

**THE RELATIONSHIPS BETWEEN PERCEIVED
WORK ENVIRONMENT, ORGANISATIONAL
COMMITMENT AND PERFORMANCE IN
JORDANIAN INDUSTRIAL FIRMS**

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DECLARATION

This is to certify that this thesis is submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy of the Liverpool Business School, Liverpool John Moores University

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ABSTRACT

Although numerous studies have been conducted on work environment, commitment and performance as separate concepts, there is a lack of evidence regarding the relationships between these three variables. It is argued that in order to understand the complexity of the employee-organisation relationship, these three organisational concepts should be integrated using a multidimensional approach.

This study aims to investigate the nature, direction and significance of the relationships between work environment, commitment and performance as global concepts, as well as multifaceted constructs for the first time in the Jordanian and Middle Eastern contexts. Sixty-nine hypotheses are developed to explore these relationships by surveying 1000 employees from 20 industrial companies in Jordan using a self-administered questionnaire.

The study results revealed that work environment, commitment and performance are multidimensional constructs comprising thirteen, two, and five facets respectively. Employees' perceptions of their work environment were found to be positively and significantly related to the commitment and performance they show in the workplace, and that the more positive the perception of work environment, the higher the commitment and performance, and vice versa. Furthermore, organisational and affective commitment were found to be positively and significantly related to employees' performance. However, continuance commitment was not related. In addition, organisational and affective commitment showed partial roles in mediating the work environment-performance relationship, but continuance commitment showed no full or partial role in mediating this relationship.

The implications of these results for both researchers and managers were also discussed, as well as a cross-cultural comparison between the findings of this study and some other settings' studies results. The study has also provided some recommendations for managing the above mentioned variables in today's diverse work teams and environments.

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DEDICATION

I would like to dedicate my thesis to:

My wife and my children, for their sacrifices, understanding, prayers and patience during the preparation of this study.

The memory of His Majesty the Late King of Jordan *Al-Hussein Bin Tital* whom the world sadly lost in early 1999. I know He would have been very pleased with the successful completion of this dissertation, which He sponsored. May Allah forgive Him and rest His soul in peace.

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Chapter One

Introduction

INTRODUCTION

Creating a supportive, positive and healthy *work environment* that encourages desired employees' behaviours, productive employee-supervisor relationships, *commitment* to the organisation and high *performance* is the ultimate goal of organisations and the core of survival and success in a global business environment. There is a theoretical agreement among researchers (e.g., Ashforth, 1985 and Meyer and Allen, 1997) that the greater the congruence between work environment of the employee and the properties of the work setting itself, the better the consequences in terms of commitment and performance. Despite this clear theoretical agreement among scholars with respect to the presence of the mutual influence involving work environment, commitment and performance, few studies appear to have attempted to explore the nature of these relationships, with specific emphasis on their levels and variety. Unfortunately, the results of these few studies have been hampered by the way they have measured and conceptualised *work environment*, *commitment* and *performance*.

More recently, the need for an understanding of the nature of the relationships between these three constructs has increased, because the work environment is no longer stable, predictable and homogenous. Organisations are under pressure to cope with the continuously changing environment, while at the same time aiming at building a committed and highly performing workforce. Thus, one of the most critical issues of the twenty-first-century for work organisations is to build employees' commitment and performance in diverse and changing work teams and environments. In an attempt at clarifying the nature of the relationships between these important organisational concepts, this study tries to explore the role of the work environment in affecting employees' commitment and performance in Jordanian industries.

1.1 AIMS OF THE STUDY

This study is conducted in Jordanian industrial firms to reach the following goals:

- 1) Understanding The role of demographic variables (gender, marital status, education, age, organisational and job tenures) in influencing employees' perceptions of work environment, commitment and performance.
- 2) Defining the role of work environment and its factors in influencing the performance of employees in Jordanian industrial firms.

- 3) Explaining the nature, significance and importance of the relationships between work environment and its factors on the one hand, and employees' affective and continuance commitment toward their organisation on the other.
- 4) Examining the direction, strength and significance of the relationships between organisational commitment and its factors on the one hand, and employees' self rated and immediate supervisor rated performance on the other.
- 5) Testing the validity of the new multidimensional approach to commitment in the Jordanian setting.
- 6) Examining the similarities and/or differences between the performance ratings obtained from the employee and his/her immediate supervisor, and understanding the implications of these similarities and/or differences.
- 7) Exploring the applicability of some Western concepts, such as organisational justice to the Jordanian and Middle Eastern context.
- 8) Providing a clear picture for the interrelationships between study variables, which will actively contribute to knowledge by clarifying and expanding current ideas in this field, especially in the Middle East.
- 9) Filling the existing gaps in the management literature with respect to the study variables, especially the PWE concept in Jordan and the Arab world as a whole.
- 10) Providing recommendations and suggestions for managing PWE, commitment, and performance, based on the study results for the industry sector in Jordan and the Middle East.

1.2 THE PROBLEM

This study is one of the few attempts that seek an interpretation of the nature, significance and significance of the relationships between three important variables in the context of work organisations. In general, the problem selected in this study is inherent in answering the following four questions:

- (1) ***How*** do the demographic backgrounds of employees influence the way they perceive their work environment, organisational commitment and work performance in Jordanian industries?
- (2) ***What*** is the role of the work environment in affecting employees' commitment to their organisation and the performance they show in the workplace?
- (3) ***Which*** kind of commitment is more related to high performance?

- (4) *Why* is the relationship between work environment and performance assumed to be mediated by commitment? And, what is the actual role of commitment in mediating this relationship in the Jordanian industries?

1.3 BACKGROUND FOR THE STUDY

The major reason behind the weak performance of most Third World organisations is often assumed to be the *mismanagement*, rather than any other technical factor (Al-faleh, 1989; Kanungo and Mendonca, 1994; Muna, 1980). Having the right mix of factors of production (e.g., labour, capital and land) has long been the classic concern of nations, organisations and researchers, and remains the main problem of Third World organisations. Although it is one of the most important factors of production, the *management* of these organisations is not capable of integrating the other production factors in a way that results in high productivity and quality. It is handicapped by the poor methods and tools that it uses to manage these factors. For example, many Third World organisations use similar methods to manage the materials, equipment and employees at one time. Unfortunately, management in the Third World organisations often "... considers people as little more than biological machines that can be made to work like other machines with the help of fuel and lubricants" (Sharma, 1987, p. 118). Therefore, most Third World organisations have failed in managing employees in a way that motivates them to feel valued, respected and committed to their employers and to work hard to achieve organisational goals. This has resulted in low levels of organisational productivity and weak competitive advantage in the international market.

Thus, the main problem of Third World organisations lies in *managing people*. In this context, Kanungo and Mendonca (1994) examined work motivation in developing countries. They argued that many organisations in the Third World have high levels of capital and technological investments; however, they have failed to increase their productivity. In their opinion, this is primarily due to a lack of management concern for the optimum utilisation of human resource potential. Furthermore, Kanungo and Mendonca argued that these organisations have recruited many managers who admirably play the roles of bureaucrats and technocrats, but are quite inept in managing the human resource in organisations.

Nonetheless, the recent process of globalisation has directed the attention of Third World organisations to the importance of productivity, quality, creativity, and innovation for gaining global levels of efficiency. Therefore, they have attempted to import management

practices and theories from Western countries, hoping that they will help in enhancing productivity and improving quality. Since management theory and practices are influenced by specific societal values, norms, attitudes, beliefs and work and social experience, the imported western ideas have done little or nothing for Third World organisations. Hofstede (1993) studied cultural constraints in management theories. It worth looking at the following quotation, in which he discussed the issue of management transfer to developing countries:

If one thing has become clear, it is that the export of Western-mostly American-management practices and theories to poor countries has contributed little to nothing to their development. There has been no lack of effort and money spent for this purpose: students from poor countries have been trained in this country, and teachers and Peace Corps workers have been sent to the poor countries. If nothing else, the general lack of success in economic development of other countries should be sufficient argument to doubt the validity of Western management theories in non-western environments. ... It has become painfully clear that development cannot be pressure-cooked; it presumes a cultural infrastructure that takes time to grow. Local management is part of this infrastructure; it cannot be imported in package form. Assuming that with so-called modern management techniques and theories outsiders can develop a country has proven a deplorable arrogance. At best, one can hope for a dialogue between equals with the locals, in which the Western partner acts as the expert in Western technology and the local partner as the expert in local culture, habits, and feelings (pp. 86-87).

As far as Jordanian and other Arab organisations are concerned, imported Western management practices and theories have contributed little to the development of these organisations, because the local management practice is part of the cultural infrastructure and therefore cannot be imported in package forms. Al-shammari (1994) suggested that Arab organisations should “acknowledge their external environment before importing management and organisational theories from countries with different socio-cultural values, economic systems and political conditions” (p. 56). Thus, this imported western ideas are not capable of improving the performance of Third World organisations, where is the way out from the current depressing situation to a more encouraging future? To overcome current problems and to build a more encouraging future, Arab and other Third World countries must avoid importing the theoretical packages and try to adapt the imported Western ideas, practices and theories of management to their own environment, as well as creating new ideas based on their own cultural experiences. It may be worth mentioning that the Japanese rational adaptation of others’ ideas (mostly western) has led to high performing organisations and increased productivity. Above all, Japan has progressed from

the list of the less-developing countries to the top of the list of the highly industrialised countries, and has become an uneasy challenger for all industrialised countries. Furthermore, most developed countries are now trying to learn from Japanese imported and adapted management methods, following the higher levels of productivity and quality that have been achieved by Japanese organisations. In this context Schuster (1998) asserted:

Organisations that want their employees to be more productive should pay more attention to them. Research studies demonstrate conclusively that a significant relationship exists between employee-centred management and superior organisational performance. Over the last several years, a great deal of publicity has also been given to Japanese firms that have used an employee-centred style of management to achieve levels of quality that exceed their American competitors. While Japanese deserves a great deal of credit for demonstrating the potency of high involvement management, it was actually invented in America (p. 5).

Hence, as an attempt at co-operating in the process of an *import and adapt* strategy, this study tries to investigate the role of the work environment in influencing employees' commitment and performance, the impact of commitment on employees' performance, and commitment's role in linking work environment and performance in Jordanian industrial firms. The factors of production by themselves are passive factors, even when supported by the latest production factors, e.g. modern technology, which is not widely used in Jordan and other Arab countries. The thing that can make these factors valuable and positive is *management*. However, if management is not using the right procedures and processes in managing these factors, all the factors of production, including management, will become passive. Since management is the problem and management is the solution, this study tries to provide some guidelines for developing the performance of the management in three key areas of administration, i.e. *work environment, commitment and performance*.

1.4 THE IMPORTANCE OF THE STUDY

This study could be useful for academics and practitioners alike. From an academic perspective, this research would improve academics' understanding of the relationships between three important concepts, namely work environment, commitment and performance. Despite being under scrutiny for more than three decades, the nature, significance and the strength of these relationships remain unclear, especially after the recent improvement in management research related to the conceptualisations of commitment and performance. Both commitment and performance are now widely viewed as multidimensional constructs. The failure of previous studies in establishing a link

between these two constructs on the one hand, and between these two concepts and other organisational variables on the other hand is mainly attributed to the unidimensional views of both commitment and performance which have dominated the management literature for more than three decades. Moreover, most, if not all, of the previous studies have attempted to examine the concept of work environment by using some well-known measures of the 1960s and 1970s (e.g., Litwin and Stringer, 1968; Payne and Pheysey, 1971 and Newman, 1977). However, these measures were mainly tailored to examine the work environments of the 1960s and 1970s, as will be explained later. Accordingly, research in work environments has made little progress in this era of diverse and continuously changing work environments.

To the best of the researcher's knowledge, no previous study has attempted to examine the relationships between work environment, commitment and performance using the multidimensional approach to conceptualise both commitment and performance, as well as using a scale that takes into account recent changes and developments in the workplace environment. Hence, this study tries to provide some answers for the above mentioned questions (section 1.2), which derive their importance from the variables under scrutiny in this study.

Firstly, to create a work environment that tells people that they are important and that employees are encouraged to collaborate is the way to build effective organisations which are capable of competing in today's global and fast changing marketplace. Secondly, employees' commitment to their organisation is essential for productivity, quality, creativity, and innovation, which are the major ingredients of survival and success. Lastly, having good performing employees is the cornerstone to enhancing organisational development, growth and survival.

On the other hand, the issues of work environment, commitment and performance are not well addressed in the Arabic context, including Jordan, and little is known about the role of these variables in influencing work organisations. For example, only one commitment study (Awamleh, 1996) has been conducted in Jordan, but it has contributed little to the understanding of this concept, as will be explained later. Moreover, only two studies (Al-shammari, 1990, 1994) were conducted in the area of work environment, but these have failed to establish a relationship between work environment and performance, because they have not use effective scales to measure both constructs, as will be discussed in chapter two of this study. With respect to the other Arabic countries, a few studies were found on the organisational commitment in Saudi Arabia and United Arab of Emirates. However, only

one study (Al-Qattan, 1987), for example, has attempted to explore the relationship between commitment and performance. Unfortunately, Al-Qattan (1987) used unidimensional scales to measure both commitment and performance. All in all, the current study will improve the Arab scholars' understanding, and provide them with up-to-date information about the influence that work environment might have on employees' commitment and performance, as well as commitment's role in affecting employees' performance. Furthermore, in this era of globalisation there is a need to examine work environment, commitment, and performance constructs, as well as other organisational concepts in non-western countries in order to make cross-cultural comparisons.

From a practical perspective, this study will provide managers with some valuable information to manage work environment, commitment and performance- the factors that are directly related to the failure or success of any organisation. Firstly, an understanding of the nature of the relationship between work environment and commitment should provide managers with valuable information for developing strategies and policies to inspire and retain committed employees, as well as creating a positive and supportive work environment that is capable of satisfying the needs of both the organisation and the employees in an effective way. Secondly, by understanding the nature of the relationship between commitment and performance, the managers will be able to understand employees' behaviour in the workplace, which kind of commitment is likely to be related to high performance, and how increasing employees' commitment is likely to be reflected in employees' performance. Lastly, understanding the role of commitment in influencing the perceived work environment-performance relationship should provide managers with valuable information for developing plans to establish the desired link between these three important concepts.

Furthermore, this study attempts to provide a solution for one of the most serious problems that faces work organisations, especially in Third World countries, i.e. *employee theft*. For example, "the largest loss to most U.S. businesses results from employee theft" (Plunkett and Greer, 2000, p. 537). Employees steal time, money, organisational assets and secrets. Some academics and other specialists have conducted employee surveys in the United States to study theft in work organisations. As many as 30% of "workers interviewed admitted stealing from their employers" (Emshwiller, 1992, p. 2). As far as Jordan and other Arab countries are concerned, the issue of employee theft is one of the major organisational issues that worry organisations and managers. One of the main reasons behind the weak performance reported by most Arab organisations in the past years

has been employee theft. The following quotation from the *Jordan Times* (August 22, 1999, p. 2), provides an example of employee theft in Jordan:

The Amman [capital of Jordan] Criminal Court is to convene next October to look into an unprecedented fraud case in which 19 defendants have been indicted by the prosecutor general for embezzling a total of JD 43million [about £39 million] from Jordan Tobacco Cigarette Company (JTC). ... The embezzlement was discovered by a special committee appointed by the government to manage the financially troubled company after the Arab Bank, the company's major editor, moved against it for defaulting on JD 5.5 million loan.

Most attempts of organisations at preventing employee theft have not solved the problem. Suliman (1995) studied employees' commitment in an Arabic country. He found that the less committed employees are more likely to steal from their employers. Suliman suggested that building employees' commitment is an effective way of dealing with employee theft, and that managers should devote enough time to communicate with the employees and understand their values, attitudes and norms in order to understand their needs. Hence, the suggested security procedures (e.g., cameras and regulations) are not the solution for preventing employee theft; rather building commitment among organisation members is more likely to reduce this negative phenomenon, because commitment means striving for achieving goals, and emphasises self-discipline. In this context, Walton (1987) argued that organisations should move '*from control to commitment in the workplace*' because by adopting a strategy based on *imposing control* they are more likely to lose; however, by *eliciting commitment* they are more likely to win. Hence, by building employees' commitment, as well as creating and activating a code of ethics, organisations can bind employees to sustain desired behaviour in the workplace. Thus, managers should understand what is commitment, how many commitment components there are in the workplace, how they are affected by the work environment and how they are related to employee' performance, in order to develop a highly committed workforce.

1.5 THE LAYOUT OF THE THESIS

The contents of this study are divided into eight chapters:

Chapter two: This chapter reviews the literature on work climate, commitment and performance, and draws a distinction between these concepts and other overlapping concepts in the management literature. The relationships between the study variables are also discussed in this chapter.

Chapter three: The main issues that build the theoretical background of this study will be discussed in this chapter. More specifically, this chapter discusses the dimensions and measurements of work environment, commitment and performance and the various approaches to commitment.

Chapter four: This chapter addresses the political, economical and the socio-cultural environments in Jordan, as well as highlighting the major indicators and characteristics of Arabic management.

Chapter five: The research objectives, study sample and population, hypotheses, operational definitions, variable measurement, statistical analysis and other related methodological issues will be discussed in this chapter.

Chapter six: The primary data collected through the questionnaire will be presented in this chapter; however, the major aim of this chapter is to examine the study hypotheses, using relevant statistical measures.

Chapter seven: This chapter highlights the outcomes of the study, analyses them and compares them to relevant studies (mostly western) for the purpose of making cross-cultural comparisons. Moreover, this chapter also discusses the implications of the results for both managers and researchers.

Chapter eight: This chapter contains three main issues; namely, the summary of the study chapters, the recommendation of the study, and some guidelines and directions for future research in the fields of work environment, commitment and performance.

1.6 THE PUBLICATIONS DERIVED FROM THE STUDY

Two pilot studies were conducted in order to test the psychometric properties of the study instruments, which will be discussed later. The data from these pilot studies have been utilised to produce some refereed journal articles and conference papers. Starting from the most recent publication, these publications are:

- (1) Organisational Justice and organisational commitment: A multidimensional analysis (2000), *The seventh Annual International Conference on Advances in Management*, Colorado, USA.
- (2) An examination of the role work climate plays in influencing employees' readiness to innovate: the case of Britain and Jordan, *European International Business Academy* (1999), International business and the global services economy, Manchester.
- (3) Is continuance commitment beneficial to organisations? Commitment-performance relationship: A new look (In press), *Journal of Managerial Psychology*.

- (4) The multi-dimensional nature of organisational commitment in a non-western context (2000), *Journal of Management Development*, Volume 19, Number 1, pp. 71-83.
- (5) The relationships between organisational climate, organisational commitment, and job performance in Jordanian industrial firms (1999), *The six Annual International Conference on Advances in Management*, Baton Rouge Hilton, Baton Rouge, USA.
- (6) The multi-dimensional nature of organisational commitment in a non-western context (1999), Paper presented at the *British Academy of Management*, Manchester.
- (7) An assessment of Meyer and Allen's (1991) three components model of organisational commitment in Jordanian industrial firms: Dimensionality and reliability (1998), Paper presented at the *School Research Forum*, Liverpool Business School, Liverpool John Moores University, Liverpool.
- (8) The impact of work environment and organisational commitment on employees' job performance in Jordanian industrial firms (1998), Paper presented at the *British Academy of Management*, Nottingham.
- (9) The relationships between organisational climate, organisational commitment and job performance of the employees in Jordanian industrial firms (1998), Paper presented at *Organisational Effectiveness Conference*, Edge Hill University College, Edge Hill.

1.7 CONCLUDING REMARKS

This introductory chapter commenced by stressing the need of work organisations to understand the nature of the relationships between the work environment, commitment and performance in today's fast changing and unpredictable workplace. It argued that one of the major issues that faces work organisations in the twenty-first-century is committing employees to perform effectively in diverse and changing work teams and environments. The chapter then discussed the background of the study, and suggested that the major factor that hinders development in Third World organisations is mismanagement. It further argued that the employee- the most important production factor- is treated as a little more than a biological machine, which negatively influences his/her readiness to participate, produce and to exert effort on behalf of the organisation. Thus, despite high levels of capital and technological investment, Third World organisations continue to report weak and less competitive performance. Moreover, the chapter also highlighted the weaknesses of Third World organisations in applying imported management theories and practices. It suggested that these management theories failed to enhance the performance of Third World organisations because it was imported in package form. It was argued that

importing others' ideas and concepts is not the best way of facilitating development, but that the ability to adapt these ideas and concepts to one's own environment is the way to maintain high performance and productivity. The chapter suggested that the success of Japanese organisations is mainly due to Japanese success in importing and adapting others' ideas.

Moreover, the chapter argued that the problem of the study is inherent in investigating the nature, significance and the importance of the relationships between work environment, commitment and performance. In addition, it was argued that the importance of the study stems from the importance of the three main variables that are under scrutiny in this study, and that the study could be useful for both academics and practitioners alike. From an academic perspective, the chapter has argued that the study will improve academic understanding of the relationships between the three variables mentioned above. It has also argued that no study has attempted to investigate these relationships using the multidimensional approach to commitment and performance, as well as a work environment scale that captures recent changes in the workplace. From a practical perspective, the chapter has argued that the study would provide managers with some valuable information to manage work environment, commitment and performance- the factors that are directly related to the success or failure of organisations. Moreover, the chapter has also suggested that the study will help managers, especially in Third World countries, to manage the employee theft by understanding the nature of commitment and how it is related to work environment and performance. Furthermore, the layout of the dissertation was also presented and discussed in this chapter. The chapter concluded by presenting a list of published work, which derived from the study.

Having introduced the study in this chapter, the following chapter will discuss the basic ideas of work environment, commitment and performance, the approaches emerging in the management literature to conceptualise them, and the relationships between these three constructs.

Chapter Two

Literature Review

THE LITERATURE REVIEW

2.1 INTRODUCTION

After the publication of the Western Electric studies (Rothlisberge and Dickson, 1939), the treatment of employees at work as merely biological machines started to disappear. Organisations tended to recognise the effect of human factors, such as feelings, attitudes, and perceptions, on employees' behaviour and work outcomes. According to Lawrence and Lorsch (1967), "... these human relations ideas have not only added a good deal to our knowledge about human behaviour in organisation, but have also created a pressure on management to change the more customary way of running organisations" (pp. 178-179).

Due to the acceleration of research in human relations and its role in influencing employees' behaviour and work outcomes, many new concepts in the management literature have been launched, and existing ones further developed. Perceived work environment (PWE) and organisational commitment (OC) were areas of major interest to researchers, because of their hypothesised impact on employees' performance.

In recent years, there has been a plethora of research literature concerned with work environment, commitment, and performance as separate concepts. However, the nature, direction and significance of the relationships between these global variables and their dimensions remain unclear. One of the major questions that emerged following publication of the ideas of human relations remained largely unanswered, i.e., *how do employees' perceptions of the work environment influence their organisational commitment and work performance? And how does employee commitment affect performance?*

This chapter will review some of the previous attempts of conceptualising and studying PWE, OC and performance in work organisations. More specifically, four main issues will be addressed in this chapter. The first part examines the development, definitions and approaches to the work environment concept, as well as its separability from some overlapping concepts in the management literature, such as organisational culture. Moreover, this part also highlights the importance of the work environment, and how it is related to employees' performance and behaviour. The second part deals with the historical and theoretical development of commitment, as well as presenting various definitions for this organisational construct. In addition, the importance of employees' commitment for work organisation is also discussed. Since commitment is conceptualised in this study as a mediating variable, the mediating nature of this concept is also discussed here. The third

part examines the definitions and importance of performance and how it can be distinguished from some other relevant constructs commonly used in the management literature, such as effectiveness and productivity. The last part investigates relationships between work environment, commitment and performance. It presents the results of some previous studies which attempted to explore the nature of these relationships. This part also discusses how these studies have failed to provide a clear picture about the linkage of these concepts, and what has gone wrong with the conceptualisation of PWE, OC and performance.

2.2 PERCEIVED WORK ENVIRONMENT (PWE)

This parts throw a light on the concept of the PWE, its development, definitions, and importance. More specifically, these points are discussed under three sub-headings, namely: the development and definition of work environment, the approaches to work environment, and the importance of work environment

2.2.1 DEVELOPMENT

Since the Second World War, the work environment has been seen as one of the most important factors influencing workers and the work outcomes. The early ideas of work environment were rooted in Lewin's studies (Lewin, Lippit and White, 1939; Lewin, 1951). Lewin (1951) attempted to study human behaviour and environmental studies; he concluded:

*To characterise properly the psychological field, one has to take into account such specific items as particular goals stimuli needs, as well as more general characteristics of the field, as the **atmosphere** (for instance, the friendly, tense or hostile atmosphere) or the amount of freedom. These characteristics of the field as a whole are as important to psychology as, for instance, the field of gravity for the explanation of events in classical physics. **Psychological atmospheres** are empirical realities and are scientifically describable facts (p. 241, researcher's emphasis added).*

The terms *atmosphere* and *psychological atmosphere* in the above quotation are clear signs for what are now known as work environment and psychological environment (climate) in recent management literature (e.g., Joyce and Slocum, 1982 and Denison, 1996).

The concept of perceived work environment (PWE) started to permeate the management literature and dominate scholars' thinking as recently as the 1960s. It arose and developed

as a result of the contribution of behaviour theories, management theories, and organisational theories (Litwin and Stringer, 1968). After concretisation of the work environment concept in management theories in the 1960s, scholars from the 1970s onwards started to link the construct to some other organisational concepts, such as individual differences (Schneider and Bartlett, 1970), structure (Payne and Pugh, 1976), and communication (Poole and McPhee, 1983). In all these studies, PWE had different names, but carried the same meaning. Hence, such terms as *organisational climate*, *internal environment*, *work climate*, *work condition*, *work atmosphere* and *work situation* are commonly used in the management literature to refer to the concept of the PWE. This study uses the terms PWE, work environment and work climate to refer to the employees' perceptions of their work environment in Jordanian industrial firms.

The concept of PWE in the management literature has been defined in different ways by different writers. Forehand and Gilmer (1964), for example, proposed the most recognised and widely cited definition for this construct. They defined work environment as:

The set of characteristics that describe one organisation and that,
(a) distinguish the organisation from other organisations;
(b) are relatively enduring over time; and
(c) influence the behaviour of people in the organisation (p. 362).

Tagiuri and Litwin (1968) criticised this definition as insufficient in terms of individuals' perceptions. They argued that the work environment is interpreted by the members of the organisation to have a certain quality to which they are sensitive and which, in turn, affects their attitudes and motivation. According to this view, they suggested the following definition:

Organisational climate is a relatively enduring quality of the internal environment of an organisation that is,
(a) experienced by its members;
(b) influences their behaviour; and
(c) can be described in terms of the values of a particular set of characteristics (or attributes) of the organisation (p. 25).

Based on this latter definition and some other previous definitions, Pritchard and Karasick (1973) redefined work environment as:

Organisational climate is a relatively enduring quality of an organisation's internal environment distinguishing it from other organisations;
(a) which results from the behaviour and policies of members of organisations, especially top management;
(b) which is perceived by members of the organisation;

- (c) which serves as a basis for interpreting the situation;
- (d) acts as a source of pressure for directing activity (p. 126).

Schneider and Snyder (1975) argued that the work environment is most adequately conceptualised as a summary perception which people have of (or about) an organisation.

According to this view, Schneider (1975) defined organisational climate as:

Climate perceptions are psychologically meaningful molar descriptions that people can agree characterise a system's practices and procedures. By its practices and procedures, a system may create many climates. People perceive climate because the molar perceptions function as frames of reference for the attainment of some congruity between behaviour and the system's practices and procedures. However, if the climate is one which rewards and supports the display of individual differences, people in the same system will not behave similarly. Further, because satisfaction is a personal evaluation of a system's practices and procedures, people in the system will tend to agree less on their satisfaction than on their descriptions of the system's climate (pp. 474-475).

As an example of the 1980s definitions of the PWE, Ashforth (1985) definition can be proposed. He suggested that work environment is:

A shared enduring molar perception of the psychologically important aspects of the work environment. [The environment] highlights several points:

- (a) climate is a perceptually based abstraction;
- (b) climate perceptions reflect what is psychologically meaningful to the individuals concerned;
- (c) climate perceptions tend to be both shared and resistant to change (p. 837).

Arguing that previous definitions of work environment have ignored the role of culture in shaping employees' perceptions about their work environment, Moran and Volkwein (1992) redefined work environment as:

A relatively enduring characteristic of an organisation which distinguishes it from other organisations and;

- (a) embodies members' collective perceptions about their organisation with respect to such dimensions as autonomy, cohesiveness, support, recognition, innovation, and fairness;
- (b) is produced by members interaction;
- (c) serves as a basis for interpreting the situation;
- (d) reflects the prevalent norms, values, and attitudes of organisations cultures; and
- (e) acts as a source of influence for shaping behaviour (p. 20).

Nonetheless, the above definition of Moran and Volkwein' (1992) is the most recent definition of work environment suggested in the management literature. As will be

explained later, Moran and Volkwein (1992) suggested a new approach for conceptualising work environment according to the definition they proposed. The previously mentioned definitions of work environment are some of many different definitions suggested in the management literature since the 1960s. Although they used to agree on the general outline of the definitions, most researchers cited different definitions for the term work environment. This is not to argue that the work environment concept is still “one of the fuzziest concepts to come a long in some time” as Guion (1973, p.121) has suggested. On the contrary, the concept of work environment is now well established, developed and diffused in all management literature since it was first defined by Forehand and Gilmer (1964). This mismatch in definition may be due to the nature of this construct, as will be explained later in this study.

2.2.2 THE APPROACHES TO WORK ENVIRONMENT

The previously mentioned examples of work environment definitions reflect the various approaches used to conceptualised this organisational phenomenon in the management literature. More specifically, all definitions of work environment can be categorised into three major and separate approaches, namely:

(1) The structural approach: This approach regards work environment essentially as a set of organisational attributes. In other words, the advocates of this approach view the work environment as a characteristic belonging to an organisation. It does not take into account the human dimension of the organisation, and people’s role in shaping the work climate. According to Ashforth (1985) “the existing of organisational structure– the degree to centralisation, specialisation, and formalisation, the basis for sub-unit grouping, and so on– gives rise for to a certain climate as organisational members respond to the structure” (p. 837). Forehand and Gilmer’s (1964) definition of environment mentioned earlier is an example for this approach. Therefore, this approach has been criticised, because it ignored the individuals’ role in shaping the environment. The same criticism applies to all early definitions of this concept (e.g., Lawrence and Lorsh, 1967 and Porter and Lawler, 1965).

(2) Perceptual approach: Two views of work environment based on perception have emerged in the management literature. The first view conceptualises work environment as a set of perceptual variables which are still seen as organisational main effects (Pritchard and Karasick, 1973). Although it has partially considered the individual’s role in

determining work climate, this view has also been criticised by some authors. James and Jones (1974, p.103), for example, argued that:

The reliance on perceptual measurement may be interpreted as meaning that [work environment] includes not only descriptions of situational characteristics, but also individual differences in perception and attitudes. This is somewhat confusing if one wishes to employ [work environment] as an organisational attribute or main effect, since the use of perceptual assessment introduces variance which is a function of differences between individuals, and is not necessarily descriptive of organisations or situations.

The second perspective concentrates on the individual as the major determinant of the work environment. The leaders of this approach in the recent management literature are Schneider and his associates (e.g., Schneider, 1988, 1990 and Schneider and Reichers, 1983). They argued that the people, and not structures, come first, and that the similarity among individuals gives rise to similar perceptions of organisational life, which in turn builds up the work environment (Schneider and Reichers, 1983). Nevertheless, this direction in conceptualising and defining work environment has also been criticised. For example, Johannesson (1973) argued that using this approach to study the work environment is no more than a replication of the work attitude literature. Furthermore, Guion (1973, p. 123) argued that "... if one is primarily interested in the measure of an attribute of individuals with no external reference such as accuracy, then he faces a different peril: the likelihood of having done nothing more creative than rediscovery of the wheel".

(3) *The interactional approach:* This perspective places the base of defining work environment on the interaction between both the individual and the organisation (Ashforth, 1985; George and Bishop, 1971; Katz, 1980; Silva, 1992). According to this view:

It is pointless to argue whether climate is a property of the organisation or the individual, or whether it is a macro construct or a micro one. Climate is seen as a joint property of both the organisation and the individual. It is both a macro and a micro construct. As such, climate is a system variable, ... serving to integrate the individual, the group and the organisation. ... Thus climate has the potential to facilitate a truly integrated science of organisational behaviour. It is equally pointless to argue whether structure, process, or individuals are first causes of climate (Ashforth, 1985, p. 838).

This latter approach to conceptualising work environment is the most accepted and popular view of work environment, because it overcomes the problems associated with the previously mentioned approaches. It simply suggests that the interaction between

employees and the organisation produce a certain type of work environment that is perceived by organisational members. Despite being a more comprehensive and encompassing definition, the interactional approach has also been criticised, but by very few writers. The literature search revealed that only one study has criticised the interaction approach. Moran and Volkwein (1992) argued that this approach failed to answer the following question: *how does the social context shape the individual and organisation interaction?* They relate the frailty of the previously mentioned environment defining approaches to the absence of an adequate ‘composition theory’- a specification of how a construct operationalized at one level of analysis. Meanwhile, they proposed a fourth approach termed, ‘*the cultural approach*’. This approach incorporates the interaction of group members as a key determinant of work environment, where the interaction is influenced by the norms, values and attitudes of the organisation’s culture. Pursuing this theme, they proposed the definition mentioned earlier in section 2.2.1. Compared with the three main approaches mentioned above, it can be argued that this cultural approach presents the weakest view of work environment suggested in the management literature. First of all, this definition integrates work environment and organisational culture in a confusing manner, as if they are one concept. Although they appear to be overlapping, these two constructs (environment and culture) are independent organisational concepts, as will be explained later. Secondly, most researchers agree that “climate exist in all organisations, ... but many organisations have no culture” (Rousseau, 1988, p. 153). Thus, the work environment *may not reflect* the prevalent norms, values, and attitudes of *some* organisations’ cultures, simply because they lack it. Therefore, this connection between work environment and culture as a way of investigating employees’ perceptions of their work climate, as suggested by Moran and Volkwein (1992) is pointless. Nonetheless, this new cultural approach has not found much support from other scholars in this field, as is the case with the interactional approach. To the best of the researcher’s knowledge, no study has attempted to examine empirically the Moran and Volkwein’s argument, indicating the weakness of the cultural perspective, or its difficulty in terms of empirical testing.

2.2.3 TOWARDS A COMPREHENSIVE DEFINITION OF WORK ENVIRONMENT

Having discussed the three major approaches to conceptualising work environment, as well as the fourth cultural approach suggested by Moran and Volkwein (1992), it can be concluded that the interactional view is the most reliable approach to conceptualising work

environment. It neither bases the analysis of work environment solely on individual perceptions nor on the organisational system. Moreover, most researchers (e.g., Ashforth, 1985 and Schneider and Reichers, 1983) agree that this approach is most effective approach to conceptualise the environment, because, unlike other approaches, it has logical and well-accepted roots in the management literature. This approach draws on symbolic interactionism (Blumer, 1969) in general and newcomers' socialisation (George and Bishop, 1971; Katz, 1980; Wanous, 1980) in particular. Symbolic interactionism suggests that the individual draws conclusions or meanings of a certain situation from his/her interaction with other people in the same situation. On the other hand, the newcomers' perspective argues that new members of any organisation learn the logistics of the organisation, expectations of both co-workers and managers, procedures, ... etc. from their interactions with the organisation and its members. From these interactions, newcomers build a 'situational identity', which will help them understand the organisation and act within it (Katz, 1980).

Considering the previous discussion about approaches to work environment the current study adopts the interactional approach and defines work environment in Jordanian industries. Although a precise and widely shared definition of work environment does not exist, it can be suggested that this concept refers to the interaction between organisational factors, such as structure, procedures and managerial style and employees' career and demographic backgrounds, such as age, sex and tenure. In other words understanding of the environment:

... Requires consideration of the whole organisational context, involving not only the individuals' perceptions, but also the organisational structure, processes and practices, as well as, individuals' interactions among themselves and visa-a-vis the organisational context (Silva, 1992, p. 443).

Based on some previous definitions (Forehand and Gilmer, 1964; George and Pishop, 1971; Pritchard and Karasick, 1973; Moran and Volkwein, 1992), and considering the ideas of interactional approach, the term work environment can be defined in this study as: *relatively enduring characteristics of an organisation's internal environment that differs from any other organisation, and is:*

- (1) produced by the interaction of individuals and the organisation;*
- (2) perceived by organisational members according to their demographic and career backgrounds (e.g., sex, marital status, tenure and job level);*

- (3) *includes members' collective perceptions about their organisation with regard to such dimension as supervisory style, employee competence and co-worker relations;*
- (4) *serves as a bases for interpreting the situation; and*
- (5) *influences the individuals' behaviour and work outcomes.*

This definition can be clarified and simplified by putting it in the following equation form:

$$WE = f(O_{a, b, c, d, \dots} + I_{a, b, c, d, \dots})$$

Where:

WE = work environment.

$O_{a, b, c, d, \dots}$ = organisational variables (e.g., work characteristics and supervisory style).

$I_{a, b, c, d, \dots}$ = individual variables (e.g., sex and tenure).

Thus, work environment is a function of organisational and individual variables. The interaction of these variables produces an environment which can be perceived in a given way, e.g. positive, negative, supportive or authoritative. Compared with previous definitions offered in the management literature, this definition is more comprehensive and informative. It reconciles the organisational and individual perspectives in an effective way, and states clearly that both variables count in the formation and perception of work climates. Since work environment variables can change according to the change in geographical and cultural environment or time, the proposed definition does not define certain organisational or individual variables. As will be explained later, for the purpose of this study, 13 work environment variables and 7 demographic variables are considered. However, those studying work environment in different contexts or in a different era can still consider this definition of work environment and replace the suggested variables with their context or era variables.

Having discussed the various definitions of work environment and its approaches, as well as suggesting a more comprehensive definition which aims at avoiding the slippage of past definitions, it can be concluded that to date there is no complete consensus among scholars over which definition or approach is best. Despite the plethora of studies devoted to explore this variable since the early 1960s, the outcomes of these studies reveal no agreement on its definition, level of analysis or dimensions. Considering this fact, Payne (1990) argued that “the climate surrounding the concept of climate is pretty bleak and damp, ... and we need some pretty powerful intellectual sunshine before it is likely to improve, but avoiding past conceptual slips might at least help to raise the cloudbase” (p.

79). The views and measurements of the work environment concept vary, mainly because the perceptions of work environment vary from an organisation to another, from one sector to another, and from one context to another. Even within one context, say for example the Jordanian context, different work environments can be found in the industrial, service, banking and agricultural sectors. Furthermore, some researchers (e.g., Sparrow and Gaston, 1996 and Schneider and Reichers, 1983) have gone further than this, and suggested that even within one organisation there may be different work environments. Moreover, the researchers' career and academic backgrounds (e.g., education, psychology and management) have also played some role in the way they define, measure and analyse work environment.

Despite these different views over conceptualising and defining the concept of work environment, some common points from previously mentioned definitions can be identified:

- 1) Work environment reflects the interaction between employee personal attributes and organisational attributes as perceived by the environment members.
- 2) Organisations are like fingerprints never cognate or similar, even if they are in the same environment. Each organisation has its own goals, procedures, practices, ... etc, and subsequently its own internal environment.
- 3) The Work environment is relatively stable and enduring. Yet this does not mean that work environment is difficult to demolish and easy to build. Normally, it takes the organisation long to establish a competitive environment, but if it does not maintain it or make a sudden change (s) in its core policies and strategies without recourse to employees, or faces pressures from outside the organisation (e.g., political and economical), its environment may change or even collapse.
- 4- Work environment influences individuals' behaviour at the work place.
- 5- Work environment is capable of being shared by the organisation members.
- 6- By influencing the employees' behaviour at work, work environment is assumed to affect their work outcomes.

To summarise, work environment is a result of interplay between employees and their organisation, and ignoring the role of any party in the formation of this environment is untenable.

2.2.4 WORK ENVIRONMENT AND SOME OTHER OVERLAPPING CONCEPTS

Apart from the synonymous terms mentioned earlier, there are some other concepts in the management literature which are commonly used by researchers and may seem to be equivalent to the term work environment, but are not. For the sake of precision, there is a need to draw a clear distinction between the concept of work environment and these overlapping concepts.

a) *Organisational environment:* In modernist perspectives, organisational environments are typically defined by three common elements (Hatch, 1997). Firstly, the inter-organisational network: every organisation needs to interact with other members of its environment such as suppliers, competitors, unions, ... etc. Secondly, the general environment: more general forces at work in the environment, such as legal, political, economic, ... etc. Thirdly, the international (global) environment: this environment includes factors of the environment that are organised on a global scale, such as the United Nations (UN), the International Monetary Fund (IMF), General Agreement on Trade and Tariffs (GATT) and the World Trade Organisation (WTO). Thus, the organisational environment is a macro view that encompasses all organisations, formal or informal, which act outside the context of any given organisation. On the other hand, work environment is a micro view concerned with the internal environment factors of the organisation.

b) *Psychological environment (climate):* the concept of psychological environment in the management literature is well developed and distinguished from the work environment construct (Swift and Campbell, 1998; Strutton, Chowdhury and Pelton, 1997; Koys and DeCotiis, 1991; Ornstein, 1986). It can be defined as “an experiential - based, multi-dimensional, and enduring perceptual phenomenon, which is widely shared by the members of a given organisational unit” (Koys and DeCotiis, 1991, p. 267). Hence, psychological environment refers to the individual description of organisational practices and procedures, whereas work environment refers to a collective description of organisational internal environment (Joyce and Slocum, 1982). Therefore, the psychological environment is a part of the work environment.

c) *Executive or managerial environment:* this construct is widely accepted as:

A relatively enduring quality of the work environment that;

(a) is experience by the executives,

(b) influence their behaviour;

(c) can be described in terms of the values of a particular set of characteristics (or attributes) of this environment (Tagiuri and Litwin, 1968, p. 226).

From this definition, it can be concluded that the managerial environment is one of the determinants of work environment, while the work environment is one of the determinants of individuals' behaviour.

d) Organisational (corporate) culture: This is the most overlapping aspect with the work environment construct. The term organisational culture appeared casually for the first time in the English language literature in the 1960s as a synonym for environment (Hofstede, 1994). However, it began to appear in the management literature as an organisational concept in the early 1980s.

Originally, it was viewed as a synonymous to the work environment concept, which complicated the status of work environment as an independent and distinct organisational aspect. Therefore, some researchers (e.g., Schneider, 1985) at that time argued that the notion of culture is a little more than a synonym for work environment. After about two decades from its appearance in the management literature, the concept of culture can said to be well developed, established, and distinguished from other organisational constructs (Dion, 1996; Hawkins, 1997; Hofstede, 1998; Lindbo, 1998; Buskirk, and McGrath, 1999; McDermott and Stock, 1999). Nevertheless, as is the case with the work environment concept, no consensus definition for this construct has emerged in the management literature. Arguing that it is not clear whether the culture construct will survive as a useful and viable addition to the conceptual 'armamentarium' of the organisational studies, Schein (1991) defined it as:

- 1) *A pattern of shared basic assumptions;*
- 2) *Invented, discovered, or developed by a given group, as it learn to cope with its problems of external adaptation and internal integration,*
- 3) *That has worked well enough to be considered valid, and, therefore,*
- 4) *Is to be taught to new members of the group as the correct way to perceive, think, and feel in relation to those problems (p. 243).*

In their study entitled 'single and multiple cultures in international cross-cultural management research', Sackman, Philips, Kleiberg and Boyacigiller (1997) defined culture as:

The core of culture is composed of explicit and tacit assumptions or understandings commonly held by a group of people; a particular configuration of assumptions and understandings is distinctive to the group; these assumptions and understandings serves as guides to acceptable and unacceptable perceptions, thought, feelings and behaviour, they are learned and passed on to new members of the group through social interactions;

and culture is dynamic- it change over time, although the tacit assumptions that are the core of culture are most resistant to change (p. 25).

By comparing the above two definitions of culture with the definitions of work environment that mentioned earlier, it can be concluded that culture and environment are separate concepts. However, they share some similarities which are not enough to conclude that they are one concept. These similarities can be summarised in the following points (Ashforth, 1985; Rousseau, 1988; Sparrow and Gaston, 1996; Shneider, Gunnarson, Niles, 1994; Schneider, Brief and Guzzo, 1996; Verbeke, Volgering and Hessels, 1998):

- (1) Consistency or consensus is required to characterise a unit as having a culture or environment.
- (2) Beliefs or individual cognition and interpretations are primary elements in each.
- (3) Each is historical, enduring and resistant to change.
- (4) Each has a tendency toward differentiation with members in different units of a large organisation demonstrating distinctive sets of beliefs.

On the other hand, the striking differences are:

- (a) Culture is largely normative, while environment is descriptive.
- (b) Environment is a summary description, however culture researches operationalise it as rich detail.
- (c) Work environment exists in all organisations, whereas many organisations have no culture.
- (d) All individuals in any organisation's setting are part of work environment, but not all individuals are part of culture.
- (e) The unit of theory in work environment theory is largely agreed to be the individual; however, the unit of culture research is norms.

Thus, culture refers to the broader pattern of an organisation's norms, values and beliefs. Work environment on the other hand, is the atmosphere that employees perceive, which are created in the organisation by practices, procedures and rewards (Schneider *et al.*, 1994).

In addition to these four different concepts, there are still some other terms that are commonly used in the management literature and seem to be synonymous to the work climate concept, while they are not. For example, ethical climate (Bourne and Snead, 1999; Ponemon, 1996), and industrial relations climate (Dastmalchian, Paul and Adamson, 1989).

2.2.5 THE IMPORTANCE OF THE PERCEIVED WORK ENVIRONMENT

The concept of work environment is an important organisational concept that has a direct impact on employees' behaviour and work outcomes. Guion (1973) argued that the concept of work environment is one of the most important to enter the thinking of industrial/organisational psychologists in many years. Indeed, work environment nowadays is more important than it was in the 1960s and 1970s, because the internal and external environments of the organisations are less stable and less predictable than before. Furthermore, Schneider (1975) attempted to study employees' performance in the workplace. He concluded that work environment is an important determinant of employee performance, and that "performance equals ability and climate, which stress the display of individual differences" (p. 457). Barnard (1997) argued that most employees work related decisions, such as participating, producing and quitting, are influenced by the work environment of which he/she is part. She asserted:

... Environmental characteristics play a part when an employee decides to leave a job. Because of increasing competition for high-performing workers and the changing lifestyles of the workforce, most companies are amending policies to better accommodate the demands of workers' personal lives. However, characteristics of the workplace environment itself are frequently not as carefully tailored to the needs of differing employee groups. Management has considerable discretion in this respect by using control systems that most effectively guide the behaviour of organisational members (p. 14).

Likewise, Al-rahimi (1990) investigated the relationship between employee work outcomes and work environment in Saudi Arabia. He called for creating the proper environment in which employees can develop to their fullest potential. Al-rahimi suggested that providing a conducive work environment is essential for enhancing employee satisfaction and commitment, and increasing their performance. Similarly, Al-shammari (1994) argued that researchers and academics must be aware about the role that work environment plays in shaping the level of organisational performance, especially in developing countries. Burruss (1996) argued that managing for motivation and performance improvement is essential for work organisations, and that providing a supportive work environment is directly related to employees' motivation and performance. He argued that when the environment is positive, people are motivated and excited about what they are doing. However, when it is negative, people are relatively depressed and angry. Therefore,

Burruss suggested that it is no surprise that work environment is an excellent predictor of organisational and employee performance.

Thus, there is a general agreement among researchers that analysing work environment helps to understand the processes by which individual and organisational interaction influences employees' *behaviour* and *performance*. The following simple equation of Lewin (1951) gives an explanation for the formation of behaviour:

$$B = f(P, E)$$

Where: B = behaviour, P = person and E = environment.

Generally, this equation suggests that behaviour is a function of the individual and his/her environment. Thus, if employee behaviour at work is the interest, then this equation can be reformulated as follows:

$$B = f(P, O) \dots\dots\dots (1)$$

Where: B = behaviour, P = person and O = organisation.

Considering this revised equation (1), it can be suggested that individual behaviour in the workplace is determined by the interaction between the person and the organisation. On the other hand, McGregor (1960) argued that individual performance is highly influenced by the environment that he/she belongs to, as well as his/her demographic backgrounds. Accordingly, he suggested the following equation, which is widely considered in the management literature:

$$P = f(I_{a, b, c, d, \dots}, E_{a, b, c, d, \dots}) \dots\dots\dots (2)$$

Whereas: P = performance, $I_{a, b, c, d, \dots}$ = Individual variables and $E_{m, n, o, p, \dots}$ = environment variables.

This latter equation suggests that individual performance is affected by the individual variables, such as age, sex and education, and environmental variables. If the aim is work environment, then variables like procedural justice, work characteristics and supervisory style can be considered. Hence by the combination of equation (1) and (2), the following new equation (3) can be obtained:

$$B + P = f(P_{a, b, c, d, \dots}, O_{m, n, o, p, \dots}) \dots\dots\dots (3)$$

From equation (3) and the definition of work environment proposed earlier, it can be concluded that work environment is an important organisational phenomenon, and that it has an impact on employees' behaviour, attitudes and performance.

2.3 THE CONCEPT OF ORGANISATIONAL COMMITMENT (OC)

Organisational commitment is assumed to be one of the major driving forces behind the development and success of organisations (formal or informal), in any environment (industry, service, agriculture, ... etc), and in any context (western or non-western). This assumption could be the reason for the considerable and continuous attention it has received since the 1960s. Despite considerable research devoted to explore the nature of this construct for the past 40 years, the concept has remained ill-defined and ill-conceptualised, and still “promises to be an exciting research issue” (Benkhoff, 1997a, p. 720). Therefore, there are continuous calls (e.g., Reichers, 1985; McGee and Ford, 1987; Allen and Meyer, 1990; Jaros *et al.*, 1993; Benkhoff, 1997a and Nyhan, 1999) recently for more precise and comprehensive definition, conceptualisation, and measurement to conceptualise this construct and its relationships with the other organisational variables, especially, employees’ performance. The continuous research in this field resulted in the birth of a new approach for conceptualising and studying OC. As will be explained later, this new multi-dimensional approach is not the end, but could be a good starting point for future research in this field. To understand the nature of this construct in the short-run, researchers must follow a build-up system, i.e., to start any new research from the last findings of the previous reliable research instead of reinventing the wheel. In this context, it could be argue that commitment research should have embraced this new approach since the 1960s, i.e., after Kelman’s (1958) interesting and valuable study of attitude change processes and Becker’s (1960) research of the ‘side-bet theory’.

As far as Jordan and other Arab states are concerned, there is a belief that OC is one of the major pillars of success and development of organisations. However, some researchers (e.g., Al-shammari, 1990) have doubted the presence of this construct in the organisational context. This could be one of the major reasons that empirical research on the concept of organisational commitment in developing countries is somewhat limited (Bhuiyan, al-shammari and Jefri, 1996). For example, Bhuiyan and Shahidulislam (1996) found only three commitment studies in Saudi Arabia, which is “one of the most important markets in the developing world” (Bhuiyan and Shahidulislam, 1996, p. 38). Nevertheless, beliefs are not enough; researchers must conduct field studies to convert these assumptions and beliefs for the benefit of the employee, the organisation and the society (Suliman, 1995).

2.3.1 THE HISTORICAL AND THEORETICAL DEVELOPMENT OF OC

Most researchers (e.g., Bar-hyim and Berman, 1992; Iles *et al.* 1990; Morrow, 1983, 1993; Reichers, 1985 and Staw, 1977) agree that there is some sort of interference between the commitment and some other affective constructs, such as job satisfaction, work motivation and job involvement. Nevertheless, *job satisfaction* is viewed as the most overlapping aspect. By reviewing both the commitment and satisfaction literature the following differences between the two concepts can be identified:

1) The concept of OC is broader than job satisfaction. Commitment is a global term that reflects an attachment to the overall organisation, whilst job satisfaction is a narrower concept, reflecting an attachment to the job, which is part of the organisation.

2) Developing employees' commitment toward the organisation needs much time and effort, over and above than that required for building job satisfaction needs. Therefore, once developed, OC is more stable over time, compared with job satisfaction.

Moreover, OC is less affected by temporary situational events such as extending working hours for a limited period of time.

3- More recently, OC has been widely accepted as a multidimensional concept, while job satisfaction is generally viewed as a unidimensional construct.

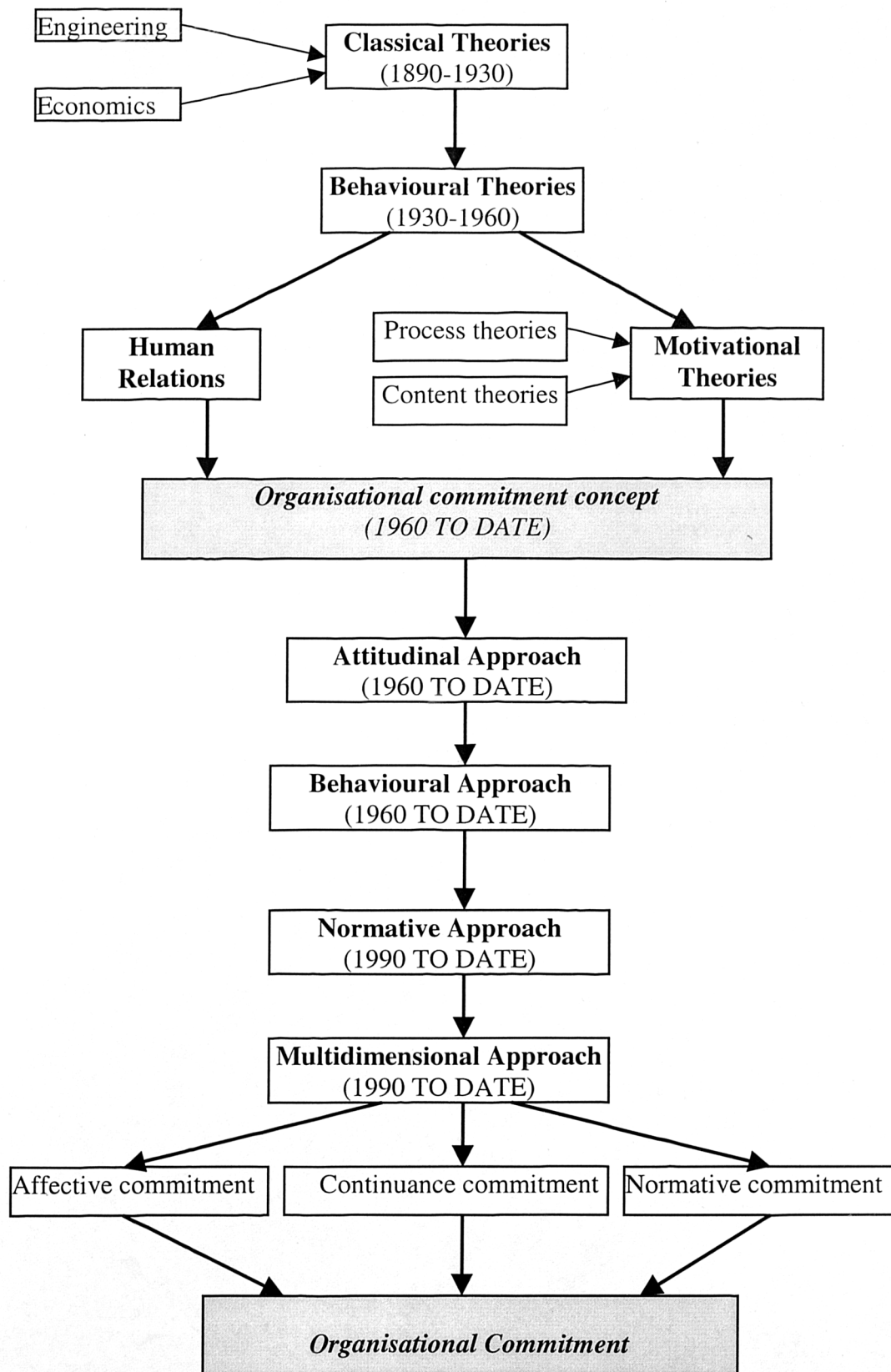
4- An employee who is committed to his/her organisation is more likely to be satisfied with his/her job, while satisfaction with the job is less likely to bind the employee to be committed to the organisation as a whole, especially in the short-run.

5- Organisational commitment is "... a more stable and less transitory attitude than job satisfaction, and thus *should* have greater consequences for behaviour (Kalleberg and Marsden, 1995, p. 237, researcher's emphasis).

6- Organisational commitment has been shown to be much better than job satisfaction in predicting organisational behaviour (e.g., tenure and absenteeism) and work outcomes, e.g., job performance (Meyer and Allen, 1996; Iles *et al.*, 1990; Mowday, Porter and Steers, 1982).

Nevertheless, empirical studies (e.g., Mathieu and Zajac, 1990 and King and Sethi, 1997) have shown a positive relationship between the two concepts. In other words, the higher employee commitment, the higher job satisfaction, and vice versa. Thus, this overlap between OC on one hand, and other affective constructs on the other hand has played a major role in researchers' attempts to conceptualise and define OC.

Figure (2-1): The historical and theoretical backgrounds of OC



Some researchers have defined it in terms of an attitudinal approach, while others followed the behavioural approach in their studies. These two themes are the most common and well-known approaches that have emerged in the management literature since the early 1960s. Another two approaches appeared in the literature during the 1990s, namely, the normative and the multidimensional approaches. Figure (2-1) explains in simple the historical background and the developmental steps of OC.

Traditional theorists (e.g., Taylor, 1911; Fayol, 1949; Weber, 1947) attempted to set rational techniques for managing business organisations. Based on their engineering and economics backgrounds they tried to tailor merely scientific principles and procedures that do not differentiate between the human side and the technical side to manage both the worker and his/her machine at the same time. Keller (1997) studied commitment from the scientists' and engineers' point of view. He asserted:

Earlier research has found that scientists tend to be cosmopolitans, whose primary loyalty is to their scientific field or professional peer community outside their company, where as engineers tend to be locals, who have a primary identification with their employing company, its goals and superiors in the hierarchy (p. 539).

The behaviourists (e.g., Barnard, 1938) largely accepted the ideas set forth by the traditionalists (e.g., Taylor, 1911), but they modified it by stressing the importance of the social side to organisational efficiency. According to their sociological, psychological and social psychological backgrounds, the behaviourists came to realise that the scientific equations do not work in all cases. The human relations theorists (e.g., Roethlisberger and Dickson, 1939) attempted to resolve the equation by adding the human factor to classical theories. On the other hand, both groups of motivational theorists, namely the content scholars (e.g., Maslow, 1954 and Herzberg, Mausner, Peterson and Capwell, 1957) and the process theorists (e.g., Varoom, 1964) stressed the fact that an employee is a human being with certain motives. Thus, it is the role of an organisation to identify these motives in order to try to satisfy him/her in a way that benefits both the organisation and the employee. Human relations and motivational theories, together with organisational theories, management theories and behavioural theories have contributed in establishing the preliminary ideas for what is known today as *organisational commitment*.

The attitudinal perspective tends to dominate most commitment research. It was invoked by Homans' (1961) Exchange Theory (ET) ideas and further supported by the research of Porter and his colleagues (e.g., Porter, Steers, Mowday, and Boullian, 1974). The

behavioural approach later evolved from Becker's (1960) work of Side-Bet Theory. It views commitment as behavioural rather than attitudinal. Salancik (1977), for example, argued that behaviour is the base for all variations of commitment. Some other group of researchers (e.g., Buchanan, 1974; Scholl, 1981; Weiner, 1982) argued that commitment represents employees' feelings of obligation toward their organisation. At this stage, the normative approach emerged as a new approach, to which another facet of organisational commitment has been ascribed. More recently, a group of researchers (e.g., Meyer and Allen, 1991; Meyer and Allen, 1984; Reichers, 1985; O'Reilly and Chatman, 1986; Somers, 1993; Meyer *et al.*, 1998) have contended that employees' commitment does not develop merely through emotional, behavioural, or moral attachment but through the interplay of all of these variables. This latest perspective towards OC puts forward three components, namely; affective commitment (attitudinal approach), continuance commitment (behavioural approach) and normative commitment (normative approach).

In spite of not being included in Figure (2-1), the effects of Japanese management (known as Theory Z) on the development of the OC concept are not disputed. Hodge and Anthony (1991) argued that Japanese management style has taken the human factor and people's involvement in organisational processes (emphasised by the behaviourists) one step further. Hodge and Anthony asserted:

*The essence of this approach [Theory Z] is that **people will work harder and with more of a sense of commitment** if they have job security ... and feel they have a significant part to play in decision-making and group activity. The work groups are organised around large job assignments rather than the monotonous, routine snippets of work that characterised the assembly-line approach of the classical school (p. 24, Researcher's emphasis added).*

Nonetheless, for the assumed impact it has on enhancing employees' commitment, many Western organisations (e.g., General Motors) are implementing Japanese management methods in order to survive, compete and lead in today's competitive environment. In general, "there are three major pillars for this approach, namely, trustfulness, skilfulness, and intimacy" (Suliman, 1995, p. 27). Indeed, there are some important lessons for non-Japanese organisations to learn from Theory (Z) when the target is workforce commitment. However, there are two important factors which to be considered before applying these methods:

- 1- This approach is not a panacea. Therefore, organisations must look for long-run benefits instead of thinking of any payback in the short-run.

2- Organisations must be able to balance, adjust, mix, and/or adapt these methods to their own situations. The Japanese themselves developed these methods through the rational adaptation of others' concepts and methods to their own environment.

To conclude, the OC concept arose and developed in the management literature as a result of the contribution of organisational and behavioural theories. It has emerged as one of the most important concepts in the study of work attitudes and behaviour (Allen and Meyer, 1996; Mathieu and Zajac, 1990; Meyer and Allen, 1991; Morrow, 1993).

2.3.2 THE NATURE AND DEFINITION OF OC

Despite the plethora of research in OC since the 1960s, the issue remains highly controversial. There is no unified or agreed definition of this construct in the management literature, it being defined in different ways by different writers. Webster's English Dictionary (1986) defined the term commitment as an *OBLIGATION* or *PLEDGE* to carry out some actions or policy or to give support to some policy or person. Brown (1996) argued that "this definition of commitment, as a pledge of involvement, should serve as a building block for knowledge of commitment in organisations" (p. 248). Moreover, Dwyer, Schurr and Oh (1987) used the term 'pledge' to define commitment as "an implicit or explicit pledge of relational continuity between exchange partners" (p. 19). Becker (1960) defined it as an obligation towards the organisation as a result of increase in employee's investments (e.g., time, status, pension, ... etc). Put differently, the higher the investment an employee makes in the organisation, the higher is his/her commitment to that organisation. Homans (1961) regarded it as a give and take agreement, or a two-way deal. According to Homans, employees offer commitment to the organisation in receipt (or anticipated receipt) of benefits they gain from being members in that organisation. Kanter (1968), however; defined it as an individual emotional attachment to the organisation. Moreover, O'Reilly and Chatman (1986) viewed OC as an employee's psychological attachment to an organisation. Hodge and Anthony (1991) contended that OC involves a situation in which members of a group offer their abilities and loyalties to the organisation. Allen and Meyer (1996) argued that OC is a psychological link between employees and their organisation that results in less chance for voluntary turnover. In addition, Brewer (1996) argued that understanding OC has always been a problematic issue for managers. She defined OC as employees' willingness to contribute efforts to the co-operative system. Brown (1996) attempted to define OC through asking the following question: "So just what is

organisational commitment? He defined OC as a dedication to and support for an organisation beyond that related to job expectations and rewards. Nevertheless, the most well-known and widely recognised definition of the OC construct was proposed by Porter and his associates (Porter and Smith, 1970; Porter, Steers, Mowday and Boulian, 1974; Mowday *et al.*, 1982). They defined OC as:

The relative strength of an individual's identification with and involvement in a particular organisation ... It can be characterised by at least three factors: (a) a strong belief in and acceptance of the organisation's goals and values; (b) a willingness to exert considerable effort on behalf of the organisation; and (c) a strong desire to maintain membership in the organisation (Mowday et al., 1982, p. 27).

Porter *et al.* (1974) argued that by defining OC in this way they are emphasising the positive features of commitment and overcoming the passive features. According to this view, they developed their well-known commitment scale entitled: the Organisational Commitment Questionnaire (OCQ) in 1974. This commitment and its conceptualisation and measurement, suggested by Porter *et al.* (1974), dominated commitment research across many cultures for more than two decades. The next chapter will explain how it dominates, what has gone wrong with its philosophy, and the problem with the 15-item scale of OCQ.

These are some examples of OC definitions. This shows how OC is a more complex phenomenon than it appear at first sight (Brown, 1996; Iles *et al.*, 1996). In all the previously mentioned studies, OC is used with different names. Terms such as loyalty, identification, involvement and attachment are commonly used in the management literature to refer to the degree of employees' willingness to contribute to the organisation's well being. Despite this variation in OC definitions, the following common ideas among these definitions can be pointed out:

- 1- Organisational commitment is one of the most important dimensions in the modern organisation.
- 2- It is a link between employees and their organisation.
- 3- The majority of researchers view it as a positive and healthy phenomenon.
- 4- Due to the effect it has on employees' behaviour at work, it influences their work outcomes.
- 5- Organisational commitment definitions reflect three general themes, namely:
 - A) Affective attachment to the organisation.
 - B) Perceived costs associated with leaving the organisation.

C) Moral obligation to maintain organisational membership.

This study uses the terms organisational commitment and commitment to refer to the psychological bond that links the employee in Jordanian industrial firms to his/her organisation, and influences him/her to participate and/or produce willingly, based on his/her affective attachment to the organisation, high investments in the organisation and/or moral obligation towards the organisation.

Nevertheless, there is a need to distinguish between OC and other, different, work attitude concepts which frequently appears in the management literature. Iles *et al.* (1990, 1996), for example, suggested that researchers must distinguish between OC and commitment to work in general, job commitment and professional commitment. In the recent management literature, there is considerable attention given to this latter type of commitment, i.e., professional commitment (e.g., Cohen, 1992; Meyer and Allen, 1991; Morrow, 1993; Randall and O'Driscoll, 1997 and Wallace, 1997). Researchers commonly use the terms career, professional and occupational commitment interchangeably, to refer to the employee's affective attachment to his career, profession or occupation (Meyer and Allen, 1993). Sheldon (1971) argued that employees with high professional commitment often appear to be lacking OC. In the same way, employees with low commitment to the profession may pursue high commitment to the organisation. Moreover, Ritzer and Trice (1969) proposed a logical explanation for the existence of professional commitment in an organisation. In their words:

... [Organisational commitment] arises from a realisation by the individual that the occupation has little to which he can commit himself. In order to make his working life meaningful an individual must commit himself to something. If the occupation is weak structurally, the organisation remains the major alternative to which the individual may commit himself (p. 478).

Thus, the scope of OC is broader than job, occupational, professional or career commitment.

According to the recent multidimensional view of OC, its conceptualisation and definition as merely affective attachment, continuing participation because of the perceived cost of leaving, or moral obligation towards the organisation is no longer accurate. The next chapter presents and discusses in depth the ideas of the four approaches of OC which have evolved in the management literature, including the recent multidimensional approach.

2.3.3 THE MEDIATING NATURE OF ORGANISATIONAL COMMITMENT

The majority of commitment studies have treated commitment as independent variable influencing work outcomes such as turnover and absenteeism, or as dependent variable affected by demographic factors and some other antecedent variables, e.g., role conflict and organisational size. However, one of the most important characteristics of commitment is the mediating role that it plays in work organisations (Iverson, McLeod and Erwing, 1996; Mathieu and Zajac, 1990; Morgan and Hunt; 1994; Mowday *et al.*, 1982). For example, Iverson *et al.*, (1996) argued that “the importance of commitment stems from its impact as a key mediating variable in determining organisational outcomes” (p. 36). Despite the wide theoretical agreement on the mediation role of commitment, few studies have attempted to explore the reality of this role, especially as a multidimensional construct. Therefore, to date, the nature of the relationships between commitment on one hand and its antecedents, consequences and correlates on the other hand remain unclear (Suliman and Iles, 1998b). Meyer (1997) reviewed the organisational commitment literature. He suggested four major limitations for the commitment research, namely:

(i) Lack of clarity and consensus concerning the conceptualisation and measurement of commitment, (ii) the theoretical nature of antecedent research, including lack of attention to mediating mechanisms, (iii) the overly narrow focus of outcomes research, with a general lack of attention to potential negative outcomes of more direct relevance to employees, (iv) the use of methods ill-suited to the investigation of causal relations, and (v) the focus in both the antecedent and consequence research on main effects, with a lack of systematic investigation of moderator effects (p. 180, researcher’s emphasis added).

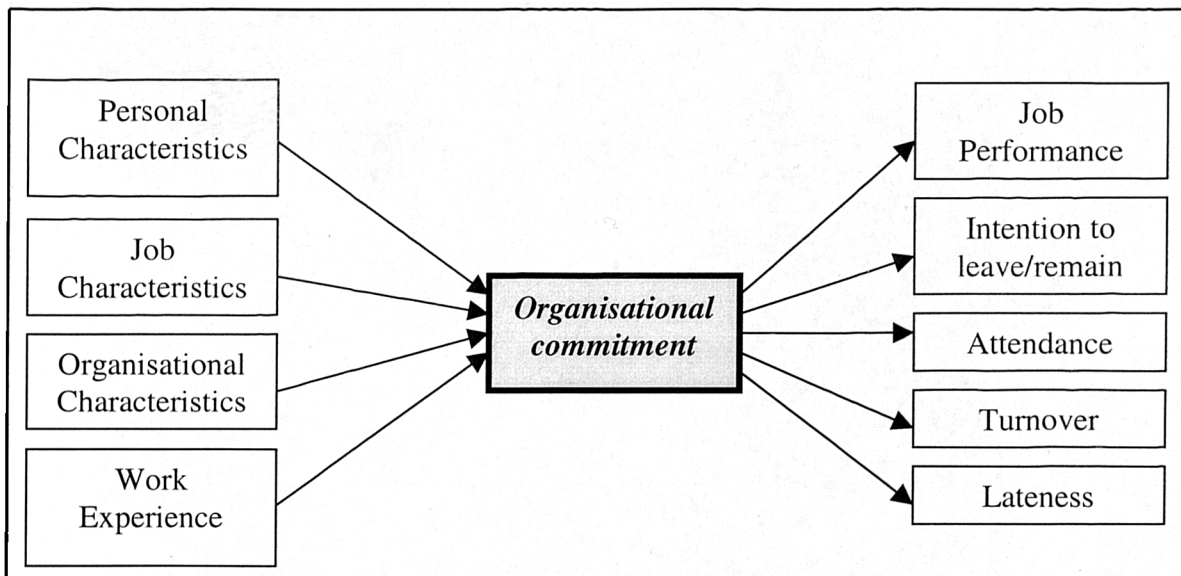
The stress-outcomes relationship is one of the major areas in the management literature where the mediating role of commitment is apparent. Two perspectives have emerged in the literature with respect to the impact of commitment on stress-outcome relationships. The first perspective, which was supported by Mathieu and Zajac’s (1990) study, holds that employees who show high commitment towards their organisation feel the effect of stress more than do less committed employees. This type of employees “... suffer more from organisational hardship, because of their investment in, and identification with the organisation” (Leong, Furnham and Cooper, 1996, p. 1347). Contrary to this view, the second perspective posits that commitment protects employees from the negative aspects of stress, because it enables them to attach direction and meaning to their work.

Based on these two perspectives, researchers have attempted to explore commitment’s role in mediating stress-outcome relationships. Begley and Czajka (1993) found that stress

increases employees' displeasure only when their commitment is low. Accordingly, they concluded, "organisations may benefit from creating situations that enable their employees to feel committed" (p. 556). Leong *et al.*'s (1996) study failed to establish any substantial mediating effect of commitment on stress-outcome relationships. They suggested that the impact of commitment on the outcome variables seems to be a direct effect. Unlike previous studies, King and Sethi (1997) adopted a multidimensional measurement of commitment to examine the mediating nature of commitment. The study results confirmed the mediating role of commitment. More specifically, affective commitment was found to mediate the relationship between stressors and burnout; however, continuance commitment's mediating role was not supported. King and Sethi concluded that affective commitment shields employees from the negative consequences of stress.

On the other hand, the goal-performance relationship is also one of the most interesting issues in the management literature where commitment also plays a considerable role as a mediating construct. Many studies (e.g., Tubbs and Dahl, 1991; Stone and Hollenbeck, 1989 and Harrison and Liska, 1994) have attempted to explore commitment's impact on the goal-performance relationship. It is generally assumed that committed employees are more prepared to achieve organisational goals than non-committed employees. Furthermore, the antecedents and consequences of commitment are inevitable issues in commitment research. Indeed, commitment studies often revolve around these two topics. Although many studies have investigated commitment's role in mediating the relationships between its antecedent and consequence variables, Mowday *et al.* (1982) and Mathieu and Zajac (1990) are the most widely recognised studies in this field. Mowday *et al.*'s meta-analysis defined four groups of antecedents and five groups of consequences; however, Mathieu and Zajac's meta-analysis of the antecedents and consequences of commitment reported five antecedents and only one outcome. The results of the both studies are summarised in figure (2-2) below.

Figure 2-2: The antecedents and consequences of organisational commitment.



As can be seen from figure (2-2), commitment mediates antecedent-consequence relationships. In other words, the antecedents predict commitment, and commitment in turn predicts the consequences. As mentioned earlier, the relationships between commitment and its antecedents and consequences are not well explored in the management literature (Meyer, 1997). However, meta-analysis of the few studies conducted in the antecedent field reveals that commitment is more strongly related to work environment factors than to the demographic variables. According to Meyer (1997, p. 179), “the results [meta-analytic investigations] of analysis involving antecedent variables ... suggest that commitment is more strongly related to characteristics of the job and work situation than to personal or structural characteristics”.

Apart from stress-outcomes, goal-performance and antecedent-consequence relationships, commitment has also been used as a mediating variable in various management issues. For example, Ferris (1981) examined commitment’s role in mediating the relationships between some antecedent variables and employee performance. Commitment was found to mediate the relationship between work related characteristics and employee performance. Schaubrock and Ganster (1991) investigated affective commitment’s role in mediating the relationship between intrinsic satisfaction and voluntarism. The results revealed that “affective commitment was positively related to voluntarism and it appeared to explain the relationship between intrinsic satisfaction and voluntarism” (p. 578). Arguing that ‘the key mediating construct’ view that they proposed is “a step that no theoretical or empirical work has undertaken” (p. 1570), Morgan and Hunt (1994) studied organisational commitment’s effect on the relationships between

constituency-specific commitments (e.g., managers and work) and work outcomes (e.g., absenteeism). The results confirmed the hypothesised mediating role of global commitment. In an attempt to explain why individuals sometimes feel strongly committed to completely unsatisfying relationship, Rusbult and Martz (1995) examined commitment's role in mediating satisfaction, quality of alternative (s) and investment size relationships with stay/leave decision. They suggested that "decisions to remain in or to end a relationship are most directly mediated by feelings of commitment" (p. 559). Rusbult and Martz found that feelings of commitment completely mediated any link between satisfaction and stay/leave decisions; largely but not wholly mediated the investment-stay/leave relationship and partially mediated the alternative (s) quality-stay/leave relationship. It is worth mentioning that the results of this study are in line with the basic ideas of continuance commitment that were discussed earlier. Some individuals are committed to maintain unsatisfying relationships, because the magnitude of investments and/or the quality or the numbers of alternatives are poor or limited.

Vandewalle, Dyne and Kostova (1995) found that commitment fully mediated the relationship between psychological ownership and extra-role behaviour. Davy, Kinicki and Scheck's (1997) study revealed that commitment played a partial role in mediating the relationships between job security and satisfaction and withdrawal cognitions. Tompson and Werner (1997) examined commitment's role in mediating the relationship between inter-role conflict and organisational citizenship behaviour (OCB). They found that commitment fully mediated the relationship between role conflict and one of the OCB dimensions. Allen and Rush (1998) investigated commitment's role in mediating the relationship between OCB and performance judgements. They found that "... perceived affective commitment mediated the relationship between OCB and overall evaluation" (p. 247).

To conclude, there is wide theoretical agreement that commitment plays an important mediating role in work organisations. However, few studies have attempted to empirically investigate this role. As mentioned earlier, most of these few studies have applied unidimensional scales to measure commitment, which is now widely viewed as a multidimensional construct.

2.3.4. THE IMPORTANCE OF ORGANISATIONAL COMMITMENT

Despite the inconsistent findings of commitment research, and the variation in its conceptualisation, there is a general agreement among researchers that commitment is an important organisational concept. About 40 years ago, Lawrence's (1958) study identified the necessity and rationale for research in this area when he asserted, "ideally, we would want one sentiment to be dominant in all employees from top to bottom, namely a complete loyalty to the organisational purpose" (p. 208, cited in Randall, 1987). Mowday *et al.* (1982) have argued that commitment is important for employees, organisations, and societies. They stated that "there are many instances where organisations need individual members, especially those in critical positions, to perform above and beyond the call of duty for the benefit of the organisation" (p. 15). Mowday *et al.* contended that committed employees are likely to perform above and beyond the call of duty, and are likely to put forth much effort to achieve the organisational goals. Likewise, Mathieu and Zajac (1990) argued that committed employees are likely to engage in extra role behaviours, such as creativity and innovation. They argued that commitment is not only important for work organisations, but "... a society as a whole tends to benefit from employees' organisational commitment in terms of lower rates of job movement and perhaps higher national productivity or work quality or both" (p. 171). Similarly, Meyer and Allen (1997) proposed that having a committed workforce would clearly appear to be an advantage, and that the individual benefits from being committed to his/her organisation. Thus there is a general agreement among researchers that commitment is a positive organisational phenomenon, and that it has a positive influence on employees' behaviour and work outcomes. The most important features of commitment cited by researchers are:

- 1) It improves employees' performance. Committed employees are assumed to be motivated to work hard and put forth much effort than the less committed employees.
- 2) It fosters better superior-subordinate relationships.
- 3) It enhances organisational development, growth and survival.
- 4) It improves work environment.
- 5) It negatively influences withdrawal behaviour, such as turnover, lateness and absenteeism.
- 6) It has positive impacts on employees' readiness to innovate and create.

On the other hand, some researchers argue that commitment is a negative organisational construct, because the 'blind' commitment to an organisation can lead employees to accept

the status quo, even if it timely means that the company loses its ability to innovate and adapt to change (Randall, 1987). More recently, a group of researchers (e.g., Baruch, 1998 and Carson, Carson, Roe, Birkenmeier and Philips 1999) have started doubting the suitability of commitment to today's fast changing environment, especially in the Western context. They argue that employees can no longer afford to be committed to their employers in this era of downsizing, re-structuring and re-engineering. They suggest that some other organisational concepts, such as procedural and distributive justice, trust and communication may predict employees' behaviour and work outcomes more accurately than commitment. However, the majority of researchers, mentioned earlier, suggest that in this era of diverse work teams and environments, "understanding commitment and how it develops is as important now as it ever was" (Meyer and Allen, 1997, p. 6). In addition, it is commitment that shields employees from the stress of downsizing and other stressing features of work environment (King and Sethi, 1997). Arguing that the study of commitment is not outdated, Meyer and Allen (1997) suggested three reasons for the continuous viability of this construct. Firstly, organisations are not disappearing; they must maintain a core of people who are the organisation. Secondly, organisations that contract out work to other firms or people will still be concerned about the commitment of these others. Lastly, commitment develops naturally, and people feel that they need to be committed to something. Thus, "if they become less committed to organisations, employees may channel their commitment in other directions" (p. 5). Furthermore, some researchers argue that one of the year 2000 key issues is OC. According to ADL Associates (1998) one of the most critical issues for the 21st century is building employees' commitment in diverse work teams and environments. In their recent book entitled 'Commitment: if you build it ... RESULTS will come', ADL Associates argue that:

Today's workplace is enveloped by the fear of downsizing, loss of job security, overwhelming change in technology and the stress of having to do more with less ... [Therefore] managers [should] establish the type of caring, spirited workplace that will ignite employee commitment (1998, p. 6).

Moreover, a recent study by the Small Business Organisations (SBO), which is a state sponsored organisation in USA, argues that organisations should build and maintain OC in order to survive and succeed in the year 2000. In their words:

Whether you are a one or two-man organisation or larger-business you need to look at the year 2000 problem as a business issue rather than a technology issue. While you will need technical help to fully understand

and fix the problem - it is the business problem that you cannot ignore. Commitment from everyone in your organisation insures full buy-in for the task at hand (www.sba.gov, researchers' emphasis added).

Likewise, Schuster (1998) argues that "in an era in which organisations frequently confront the necessity of massive change, committed employees can be an extremely valuable organisational resource in facilitating rapid adaptation to changing conditions" (p. 51). Hence, the majority of researchers suggest that commitment is important for the success of the organisation, the development of individuals and the wellbeing of society.

2.4 WORK PERFORMANCE

The performance of employees is a cornerstone in developing the effectiveness and success of any organisation. Therefore, there is a growing interest in developing employees' performance through continuous training and development programmes. In recent years, performance management has come to the fore as organisations seek constantly to optimise their human resources in the face of growing competitive pressures. Unlike work environment and commitment, there is a general agreement among researchers that it is an important organisational concept. Therefore, there is a general agreement among researchers on its definition. For example, McEyo and Cascio (1989) defined it as an "accomplishment of assigned tasks" (p. 309). To energise employee motivation, McEyo and Cascio suggested that the definition of performance includes a description of what is expected of employees, plus the continuous orientation of employees toward effective performance. They argued that performance description includes three elements, namely goals, measures, and assessment. Furthermore, Campbell and McCloy, Oppler and Sager (1993), contended that performance is not the consequence or result of action, but that it is the action itself. They define performance as "those actions or behaviours that are relevant to the organisation's goals and that can be scaled (measured) in terms of each individual's proficiency (that is, level of contribution)" (p. 40). Although they are distinct from the performance concept, *effectiveness* and *productivity* variables are sometimes used in the management literature as synonymous with performance. *Effectiveness* refers to the evaluation of the outcomes of performance. It is the result of the aggregate performance of all employees at all management levels. According to Campbell *et al.* (1993, p. 41), "...rewarding or punishing individuals on the basis of effectiveness may be unfair and counterproductive". Employees should be rewarded or punished based on performance not

effectiveness, because the organisation cannot know who is performing better and who is performing less well. When the system of reward and punishment is based on effectiveness, high performing employees will be frustrated because the organisation equates them and their poorer performing counterparts. This frustration may negatively influence their commitment and performance, and thus organisational effectiveness. On the other hand, the lower performing employees will be happy at the expense of the high performing employees, because they are sharing rewards or punishments with them. This equation between low and high performing employees may motivate the poor performers to sustain the same line of poor activity. In this context, some researchers argue that performance-related-pay (PRP) schemes of reward are important to improve employees' performance and organisational success. PRP schemes call for rewarding individual employees on the basis of their performance. PRP can be defined as "a method of payment where an individual employee receives increases in pay based wholly or partly on the regular and systematic assessment of job performance" (Advisory, Conciliation and Arbitration Services- ACAS, 1996, p. 8). For example, Stern and Stewart (1993) argued that "long-term, pay-for-performance plans must reconcile three conflicting and possibly irreconcilable objectives: retaining key executives, creating strong incentives for performance and controlling excessive costs" (p. 84). Similarly, Booth and Frank (1999) suggested that "jobs with performance-related (PRP) pay attract workers of higher ability and induce workers to provide greater effort" (p. 447). Nonetheless, the debate over the advantage and disadvantage of PRP is far from over. *Productivity* is the ratio of output (effectiveness) to the cost of achieving that level of effectiveness (input). The term productivity is mainly used as a relative index of how well a group, organisation, industry or economy is functioning.

On the other hand, there are many situational factors that must be taken into consideration when looking for high performing employees. Kane (1993) argued that "the importance of environmental influences of work situations as determinants in individual performance has been overlooked by theorists" (p. 84). In fact, not only do theorists often not consider the work environment effect on the employees' performance, even organisations, especially in the Third World do not consider it as an important factor. Dobbins, Cardy, Fecteau, and Miller (1993) argued that these situational constraints have the potential to exert a significant influence on the performance evaluation process, not only

the performance of employees. Mabey and Salaman (1995) argued that performance evaluation consist of five main steps:

- (1) Setting performance.
- (2) Measuring outcome.
- (3) Feedback of results.
- (4) Rewards linked to outcome.
- (5) Amendments to objectives and activities.

In the third step of this evaluation cycle, employees must be afforded the opportunity to point out the factors that determine their performance's strength or weakness for future development or avoidance. The employee is the best one to know about these factors, and this could be the reason for the adoption of the self-rating system recently by some organisations. Farh, Dobbins, and Cheng (1991) argued that "self-ratings have the potential to increase the effectiveness of appraisal systems, resulting in higher levels of appraisal satisfaction and perceptions of procedural justice and fairness" (p. 129). On the other hand, some other researchers argue that the performance appraisal is an integral part of the managerial role; therefore, it should be undertaken by the person with immediate management accountability (Anderson, 1993). Thus, who should evaluate performance? How are self-and supervisor rated performance related? And how many dimensions are there in work performance? All these issues will be addressed in detail in the next chapter. However, in the following section, the relationships of performance with both work environment and commitment will be examined.

2.5 THE RELATIONSHIPS BETWEEN PWE, OC AND PERFORMANCE IN THE MANAGEMENT LITERATURE.

Numerous studies have been conducted on work environment; commitment and performance as separate concepts, or in relation with some other organisational concepts; but little has been done to investigate the relationships between these three constructs. Nonetheless, there is theoretical agreement among researchers that these three variables are related to each other, and that their interplay has some effect on employees' behaviour and work outcomes. Steers (1977) for example asserted that:

Individuals come to an organisation with certain needs, desires, skills and so forth, and expect to find a work environment where they can utilise their abilities and satisfy many of their basic needs. When the organisation provides such a vehicle ... the likelihood of increasing

commitment [and performance] is ... enhanced (p. 47, researcher's emphasis added).

Likewise, Ostroff (1993) suggested that “congruence between [work environment] and individual’s personal orientations would lead to higher satisfaction, commitment, involvement in work, adjustment to work, and performance” (p. 56).

Considering work environment as an independent variable, Pritchard and Karasick (1973) examined its effect on managerial job performance. The results of surveying 76 managers revealed that there was small positive correlation between two dimensions of work environment, namely level of rewards and achievement, and job performance. They suggested that the causal link between work environment and outcome variables should be investigated, and that “... individual’s performance ... can influence his perceptions of climate or even the climate itself” (p. 143).

Using work environment as a mediating variable, Lawler, Hall and Oldham (1974) examined its impact on organisational performance. The mediation hypothesis was not supported, but a positive relationship between work environment and performance was reported. Surveying 149 employees from various business sectors, Welsh and LaVan (1981) investigated the relationship between work environment and employees’ commitment. The study results revealed that “... all of the climate variables [i.e. dimensions] were significantly and positively related to organisational commitment” (p. 1086).

Angle and Perry (1981) studied commitment and organisational effectiveness in 24 bus service organisations. They found that organisational commitment and its two factors (commitment to stay and value commitment) were negatively and significantly related to separation rate, as one of the performance facets. However, only organisational and value commitments were significantly and negatively related to “tardiness”. Angle and Perry concluded:

The overall pattern of relationship between various performance indicators and the two commitment sub-scales, though inconclusive, suggests follow-up research. The relationship between commitment and behaviour very likely depends on the form that commitment takes. Rather than assuming a simplistic relationship between commitment and positive performance outcomes, organisational researchers will have to begin to deal with more complex factors (p. 12).

Joyce and Slocum (1982) tested the relationship between work environment and performance by surveying 178 first-line foremen from three plants. Using work

environment as an independent variable and performance as a dependent variable, Joyce and Slocum found that a large amount of variance in employees' job performance was explained by perceived work environment. Mowday *et al.*'s (1982) meta-analysis study examined the commitment-performance relationship. Commitment was found to be weakly related to both objective and subjective ratings of employees' performance (.14 and .05 respectively). They concluded "the least encouraging finding that has emerged from studies of commitment is a rather weak relationship between commitment and job performance" (p. 35).

DeCotter and Summers (1987) explored the attitudinal model of commitment by surveying 368 managerial employees of a restaurant. The results showed that work environment was predictive of employees' commitment. In addition, organisational commitment was found to be predictive of individual motivation and objective job performance, but not of subjective job performance. Jackofsky and Slocum (1988) studied perceived work environment's relationships with various work outcomes, including job performance in 63 hotels. The results discovered that none of the seven facets of work environment were related to job performance.

Meyer, Paunonen, Gellatly, Goffin and Jackson (1989) investigated the relationship between the performance of first-level managers in a large food service firm and their commitment. Affective commitment correlated positively and continuance commitment correlated negatively with employee performance. The results were interpreted as distinguishing between commitment based on desire and commitment based on need. Meyer *et al.* called for directing organisational efforts to foster affective commitment in employees.

Tziner and Falbe (1990) explored work attitude and performance relationships in four plants of a large industrial company in Israel. The study results revealed a significant and positive relationship between commitment and employee job performance.

In a meta-analytic study to investigate the antecedents, correlates and consequences of organisational commitment, Mathieu and Zajac (1990) found that "commitment has relatively little direct influence on performance in most instances" (p. 184). Both affective and continuance commitments were positively related to performance; however, both correlations were non-significant.

Brooks and Seers (1991) surveyed 1536 personnel, officers and civilians in USA. The results revealed a strong, positive and significant relationship between perceived work

environment and organisational commitment. Motivated by March and Simon's (1958) argument that "decisions by workers to participate in an organisation reflect different considerations from decisions to produce" (p. 83), Meyer and Schoorman (1992) attempted to explore participation and production factors in a financial institution. Value commitment (production factor) was found to be positively and significantly related to employee performance; however, continuance commitment (participation factor) was found to be negatively, yet non-significantly, related to performance. They concluded that, "... individuals who are value committed may indicate that they intend to stay in an organisation, but if they are continuance-committed, will leave when the opportunity presents itself" (p. 681).

Guzley (1992) tested the role of perceived work environment in predicting commitment to the organisation. He surveyed 237 employees from a service organisation. The "results of multiple regression analysis indicated that the independent variables (organisational clarity, superior-subordinate communication, and participation) accounted for 41% of the variance in commitment ($R = .647$, adjusted $R^2 = .411$)" (p. 393). Guzley concluded that the more favourable the perceived work environment, the higher the level of organisational commitment. Arguing that organisational "commitment is an outcome of better organisational conditions" (p. 37), Mishra (1992) examined the relationship between perceived work environment and commitment in the Indian context. The study sample consisted of 200 front line and middle level executives from two industrial companies. Mishra found that employees' perceptions of work environment tended to influence their commitment levels. More specifically, the nine work environment dimensions used in the study were positively and significantly related to commitment, and explained 37% of the variance in this variable. Mishra suggested that the "feeling of commitment is a value oriented phenomenon; *Good* pay or promotion alone cannot bring it" (p. 40, Mishra's emphasis).

Luthans, Wahl and Steinhans (1993) surveyed 19 banks and 85 tellers to study the relationship between supportive work environment and commitment. Luthans *et al.* found some differences between the various dimensions of supportive environment and organisational commitment. Generally, the quantitative and qualitative analysis of the bank tellers revealed a positive and significant relationship between supportive work environment and commitment. Leong, Randall and Cote (1994) surveyed a sample of salespeople to explore the commitment-performance relationship in 16 Singaporean life

insurance companies. Results “revealed the influence of organisational commitment was mediated by working hard, and to a lesser extent, working smart” (p. 57). However, the researchers did not test the mediating role of working hard and smart, nor did they examine the direct relationship between commitment and performance.

Motivated by Meyer *et al.*'s suggestion that “... it is the nature of the commitment that counts” (p. 152), Angle and Lawson (1994) tried to explore the nature of the commitment-performance relationship from a different perspective by surveying 778 employees from an industrial company in the United States (U.S.). They found that:

Neither affective commitment nor continuance commitment was related to either of the global performance measures. Affective commitment was related to two of the four performance facets ... This pattern of relationship did not hold for continuance commitment, which was unrelated to any of the facet-specific performance measures (p. 1544).

Angle and Lawson suggested that the strength of the relationship between performance and commitment vary for different facets of performance as well as for different components of commitment. They concluded that affective commitment makes an employee want to be a better problem solver, and that it is “the nature of the performance that counts” (p. 1549).

Assuming that “committed workers perform better because they have higher levels of effort and motivation” (p. 238), Kalleberg and Marsden (1995) investigated the relationship between organisational commitment and employee performance in the U.S. labour force. The results revealed that neither affective nor continuance commitment were significantly ($< .05$) related to any of the two facets of performance. However, the effort variable, which was conceptualised as one of the commitment's dimensions, was found to be significantly related to the both factors of performance.

Shore, Barksdale and Shore (1995) explored managerial perceptions (231 managers) of employee (339 employees) commitment to the organisation. They found that “job performance was not associated with either manager-rated affective or continuance commitment” (p. 1606). Stressing Barnard's (1938, p. 83) conceptualisation of organisational commitment (the “willingness of a person to contribute efforts to the co-operative system”), Brewer (1996) studied commitment and work environment in a private bus industry (179 employees). The study results revealed that:

Organisational commitment was significantly correlated ($p < 0.001$) with all factors, suggesting the importance of managerial strategy, satisfaction with work context and challenging work as important in shaping employee identification, involvement and loyalty (p. 30).

Brewer concluded that the way people feel about their jobs is greatly influenced by work environment factors.

Tang and Baldwin (1996) applied two measures of commitment to investigate its relationship with performance, namely: Porter's *et al.* (1974) scale (OCQ, 15-items) and the Index of Organisational Commitment (IOC, 4-items) measure (Herbiniack & Alutto, 1972). They surveyed 200 employees from a medical organisation in the U.S.. Surprisingly, the study findings revealed that performance was significantly and positively related to OCQ ($r = .47, p < .05$) and negatively to IOC ($r = -.35, p < .05$). Since the focus of the study was the relationship between distributive and procedural justice and commitment and satisfaction, the researchers provided no explanation for these contradictory results.

Arguing that "the time has now come to analyse organisational commitment in other countries [non-western] and make cross-cultural comparisons" (p. 979), Sommer, Bae and Luthans (1996) examined commitment's relationship with perceived work environment in the Korean context. The study sample was composed of 2150 Korean employees. They found that "... perceptions of the [work environment] of these Korean employees was directly related [$r = .69, p < .001$] to their commitment. Korean employees and managers who had more positive climate perceptions had higher levels of organisational commitment" (p. 986). Sommer *et al.* suggested that a positive climate is related to higher levels of commitment, and that commitment increases as employees feel more comfortable in the organisation.

Suggesting that committed employees are likely to prioritise the interests of the organisation and to pursue innovative and profitable solutions on its behalf, Fogarty (1996) studied work environment and commitment in a large international accounting firm. The analysis of 460 responses revealed that work environment factors were significant predictors of employee commitment. McCue and Wright (1996) examined the effect of workplace experience on employees' commitment in an accounting company (328 subjects). They found a negative, yet non-significant, relationship between perceived work environment and commitment.

Suggesting that "although overall commitment to organisations appears to be largely unrelated to job performance, it is possible that there is a relationship between commitment as a multidimensional phenomenon and performance" (p. 465), Becker, Billings, Eveleth and Gilbert (1996) examined the foci and bases of employee

commitment and its implications for job performance. They found that job performance was weakly, yet non-significantly, related to organisational, affective and normative commitments.

Motivated by the recent multidimensional approach to commitment, Randall and O'Driscoll (1997) attempted to explore affective and continuance commitments' relationships with some organisational constructs including job performance. The study sample was composed of 1491 employee from two dairy co-operatives. Results revealed that affective commitment was significantly and positively related to affective commitment; however, continuance commitment was not related. They concluded that continuance committed employees:

... May adopt a global, negative attitude toward the organisation and its various facets, ... [and that] if, as is likely, the current trend of corporate downsizing continues ... and human capital remains abundant, managers will need to cope with numerous performance challenges from increasing ranks of calculatively committed workers (p. 615).

Suggesting that 'ignoring commitment is costly', Benkhoff (1997a) attempted to establish the missing link between financial performance and commitment by incorporating different measures for both variables. Forty-one banks and 340 employees were co-opted in the study. Results showed that "... employee commitment is significantly related to the financial success of bank branches" (p. 701). Benkhoff concluded, "... a new approach to measuring commitment can bring out the importance of commitment for business success. Even after 35 years of frustrating results, commitment still promises to be an exciting research issue" (p. 720).

Orpen (1997) surveyed 87 employees to examine the commitment-performance relationship in an industrial company. Commitment was found to be positively, yet non-significantly, related to employee job performance. Keller (1997) tested the commitment-job performance relationship in the U.S. A sample of 532 scientists and engineers from four companies were surveyed. No relationship was found between the two variables.

Caruana, Ewing and Ramaseshan (1997) investigated the relationship between commitment and performance in the Australian public sector (502 subjects). They found that affective commitment was positively and significantly related to performance; however, continuance and normative commitments were not significantly related.

Arguing that "studies of the commitment-performance relationship that are available have been hampered by a limited conceptual framework" (p. 621), Somers and Birnbaum

(1998) examined the commitment-performance relationship by surveying a sample (109) of hospital employees. Neither affective commitment nor continuance commitment was found to be significantly related to job performance, regardless of the dimension of performance considered. Gupta, Prinzing and Messerschmidt (1998) studied the role of organisational commitment in advanced manufacturing technology. The results of surveying 101 employees showed that commitment significantly explained much of the variance ($R^2 = .61$) in employee performance.

Allen and Rush (1998) surveyed 80 managers and 148 employees of an industrial company in the U.S. to test the impact of commitment on employee job performance. They found that commitment has a significant and positive impact on employees' performance. Levy and Williams (1998) conducted two studies to examine the commitment-performance relationship in some banking institutions (62 subjects). In the first study, commitment was found to be positively and significantly related to performance; however, it was found to be negatively, yet non-significantly, related to performance in the second study.

Arguing that "the empirical relationship between OC and employee performance has been weaker than the theoretical relationship" (p. 372), Slocombe and Dougherty (1998) explored effect of commitment on employee behaviour. Results of surveying 414 graduates of a business school revealed a significant and positive relationship between commitment and performance. Randall, Cropanzano, Bormann and Birjulin (1999) surveyed 128 employees from three industrial firms to examine the relationships between commitment and its facets and employee job performance. Affective commitment was found to be positively and significantly related to performance; however, continuance commitment was not significantly related.

As far as Jordan and other Arab countries are concerned, there is a theoretical belief that work environment, commitment and performance are important issues for work organisations, and that:

[Organisational commitment] improves the trust between employees, managers, owners and other concerned parties of any organisation. ... Therefore, it fosters better superior-subordinate relationships and improves organisational climate [and employees' performance]. Stronger and more generalisable commitment may enhance development, growth and survival (Awamleh, 1996, p. 65).

Nonetheless, no study, to the best of the researcher's knowledge, has empirically examined the nature, direction and significance of the relationships between these three constructs,

i.e., work environment, commitment and performance. In addition, few studies have examined the work environment-performance and commitment-performance relationships in the Arabic context.

Al-Qattan (1987) examined the relationship between commitment and performance in Saudi Arabia. The study sample included 270 Asian, Arabian (non-Saudi), Saudi nationals and Western employees working in Saudi organisations. The results revealed a positive and significant relationship between commitment and performance. Moreover, Arabian and Asian workers showed greater commitment than did Western and Saudi workers.

Al-shammari (1990) administered a questionnaire containing eleven factors of work environment to study its relationship with the financial performance of some industrial organisations in Jordan. The study sample composed of 400 employees from the three managerial levels (bottom, middle and top). The study failed to establish a significant link between these two constructs. Nevertheless, Al-shammari conducted another study in 1994 to examine the work environment-financial performance relationship. Unfortunately, the study results revealed similar findings to those found in the 1990 study. The researcher suggested three possible explanations for the failure to establish a positive climate-financial performance link. In his words:

(1) The concept of [work environment] is not positively bound to financial measures of organisational performance only in the context of Jordanian manufacturing companies. (2) Some other climate and performance measures (not included in the study) may exhibit positive and significant relationships. (3) Some other uncontrollable influences on the climate-performance relationship linkage were not accounted for (p. 56).

Awamleh (1996) studied organisational commitment in Jordanian civil service organisations. The study sample composed of 100 managers from 24 ministries and nine central departments. The study results revealed that:

*Respondents have given a relatively high assessment of seven elements **with potential for improving managers' commitment** in the civil service in Jordan. These factors include motivation, education, development, equitable standards **and improving organisational climate**, security and stability. Means for these elements ranged between 3.54-3.94 on the 5-point scales (p. 72, Researcher's emphasis added).*

Awamleh suggested that "work conditions strongly affect work commitment levels among many different groups of people" (p. 69).

Yousef (1997) studied satisfaction, job security, organisational commitment and job performance in the United Arab Emirates. He surveyed 447 employees from various organisations, and found "... a positive correlation, although not very strong, between satisfaction with job security and organisational commitment, as well as between satisfaction with job security and performance" (p. 192). Unfortunately, the researcher did not investigate the direct relationship between commitment and performance.

Suliman and Iles (1998b) surveyed 115 employees to examine the commitment-performance relationship in three Jordanian industries. They found significant and positive relationships between organisational, affective, normative and continuance commitments on one hand, and employees' performance on the other hand. The results also revealed that organisational commitment's relationship with performance was stronger than any one of the three dimensions' relationships. According to this result they concluded:

Drawing on Meyer et al.'s (1989) study, Angle and Lawson (1994), for example, found that neither affective nor continuance commitment was related to an overall performance measure. Therefore they proposed that it is not only the nature of commitment that counts, but also the nature of the performance. We would agree with both suggestions, but would also add that the overall commitment and performance count more. This result implies that the employee who is affectively attached to his or her organisation, values his or her investments in it, and feels a moral obligation to maintain membership, will show higher performance than one who is merely affectively, continuance or normatively committed. Therefore, organisations may gain more by attaching employees, increasing their investments, and making them obliged to fulfil their goals (p. 14).

Hence, it can be concluded that the issues of work environment, commitment and performance and their relationships with each other, as well as with other organisational concepts remain unexplored in the Arabic context. Considering the previous presentation of both Western and non-western studies' results, some important issues can be discussed.

Firstly, very few studies have examined work environment's role in influencing employees' commitment and performance, as well as commitment's impact on performance. In the light of current developments in the management literature, the results of most, if not all, of these few studies are less reliable. Three reasons can be given for the weaknesses of these studies:

(1) Most of these studies have measured work environment using some well-known scales, such as Litwin and Stringer (1968) and Payne and Pheysey (1971). The problem with these scales is that they were primarily developed to examine the work environments of the

1960s and 1970s, which were more stable, homogeneous and less threatening than the current work environment. Although the traditional work environment factors used in these scales (e.g., task characteristics) are still important, some other recent factors, such as procedural justice and innovation are viewed as more important in today's workplace, because:

Factors such as increased competition, changes in the regulatory environment, the impact of technology, and shifts in customer expectations have created a turbulent business environment in which the ability to continuously adapt to change is critical for success (Hoopes, 1999, p. 90).

The modern organisations' processes of adaptation to change have introduced into the recent work environment some new concepts, which were not well known in the 1960s and 1970s, for example, re-engineering, delaying, downsizing and corporate restructuring are common features of recent workplace, which have significant impacts on employees' behaviour and work outcomes.

(2) Most of Western and non-western studies have conceptualised organisational commitment as a unidimensional concept, rather than a multifaceted construct. Now there is a general agreement that this unidimensional view of commitment was the major problem in inconsistent findings produced by commitment studies, and that Porter *et al.*'s (1974) scale and definition of commitment (which dominated commitment studies for more than two decades) is not reliable scale (e.g., Benkhoff, 1997a, 1997b; Meyer and Allen, 1996; Lydka, 1994 and Suliman and Iles, 1998b). The problem associated with the application of the unidimensional approach, and Porter *et al.*'s scale, will be discussed in detail in the next chapter.

(3) As can be seen from the previous discussion of studies, most analyses in Western and non-western contexts have conceptualised performance as a unidimensional concept rather than as a multidimensional variable. More specifically, most of these studies have examined employee job performance which is now viewed as one of the factors in work performance (e.g., Farh *et al.*, 1991, Angle and Lawson, 1994, Yu and Murphy, 1993). Some other performance factors, such as readiness to innovate and work enthusiasm which were disregarded in past studies are vital factors in the development and growth of work organisations. In this context, Baghai, Bradshaw, Coley and White (1999) argued that:

The ability to create a continuous pipeline of new businesses representing new sources of profit is what distinguishes corporations that continue to grow. These exemplary performers can innovate their core businesses and

build new ones at the same time. Unfortunately, companies boasting pipelines are the exception. Building and managing a continuous pipeline of business creation is the central challenge of sustained growth. A vital factor in meeting this challenge is creating performance metrics that reflects the growth horizon of each business segment. If a company relies on one management system across its entire organisation, it is making the tacit assumption that all parts of the organisation have similar management needs (p. 16).

The multidimensionality of performance will also be discussed in some detail in later chapters (three and seven).

Secondly, some studies (e.g., Shore *et al.*, 1995) which examined the commitment-performance relationship used supervisor ratings of commitment to measure employees' commitment. Since commitment is directly related to employees' feelings and attitudes, it will be difficult for supervisors to assess it. Thus, using supervisor-ratings to measure employees' commitment may have played a part in the inconsistent findings reported in the management literature.

Lastly, most western and non-western studies (e.g., Al-shammari, 1990, 1994) which have examined the role of work environment in influencing performance used financial measures (e.g., sales, profit and assets) to test organisational performance. More recently, this tendency to link work environment and financial performance has been criticised by some scholars. For example, Schneider (1990) suggested that work environment is more related to employees' behaviour and work outcomes, and that the usefulness of the concept is not to be found in terms of sales growth, growth of profits or any other indicator of the financial performance, but in the understanding it yields about the organisation as a human system. Sparrow and Gaston (1996) confirmed Schneider's argument, and suggested that work environments "... causal link to performance must be inferred on the basis of motivation theories that suggest work motivation ... generates salient organisational behaviours" (p. 680). Hence, work environment is expected to be more related to employees' performance rather than financial performance.

To summarise, there is a theoretical agreement that perceived work environment plays an important role in affecting employees' commitment and performance, and that commitment influences employees' performance. Few studies have attempted to explore these relationships. Moreover, the results of these studies have been hampered by using improper measures and by the misconceptualisation of constructs. This theoretical belief, which was partially supported by the findings of some studies, can be empirically investigated if the

right measures and the right conceptualisations are used. For example, there is a general agreement among researchers that work environment, commitment and performance are multidimensional concepts. Therefore, researchers need to overcome the unidimensional view when examining these constructs' relationships. Only then one can expect encouraging results, and confirm or disconfirm the assumed theoretical relationships between work environment, commitment and performance.

2.6. Concluding Remarks

This chapter has presented and discussed the literature on work environment, commitment and performance. The first part of the chapter examined the definition, approaches and importance of the work environment concept. Moreover, the relationships of this concept with other overlapping constructs in the management literature were also discussed.

The second part looked at the concept of commitment, its nature, development, definition and importance. Furthermore, the mediating nature of this construct was also discussed in this chapter. The third part highlighted the importance of employees' performance for work organisations, and discussed its definition and relationships with some other overlapping concepts. The last parts presented and discussed the results of previous studies which have investigated the relationships between work environment, commitment and performance.

It was concluded that these three concepts are important organisational concepts, and that there is a general agreement among researchers that work environment, commitment and performance are related concepts. In addition, it was also suggested that the interplay of these factors has an impact on an organisation's success and development, and that the failure of past studies to establish the missing link between these concepts was due to misconceptualisation and weaknesses in measures used to examine these relationships.

The next chapter will provide more theoretical information about the concepts of work environment, commitment and performance.

Chapter Three

The Theoretical Framework

THE THEORETICAL FRAMEWORK OF THE STUDY

3.1 INTRODUCTION

This chapter provides some theoretical information about the constructs of work environment, commitment and performance, which were introduced and defined in the previous chapter.

The contents of this chapter are presented in four main parts. The first part is concerned with a review of the dimensions of the work environment concept that have emerged in the management literature. Moreover, the different measures of work environment that were used in the previous studies are also discussed, compared with each other and with the scale of work environment used in this study. The second part examines the various approaches which have emerged in the management literature to conceptualise the commitment concept. The third part examines the dimensions of the commitment concept that have been reported by different scholars, and how researchers have attempted to measure this construct based on the dimensions they have proposed. The last part looks at the researchers' attempts to conceptualise the performance concept, and what factors they have suggested to conceptualise this construct.

3.2 THE DIMENSIONS AND MEASUREMENTS OF WORK ENVIRONMENT

The previous chapter has demonstrated that the concept of work environment has been driven from different perspectives, and that there is no general agreement among researchers with respect to its definition. Accordingly, different sets of dimensions and different measures have been used in the management literature to conceptualise this construct. The following measures and dimensions are examples:

Halpin and Crofts (1963) studied the work climate of schools in the United States. To measure the work environment concept they used a scale composed of eight items, namely: esprit, consideration, production, aloofness, disengagement, hindrance, intimacy and trust. Similarly, Forehand and Gilmer (1964) suggested five dimensions for measuring work environment, namely size, structure, systems complexity, leadership pattern, and goal directions. Forehand and Gilmer argued that these five factors are capable of assessing work environment; however, they did not explain the nature and the number of items that constitute each dimensions. In other words, Forehand and Gilmer suggested the number and type of work environment's dimensions, but they did not develop a complete scale to examine it. Moreover, Litwin and Stringer (1968) have suggested eight dimensions of work environment, namely structure, responsibility,

rewards, warmth and support, risk, conflict and performance standard. This set of components is widely recognised in the management literature, and the complete scale is widely used to measure the work environment variable. However, Litwin and Stringer's scale suffers from a major limitation, i.e. the *identity* dimension. They conceptualised employees' identity as one of the work environment factors rather than an independent organisational concept. Graham (1982) defined identity as "the degree of organisation loyalty from the members. Do the members identify with the organisation and show concern for it?" (p. 183). Thus, identity is used here as another name for the organisational commitment concept.

As mentioned earlier, the terms loyalty, involvement, attachment and identification are commonly used in the management literature to refer to the psychological bond between the employee and his/her organisation. Conceptualising commitment as a factor of work environment may have negatively influenced the results of work environment studies, because the majority of researchers have used Litwin and Stringer's scale to measure work environment. For example, Al-shammari (1990, 1994) used this scale to examine the work environment-performance relationship. He failed to establish a link between these two constructs in both studies, perhaps because he did not use the right measure of work environment, as he suggested. Al-shammari concluded; "the results of the study showed that the majority of respondents perceived a low level of employees' identity towards their organisations. That is, employees did not have a feeling either being proud to belong to the company or to the work team" (1990, p. 299). According to this result, Al-shammari (1990) suggested that the concept of commitment did not exist in the Arabic context, including Jordan. As mentioned earlier, this suggestion has negatively influenced the development of commitment research in the Middle East. Using the right measures to examine the right concepts is essential for the development of research, in any area and in any context. According to Benkhoff (1997b) "with the help of better measures we will soon know more about the causes and the consequences of employee attitudes" (p. 129)

Furthermore, Schneider and Bartlett (1968) examined individual differences and work environment. To measure the work environment construct, Schneider and Bartlett used a scale of six factors, namely: managerial support, managerial structure, concern for new employees, intra-agency conflict, independence and overall satisfaction. Moreover, Payne and Pheysey (1971) developed one of the most well-known scales of the work environment, which they called the Business Organisational Climate Index (BOCI). This scale consists of twenty dimensions such as job challenge, rules orientation and

future orientation. In addition, Pritchard and Karasick (1973) examined the effect of work environment on managerial job performance and satisfaction. They measured the work environment variable using eleven factors, namely: autonomy, conflict vs co-operation, social relations, level of rewards, performance-rewards dependency, motivation to achieve, status polarisation, flexibility and innovation, decision centralisation and supportiveness. Considering the outcomes of past research in this field, Pritchard and Karasick argued that these dimensions are stable and clear, relevant to theory and important. Similarly, Newman (1977) attempted to incorporate all the previously mentioned dimensions into one scale in order to produce 'a comprehensive and reliable scale' of work environment. He has suggested eleven dimensions as the most important work environment factors, namely: supervisory style, task characteristics, performance-reward relationships, co-workers relations, employee competency, decision making policy, pressure to produce, employee work motivation work space, equipment and arrangement of people and equipment and job responsibility.

By considering the above mentioned dimensions, it can be noticed that there is homogeneity between the proposed factors of work environment; however, the labelling of these facets is different. For example, what Halpin and Crofts's (1963) called 'consideration' factors is called 'warmth and support' by Litwin and Stringer (1968), 'managerial support' by Schneider and Bartlett (1968), 'managerial concern' by Payne and Pheysey (1971), 'supportiveness' by Pritchard and Karasick (1973) and 'supervisory style' by Newman (1977). Thus, it can be suggested that "it is not necessary to build a single list of climate components or even to reconcile the differences in labels and terminology. But you do need to grasp the overall concept of climate as multifaceted measure of the internal dimensions of an organisation" (Graham, 1982, p. 185).

Considering today's workplace, permeated by the fear of re-engineering and downsizing, reduced job security, and the stress of having to do more work with less rewards, it can be suggested that the use of the 1960s and 1970s work environment factors alone may not accurately assess the current work environment. Unfortunately, the majority, if not all, of the recent work environment studies (e.g., Jackofsky and Slocum, 1988; Al-shammari, 1994; Sparrow and Gaston, 1996; Hemingway and Smith, 1999) have adopted the previously mentioned scales of the 1960s and 1970s to measure employees' perceptions of work climate. The literature survey results revealed no new or an updated scale of work environment; rather the work environment studies are revolving around the dimensions that suggested by the 1960s and 1970s scholars. As mentioned earlier, the work environment has changed, and is changing continuously.

Therefore, there is a need to revise the previously suggested dimensions in a way that facilitates the inclusion of new factors of work environment and eliminate the less significant factors. It could be argued that the failure of past studies to establish a link between work environment and other organisational concepts is due to the use of yesterday's measures to assess today's fast changing work environment. In this context, Sparrow and Gaston (1996) examined Payne and Pheysey's (1971) scale of work environment. They concluded:

By the 1990s a number of gaps in the coverage of the original instrument were revealed as a result of organisational changes in the last 20 years, such as the concern for customer service, developments in quality, the impact of information technology, and the ability to manage culture (p. 683).

Considering this fact, the current study has adopted 13 work environment factors to examine the Jordanian employees' perceptions of work environment. These are presented and defined in chapter five of this study. These factors represent the key variables of the current work environment; however, the scale also include some conventional factors, which are still of value in today's workplace, such as *supervisory style* and *task characteristics*. The new factors are:

(1) Procedural justice: This is viewed (e.g., Tang and Baldwin, 1996 and Mossholder *et al.*, 1998) as one of the most important factors in today's workplace. According to Lin and Tyler (1988):

Organisations that ignore procedural justice concerns run the risk of engendering negative organisational attitudes, dissatisfaction with organisational outcomes of decisions, non-compliance with rules and procedures, and, in some instances, lower performance (p. 61).

(2) Distributive justice: This concerns satisfaction with work outcomes. There is a general agreement among researchers that distributive justice "leads to organisational effectiveness" (Tang and Baldwin, 1996, p. 25). Together with procedural justice, distributive justice constitutes the concept of organisational justice.

(3) Innovation climate: There is a general consensus among managers and researchers about the importance of innovation for the success of the organisation, especially in today's increasing global economy, which is driven by information technology. In such an environment resisting change is dangerous; organisations cannot be protected from change regardless of their size, resources, or the excellence of their current offerings. Thus, innovate or disappear. Kanter (1997) argued that innovation is one of the most important issues for the modern organisation, and that even the most successful

organisations cannot ignore it, because they will lose out if they do not cope with innovation. She asserted:

Organisations must be courageous if they truly want to embrace innovation and change. A company cannot enjoy the benefits of risk-taking without being willing to try things no one has done before. Leaders must nurture cultures of courage in which experiments, questions and challenges are common. Courageous corporations are not risk-takers, they are risk-reducers; they make it less risky for people to champion products or ideas that depart from convention. Innovation requires persistence. If innovating was easy, then everybody else would be doing it already (p. 22).

Thus, the innovation climate is an important factor in today's work environment.

(4) Fairness: This is one of the most important factors of work environment that influence manager-employee relationships, employee-employee relationships and the organisation-employee relationship. The employee's perception of fairness in the organisations' procedures and processes is assumed to influence his/her relationships with the organisation, co-workers and managers, which in turn affect his/her behaviour and work outcomes. Cottringer (1999), for example, argued that creating and managing fairness is important for work organisation, because it has an impact on employees' attitudes and performance. He concluded:

The first rule of good management is fundamental fairness. This is the management gold rule: Treat employees the way you want to be treated. This requires an attitude of openness and a keen sensitivity to know when you are approaching the point of no return in crossing over the line. Fundamental fairness means achieving a workable balance between opposing behaviours, such as: 1) giving vs. taking, 2) autocracy vs. democracy, 3) autonomy vs. supervision, 4) change vs. stability, 5) aloofness vs. approachability, 6) idealism vs. realism, 7) talking vs. listening, 8) simplicity vs. complexity, 9) organisation vs. individual, and 10) thinking vs. acting (p. 13).

(5) Two-way communication: Developing an effective communication system which facilitates the daily interactions between the employees and their supervisors is essential for work organisations. More specifically, the employee-immediate supervisor communication is assumed to have an impact on the employee's commitment and performance (Tang and Baldwin, 1996). Therefore, two-way communication is an important factor in today's workplace. Arguing that "creating a work environment that is open, honest and responsive to all employees is critical to establishing employee ownership" (p. 50), Kane (1996) suggested that having an effective two-way communication system within the organisation fosters greater commitment and

performance. Likewise, Sanchez (1999) argued that two-way communication is an important factor in today's business environment. He suggested some strategies for creating successful employee communication in the information age. He concluded:

In today's business environment, communicators face the complex challenges of developing strategies and processes to manage the communication function in ways that enhance the organisation's success. Broad-based communication must win the attention and co-operation of employees. To meet these challenges, communicators and senior management must work to establish proactive, well-defined communication strategies that engage and align employees with the organisation's business goals (p. 9).

(6) Trust: This is an important factor of work environment that is increasingly assumed to play an important role in determining employees' commitment and performance. For example, Cole and Cole (1999) suggested that the volatile corporate world of downsizing, mergers and organisational restructuring have shattered employee security and confidence. Therefore, gaining employee's trust is essential. They asserted:

Perhaps no other component affects the working relationships as much as trust. It is frequently referred to as the lubricant that makes relationships work. In its absence, paranoia often runs rampant. Lack of trust tears at the very fibers of creativity, feeling valued as an employee and the commitment to produce at the 110% level (p. 3).

(7) Psychological contract: In the past, organisations used to have a clear understanding about the second party's (i.e., employees) beliefs and expectations, because the psychological contract used to be reinforced by repeated contributions and reciprocity over time, and there was a convergence (to a large extent) between the two parties concerning their understanding of the nature of the contract (Rousseau, 1990). Therefore, it was not an important issue for work organisations at that time. However, in today's diverse and fast changing work environment, the psychological contract is no longer easily predictable. It has recently emerged as one of the most important work environment factors that affect employees' behaviour and work outcomes. According to Stiles, Gratton, Truss, Hailey and McGoyern (1997, p. 57):

Organisations are now faced with new competitive conditions, and have to cope with dynamic environments- organisations and psychological contracts are now in transition. ...These developments have brought performance management to centre stage: by specifying the new performance requirements of employees as the result of strategic change, and the rewards they will receive upon their fulfilment, organisations define new expectations and so alter the employment relationship. Employee flexibility, greater responsiveness to changing incentives and willingness to absorb changes in the

reward structure are key factors if organisations are to maintain their positions within fluctuating markets

Hence, it is no surprise that the above factors of work environment were disregarded in the previously mentioned scales of work climate, simply because they were not of importance at that time, i.e. in the decades of the 1960s and 1970s. These well-known scales (e.g., Litwin and Stringer, 1968 and Payne and Pheysey, 1971), are widely usable in the recent management literature, were mainly tailored to assess the work environments of the 1960s and 1970s where factors like innovation climate and two-way communication were of less importance and in most cases not relevant. For example, in the decades of the 1960s and 1970s the work environment was more stable; therefore, organisations were not under pressure to innovate, because there was no rapid change or strong competition and, generally, demand for organisational products was more than supply. Thus, innovation climate was not an important factor of the work environment at that time. On the contrary, in today's fast changing work environment of intensive global competition, organisations are under pressure to cope with change through innovation. Furthermore, one-way communication or up-down communication was one of the major features of the 1960s and 1970s organisations. Therefore, two-way communication was a less relevant factor in the work environment at that time. However, in today's work environment, communication is an inevitable issue, especially communication between the employee and his/her immediate supervisor. Thus, in a work environment where nothing is certain anymore, the factors and measures that are used to examine it should be revised and updated on a regular basis. For example, the thirteen factors that are used in this study to examine the current Jordanian work environment may not be of value in the year 2010. Accordingly, researchers must avoid applying the measures of the 1960s and 1970s as complete packages to study the work environment concept in this era of global, diverse, uncertain and fast changing work environments.

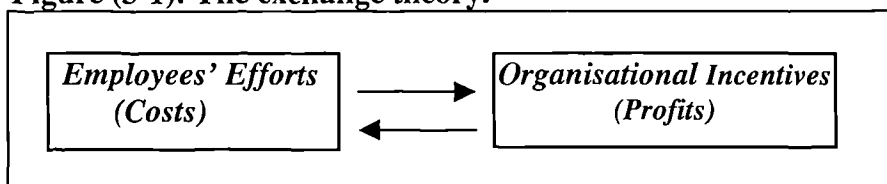
3.3 CONCEPTUAL APPROACHES TO OC

From the previous discussion in chapter two, it can be noticed that researchers have driven the concept of OC from different points of view. Some view it as an attitudinal concept, whilst some other researchers contend that it is a behavioural concept. There are another two groups of scholars who neither agree with the first opinion, nor with the second view. Some of them prefer the normative based approach, whilst others argue that OC cannot be explored without considering its multifaceted nature. Thus, four different approaches to study OC have emerged in the management literature.

3.3.1 THE ATTITUDINAL APPROACH

This is “the predominant approach [that] stresses the affective nature of commitment, emphasising employee loyalty, identification and involvement, and a consequent desire to exert effort for the organisation”. (Iles *et al.*, 1990, p. 3). Unlike the OC construct itself, most researchers (e.g., Oliver, 1990; Brown, 1996; Mowday *et al.*, 1979) would agree that exchange theories (e.g., Barnard, 1938; Homans, 1961) represent the historical roots of this approach. Exchange theories assume that employees offer their efforts (costs) in return for incentives (profits) given to them by their employing organisation. The following simple model shows how this theory works:

Figure (3-1): The exchange theory.



Mowday *et al.* (1979) argued that “commitment often encompasses an exchange relationship in which individuals attach themselves to the organisation in return for certain rewards or payments from the organisation” (p. 225). Moreover, Oliver (1990) argued that the attitudinal approach finds its roots in exchange theory, whereby “employees offer commitment in return for the receipt (or anticipated receipt) of rewards from the organisation” (p. 20).

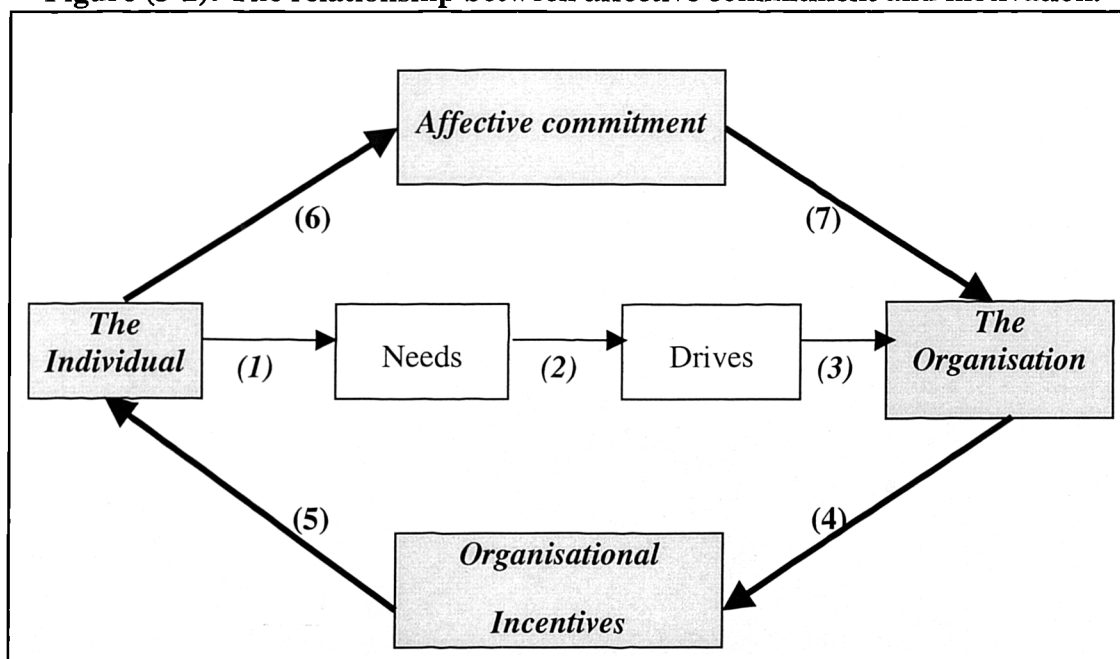
Mowday *et al.* (1982) defined the scope of this approach in their well-known book: ‘*Employee-organisation linkage: the psychology of commitment, absenteeism and turnover*’, as:

Attitudinal commitment focuses on the process by which people come to think about their relationships with the organisation. In many ways it can be thought of as a mind set in which individuals consider the extent to which their own values and goals are congruent with those of the organisation (p. 26).

This approach has dominated most OC researches for more than three decades. It was initiated by Kanter (1968) and Buchanan (1974) and further supported by Porter and his colleagues. In the recent management literature, the term affective commitment is commonly used to refer to the notions of attitudinal approach. According to this approach, Kanter (1968) defined what he called ‘cohesion commitment’ as “the attachment of an individual’s fund of activity and emotion to the group” (p. 507). Likewise, Buchanan (1974) defined affective commitment as “a partisan, affective attachment to the goals and values and to the organisation for its own sake, apart from its purely instrumental worth.” (p. 533). Moreover, the well-known definition of Porter

et al. (1974) mentioned earlier was formulated in a way that reflects the basic ideas of the attitudinal approach. Recent definitions of affective commitment are consistent with the definitions mentioned above. For example, Iles, Forster and Tinline (1996) defined affective commitment, as the “attachment to an organisation, identification with it, loyalty towards it and a desire for affiliation with it.” (pp. 19-20). Allen and Meyer (1996) defined it as “identification with, involvement in and emotional attachment to the organisation” (p. 253). Moreover, Brown (1996) described affective commitment as “a set of strong, positive attitudes toward the organisation manifested by dedication to goals and shared sense of values” (p. 231). Finally, Randall and O’Driscoll (1997) argued that affective commitment is “based more on perceptions of similar values and goals, and it occurs when an individual identifies with, and is involved in a particular organisation” (p. 607). These definitions of commitment are selected as examples there are many other definitions in the literature. It is clear that these definitions are homogeneous. All of them constitute an effort to define how employees are affectively attached to their organisation through emotional feelings such as happiness, pleasure, sense of belonging, affection, loyalty and so on.

Figure (3-2): The relationship between affective commitment and motivation.



Looking at these definitions of commitment that reflect the attitudinal view, it can be noticed that they are in line with motivation theories discussed earlier. In this context, Luthans (1989) defined motivation as “a process that starts with physiological or psychological deficiency or need that activates behaviour or a drive that is aimed at a goal or incentive” (p. 231). There are three key words in this definition, namely, *need*, *drive* and *incentive*. Indeed, these three terms are the basic pillars of motivation

theories. Figure (3-2) shows the relationship between affective commitment and motivation.

Drawing on motivational theories, and according to Figure (3-2) above, any individual has certain needs or deficiencies, such as friendship needs and money needs. These needs drive or direct the individual to take action toward satisfying them. To satisfy a need for money or friendship, for example, the individual can be said to be driven by a need for employment and affiliation respectively. After he/she finds a job and starts receiving rewards and making friends (co-workers) at the same time, these incentives will reduce the needs and alleviate the drives. Therefore, the employee is expected to offer the employing organisation his/her commitment in return for rewards or incentives that satisfy his/her needs (exchange theories).

The question now is: *Will employees keep their commitment towards the organisation even if it tried, for example, to cut or reduce the amount of its rewards?* Put in more general form: *Will employee commitment remain constant if working conditions change?* Based on the ideas of the exchange and motivation theories, one can argue that the action of reducing rewards will negatively influence the rewards-commitment relationship that exists between employee and organisation. Studying the reward system in 14 companies, Martin and Nicholls (1987) argued that the level of rewards should recognise the realities of the marketplace. Therefore, they stressed the importance of rewards as a direct reason for building commitment among the workforce. They asserted:

How people are rewarded can help to create or destroy their commitment. It can determine whether or not they co-operate with the organisation, or work only for themselves. It can decide whether or not they put in that extra effort or just coast a long. Getting reward right is important” (p. 64, researcher’s emphasis added).

Moreover, Mendonca and Kanungo (1994) examined employees’ motivation and effective reward management in developing countries. They argued that the reward system must be designed and managed in a way that supports the organisation’s mission and strategies. Arguing that the reward system is crucial to organisations, they asserted:

The reward system, i.e., the totality of economic [e.g., money] and non-economic [e.g., friendship] compensation the organisation offers its employees, serves to attract, retain and motivate employees to achieve the desired performance levels. It also contributes to maintain employee moral and, more importantly, it motivates employees to prepare themselves for great responsibilities. Hence, the reward system is a powerful motivational tool in the hands of management (p. 50).

Mendonca and Kanungo further suggested that the effectively designed reward system should enable the organisation to achieve the following goals:

- 1- To attract skilful employees those who are able to carry out the required task.
- 2- To induce productive employees to maintain organisational membership.
- 3- To maintain the desired job behaviours that positively influence the performance levels of employees.
- 4- To “*promote attitudes conducive to loyalty and commitment* to the organisation, high job involvement and job satisfaction” (p. 51, researcher’s emphasis added).
- 5- To encourage employee growth that motivates them to accept more challenging work.

In this context, Kanungo and Rabindra (1987) and Kanungo and Mendonca (1988) studied work rewards. They argued that unless the reward system is perceived to be salient, valued and contingent on that behaviour, it would not motivate desired employee behaviour. Thus, they proposed three characteristics of reward systems:

(a) Reward saliency: This refers to the degree that the existence of reward and its operative conditions are effectively communicated to the employees. Unless employees are well aware about the reward system and how it works, they are not likely to be influenced by rewards.

(b) Reward valence: This refers to the way employees view the reward system positively if they consider it as good and of value to them. Nevertheless, employees are the ultimate goal of the reward system, therefore, it must be designed in a way that makes them feel obliged to commit and work hard for the organisation. Hence, reward is exactly like fuel for the engine; the right fuel must be given to the right engine to obtain the desired performance.

(c) Reward contingency: This refers to the view that to induce the desired motivation and commitment (besides reward saliency and valence) the organisation needs to link reward with the desired behaviour. By doing so, the organisation will be able to maintain this behaviour in the future.

Unfortunately, there are few empirical studies that have investigated the effects of changing work conditions on employee commitment. One reason could be the problem of defining the nature of the commitment itself. Therefore, most, if not all, commitment studies are directed at investigating and exploring its antecedents, consequences and correlates. Given the fact that commitment is a multidimensional concept, as will be explained later, there is a huge gap with respect to the commitment process that needs to be bridged. Meyer (1997) argued that “without understanding a process, we are less well equipped to predict which, if any, form of commitment [attitudinal, behavioural,

normative or multifaceted commitment] is likely to be affected by changes in the conditions at work” (p. 217). He further contended that employee reactions to changing work conditions might depend on their perceptions of the practice. However, there is a need to understand how these perceptions are formed and translated into commitment. In addition, Caldwell, Chatman and O’Rielly (1990) argued that well designed rewards systems are positively related to employees’ commitment, as was found in earlier studies (e.g., Becker, 1960).

In general, it can be concluded that increasing reward enhances commitment and reducing it diminishes employee’s affective attachment to the organisation, as was suggested in figure (3-2). Does this equation work with the other two forms of commitment, that is continuance and normative commitments? In other words, can employees’ continuance and normative commitment be increased simply by increasing their reward level? This question will be addressed in the following two sections.

3.3.2 THE BEHAVIOURAL APPROACH

While most researchers believe that employees’ commitment is a reflection of emotional attachment to their organisation, there is still a group who thinks that it is a reflection of employees’ attachment to their own investments in the organisation. Advocates of this approach argue that employees’ commitment is developed on the basis of an ‘economic rationale’ (Stevens, Beyer and Trice, 1978). In other words, employees tend to maintain their organisational membership because of the perceived costs of doing otherwise. The terms *perceived cost*, *side-bet* and *investment* are used interchangeably in the management literature to refer to anything of value such as time, efforts, money, ... etc that the individual has invested. Based on this view, commitment is considered as behavioural rather than attitudinal. Sheldon (1971) defined the behaviour that is a result of commitment as the “behaviour that persist over a period of time, and that implies a rejection of other alternatives” (p. 143).

The preliminary ideas of this approach were inherent in Becker’s studies (Becker and Carper, 1956; Becker, 1960). Becker and Carper (1956), for example, argued that employees’ commitment is related to three kinds of experiences, namely: investments, involvement with peers and managers and development of technical interests and skills. Moreover, Becker (1960) contended that to study an employee’s commitment one must recognise the investment he/she has made in the organisation. He suggested that “the element of recognition of the interest created by one’s prior action is a necessary

component of commitment, because even though one has such an interest, he will not act to implement it ... unless he realises it is necessary” (p. 36). He further added:

For a complete understanding of a persons commitment we need ... an analysis of the system of values or, perhaps better valuables with which bets can be made in the world he lives in ... In short, to understand commitment fully, we must discover the system of values within which the mechanisms and processes described earlier operate (p. 39).

According to this view, Becker (1960) initiated the well-known commitment definition in terms of the behavioural approach, around which all definitions to date have revolved. He defined it as “commitment, comes into being when a person, by making a ‘side-bet’, links extraneous interests with a consistent line of activity” (p. 33). Meyer and Allen (1984) argued that the ‘consistent line of activity’ in this definition refers to continuing membership or employment in the organisation. Nonetheless, unlike with the attitudinal approach, very few studies supported the behavioural approach in the decades of the 1960s and 1970s. Kanter (1968), for example, defined commitment as “the ‘profit’ associated with continued participation and a ‘cost’ associated with leaving” (p. 504). Moreover, Salancik (1977) adopted the behavioural view to study commitment. He defined commitment as a state of being in which an individual becomes bound by his or her actions and through these actions to beliefs, which sustain them.

Nevertheless, only about a decade ago did researchers come to realise the importance of side-bet theory in understanding employees’ commitment toward their organisation. This side-bet theory has been given new titles in the recent management literature, namely continuance and calculative commitments. However, the majority of writers (e.g., Meyer and Allen, 1991; Jaros, 1997) prefer to use the term ‘continuance’ instead of ‘calculative’ (e.g., Brown, 1996; Randall and O’Driscoll, 1997; Wallace, 1997). Table (3-1) shows some examples of the recent continuance commitment definitions. By looking at the continuance commitment definitions in Table (3-1), it can be seen that there is a consensus among researchers’ definitions of this concept. Most of them would agree to define it in terms of two factors, namely: the number and/or the magnitude of side-bets or investments an employee makes; and a perceived lack of alternative jobs. On the other hand, there is minor disagreement among scholars with respect to the base or roots of the continuance commitment. While one group (e.g., Meyer and Allen, 1991) argues that Becker’s (1960) side-bet theory is the historical

background for this construct, another group (e.g., Randall and O’Driscoll, 1997) assert that this concept is rooted in Homans’ (1961) exchange theory.

Table (3-1): The recent continuance commitment definitions.

Researcher (s)	Year	Definition
1- Allen and Meyer	1996	“Continuance commitment refers to commitment based on the employees’ recognition of the costs associated with leaving the organisation” (1996, p. 253).
2- Angle and Lawson	1994	Continuance commitment is “a propensity to remain a member of the organisation for other reasons such as to keep benefits or because of lack alternative jobs” (p. 1540).
3- Brown	1996	Continuance commitment is the tendency to remain a member of the organisation because of he perceived costs of doing otherwise” (p. 231).
4- Jaros <i>et al.</i>	1993	Continuance commitment is a state of feeling “compelled to commit to the organisation because the monetary, social, psychological and other costs associated with leaving are high” (p. 953).
5- McGee and Ford	1987	It is the sense of being “bound to the organisation through extraneous interests (e.g., pension; seniority) rather than favourable affect toward the organisation” (p. 638).
6- Mowday <i>et al.</i>	1982	Continuance commitment “relates to the process by which individuals become locked into a certain organisation and how they deal with this problem” (p. 26).
7- Randall and O’Driscoll	1997	“Calculative commitment reflects a relationship that is largely based on an exchange between the employee and the organisation; members develop commitment to the organisation because they see it as beneficial regarding costs and rewards” (p. 607).
8- Reichers	1985	“Commitment is a function of the rewards and costs associated with organisational membership; these typically increases as tenure in the organisation increases” (p. 967).
9- Chait	1998	Continuance commitment is the “attachment to the organisation because of the perceived cost of leaving” (p. 2).
10- Irving, Coleman and Cooper	1997	“Continuance commitment often develops as a results of costs associated with leaving that result from investments in the organisation, as well as the perceived lack of alternative employment opportunities” (p. 445).

As mentioned earlier, there is no major difference between these two theories. Becker’s side-bet theory refined the notions of the exchange model by introducing the time factor and the concept of investments that result from this time element. Put differently, the side-bet theory acknowledges the notions set forth by the exchange

theory, and adds that the longer the time that an employee spends in the organisation, the higher will be his/her investments in that organisation.

In general, advocates of the behavioural approach argue that side-bets or investments an employee experiences in an organisation oblige him/her to continue working for that organisation. However, it seems to be difficult to generalise this argument to all employees and to all organisations. There is a group of employees, especially in the Third World, who do not care about their investments in the organisation when they consider terminating their memberships in the organisation. This is mainly because this type of employee usually joins organisations in order to develop these investments before leaving them and looking for better offers elsewhere, whether locally, nationally or internationally. Today's employees are driven by economic cues; they are struggling to make a balance between their income and market prices. Therefore, the employee offers his/her loyalty to the one that is able to solve this complex and continuously changing equation (income and market prices). According to this view, the investments that this kind of employee makes in an organisation is not a "by-product" of his/her membership in the organisation; rather, it is more like an ultimate goal gained from joining the organisation. In most Third World organisations, including Jordan, people leave their jobs after working for many years to look for new jobs that they think are better in terms of 'economic benefits'. The numbers of this type of employee are increasing in Jordan and other Third World countries. In a recent study, Abdelrahim (1995) examined the economic characteristics, performance and contribution of industrial firms in Jordan. The lack of skilled workers emerged as one of the most important determinants of efficiency and productivity in these industrial firms. One of the most important reasons for this problem is that there is considerable number of employees in these firms who continue working for a number of years until their skills, experiences and performances develop, after which they quit. Thus, they leave the organisation when it starts to benefit from the skills that developed as a result of the training and support it provided them. Nevertheless, this problem happens because of weak organisational policies and strategies that entirely focus only on three production factors, namely, management, money and material. Unfortunately, most Third World organisations are mismanaging the most important production factor- the employee.

On the other hand, there is a group of employees who join organisations for a number of years to fulfil certain requirements. For example, a certified public accountant must work for a certain number of hours before starting public auditing work. In this context, Caldwell, Chatman and O'Rielly (1990) studied the ways that allow organisations to

facilitate commitment among its members. They found that strong organisational career and reward systems are related to high levels of instrumental or compliance-based commitment (continuance commitment). In addition, the study revealed that accountants tended to be more instrumentally committed ($\alpha = 0.22$). They attempted to explain these findings by asserting:

This may be due to the fact that one major requirement for becoming a certified public accountant is that a specific number of hours of public auditing be completed. Thus, many of the accountants in this sample may have joined the firm in order to fulfil this requirement, rather than to spend their careers in that particular firm (p. 253).

For this type of employee, the investments they have made do not bind them to stay, simply because they want to sacrifice the benefits associated with maintaining memberships for the advantage expected from terminating memberships. In such case, the term continuance commitment that Caldwell *et al.* used is irrelevant. Therefore, the researcher would agree with Becker and Billing's (1993) argument that describes this kind of worker as the "uncommitted" employee. Becker and Billing (1993) examined the different patterns of commitment to the various constituencies within an organisation (commitment profiles). The study results uncovered four commitment profiles, namely:

(a) The locally committed (employees who are attached to their supervisors and work group), (b) The globally committed (employees who are attached to top management and the organisation), (c) The committed (employees who are attached to both local and global foci, and (d) The uncommitted (employees who are attached to neither local nor global foci) (p. 177, researcher's emphasis added).

Employees committed to both local and global foci were found to be highly satisfied and least likely to contemplate leaving. On the other side, uncommitted employees are more likely to be dissatisfied and least likely to retain membership (Meyer, 1997). The larger the numbers of this type of employees in any organisation, the less are its chances to achieve its set goals. Thus, two types of employees can be distinguished based on the continuance commitment approach (Sheldon, 1970). There is a group of employees who are well aware about the development of the side-bets since they join the organisation, because they are mainly there to make it. On the other hand, there is a group of employees who are not aware of the development of these investments. Therefore, these investments may bind them to continue working for their organisations when they think of terminating organisational membership. For the last group, the behavioural approach is capable of explaining the direction, significance and importance

of the relationship between the individuals and the organisation. However, in the first situation, there is a need to explore the nature of the relationship between the individual and the organisation that exists during the employee's membership in the organisation. In this context, the findings of Caldwell *et al.* (1990) and Becker and Billing (1993) can be good starting points for this work.

Before turning to the discussion of the normative approach, there is an important point, without whose discussion any work related to the behavioural approach could be judged as incomplete, because it is directly related to the conceptualisation of the continuance commitment. Motivated by recent studies (e.g., Meyer and Allen, 1984) of the multidimensional commitment, McGee and Ford (1987) proposed that continuance commitment is also a multidimensional construct. Consequently, they divided Meyer and Allen's 8-item continuance commitment scale (CCS) into two equal parts to measure the following two dimensions that they formed: (1) Low Perceived Alternatives (CC: Lo Alt), and (2) CC High Personal Sacrifice [CC: Hi Sac]. They found that affective commitment was negatively related to CC: Low Alt and positively related to CC: Hi Sac. Based on these results they concluded that:

The development of additional items, similar to those that constitute CC: Hi Sac {3-items}, could strengthen and refine the scale, making it more useful for testing the side-bet theory of commitment. Similarly, a great understanding of organisational continuity based on a lack of alternatives could be gained by developing additional items for the CC: Low Alt scale {3-items} (p. 640).

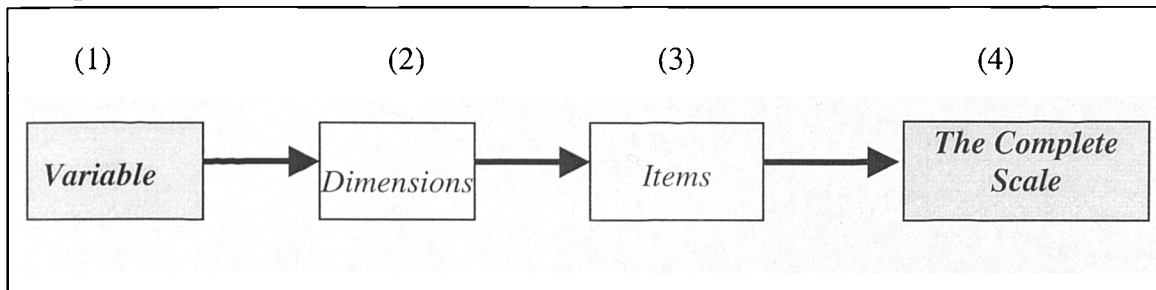
Following this recommendation, and driven by the same motive of multidimensionality, McGee and Ford's proposition found support from some researchers in this field (e.g., Jaros, 1997; Allen and Meyer, 1990, 1996; Somers, 1993). Somers (1993), for example, adopted McGee and Ford's 3-item scale to test the relationship between affective and continuance commitment. The study results supported the notion of the multifaceted nature of continuance commitment. Moreover, he also recommended that additional relevant item (s) to be added to the 3-item scales. In Somers' words:

... The CC: Hi Sac and CC: Lo Alt scales would clearly benefit from additional items tailored to their conceptual definitions. The task at hand involves developing items that specifically and unambiguously focus on the alternatives and sacrificing components of continuance commitment without spilling over into the more general notions of cost based commitment (p. 192).

Contrary to the above arguments, it can be suggested that the concept of continuance commitment seems to be a unidimensional construct. In the statistical sense, the

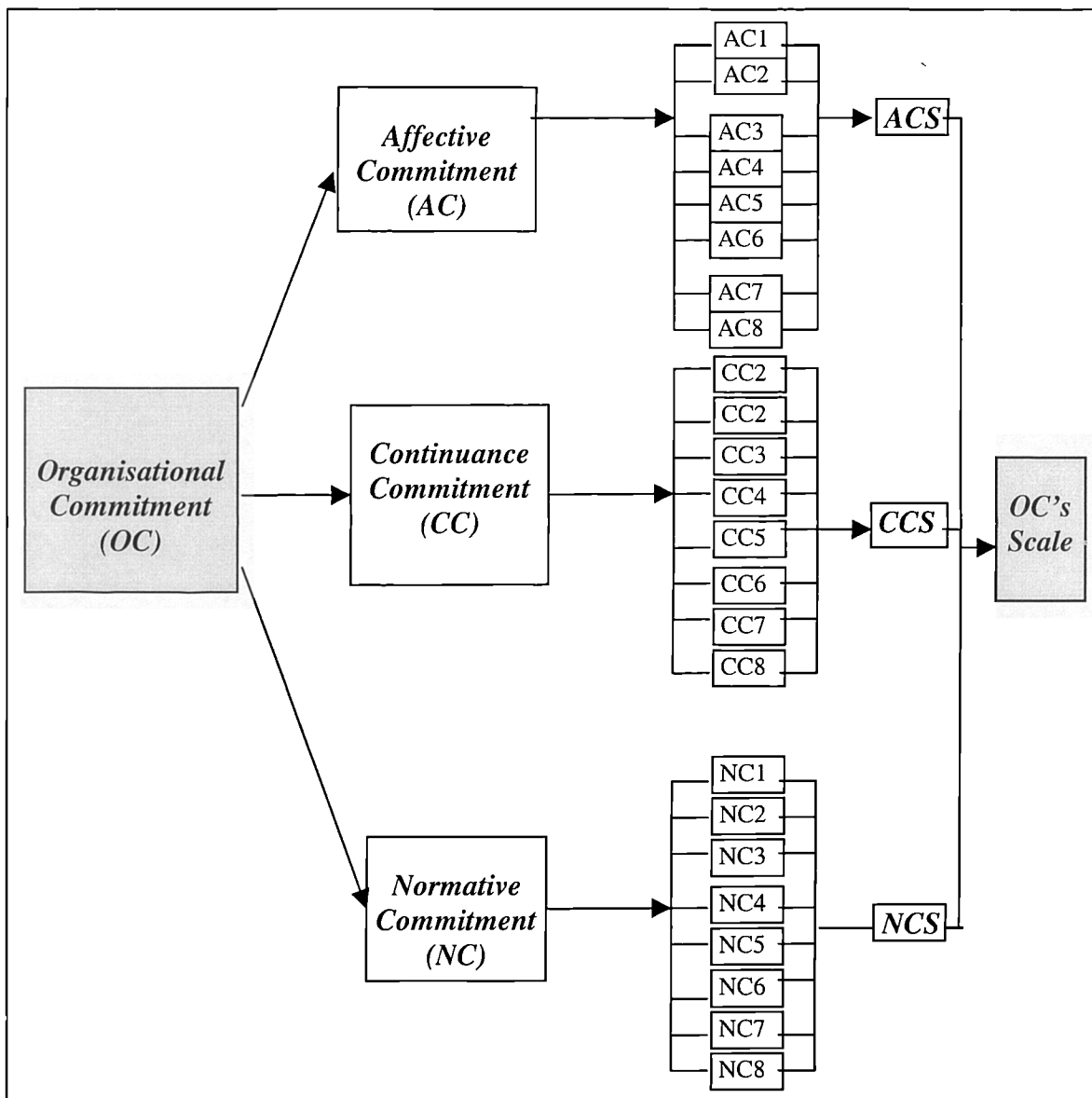
multidimensional variable must be measured through certain dimensions and certain items, as shown in Figure (3.3) below:

Figure (3-3): The formation of a multidimensional Scale.



With respect to organisational commitment, as an example, and given the recent three dimensional model (Meyer and Allen, 1991), the relationships between commitment, its dimensions and items are shown in Figure (3-3).

Figure (3.4): The relationships between OC, its dimensions and its Items.



McGee and Ford's dimensions of continuance commitment seems to be items rather than dimensions, and this could be the reason that to date the proposed 3-item scales remain consisting of only three questions each. On the other hand, there is no doubt that the precise operational definition of any variable is the starting point for developing a reliable scale or measurement for that variable. By looking at McGee and Ford's (1987) definition of continuance commitment that appears in Table (3-1), it can be noticed that it is an incomplete definition compared, for example, with Iles *et al.*'s (1996) definition in the same table. McGee and Ford have ignored the role of alternative jobs in shaping employees' continuance commitment. Thus, when compared with the scale development process (figure 3-4), Iles *et al.*'s definition reflects the global nature of this concept. The perceived lack of alternatives and the cost associated with leaving the organisation are meant to be items, rather than dimensions.

Above all, the aim behind proposing the multidimensional nature of continuance commitment is unclear, especially when considering recent studies (e.g., Hackett, Bycio and Haudorf, 1994; Meyer, Paunonen, Gellatly, Goffin and Jackson, 1989) which revealed that the two proposed dimensions are highly related, and correlate similarly with other organisational concepts, such as employee performance. Moreover, many researchers (e.g., Allen and Meyer, 1990, 1996; Allen and Lee, 1993; Gellatly, 1995; Jaros, 1997; Meyer *et al.*, 1998) have demonstrated that the internal consistency reliability of the unified or global continuance commitment scale is acceptable. Furthermore, Meyer (1997) has criticised McGee and Ford's suggestion and described it as 'valueless': "there may be little to be gained by further development of the sub-scales" (p. 182). It is worth to mentioning that Meyer and Allen and their associates (e.g., Allen and Meyer, 1990; Meyer and Allen, 1991) have supported this idea since it was first proposed in 1987. Moreover, Sethivikram, Meinertdbm, Kingrking and Sethiavsethi (1996, web site:www.hsb.baylor.edu/ramsower/ais.ac.96/papers/sethi.htm) studied the multidimensional nature of organisational commitment among information systems personnel. The study results confirmed the unidimensional nature of continuance commitment. In their words:

... Six of the eight continuance-commitment [scale] (CCS) items loaded on the second factor. Two items-CCS7 and CC8- did not load. These results mirror previous analyses conducted by McGee and Ford (1987). The factor analysis suggested deleting the two CCS items and re-computing the remaining six items as one scale (p. 2).

In addition, Suliman and Iles (2000) studied the multidimensional nature of commitment in a non-western context. The study results revealed that continuance commitment is a unidimensional construct. They asserted:

... [The results] relate to the continuance commitment did not support the multidimensionality of this concept, as has been found in some studies (e.g. McGee and Ford, 1987 and Somers, 1993). The items of Low Perceived Alternatives [CC: Low Alt] and High Personal Sacrifice [CC: Hi Sac] factors (McGee and Ford, 1987) appear to be captured by one factor rather than two. Nevertheless, the results have shown that the CCS items are six, not eight (p. 79).

Hence, in the light of the outcomes of recent empirical studies, it can be concluded that there is no need to divide the continuance commitment into two dimensions, because the general concept provides accurate and reliable results. Nonetheless, there is a need to differentiate between the investments or side-bets that develop while the employee is aware of its development (un-committed) and that develop without his/her awareness of its development (continuance committed).

3.3.3 THE NORMATIVE APPROACH

The normative approach is another different view for conceptualising and defining organisational commitment discussed in the management literature. Despite the little attention given to this component of commitment, its existence and importance are undisputed in the literature. This approach emphasises that employee commitment towards the organisation is mainly determined by the goals and values of that organisation (Buchanan, 1974; Wiener, 1982; Blau and Ryan, 1997). According to this view, Buchanan (1974) defined commitment as “a partisan, affective attachment to the goals and values of an organisation, to one’s role in relation to goals and values, and to the organisation for its own sake, apart from its purely instrumental worth” (p. 533). Unlike attitudinal and behavioural approaches, the normative approach suggests that a sense of obligation binds the individual to a certain course of action (Allen and Meyer, 1990). Thus, the greater the congruence between the person’s and his/her organisation’s goals and values, the stronger is the obligation that the individual develops toward the organisation. Nevertheless, this feeling of obligation to keep organisational membership results from the internalisation of normative pressures (Wiener, 1982). Based on this approach, Marsh and Mannari (1977) described the employee with ‘lifetime’ commitment as one who “considers it morally right to stay in the company, regardless of how much status enhancement or satisfaction the firm gives him over the years” (p. 59). Likewise, Wiener (1982) defined commitment as “the totality of internalised normative

pressures to act in a way which meets organisational goals and interests” (p. 421). Moreover, Caruana, Ewing and Ramaseshan (1997) defined normative commitment as “employees’ feelings of obligation to stay with the organisation” (p. 2). In addition, Meyer *et al.* (1998) argued that normative commitment “reflects employees’ feelings of obligation to remain with the organisation” (p. 32). Advocates of this approach argue that employees who are normatively committed to their organisations show considerable willingness to maintain membership and invest their personal efforts for the sake of the organisation (Brewer, 1996; Meyer and Schoorman, 1992). Employees exhibit this positive behaviour because they “believe it is the ‘right’ and moral thing to do so” (Wiener, 1982, p. 421).

Since it ignores the role of rewards in influencing employee commitment, the normative approach has been criticised by some researchers. Al-shakha (1995), for example, argued that this approach does not exist in real work settings. Generally, four reasons can be suggested for the criticisms that this approach has found from the majority of researchers in the field of employee commitment:

- 1) Employees are not living in Utopian societies. It seems to be hard to find a person in today’s organisations who is ready to give without having something in return just because he/she feels it is right to do so.
- 2) Unfortunately, there are no historical roots for this approach, as is the case in the attitudinal and behavioural approaches. The only source that such approaches can be related to is religion, which is based on a spiritual system. These religious methods that can bind individual to keep a certain line of activity are questionable to many people.
- 3) Unlike the other two commitment approaches, there are very few empirical studies in this field. Therefore, it is viewed here as a theoretical approach that is not capable of explaining individual behaviour in work organisations.
- 4) The construct itself is a new idea in the management literature. Following Allen and Meyer (1990) and Meyer and Allen’s (1991) studies, normative commitment began to attract researchers’ attention only about a decade ago (Morrow, 1993).

As mentioned earlier, there is no doubt that normative commitment is a real construct and that its existence in organisational contexts is undeniable. Meyer, Allen and their associates (e.g., Allen and Meyer, 1990; Allen and Lee, 1993; Allen and Meyer, 1996; Meyer *et al.*, 1998) have tested the validity of this construct in many valuable studies. Allen and Meyer (1996), for example, examined the validity of this construct by reviewing 40 study samples, which represented more than 16000 employees from a wide variety of organisations and occupations. They found that the normative concept is

valid, exists in the workplace and relates to some work outcomes such as job satisfaction ($\infty = 0.238$ average) and job involvement ($\infty = 0.36$). Also, Jaros (1997) tested the relationship between normative commitment and turnover intentions using two samples, 165 engineers and technicians and 175 part time Master of Business Administration (MBA) students. Normative commitment was found to be significantly related to turnover intentions in the two samples, $\infty = 0.193$ and $\infty = 0.258$, respectively. Irving, Coleman and Cooper (1997) suggested that normative commitment exists across occupations. In other words, normative commitment is capable of interpreting the variance in occupational commitment, as well as organisational commitment.

Considering the arguments of normative supporters (it exists, but rewards do not influence it) and critics (it is unrealistic, and does not exist in the organisational context), it can be suggested that neither of these two arguments is correct. Based on the above discussion, it can be argued that this concept is a real construct, and its existence in the real work setting is undeniable. However, it is not logical to ignore the assumptions of 'economic man' (McGregor, 1960), especially in today's difficult economic situations in most world countries. Therefore, it can be doubted that employees will remain loyal to their organisations irrespective of any organisational rewards, especially financial rewards. In this context, some researchers have implicitly agreed that the rewards have a role to play in developing employees' normative commitment. Meyer and Allen (1991), for example, asserted that:

Normative commitment may develop, however, when an organisation provides the employee with the "rewards in advance" (e.g., paying college tuition), or incurs significant costs in providing employment (e.g., costs associated with job training). Recognition of these investments on the part of the organisation may create an imbalance in the employee/organisation relationship and cause employees to feel an obligation to reciprocate by committing themselves to the organisation until the debt has been repaid (Scholl, 1981) (p. 72).

Likewise, Irving *et al.* (1997) argued that "normative commitment may develop as a result of organisational investments in the individual (e.g., training or tuition subsidies) or socialisation experiences that stress the value of loyalty" (p. 445). Thus, whether the employee receives the rewards before (e.g., college tuition) or after (e.g., promotion) joining the organisation, the fact of receiving the reward, which influences his/her relationship with the organisation, does not change. Thus, it can be suggested that the rewards that the employee receives (or expects to receive) from the organisation before, during or after his/her organisational membership influence his/her normative

commitment towards the organisation. However, normative commitment is less affected by rewards than are affective and continuance commitments.

Before terminating the discussion about the normative approach, it is necessary to differentiate between normative commitment, codes of ethics commitment, and personal norms commitment. Codes of ethics commitment refer to the degree that the employee is committed to a set of ethical norms that relates to a specific profession or task. For example, releasing work or customer secrets is not in accord with codes of ethics. In this context, Suliman (1995) studied organisational conflict and employee commitment in Sudanese industrial firms. He found that a considerable number of the study subjects were engaged in a side-business during normal working hours, which was against their organisational codes of ethics. Therefore, the organisational commitment for this group of employees was found to be lower than those who perceived such habits (side-business) as unethical behaviour. Thus, while normative commitment obliges the employee to keep commitment to the organisation's goals and values for its own sake, codes of ethics commitment bind the employee to be committed to the set of norms that are related to a certain work.

Yet, the most overlapping concept with the normative commitment construct is that of personal norms. It is commonly used in social studies (e.g., Presthold, Lane and Mathews, 1987 and Schwartz, 1973) to refer to the degree of individual internalised moral obligation. An employee's personal norms may bind him or her to feel committed to the organisation.

To conclude, employees develop certain set of personal norms during their life cycle according to their day-to-day interactions with other individuals, groups and organisations. For example, an individual's father, family, religion, tribe and education may influence his/her relationship with his/her work organisation by shaping his/her personal norms. Nevertheless, this set of norms can be positive, such as 'keeping loyalty to one's employer is a good thing' or negative, e.g., 'organisations demand optimum efforts and pay less'.

3.3.4 THE MULTI-DIMENSIONAL APPROACH

Despite being rooted in Kelman's (1958) study, the multidimensional approach is considered to be the most recent attempt to conceptualise and study commitment in organisations. Advocates of this approach argue that different components of commitment (which have different relationships with work outcomes) exist in the workplace. They believe that organisational commitment does not develop simply

through affective attachment, perceived costs associated with leaving or moral obligation towards the organisation, but through a variety of mechanisms.

Almost half a century ago Kelman (1958) suggested that individual attitudes and actions that develop as a result of social influence may occur at different levels. These differences in the nature or level depend on the type of process whereby the individual accepts social influence. According to Kelman: “the underlying process in which an individual engages when he adopts induced behaviour may be different, even though the resulting overt behaviour may appear the same” (p. 53). Considering this view, Kelman proposed three different processes of influence:

1) Compliance: This process “occurs when an individual accepts influence because he hopes to achieve a favourable reaction from another person or group” (p. 53). In this situation, the individual adopts the induced behaviour to gain certain rewards; it does not necessarily mean that he/she agrees with its contents. Hence, if this compliance process is compared with the continuance commitment concept mentioned earlier, no major differences can be found. In both views the individual behave in a certain manner to achieve certain goals.

2- Identification: This is another process that occurs when an individual accepts influence because he/she wants to establish or maintain a satisfying self-defining relationship to another person or group. According to this process, the individual maintains the induced behaviour as long as it is associated with the desired relationship. Given the behavioural approach theories, it can be suggested that Kelman’s identification process is similar to the concept of affective commitment.

3- Internalisation: This occurs when an individual accepts influence because the content of the induced behaviour- the ideas and actions of which it is composed- is intrinsically rewarding. This process suggests that the individual adopts the induced behaviour because it is in line with his/her value system. In addition, the ideas of this concept seem to be congruent with the normative approach notions that were discussed earlier. In both concepts, the personal norms of the individual bind him/her to adopt the induced behaviour. Kelman (1958) argued that the satisfaction resulting from internalisation can be referred to as the content of the new behaviour.

The question now is, what determines the probability of accepting an influence? According to Kelman the probability of accepting a certain influence is a combined function of three elements:

- a) The relative importance of the anticipated effect.
- b) The relative power of the influencing agent and;

c) The prepotency of the induced response

It worthwhile quoting the following meaningful statement, by which Kelman concluded his study:

For some individuals, acceptance of their system of government may be based on compliance: they may go along with the accepted norms in order to avoid social ostracism or perhaps even persecution [continuance commitment]. For others, attitude toward their government may be largely identification-based: their relationship to their own nation and its major institutions may represent an essential aspect of their identity, and acceptance of certain political attitude and beliefs may serve to maintain this relationship and their self-definition, which is anchored in it [affective commitment]. For a third group of individuals, beliefs in the country's system government may be internalised: they may see this political form as fully congruent and integrated with their value systems and likely to lead to a maximisation of their own values [normative commitment] (p. 59).

This quotation includes an important message for work organisations, especially to those who are interested in understanding employees' attitudes and behaviour in the workplace. As far as organisational commitment is concerned, Kelman initiated several useful starting points for research in this area. Unfortunately, researchers have disregarded these important notions in understanding employee commitment for more than three decades (1958 to 1990). More recently, scholars have come to realise the importance of Kelman's study, following Allen and Meyer's (1990) support for the multi-dimensional nature of organisational commitment. There is a common agreement among researchers that the historical background of the multi-dimensional approach is rooted in Kelman's study of attitude change processes.

Many valuable and sequential studies have contributed to the re-birth of the multi-dimensional approach, which has recently emerged in the recent management literature as the most important and reliable approach for studying and conceptualising commitment. Drawing on Kelman's theories, researchers (e.g., Angle and Perry, 1981; Meyer and Allen, 1984; McGee and Ford, 1987) have used two commitment facets or three (e.g., Meyer and Allen, 1991; Jaros, 1997; Suliman and Iles, 1998b) to examine the multidimensional nature of commitment. The remainder of this section reviews some of these studies, which have contributed to the development of the multidimensional approach.

Motivated by Hall's (1977) ideas (that call for ignoring the global form of organisational commitment and to deal instead with a set of concepts that each focus on a certain type of commitment) Angle and Perry (1981) examined commitment and

organisational effectiveness. Based on the results of factor analysis, they divided employee commitment into two components, namely value commitment and commitment to stay. They defined value commitment as the employee commitment to support the goals of the organisation, and commitment to stay as the employees' commitment to retain their organisational membership. The study found few significant differences between the two proposed commitment dimensions, as they related to various indicators of organisational performance. Angle and Perry called for avoiding the simplistic traditional assumption about the impact of commitment on organisational relevant behaviour. Furthermore, Meyer and Allen (1984) adopted Becker's (1964) side-bet theory to introduce the continuance commitment concept alongside the affective commitment that had been dominating commitment studies. They modified Porter *et al.*'s (1974) commitment scale (OQC) to measure affective commitment, using an 8-item measurement. Moreover, they also revised Ritzer and Trice's (1969) and Herbiniack and (1972) scales of commitment to obtain another 8-item's scale in order to test for continuance commitment. To examine these scales' reliability, they surveyed 64 students and 229 full-time employees. They concluded that both Ritzer and Trice and Herbiniack and Alutto's scales of commitment were not the appropriate measures for studying Becker's side-bet theory. In addition, Meyer and Allen suggested that these measures are "... saturated with affective commitment and, as such do not allow the theory [side-bet] to be tested appropriately" (p. 40). They also proposed that to conceptualise continuance commitment accurately, researchers should use scales or measures that directly test the number and magnitude of side-bets, as individuals perceive and feel it. However, Meyer and Allen, at this stage of their research, did not recommend both the affective commitment scale ($r = 0.86$) and the continuance commitment scale ($r = 0.77$) that they developed for future research. Nevertheless, they shed light on the concept of continuance commitment and introduced it for the first time in the recent management literature as one of commitment's dimensions.

Likewise, Reichers (1985) reviewed 32 commitment studies from 1966 to 1984. She found that organisational commitment varied great deal. From her review of these commitment studies, Reichers nominated three different definitions typologies for the commitment construct:

1) Side-bets: This form is synonymous to Meyer and Allen's (1984)-continuance commitment concept, based on the side-bet theory.

2) Attributions: According to this concept "commitment is a binding of the individual to behavioural acts that results when individuals attribute an attitude of commitment to

themselves after engaging in behaviours that are volitional, explicit and irrevocable” (p. 468).

3- Individual and organisational goal congruence: this typology is similar to normative commitment concept, that was discussed earlier.

Reichers argued that researchers must ignore the global form of organisational commitment and focus on specific commitments to various entities within it. In Reichers’ words:

It is the central thesis of this paper that organisational commitment can be accurately understood as a collection of multiple commitments to various groups that comprise the organisation. These various identifications with various groups both inside and outside the organisation constitute multiple commitment (p. 469).

She mentioned such groups as customers, professional associations, co-workers and employees’ unions, to which employees can be attached. Moreover, the researcher raised the possibility of conflict between the various types of commitments for employees. She asserted:

... Commitment should be conceptualised to reflect multiple commitments to the goal orientations of the multiple groups that constitute the organisation. This approach may represent the next step in the natural development of the construct from a general to a more specific orientation. It present commitment in a way that may be more closely aligned to individuals actual experience in organisations, raises questions about the relationship between conflict and commitment, and may serve to differentiate commitment more fully from related constructs (p. 474).

Some researchers have agreed with Reichers’ suggestions. Iles *et al.* (1990), for example, stated that commitment looks to be a multi-dimensional concept, and confirmed that there is a possibility of conflict occurring among its facets. According to Iles *et al.*:

Employees commitment seems to be multifaceted, with differential commitments to paid employment, job, organisation and career having been identified and empirically distinguished ... Individuals may show different levels of commitment to different organisational stakeholders or constituencies, including customers, work groups, sections, departments, unions, professional association and top management. Indeed, these differential commitments may even be conflicting (p. 7).

In Reichers’ study, the multi-dimensional nature of commitment has been driven from different point of view. Unlike the previously mentioned studies, Reichers argued that commitment must be divided among all other entities which comprise the macro and

microenvironment factors of the organisation. However, in such cases researchers will not be dealing with an aspect related to the organisation; rather, they will be looking at a broader concept. For example, employees' attachment to their community may have little to add to the interest in understanding the nature of organisational commitment. In this context, Oliver (1990) argued that the global conception of commitment is no longer useful. However, he disagreed with Reichers in defining the base of breaking down this construct into a set of facets. Oliver argued that the global conception of commitment could be dismantled into a set of more useful commitment targets centred around *actions*, not *objects*. The terms *actions* and *objects* refer to different views of conceptualising commitment. The first is related to the idea of considering employee attitudes and behaviours (actions) as the base of exploring the multi-dimensional nature of commitment. For example, the perceived costs of leaving the organisation, emotional attachments to the organisation and the feeling of obligation toward the organisation are all parts of employee attitudes and behaviours in the workplace. The second theme calls for taking the units, sections or departments of the organisation (objects) as a base for testing the multifaceted nature of commitment.

Reichers' suggestion matches the second view. She went further than merely considering organisational units as a base for dismantling global commitment. As mentioned earlier, Reichers called for taking into account all entities inside and outside the organisation to which employees are attached. Reichers' suggestions would be of value in examining the relationship between the organisation and its environment, discussed in the last chapter. Moreover, the unit of analysis in the organisational commitment is the individual (the employee), not entities within or outside the organisation. Therefore, examining the multidimensional nature of commitment outside the boundary of employee-organisation relationships is pointless. On the other hand, from her review of 32 commitment studies, Reichers was able to define three different bases of commitment. These definitions assisted in providing guidelines for subsequent commitment research that has investigated the multifaceted nature of this construct.

Drawing on Kelman's (1958) study, and motivated by Reichers' suggestions, O'Reilly and Chatman (1986) attempted to explore the nature of commitment. They attributed the lack of consensus in organisational commitment studies to the overlapping of antecedents and consequences of commitment on the one hand, and the failure to define a basis of employee attachment on the other. They proposed that individuals' attachment to the organisation may vary within and across individuals, based on the underlying dimensions or attachment bases. According to this suggestion, they

proposed Kelman's (1956) compliance, identification and internalisation concepts, and demonstrated that commitment's antecedents and consequences vary according to these dimensions. Hence, O'Reilly and Chatman (1986) brought Kelman's three-process approach again to the forefront by adopting it in their study as a basis for conceptualising OC.

Following O'Reilly and Chatman's study, Caldwell, Chatman and O'Reilly (1990) used larger and more representative samples to examine the three concepts mentioned above. They found that the items of internalisation and identification formed a single dimension, which they called normative commitment. However, compliance or the continuance commitment loaded as independent factor. They concluded that the multi-dimensionality of the commitment construct seems to be a fact. In their words, the "findings from both studies [1986 and 1990] support the notion that commitment is multifaceted, and that without clarity in the specific aspects of commitment being studied results may be somewhat ambiguous" (p. 257).

Moreover, O'Reilly and Chatman's (1986) three dimensional commitment model was also adopted by Becker (1990). Identification and internalisation were found to be negatively related to intent to quit, and positively related to satisfaction and prosocial organisational behaviour. However, compliance revealed positive relationships with intent to quit, and negative relationships with satisfaction and prosocial behaviour. Together, the three commitment dimensions have successfully explained the variance in the above mentioned dependent variables. The researcher concluded that "compliance, identification and internalisation as bases of commitment were unique determinants above and beyond commitment to foci [particular entities to which employees are attached]" (p. 232).

McGee and Ford (1987) agreed with Meyer and Allen's (1984) suggestion of two-dimension commitment. Their study goal was to test the psychometric properties of the affective and continuance commitment scales developed by Meyer and Allen. To achieve this goal, they surveyed 971 employees representing a broad range of ages, disciplinary areas, geographical regions, institutional sizes, and organisational tenure. The concept of continuance commitment was not as yet well known in the management literature. According to McGee and Ford "*a quite different view of organisational commitment known as the "side-bet theory"* evolved from the work of Becker (1960), who regarded commitment as behavioural rather than attitudinal" (p. 638, researcher's emphasis added). From the results of the factor analysis, McGee and Ford argued that affective commitment is a uni-dimensional concept, with a good internal consistency

reliability. However, as was discussed earlier, they identified two distinct dimensions of the continuance concept. Furthermore, the study failed to explain the reasons and the nature of interference found between affective commitment and the two dimensions of continuance commitment, but it was suggested that affective and continuance commitment may not operate totally independently from each other. Nonetheless, McGee and Ford's study highlighted the importance of multi-dimensional commitment and stimulated other researchers to explore further aspects of this approach. They concluded:

If future studies offer additional confirmation of the multi-dimensional nature of organisational commitment, the ability to clarify the contradictory and inconclusive relations between commitment and its antecedents and consequences will be considerably improved (p. 640).

Peneley and Gould (1988) adopted a different method to study the multi-dimensional nature of commitment. They tried to adopt Etzioni's (1961) macro organisational model of involvement as a single model for both attitudinal and behavioural commitment perspectives. Etzioni's model suggests that organisations possess a predominant compliance system, with relevant involvement types. Unlike previously mentioned studies, Peneley and Gould's study suggested two dimensions for affective commitment, namely, moral commitment and alienative commitment, besides continuance commitment. The alienative commitment viewed employees' commitment as a consequence of two factors, namely:

- (a) A lack of control over the internal organisational environment.
- (b) The perceived absence of alternatives for organisational commitment.

Given these two factors that bind employees to show alienative commitment toward their organisation, one could argue that there is some sort of interference between this concept and the continuance commitment construct, if they are not one concept. However, the researchers argued that they are totally different concepts. According to Peneley and Gould, whilst continuance committed employees would terminate their organisational membership when rewards are no longer equivalent to efforts, alienatively committed employees remain despite the reward-effort imbalance. The study findings supported the multi-dimensionality of commitment; both continuance (calculative) and affective (moral and alienative) commitments were found to exist in the workplace. Peneley and Gould concluded that employees might feel a mixture of commitment types. Moreover, the three aspects of organisational commitment revealed different relationships with some other concepts of organisational behaviour. The

hypothesised two dimensions of affective commitment were found to be independent from each other. Nevertheless, the concept of alienative commitment does not find any support from subsequent commitment studies.

Allen and Meyer (1990) attempted to revise their 1984 two-dimensional study of commitment in the light of subsequent studies which supported the multi-dimensionality of commitment and suggested three commitment dimensions instead of two. Based on their review of the commitment literature they concluded that of several conceptualisations of attitudinal commitment, each reflected one of three general themes:

- (1) Affective attachment,
- (2) Perceived costs,
- (3) Obligations.

Given this conclusion, they contended that “the ‘net-sum’ of a person’s commitment to the organisation, therefore, reflects each of these separable psychological states” (1990, p. 4). Allen and Meyer carried out two studies to investigate this assumption. In the first study, they developed and tested the three scales of the assumed commitment dimensions. In the second study, they examined the degree of interference between the above three factors and the hypothesised antecedents variables for them. Allen and Meyer found that affective and continuance commitment are empirically separable constructs, with different correlates. Although they were also found to be distinguishable, affective and normative commitment appeared to be somewhat related. Given the results of this study, Allen and Meyer argued that the affective, continuance and normative components of organisational commitment are conceptually and empirically separable. They thought that this will help organisations differentiate between the employee commitments, and consequently find out who is contributing positively to organisational success. In Allen and Meyer’s words:

In future research, it may be possible to identify “commitment profiles” that differentiate employees who are likely to remain with the organisation and to contribute positively to its effectiveness from those who are likely to remain but contribute little. If so, it should be possible for organisation to use the results of research examining antecedents ... to better manage the experience of their employees so as to foster the development of the desired profile (p. 15).

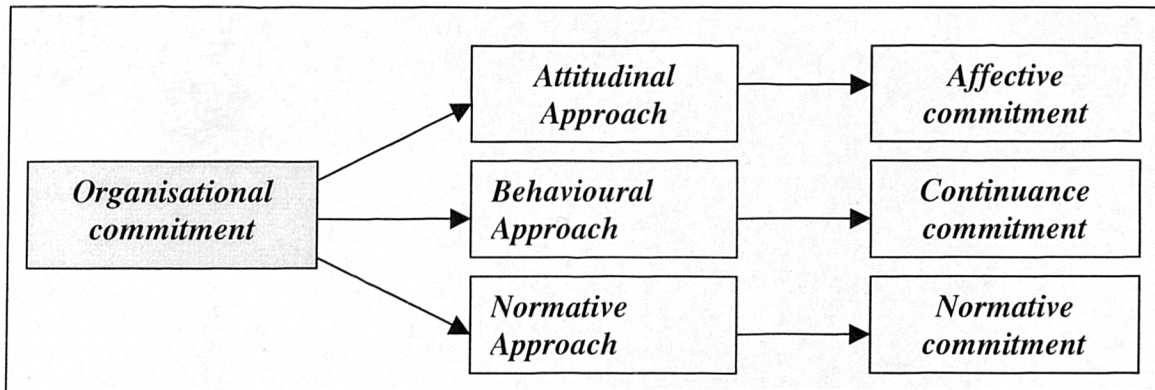
The results of this study supported further the assumption that organisational commitment is a construct of three dimensions. Given this support for the multidimensional view of commitment, it can be noticed that researchers came to recognise the importance of Kelman’s (1958) three-process approach after about three

decades from its publication. By comparing the previously mentioned processes of Kelman's with Allen and Meyer's (1990) dimensions, no major differences can be found. However, both studies used different terms to describe the same concepts. While Allen and Meyer used the terms affective, continuance and normative commitment, Kelman used identification, compliance and internalisation, respectively. Nevertheless, Allen and Meyer's study is criticised by some researchers. Al-shakha (1995), for example, argued that the Allen and Meyer study ignored the behavioural approach, or rather tried to subsume its ideas under the attitudinal approach, which is not correct. According to Al-shakha, Allen and Meyer "create a conceptualisation that appears to conflict with established notions usually maintained in the discussion of organisational commitment ... such inconsistent usage of the same concept [continuance commitment] is confusing" (pp. 14-15).

On the other hand, Allen and Meyer argued that behavioural approach theories could successfully fit the definition they proposed for attitudinal commitment. They defined attitudinal commitment as a psychological bond that reflects the employee-organisational relationship. According to this definition, employee continuance commitment's viewed as a psychological attachment to his/her organisation. Nonetheless, Alshakha's argument seems to be right; however, Allen and Meyer's study contains two major weaknesses, not only one, as he suggested, namely:

- 1) Although they mentioned three commitment components (affective attachment, perceived costs and obligations), Allen and Meyer acknowledged only one approach to study these three concepts (the attitudinal approach).
- 2) Despite being well established in the management literature, both behavioural and normative approaches were disregarded and implicitly subsumed under the attitudinal approach. This integration of the three approaches in one approach mixed-up the concepts, confused researchers and conflicted with the basic pillars of the organisational commitment construct. On the contrary, the three commitment dimensions of Allen and Meyer are related to three different commitment approaches, not only one, as they suggested. Figure (3-5) provides some ideas about the development of the three commitment dimensions.

Figure (3-5): The development of affective, continuance and normative commitments.



As can be seen from Figure (3-5), each one of the three commitment's approaches has its own philosophy and ideas and is capable of explaining employee commitment, as was discussed earlier. Later on, Meyer and Allen (1991) came to realise the confusion they had created by conceptualising organisational commitment in such a way. Therefore, they acknowledged both the attitudinal and behavioural perspectives in the 1991 study as an attempt to remove the contradiction between their proposed components and already established approaches. Meyer and Allen asserted:

In the model of commitment ... we incorporate both the attitudinal and behavioural approaches and their complementary relationship ... to expand upon the concept of organisational commitment as a mind set, or psychological state (i.e., feelings and/or beliefs) concerning the employee's relationship with an organisation. ... This psychological state need not to be restricted to value and goal congruence as described by Mowday et al. Rather we argue that it can reflect a desire, a need and/or obligation to maintain membership in the organisation (p. 162).

Meyer and Allen further suggested that, according to the three commitment approaches, employees develop a commitment profile reflecting the level of desire, need and obligation to remain.

In spite of the above weaknesses, the Allen and Meyer (1990) study "has provided what is perhaps the best-developed typology of organisational commitment" (Angle and Lawson, 1994, p. 1540). They further supported this typology by a stream of other empirical studies (e.g., Allen and Meyer, 1996; Meyer, 1997; Meyer, Allen and Smith, 1993; Meyer *et al.*, 1998). In their 1996 study, Allen and Meyer thoroughly reviewed and evaluated the body of the evidence relevant to the validity of the affective, continuance and normative scales. The overall results of this study strongly supported the multi-dimensional nature of commitment; they concluded:

Overall, there appears to be considerable evidence regarding the construct validity of the three measures. Thus, we would argue that the ACS, CCS and NCS [affective, continuance and normative commitment scales] are appropriate measures of organisational commitment based on emotional attachment, perceived costs and feelings of obligation, respectively. Nonetheless, construct validation is on going process. ... The continued use of measures should contribute to this on going process as well as to substantive research goals (p. 273).

Since then many studies (e.g., Irving *et al.*, 1997; Jaros, 1997; Brown, 1996, Chait, 1998) have adopted the multifaceted approach to study organisational commitment and its antecedents, consequences and correlates. Yet, the approach is still a new idea, and it needs some additional efforts before it takes over the role from Porter *et al.*'s (1974) well-known unidimensional approach.

Some researchers (e.g., Brown, 1996; Peneley and Gould, 1988; Angle and Lawson, 1994) used the term *types* to refer to the dimensions of organisational commitment. Using such a term seems to conflict with the fact that these dimensions are not completely separable from each other, and are not mutually exclusive. Therefore, this study uses the terms component, factor, dimension, facet and foci instead of type. This comes in to line with the recent calls (e.g., Benkhoff, 1997b) that ask researchers to be very selective and careful when they use such technical terms. As suggested, this approach is likely to provide positive and consistent results on employees' organisational commitment. In order to reach this point, researchers need to use similar technical words and to avoid such slippage, which occurred during the domination of Porter *et al.* (1974).

3.4 THE FACTORS AND MEASUREMENTS OF ORGANISATIONAL COMMITMENT

As mentioned earlier, most commitment studies of the 1960s, 1970s and 1980s have treated commitment as a unidimensional construct. The terms *commitment* and *loyalty* were widely used in these studies to refer to the employees' affective attachment to the organisation. Despite being rooted in Kelman's (1958) study, the multidimensional view of commitment started to appear in the management literature as late as the 1990s. Although it is now widely agreed that commitment is a multifaceted concept, some studies (e.g., Gupta *et al.*, 1998 and Rahim, Antonioni, Psenicka, Kim and Khan, 1999) still use the unidimensional view to conceptualise this construct.

Angle and Perry (1981) factor analysed the 15-item OCQ scale of Porter *et al.* (1974) in order to examine the commitment-organisational effectiveness relationship. The

results revealed two dimensions, namely *value commitment* and *commitment to stay*, which appear to differentiate between respondents' commitment to support the goals of the organisation and their commitment to retain organisational membership, respectively. They concluded, "any impact of employee commitment on the organisation may indeed depend on the specific kinds of behaviours to which the employees are committed and, of course, the effects of such behaviours on organisational outcomes" (p. 10). Likewise, Meyer and Allen (1984) used the same dimensions as Angle and Perry (1981) to conceptualised the commitment concept, however they gave them different labels, namely *affective commitment* and *continuance commitment*. Furthermore, Meyer and Allen (1991) re-conceptualise the commitment concept in a way that encompasses the idea that some employees have a moral obligation toward their organisation. At this stage the concept of *normative commitment* emerged as a third factor. Since that time, commitment studies have focused on these three factors, with most of them using only the affective and continuance commitment components to study employee commitment. The concept of normative commitment has not gained enough support from most previous studies.

Measures of the organisational commitment concept are as diverse as their definitions. For example, Grusky (1966) used a scale of four items to measure this variable, namely company seniority, identification with the company, attitudes toward company administrators and general attitudes toward the company. Moreover, Kanter (1968) used a 36-item scale to measure commitment; however, he failed to report either validity or reliability data. In addition, Herbiniack and Alutto (1972) used a 4-item scale, which ask in essence what it would take for the employee to leave the organisation. Nonetheless, the 15-item scale (OCQ) developed by Porter *et al.* (1974) is the most recognised measurement of this construct, which has dominated commitment studies for about two decades. They argued that this instrument taps the three aspects of their definition of commitment mentioned earlier in chapter two. More recently, some researchers have tended to criticise Porter *et al.*'s definition of commitment and the OCQ.

Becker *et al.* (1996), for example, studied the commitment-performance relationship. They argued that the use of the OCQ to measure employees' commitment has reflected negatively on commitment-performance relationships. In their words:

The conclusion that commitment is largely unrelated to job performance is based upon the conventional view of commitment, which is that employee attachment involves 'the relatively strength of

an individual's identification with and involvement in a particular organisation' (Mowday et al, 1982, p. 27)" (p. 465).

Moreover, O'Creevy, Winfrow, Lydka and Morris (1997) examined the multidimensionality of the British Organisational Commitment Scale (BOCS), which was developed by Cook and Wall (1980) and is widely seen as a UK alternative to the OCQ. They argued that "the best-known instrument, the organisational commitment questionnaire, has been criticised for confusing commitment and its outcomes" (p. 594). Furthermore, Benkhoff (1997b) has examined the 'dangerous use of the OCQ for research and policy'. She suggested that the widespread use of the OCQ scale to measure commitment and to examine its relationships with other work-related outcomes, such as performance has resulted in inconsistent and somewhat confusing findings. She asserted:

After 30 years of research on employee commitment, the results are disappointing. So far there is no evidence of a systematic relationship between commitment and its presumed consequences- turnover and job performance- even though these links are almost implied in the definition of the concept. ... One of the reasons why commitment research has made so little progress seems to be the way 'commitment' is conceptualised and measured. If one conceptualisation is to blame, it has to be Porter et al.'s (1974) three-dimensional definition and their corresponding Organisational Commitment Questionnaire (OCQ) (p. 114, researcher's emphasis added).

Benkhoff argued that the OCQ is not a homogenous scale, and that Porter *et al.*'s argument of three factors defining commitment is not correct, because they are not talking of factors in the statistical sense (factor analysis), but of aspects of a single concept. Benkhoff suggested two approaches for commitment research to get out of its current 'quagmire': "the first is to abandon the popular definition of Porter *et al.* (1974) and to explore the dimensions separately. ... The second is that researchers could use the Allen and Meyer (1991) scales which are based on a different commitment concept and have been tested for homogeneity" (p. 129).

Hence, past commitment research can said to be hampered by two main factors:

- (1) The unidimensional view of commitment: Unfortunately, most researchers have followed in the footsteps of Porter *et al.* (1974) in conceptualising commitment as "a global construct reflecting a general affective response to the organisation as a whole" (Mowday *et al.*, 1979). However, commitment as mentioned earlier is a multidimensional concept; therefore researchers should adopt multifaceted scale (s) to measure it and investigate its relationships with other organisational concepts.

(2) The unidimensional measures: Most past studies have used a unidimensional scale (s) to measure employee commitment. More specifically, the majority of them have used the OCQ, which has later appeared to be a misleading measure. For example, the OCQ was used in 103 of the 174 samples which Mathieu and Zajac (1990) reviewed in their meta-analytic study. Nonetheless, the application of the OCQ can still be useful, but under one condition. That is, when using it to measure the affective commitment dimension of commitment, because the OCQ is not capable of measuring either continuance or normative commitment. Both the complete scale (15 items) and the parsimonious scale (the nine positive items) of the OCQ are capable of measuring affective component only.

In summary, commitment research will continue to report less progress, inconsistent and contradictory findings if researchers continue to employ unidimensional definitions and measurements in their attempts to study this important organisational concept.

3.5 THE DIMENSIONS AND MEASUREMENTS OF PERFORMANCE

Although performance is also a multifaceted concept, most previous studies (e.g., Pritchard and Karasick, 1973; Ferris, 1980; Makiney and Levy, 1998 and Randall *et al.*, 1999) have conceptualised performance as a unidimensional construct. According to Campbell *et al.* (1993), one of the most pervasive fallacies has been the classic position that has dominated applied research for much of the century. This says that “performance is one thing; that is, the general factor will account for all the relevant true-score covariances among observed measures” (p. 37). They concluded that this single view of performance was a very unfortunate and counterproductive characterisation of the goals of performance, and that the general factor cannot possibly represent the best fit.

Likewise, Angle and Lawson (1994), Kalleberg and Marsden (1995) and Somers and Birnbaum (1998) suggested that using multiple dimensional scales to study performance relationships with other variables (e.g., commitment) is necessary to examine and understand the nature, significance and strength of these relationships. In this context, it worth mentioning that the multidimensional nature of performance was rooted in Varoom’s (1964) model of Valence-Instrumentality-Expectancy of work motivation. According to this model, performance is a multiplicative function of ability and motivation. Thus, if either of these factors were absent, performance would be reduced to zero. In general, from the early 1990s, researchers started to realise the importance of conceptualising performance as a multifaceted construct. Farh *et al.* (1991), for

example, used four dimensions of performance to examine self-ratings in China and United States. These factors are understanding of work duties, work skills, desire to work and job performance. The job performance factor in Farh *et al.*'s study comprised two main components, namely quality and quantity of work.

Similarly, Yu and Murphy (1993) used the same factors and scale of Farh *et al.* (1991) to study modesty bias in self-ratings of performance in Taiwan and China. Suggesting that the "nature of performance counts" (p. 1539), Angle and Lawson (1994) used four facets of performance to investigate the commitment-performance relationship. These factors are dependability, initiative, organisation and accomplishment, and judgement. Likewise, Kalleberg and Marsden (1995) used two performance factors, namely quality and quantity of work, to study the commitment-performance relationship. Surprisingly, they treated the concept of effort, which is likely to be a performance factor, as a commitment dimension. Moreover, Cheng and Kalleberg (1996) examined employee job performance in Britain and United States. They used 'work much' and 'work well' factors to measure the performance concept.

In addition, Furnham and Stringfield (1998) studied congruence in performance ratings using four performance components, namely: forward planning, communication, teamwork and contribution to continuous improvement analysis. Furthermore, Somers and Birnbaum (1998) argued that "it is the nature of performance that counts" (p. 621). They used 'task proficiency', 'performance that is beneficial to organisations' and 'performance that is detrimental to organisations' as performance factors to examine their relationship with commitment.

By comparing the above multifaceted scales of performance, it is apparent that the common denominators among the dimensions of these scales are quality and quantity of work facets. Moreover, most of these dimensions ranged between two and four for each performance scale. The current study uses six dimensions to measure employee performance in the Jordanian industries; namely, understanding work duties, work skills, work enthusiasm, quality and quantity of work and readiness to innovate. This scale departs from the previous scales of performance in two main respects:

- (1) Work enthusiasm: Most, if not all, past performance scales have ignored the role of work enthusiasm and/or spirit in influencing employees' performance. The enthusiastic employee is generally assumed to be energised, active and demonstrating of his/her passion and love for his/her job and the people around him/her. In this context, Spitzer (1999) argued that having spirited and enthusiastic employees is very important for work organisations, because it gives heightened

energy, imparts a sense of well-being, inspires creativity, connects people to a common cause and to a unity beyond material boundaries, assists self-transcendence and self-sacrifice beyond normal physical limitations, and embraces the future as if it were the present. Furthermore, he suggested that enthusiasm “leads to clarity of thought, good judgement and efficient and effective action. Overall, [it] *is the key to having a high performance*, highly adaptable, highly team-oriented organisation” (p. 13, researcher’s emphasis added). In addition, Lonkevich (1999) suggested that employees’ enthusiasm is one of the most important competitive advantages that the organisation can have in this era of global intensive competition. He concluded, “the idea is to distinguish yourself from the competition, the way we are going to compete is by intellect and enthusiasm. Our focus is to hire the best” (p. 5).

- (2) *Readiness to innovate*: Except for Angle and Lawson’s (1994) measurement, all previous performance scales have ignored the importance of innovation in determining employee performance. For firms to become competitive and integrative, Kanter (1984) believes they need to develop three new sets of skills in their managers, namely: skills in persuading people to invest time and resources in new and possibly risky initiatives; skills in managing problems arising from team working and employee participation; and an understanding of how change is designed and constructed in an organisation. More recently, employees’ readiness to innovate has become one of the major driving forces behind the success of organisations in today’s fast changing markets. Thus, coping with change means innovation, and innovation leads to success. According to Kandampully and Duddy (1999), “it has become increasingly important for firms today to introduce innovation and flexibility into their core competence” (p. 52). Arguing that the world of business is now in a permanent state of flux where constant innovation is the only strategy for survival for both the individual and the organisation, Roffe (1999) asserted:

The explosion [i.e. re-engineering, downsizing and delayering] is propelled by the demands of increasingly competitive markets and the needs of organisations to improve their competitive advantage in these markets. In response, companies can reduce costs, improve quality, increase productivity or effect innovation. However, the changes introduced by most companies commonly address the first three of these factors and less often, the last.

[However, we] believe that the key to organisational success lies in developing intellectual capital and acquiring a new set of thinking: creativity to yield an idea and innovation to translate the idea into a novel result (p. 224).

The implication of the above discussion for researchers is that work enthusiasm and readiness to innovate are important factors of performance and that they should not be ignored when looking at employee performance as a single concept, or in relation to other organisational concepts. The main failure of past studies mentioned in chapter two in establishing a link between performance and other concepts, such as commitment is partly due to the scales used in measuring the performance concept (Angle and Lawson, 1994; Kalleberg and Marsden, 1995; Somers and Birnbaum, 1998).

Most researchers face some difficulties in obtaining actual performance data, because most organisations refuse to release it and consider it as a confidential issue, or simply because it does not exist in some organisations, especially in the Third World. However, even if it does exist and is made available in some circumstances, most researchers (e.g., Caruana *et al.*, 1997) argue that it is of minimal use in explaining variation in performance between organisations and between employees. Accordingly, they “recommended that researchers consider using questionnaire or interview based perceptual measures of performance” (Caruana *et al.*, 1997, p. 5). Thus, who should evaluate or appraise employee’s performance? The term *performance appraisal or evaluation* refers to a systematic description of an employee’s job relevant strengths and weaknesses. Employee’s performance can be evaluated by his/her peers, subordinates, customers served, and more recently by computers. However, the most widely considered appraisal systems use the immediate supervisor and self-appraisal. The advocates of the immediate supervisor performance ratings (ISPR) approach argue that the immediate supervisor has an adequate opportunity to observe employee performance over a reasonable period of time, and this makes him/her capable of producing accurate and objective ratings. According to Cascio (1989):

If appraisal is done at all, it will probably be done by this person [i.e. the immediate supervisor]. He or she probably most familiar with the individual’s performance and, in most jobs has had the best opportunity to observe actual job performance. Furthermore, the immediate supervisor is probably best able to relate the individual’s performance to the departmental and organisational objectives. Since he or she also is responsible for reward (and punishment) decisions, it seems only logical to make the immediate supervisor responsible for performance appraisal as well (p. 318).

On the other hand, supporters of self-rating argue that it tends to be more lenient, improves ratee’s motivation and reduces his/her defensiveness during the appraisal interview. In this context, it worth mentioning that the debate on which measure of performance is the best (self and immediate supervisor) is far from over. Examining the

relationship between these two measures of performance is one of the most interesting issues in the management literature. Generally, the results have shown a frequent lack of agreement between self-ratings and those provided by other sources, mainly immediate supervisor ratings. Harris and Schaubroeck (1988) conducted a meta-analytic study to examine self and supervisor ratings relationships. The results revealed a moderate positive correlation ($r = 0.36, p < .05$) between these two measures. In addition, Furnham and Stringfield (1998) studied the congruence in performance ratings. They found that “self-ratings were higher than others (managers, peers, consultants). ... [However] there was no significant difference between managers, peers and consultants” (p. 523). Thus, it can generally be concluded that self-appraisals tend to less agree with the evaluations of others, including immediate supervisors. Put differently, employees tend to give themselves higher marks than their immediate supervisors do. Therefore, some researchers suggested that “self-appraisals are probably more appropriate for counselling and development than for personnel decisions” (Cascio, 1989, p. 319).

3.6 CONCLUDING REMARKS

This chapter has presented and discussed some theoretical approaches to the concepts of work environment, commitment and performance. It has argued that previous studies of work environment have failed to assess appropriately the nature of this construct and to explore its relationships with other organisational concepts. The use of the 1960s and 1970s scales of work environment to examine today’s fast changing, uncertain and diverse work environments was assumed to be the major reason behind the failure of this construct to explain the variance in some other organisational variables, such as performance. This chapter has demonstrated that concepts like trust, procedural justice and innovation climate are important factors in today’s work environment. Therefore, researchers are urged to consider revising the previous well-known scales (e.g., Litwin and Stringer, 1968) in the light of current changes in work organisations, instead of applying them as complete packages.

Moreover, this chapter has reviewed the various approaches which have emerged in the management literature to conceptualise the commitment concept, namely: the attitudinal, behavioural, normative and multidimensional approaches. It argued that the multidimensional view is the most suitable approach to conceptualise commitment. It was also suggested that abandoning the multidimensional view of continuance commitment would help in the development of commitment research, because the

global view is more capable in explaining employees' feelings of commitment to stay because of the perceived cost of doing otherwise.

Furthermore, the dimensions and measurements of organisational commitment used by different researchers were also discussed in this chapter. It was argued that the wide use of the OCQ in past studies has resulted in frustrating and contradictory results; to an extent this has weakened the importance of this concept. To obtain more encouraging and consistent results, and to overcome the slippage of the past studies, the chapter has suggested the use of the multidimensional approach and multidimensional scale (s) to study and measure the commitment construct.

In addition, the chapter has reviewed the various components of the performance concept used in the management literature. It has argued that the unidimensional view of performance that has dominated most previous performance studies has negatively influenced the progress of the research in this field. The chapter has suggested that performance is a multidimensional construct, and that to obtain more encouraging results researchers must conceptualise it in this way. The importance of *enthusiasm* and *readiness to innovate* factors was also discussed.

The next chapter highlights the political and economical environment of Jordan. It also discusses the major features of Jordanian society, as well as the main indicators of the Arab management system.

Chapter Four

**JORDAN: POLITICAL,
ECONOMICAL AND SOCIO-
CULTURAL ENVIRONMENT**

JORDAN: POLITICAL, ECONOMICAL AND SOCIO-CULTURAL ENVIRONMENT

4.1 INTRODUCTION

One of the major arguments of this study is that the work environment in any organisation influences employees' attitudes, behaviours and work outcomes. Nevertheless, no one can doubt the effect of organisational environments on organisations, employees and work outcomes. Yet, each country has its own unique political, economic and socio-cultural environment, which interacts to influence the work environment in variety of ways. Therefore, this chapter examines the environment of the industrial organisations under scrutiny in this study.

The chapter is divided into four major parts. The first part deals with Jordan's political environment. The second section focuses upon the economic environment in terms of features, structure and development. The third part examines the major features of the social environment in the Jordanian context. Since this study explores the PWE, OC and performance in a non-traditional setting (non-Western), it is felt that there is a need to highlight the major cultural indicators of Jordanian society, especially those related to work in organisations. Thus, the last section sheds some light on the Jordanian and Arab culture and management style.

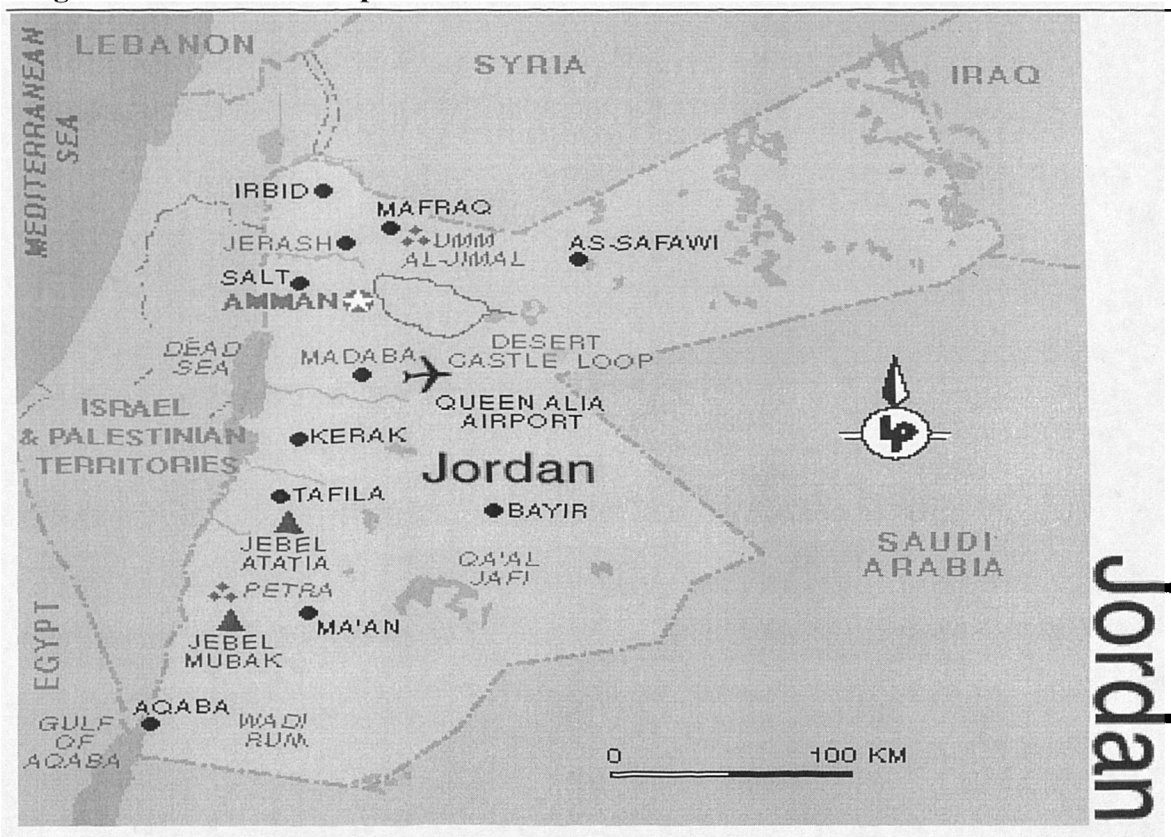
4.2 GEOGRAPHICAL AND HISTORICAL BACKGROUND

Jordan is a small developing country in the Middle East. It stands at the junction of Asia, Africa and Europe continents. As can be seen from the map (figure 4-1), it is bounded by Syria on the north, Iraq from the north-east, Saudi Arabia on the south and east and Israel on the west.

Jordan is rich in history; it is the home to some of the earliest human settlements and farming villages in the world. It represents the cross-roads of the ancient world, where human beings first organised themselves into communities, cities and eventually, civilisations. The Ottoman Empire ruled Jordan until the First World War, when it was defeated by the Allies who signed the Sykes-Pico treaty in 1916. Accordingly, Britain governed Iraq, Palestine and trans-Jordan. Under the mandate, Britain recognised Prince Abdullah as the governor of the trans-Jordan. After the independence in 1946, the trans-Jordan become the Hashemite Kingdom of Jordan (current official name) under British tutelage, and hence Prince Abdullah was proclaimed king. In 1950 unity between East bank (trans-Jordan) and West Bank was achieved. However, in 1967 the

West Bank was occupied by Israel; as such, the unity between the two banks collapsed. Nevertheless, the legal relationship between the two regions remained until 1988, when the late king Hussein of Jordan declared the disengagement of the legal and administrative relationship between the two banks of River Jordan. The last major historical issue in Jordan to be reported is the death of the founder of new Jordan, King Hussein Bin Talal in the 7th of February 1999. He was one of the longest serving leaders in the world; about 80% of Jordanian have known no other head of state (Ministry of Planing, 1999).

Figure 4-1: Jordan's map.



4.3 THE POLITICAL STRUCTURE

The Hashemite Kingdom of Jordan is a constitutional monarchy. The king is the head of the state, and in him the supreme executive, legislative and judicial powers are vested. Moreover, the king has the constitutional power to declare war, conclude peace and sign treaties and agreements. The constitution was written in 1949 and promulgated in 1952. It guarantees the independence of the judicial branch, and clearly states that judges are subject to no authority but that of the law. The legal system, as in most Arab countries, is based on two main sources, Islamic Law (Shari'a) and Civil Law. The Shari'a's law embraces the whole range of personal and social life. Civil law is considered in cases of civil, criminal or administrative disputes between people or

between people and the state. Since 1991 there have been significant democratic reforms, such as liberation of the press. Moreover, the National Charter, which had been commissioned by Royal Decree (effective since 1991), regulates and governs the establishment of political parties within the context of a pluralistic democracy. Its legislation guarantees full and free participation for all political parties within the system. Seventeen political parties, ranging from Islamic parties to conservatives, had been granted licenses and rights to participate in the legislative election. On the other hand, on October 1994, Jordan and Israel signed a peace agreement, according to which Jordan terminated its boycott of Israel. In this agreement, Jordan has reinforced its commitment to a comprehensive peace in the region. In addition, the Gulf crisis and the second Gulf war (1990-1991) have created some economic and social difficulties for Jordan, costing at least US\$ 1.5 billion in lost trade and declining revenue (Ministry of Planning, 1997). Its political relations with neighbouring Gulf States were strained as a result of the position adopted (neutrality). The neutrality stance of Jordan in this war caused Jordan to be ostracised politically. More recently, Jordan's political relationships with the Gulf States are improving, and this may pave the way for the return of some Jordanian workers to these countries to take up employment.

Overall, the Jordanian political system remains one of the most stable systems in the Middle East and Third World.

4.4 THE ECONOMIC ENVIRONMENT

Jordan's economic system consists of private and public sectors. However, the economy is market oriented, where ownership of business entities is largely private. Except subsidised goods (e.g. wheat and sugar), prices, interest rates and wages are generally determined by market forces.

4.4.1 GENERAL OUTLOOK

The political situation of any country plays a significant role in shaping the economic performance in that country. As discussed earlier, the second Gulf War (1990-1991) and the ongoing United Nations (UN) sanctions further seriously affected Jordan's economy. The remittance of Jordanian workers from abroad was reduced by about 14.5% (Ministry of Planning, 1999). In addition, about US\$ 537 million foreign aid was also suspended. The operation and revenues of the Aqaba port and trade with other countries were also disrupted. Nevertheless:

The influx of approximately 300,000 well-educated and entrepreneurial Jordanians from Kuwait and other Gulf countries, who brought with them an estimated US\$ 1.5 billion set in motion, in the early 1990s, a

construction-led boom in Jordan. This injection of new capital, coupled with the successful implementation of the structural adjustment program (which was revised following the Gulf war), caused Jordan's GDP [Gross Domestic Product] growth rate to reach 16.1% in real terms 1992 (Ministry of Planing, 1999, p. 67).

Gross Domestic Product (GDP) is the market value of all final goods and services produced by factors of production in a country. Furthermore, in 1992 all economic sectors showed positive growth, especially trade, agriculture and manufacturing, in each of which growth exceeded 9% (Ministry of Planing, 1997). However, in 1996 the value of national exports reached US\$ 1,816.9 million, compared with US\$ 1,750.5 million in 1995 (Department of Statistics, 1997). The country's reserves of gold and foreign currencies witnessed a remarkable increase during 1996, reaching JD 4,271 million (about US\$ 6,100) against JD 4,067.8 million in 1995 (Amman Financial Market [AFM], 1996). Nonetheless, in 1997 and 1998 the Jordanian economy continued to progress as a result of the successful implementation of the Economic Adjustment Program (EAP) launched by the government in 1989. According to AFM annual report (1997) "the program [EAP] aims at overcoming the imbalance from which the economy has suffered, and achieving desirable macro economic indicators on the way to reach prosperity and development" (p. 9). During 1997 the economy achieved a real growth rate of 5% in GDP, and the national savings reached 11.3% of the GDP against 10.9% in 1996. The major indicators of the Jordanian economy are presented in Table (4-1).

Table 4-1: Major Economic Indicators.

Particulars	Unit	1994	1995	1996
Central Gov. Domestic Revenues	Mill.J.D	1361.8	1437.2	1476.2
Central Gov. External Revenues	Mill.J.D	469.5	695.6	706.4
Central Gov. Current Expenditures	Mill.J.D	1115.2	1220.4	1296.6
Central Gov. Capital Expenditures	Mill.J.D	465.1	728.4	680.4
GDP at Current Producer's Prices	Mill.J.D	4218.0	4619.3	4761.3
GDP at Constant Producer's Prices	Mill.J.D	2583.8	2736.8	2758.8
GNP at Current Prices	Mill.J.D	4066.6	4502.5	4649.0
Growth Rate of GDP at Current Prices	Per Cent	11.0	9.5	3.1
Growth Rate of GDP at Constant 1985 Prices (1985 =100)	Per Cent	8.5	5.9	0.8
GDP at Current Prices per Capita	J.D	1019	1077	1071
<hr/>				
Particulars	Unit	1995	1996	1997
Electricity Consumption per Capita	kWh	1310	1364	1361
Consumer Price Index	1992=100	107.0	109.0	116.6

Source: *Department of Statistics, Amman, Jordan (www.dos.gov.jo).*

Contrary to the most local and international economic organisations and experts' expectations, the death of King Hussein of Jordan in 1999 did not affect the steady progress of the Jordanian economy. Rather, most economic indicators suggest that the Jordanian economy is in its best situation. For example, the statistics of June 1999 indicate that the rate of unemployment has reduced from 14.4% to 10.2% (Department of statistics, 1999). According to the Jordanian Labour Minister, this unemployment rate (10.2%) is good, given the rate in some other developed countries, such as Spain (22%), Germany (9%), Britain (9%) and Italy (10%) (Al-Rai newspaper, 20 July 1999, p. 2).

As mentioned earlier, Jordan's economic system is a mix of state owned or shared enterprises and private organisations. The public sector in Jordan has been in existence since 1950. It has established large capital intensive projects, such as the phosphate, potash and fertiliser industries. Moreover, the public utilities sector is also owned by the state, e.g., electricity, water, communication, railway and public transportation. The public sector organisations employ about 50% of the labour force in Jordan. However, the operation of some of these organisations is weak, and results in losses rather than profits most of the times. The state invests millions to up-grade the telecommunication, power and water sectors. For example, Royal Jordanian debts only stand at JD 600 million (US\$ 845 million), and the monthly losses of public transportation amount to about JD 100,000 (US\$ 141,000) (Ministry of Planning, 1999). Therefore, the government introduced the privatisation program in 1990. The privatisation policy was initiated to achieve four objectives:

- 1- To enhance enterprise efficiency and competitiveness in the economy.
- 2- To increase the private investment in the infrastructure.
- 3- To attract foreign investment and technical know-how.
- 4- To develop Jordan's capital market (AFM) and broaden its ownership base.

Nevertheless, there is also a strong belief among official Jordanians that GDP growth is highly dependent on the pace of privatisation. Nonetheless, the privatisation strategy started functioning in Jordan after the establishment of the Executive Privatisation Unit (EPU) in 1996. The current agenda of privatisation includes the national airline (*Alia*), power, telecommunication, transport and railway and water. As step towards full privatisation, the Jordan Electrical Authority and the Jordan Telecommunication Corporation were transferred into wholly government-owned shareholding companies.

On the other hand, most private organisations are small scale, owned by individuals and families. The good performance of the private sector in the developed countries led

the government to encourage and support Jordanian private business organisations. As mentioned earlier, it is the intention of the State to transfer the current ownership of public organisations to the private sector. Table (4-2) below shows the major employment indicators of the public and private sectors for the year 1996. As can be seen from Table (2-4), the number of private organisations employing 5 persons or more (8076) is double that of the public enterprises (432). However, the total number of employees in the public sector (226056) is greater than that of the private sector (180457).

Table 4-2: The employment indicators of public and private sectors.

Particulars	Unit	1996
Enterprises (Engaging 5 persons or more)		
Public Sector	Ent.	0432
Private Sector	Ent.	8076
Employees (of Enterprises Engaging 5 Persons or more)		
Public Sector	Person	226056
Private Sector	Person	180457
Paid Employees		
Public Sector	Person	226056
Private Sector	Person	172503
Compensation of Employees (during the Survey Year)		
Public Sector	1000 J.D	691998
Private Sector	1000 J.D	534728
Compensation of Employees (during the Reference Month)		
Public Sector	1000 J.D	55596
Private Sector	1000 J.D	41735

Source: Department of Statistics, Amman, Jordan (www.dos.gov.jo).

To summarise, Jordan's economy continues to progress as a result of the successful implementation of the EAP. However, the major threat of the economy is "its vulnerability to external shocks and regional unrest, in addition to high dependence on external assistance" (Central Bank of Jordan, 1999, p. 68).

4.4.2 THE ECONOMIC SECTORS

In general, the Jordanian economy can be divided into three major economic sectors, namely: Industry, agriculture and service.

4.4.2.1 THE INDUSTRIAL SECTOR

This economic sector contributes approximately to 17% of the GDP (Ministry of Planing, 1999). It comprises mining, cement, fertilisers and petroleum refinery as large scale industries, and some other small scale industries, such as food, engineering and pharmaceutical industries. Generally, the industrial sector in Jordan can be divided into

two groups, namely: mining and quarrying and manufacturing. Table (4-3) presents the industrial production of the principal industries for the period of 1995 to 1998. As can be seen from this table, the Industrial Production Index (IPI) increased from 100 in 1994 to 109,1; in 1995, however it declined in 1996 to 105, to increase again in 1997 (109.5) and 1998 (112.6). Considering the results of the monthly statistics of the Central Bank of Jordan (www.cbj.gov.jo), it can be suggested that the IPI will increase in 1999.

Jordan exports part of its industries (table 4-3) to some Arabic, European Union, Asian and American countries. Table (4-4) provides some details about Jordan's industrial exports, and its contribution to the total national export. As can be seen from this table, mining industries only account for about 68% of total exports. Jordan is the third largest exporter of phosphate in the world, with six million tons exported annually. In 1997, Jordan exports of mining and fertilisers products (table 4-4) amounted to JD 327 million, and exports of the manufacturing products reached JD 576 million. On the other hand, the 1997 statistics of industrial organisations showed that the total number of registered industrial firms were 24500, employing 150,000 workers (Department of Statistics, 1998). Thus, the industrial sector can said to employ around 8% of the labour force in Jordan.

Table 4-3: Industrial Production of Principal Industries.

Particulars	1998	1997	1996	1995
1- Mining and Quarrying				
Phosphates (000 Ton)	5927.2	5896	5422	4948
Potash (000 Ton)	1529.3	1416	1766	1780
2- Manufacturing				
Fodder (000 Ton)	67.7	73	54	54
Alcoholic Drinks (000 Litre)	7848.6	7825	7972	6847
Cigarettes (Mill. Cig.)	1144.2	1853	2769	3667
Textiles (000 Yards)	1544.7	1459	1764	1745
Spinning (Ton)	858.4	1240	1614	1524
Upper Leather (000 Sq. Ft.)	1788.2	2270	2139	2520
Sole Leather and Wool (Ton)	35.3	46	55	51
Fertilisers (000 Ton)	642.1	586	640	729
Chemical Acids (000 Ton)	1474.5	1289	1260	1338
Detergents (000 Ton)	18.2	22	15	22
Cement (000 Ton)	-	3055	2983	3152
Iron (000 Ton)	104.8	115	172	151
Petroleum Product (000 Ton)	3336.4	3301	3154	3101
Paper and Cardboard (000 Ton)	15.6	12	18	14
Liquid Batteries (000 Batt.)	62.3	56	63	70
3- Electricity (Mill. K.W.H)	6331.4	5941	5686	5252
Industrial Production Index (1994 = 100)	112.6	109,5	105	109,1

Source: The Central Bank of Jordan (1999) and Amman Chamber of Industry (1998).

Due to the lack of natural resources, Jordan has been focusing increasingly on manufacturing industries. According to the Amman Chamber of Industry (ACI) statistics of 1996, manufacturing products represent more than 59% of total 1996 exports. However, various kinds of industries, such as mining, cement and fertilisers, offer promising scope for joint ventures to produce products for local, regional and international markets. Since the industrial sector is viewed as the future driving force behind country's economy, the government is encouraging investments in this sector.

Therefore, it enacted a new investment law called the Encouragement of Investment Law. This law equates between Jordanian nationals and foreign investors, and abolishes the requirement of obtaining the prior approval of the Council of Ministers for foreign investments. To support the development of industrial sector, and to promote investment opportunities as a mean of sustaining the planned growth of the economy, the government established some facilitating organisations. For example, Jordan Industrial Estates Corporation (JIEC) was established in 1980 to provide efficiency and an organised management approach to growing manufacturing industry.

Table 4-4: Exports by Commodities (JD Million).

Particulars	1997	1996	1995
Mining and Fertilisers	327	382	340
Phosphates	134	127	105
Potash	099	126	113
Fertilisers	094	129	113
Manufacturing (excluding Fertilisers)	576	513	582
Medicaments	132	104	087
Detergents	038	025	033
Cement	033	041	030
Textiles & Related Products	025	025	023
Clothes	026	024	017
Paper and Cardboard	026	022	014
Plastic Products	006	005	007
Paints	007	007	008
Others	283	260	363
Total Industrial Export	903	395	922
Total Agriculture Exports	163	145	083
Total National Exports	1066	1040	1005
Contribution of Industrial Exports to National Exports	85%	86%	92%
Re-exports	234	248	237
Total Exports	1300	1288	1240

To conclude, the industrial sector is the third most important economic sector in Jordan. Its contribution to the GDP is about 17% (mining and quarrying 4% and manufacturing 13%). Although it is viewed as the future life line for the Jordanian economy, it is difficult to predict the future of this sector as well as the economy as a

whole. As mentioned earlier, the movement and the results of the peace process in the Middle East, which is now unclear, is the major determinant of success and development of Jordan's economy. In general, it is assumed that the economy will boom if the involved parties reached an agreement over the peace process agenda.

4.4.2.2 THE AGRICULTURAL SECTOR

As mentioned earlier, Jordan is endowed with a rich valley, which enjoys a subtropical climate and highly fertile soil, allowing for year-round cultivation. Due to the new technical advancement in farming methods (e.g., drip irrigation), the agricultural sector has expanded tremendously in recent years. Table (4-5) presents the major economic indicators of this sector for the year 1997. As can be seen from Table (4-5), the agricultural sector's contribution to the national GDP amounted to 5.3%, and it employed 7.7% of the labour force in 1997. This is the only economic sector that is open to foreign employers. Table (4-5) shows that the majority (72.2%) of employed workers are non-Jordanian (e.g., Egyptian and Syrian). Jordan exports several types of vegetables and fruits to the Gulf States and European countries. As can be seen from Table (4-4), total agricultural exports in 1997 reached JD 163 million, compared to JD 145 million in 1996 and JD 83 million in 1995.

Table 4-5: The economic indicators of the agricultural sector.

Particulars	Unit	1997
Total planted area in the kingdom	Dunum	2742331.1
Total planted area in Jordan valley	Dunum	0328571.1
Planted areas with fruit trees in Jordan	Dunum	0831437.1
Number of fruit trees	Tree	13562813
Planted area with winter vegetables	Dunum	0143708.2
Planted area with summer vegetables	Dunum	0159115.6
Planted area with held crops	Dunum	1608070.2
Paid employees	Person	0002124.4
Non-Jordanian employees to total	Percent	72.2
Female employees to total paid	Percent	1.7
Annual Livestock Survey		
Number of sheep on 1/11	Head	1935095
Number of goats on 1/11	Head	0649587
Number of cattle on 1/11	Head	0056065
Goats and sheep holding output	J.D.	152000819
Particulars	Unit	1997
Cattle holding output	J.D.	16260123
Broiler Farms output	J.D.	150129584
Layers farm outputs.	J.D.	41128764
Contribution to Gross Domestic Product	Percent	5.3%
Contribution to Labour force	Percent	7.7%

Source: Department of The Statistics, 1998.

Table (4-6) presents the production of the industrial sector for the period 1993-1998. The major thing that can be noticed from this table is the fluctuation in agricultural production throughout these years. For example, the production of peach fruit (table 4-6) increased from 5.6 (000 Ton) in 1993 to 17.2 in 1994; however, it decreased in 1995 to 8.8, and kept on declining in 1996 (7.5), 1997 (3.8) and 1998 (7.0). This fluctuation is due to the heavy dependence of this sector on rainfall, which is not stable, especially in recent years that have witnessed climate change throughout the world. Thus, the major obstacle that faces the development of this sector is the limitation of the water supply for irrigation. However, the country is continuously searching for ways to alleviate this problem. One of the major goals that Jordan hope to achieve from participation in the peace process in the Middle East is to secure the country's rightful share of water in the Jordan River Basin.

Table 4-6: Agricultural Production (Thousand Tons).

Particulars	1998	1997	1996	1995	1994	1993
A- Field crops, of which:						
Wheat	36.0	41.8	42.7	58.5	46.9	57.1
Barley	27.4	29.4	29.2	31.7	27.4	31.8
Tobacco	2.3	2.7	1.1	4.8	1.5	3.4
Lentils	1.6	2.1	2.0	2.1	1.4	4.8
Corn	12.3	11.0	9.8	8.6	9.4	5.3
Clover	27.4	27.3	48.1	27.4	17.5	6.8
B- Vegetables of which:						
Tomatoes	299.9	324.0	291.3	439.7	438.7	331.5
Eggplant	52.9	39.7	43.1	73.4	37.9	33.6
Cucumbers	93.3	62.2	74.2	66.4	35.1	46.0
Cauliflowers and cabbages	62.6	41.0	42.0	55.4	51.8	27.6
Melons	106.8	124.0	106.4	117.8	145.2	64.3
Potatoes	88.1	94.7	95.2	97.5	48.5	78.8
Zucchini	37.3	28.8	28.3	36.4	28.4	15.5
C- Fruit Trees, of which:						
Olives	137.5	57.1	88.6	63.2	94.1	31.8
Grapes	17.9	18.3	21.9	24.3	26.4	35.2
Citrus fruits	161.3	168.9	133.1	105.5	150.7	106.8
Bananas	24.5	18.2	29.1	29.3	24.7	30.3
Apple	38.5	31.0	32.9	41.9	27.8	17.5
	1998	1997	1996	1995	1994	1993
Peach	7.0	3.8	7.5	8.8	17.2	5.6
D- Livestock Production:						
Red meat	22.1	15.5	16.0	14.5	16.1	18.9
Poultry meat	93.1	98.0	100.0	107.0	94.0	83.4
Milk	170.8	170.0	165.1	147.0	151.4	166.6
Eggs (Mill. egg)	984.1	954.0	726.0	715.0	871.0	862.2

Source: Department of Statistics (www.cbj.gov.jo).

According to the 1994 peace treaty between Jordan and Israel, Jordan is to get 50 million cubic meters of water from Taberiah Lake annually. However, this is still a long way to the final agreement on the rights and duties of each party, including water shares. Nevertheless, the government has built dams in some strategic locations around the country as a way of reducing the shortage of water.

To conclude, the agricultural sector contributes less than 10% to the GDP, and employs about 7% of the labour force. It represents the basic source of income for 10% of the population. It is also the only economic sector in which the majority of employees are foreigners.

4.4.2.3 THE SERVICE AND TRADE SECTOR

This is the most important economic sector in Jordan. It contributes about 80% to the GDP, and employs about two-third of the labour force. The service sector comprises financial services, trade, transportation, communication, restaurants and hotels, tourism and education. Table (4-7) presents the sectoral relative importance of GDP at (1985) prices.

Table 4-7: Sectoral Relative Importance of GDP at (1985) Prices (%).

Particular	1998	1997	1996	1995	1994	1993
Agricultural	4.9	5.3	6.3	6.0	6.4	7.7
Mining and Quarrying	3.1	3.1	2.9	3.0	2.2	2.4
Manufacturing	13.8	13.7	13.3	14.8	15.5	13.0
Electricity and Water	3.9	3.9	3.7	3.6	3.2	3.3
Construction	6.5	6.9	7.9	8.5	9.0	8.7
Trade, Restaurants and Hotels	6.0	5.8	5.0	4.7	4.6	4.1
Transport and Communications	15.3	15.2	15.3	14.3	13.9	14.4
Finance, Insurance, Real Estate and Business Services	22.1	21.9	21.8	21.7	21.7	22.0
Social and Personal Services	3.4	3.3	3.1	3.0	2.8	2.5
Producers of Government Services	21.6	21.5	21.2	20.9	21.3	22.5
Producers of Private Non-Profit Services for Shareholders	1.2	1.2	1.3	1.3	1.3	1.2
Domestics household services	0.1	0.1	0.1	0.1	0.2	0.2
Less: Imputed Bank Service Charge	-1.9	-1.9	-1.9	-1.9	-2.1	-2.0
GDP at Factor Cost	100.0	100.0	100.0	100.0	100.0	100.0

Source: *The Central Bank of Jordan* (www.cbj.gov.jo).

The financial and banking services are well developed, and have good chances of future expansions and diversification. The 1998 business survey showed that finance, insurance, real estates and business services contributed 22.1% to GDP (table 4-7). Excluding the Central Bank, there are 27 commercial and development banks currently operating in Jordan. Some of these banks are local, such as Housing Bank, and some

are international, e.g. ANZ Grindlays. However, some work has to be done to increase the efficiency of this important business sector, such as launching modern bank data-communication networks including a complete digital fiber optic data transmission (Ministry of Planing, 1997). On the other hand, the trade sector consists of the wholesale and retail trade, restaurants and hotels. Since 1993 this sector has reported a steady growth. In 1993 it accounted for 9.9% to the GDP, in 1994 10.6%, in 1995 10.7% and in 1996 11.7% (Department of statistics, 1998). The efficiency of the trade balance is considered as one of the basic features of Jordan's economy. Internal trade amounted to US\$ 675 million in 1996, and external trade in the same year reached US\$ 6.1 billion, of which imports constituted 70%, exports 24% and re-export 6% (Department of statistics, 1998). Moreover, the first 11 months of 1998 deficit amounted to JD 1,286.8 million, a fall of 8.6% from the same period in 1997 (Ministry of Planing, 1999).

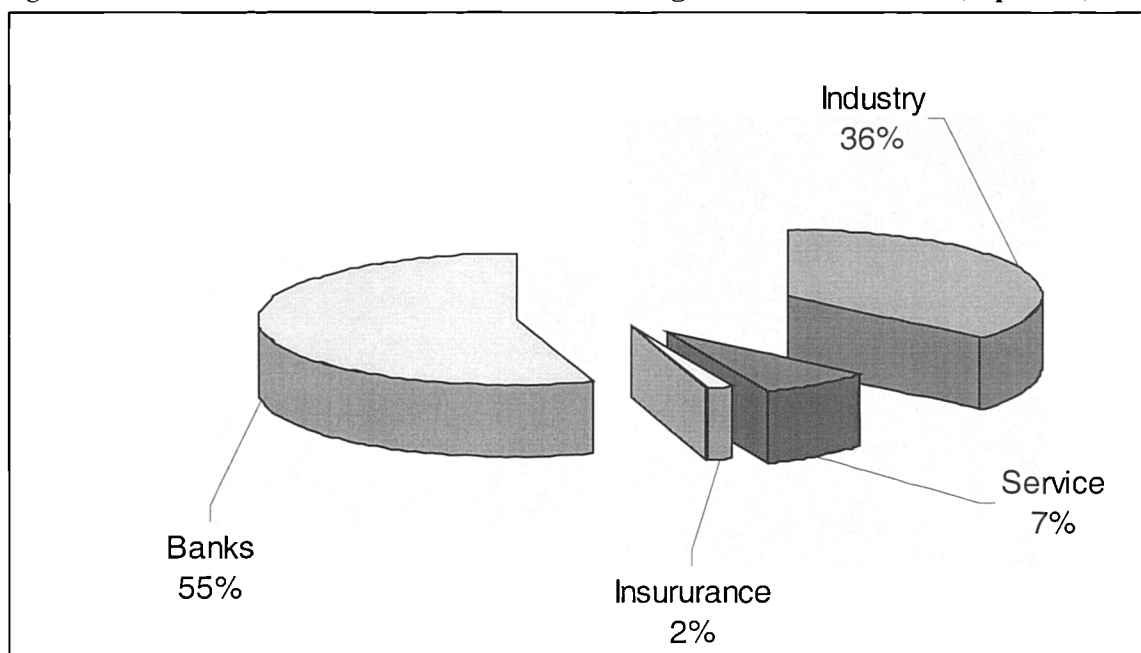
Nevertheless, the transportation and communication sector contributed to 15.2% to the GDP in 1993, however this contribution dropped by .6% in 1994 and by .4% in 1995. In 1996, this sector's contribution to GDP reached 15.7%. The country has three airports, one seaport, road networks that cover 6800 km, and 452 km railway portion. Jordan also has good telephone, telegram and other communication services which witnessed a major upgrading of its system and the installation of modern networks over the last few years. On the other hand, Jordan enjoyed a boom in the tourism sector after the signing of the peace treaty with Israel. It has started to generate a major source of income for the country, accounting for about 15% of the Gross National Product (GNP). GNP is the annual total value of goods produced, and services provided, in a country. Foreign income from tourism stood at US\$ 750 million in 1996, compared to US\$ 650 million in 1995 (Ministry of Tourism and Antiques, 1997). Nevertheless, the outlook for this sector is highly dependent on the movement of the peace process in the region. Since Jordan is endowed with a wide spectrum of archaeological and historical sights, Jordanian officials look at this sector as one of the major sources of income after the completion of the peace process in the Middle East. Tourism is the future lifeline of the Jordanian economy (Ministry of Tourism and Antiques, 1997).

4.4.2.4 AMMAN FINANCIAL MARKET (AFM)

As a step towards developing the financial sector as well as the overall economy of the country, the Jordanian government established AFM in 1976; it started official functioning in 1978. It was thought that the country's financial resources would be

better utilised through the development of a sound capital market. Nonetheless, the objective of the market is twofold: First, to mobilise savings by encouraging investments in securities, thereby channelling savings to serve the interests of the national economy. Second, to regulate and control the issuance of securities and dealings. Nowadays, AFM is one of the most developed and fastest growing markets in the Middle East. Its market capitalisation is over US\$ 4.7 billion. The banking and finance sector leads the market, with a capitalisation of about 52% of the total market capitalisation. The industrial sector ranks second, with a 38% capitalisation, and then comes the service and insurance sectors with 8% and 2% capitalisation respectively. Figure (4-2) shows the distribution of value traded at the organised sector of AFM for September 1998.

Figure 4-2: The distribution of value traded at the organised market sector (Sep. 1998).



Appendix (3) shows the list of all banking, industrial, service and insurance companies which are registered in the AFM.

4-5 THE SOCIO-CULTURAL ENVIRONMENT

Since Jordan is a Muslim state, social life is highly influenced by the values and culture of Islam. Islam is recognised as the official religion of the country. On the other hand, the inherited Arab culture that includes Arab nation traditions, customs and morals also plays some role in influencing Jordanian daily life. For example, marriage is a family affair, rather than a personal choice. Generally speaking, two kinds of value systems regulate the Jordanian society: “the ancient values of a sedentary population on one hand, and the values of Bedouins on the other” (Elkhoully and Buda, 1997, p. 153).

According to Ali (1995) “the Bedouin stresses courage and pride, show, and generosity; whereas the values of the sedentary traditions are endurance, hardship [and] submission” (p. 153). As it is the case in all cultures (Hofstede, 1980), the conflict between these two values systems is inevitable in the Jordanian society.

In the remainder of this section, the main indicators of Jordan’s socio-cultural environment will be discussed. However, the focus of this discussion will be on the cultural characteristics of the Jordanian and Arabic management.

4.5.1 THE FAMILY AND SOCIAL LIFE

The family is the cornerstone of social life in Jordan and other Arab states. According to Ali (1996, p. 6), “the family and other social institutions still command the respect of almost all individuals [in Arabia] regardless of their social backgrounds”. The extended family system is the major feature of the household. The Jordanian household used to consist of a married couple, their married and un-married children, and some other relatives as parents, un-married sisters and brothers. However, in the recent society this form of household has started to diminish in urban areas, such as Amman, the capital of Jordan, because of the limited size of modernised houses and apartments. Nevertheless, individual social identity and loyalty continue to be oriented to his/her largely extended family, and it always co-ordinates his/her personal interests to those of the grand family.

The family normally arranges marriages for its children. Finding the suitable mate took place through the family; however, this habit is also changing nowadays in the most urban areas that are affected by the Western civilisation. By the late 1980s, the social relationships and values have tended to change in most Arab states, including Jordan. The relationships between male and female members of the Jordanian society have started to take a more open form. The new generations have tended to adopt new values, attitudes and customs that are different and some times contradicting those traditional in the society. Many factors have led to this change, such as increased physical and social mobility and education (Abdalla and Al-Homoud, 1995). Above all, the revolution of globalisation has led to more interaction between the world’s different cultures through satellite channels, the internet and other advanced communication means. Jordanian women have begun to demand more freedom and equality than in the past. Their average age of marriage has risen from the mid-teens to the early and mid twenties, and they have tended to prefer fewer children. The men have started to accept, and some times encourage, the work of their wives, sisters and daughters, mainly

because there is a need for dual income. According to Al-Amri (1998) “a number of men recognised the financial advantage of a household with two incomes, and for this reason they support the idea of a female relative or wife working outside the home. In some instances, as a matter of fact, the female salary may be the only income for the family” (p. 2). Thus, bringing-up children is no longer the only role open to women in Jordan. On the other hand, these social changes in the Jordanian society have affected the country’s population, birth, death and labour force rates. Fore example, the birth rate (000) in 1995 was 34 and reduced to 33 1996 and 1997, and the labour force increased from 975 in 1995 to 994 and 1014 in years 1996 and 1997, respectively (Amman Chamber of Industry, 1998). Table (4-8) presents the major indicators of population, births, deaths and labour force rates for 1995, 1996 and 1997.

Table 4-8: The major indicators of population, births, deaths and labour force rates.

<i>Particulars</i>	<i>1997</i>	<i>1996</i>	<i>1995</i>
Population	4600	4444	4291
Population density (Person per Sq. Km)	51.7	49.4	47.3
Percentage of Urban population	81%	80%	79%
Birth rate per (000)	33	33	34
Death rate per (000)	6	6	6
Life expectancy at birth (year)	68	68	68
Labour force (000)	1014	994	975

Source: *Amman Chamber of Industry, 1998.*

To conclude, the features of Jordanian society’s value orientation can be summarised as follows:

Table 4-9: Aspects of Jordan society value orientation.

<i>Aspect</i>	<i>Characteristic</i>
1- General ethical orientation	-Personalistic and particularistic
2- Authority	-Highly respected
3- Interpersonal relationships	-Group oriented
4- Status and prestige	-Very high concern
5- Social structure	-High degree of vertical (kinship) and lateral (class) stratification.

Source: *Malallah (1976), cited in Al-Shammari (1990).*

4.5.2 EDUCATION

Jordan provides free and compulsory education in the first nine grades. The educational ladder consists of three parts: basic education (grade one to nine), secondary (grade ten to twelve) and post-secondary (all higher education). Table (4-10) shows the major education indicators in Jordan.

Table 4-10: The major indicators of education sector in Jordan.

<i>Particulars</i>	<i>Unit</i>	<i>1995</i>	<i>1996</i>	<i>1997</i>
Students	person	1248664	1281141	1305351
Teachers	person	59343	63184	63521
Class units	Class	42280	43711	45052
Schools	School	4041	4239	4407
Students per 1000 population	person	290	288	284
Students per 1000 teacher	person	21	20	20
Students per 1000 class unit	person	30	29	29
<i>Particulars</i>	<i>Unit</i>	<i>1995</i>	<i>1996</i>	<i>1997</i>
Students per one school	person	309	302	296
Higher Education:				
Enrolled students in universities	person	93474	103101	114585
Enrolled students in community colleges	person	22471	22645	23949
Students per 1000 population	person	28	28	26
Number of universities:				
	Univ.	18	19	20
-Public	Univ.	8	6	7
-Private	Univ.	10	13	13

Source: *The Department of Statistics (1998)*, www.dos.gov.jo.

As can be seen from Table (4-10), in 1997 1,305,351 students were enrolled in the basic and secondary schools in 4407 schools throughout the country, whereas 139,534 students were enrolled in higher education. The total number of universities is 20, of which 7 are public and 13 are private. According to a recent study for the Institute of Applied Social Psychology (FAFO, 1998, based in Oslo), the illiteracy rate was found to be 20% among women and 9% among men. Women account for one in every 5 Jordanians who obtained a degree in another Arab state, and only one in every 10 Jordanian who obtained a university degree in Europe, North America or Asia. FAFO said that the reason behind the tendency to educate women close to home could be either social (to keep women under close supervision and protect them from corrupting influences) or financial (study abroad is expensive, and priority is given to males). FAFO study results also revealed that Jordanian women have limited access to information compared to men. The study suggested that the wider gender gap in newspaper consumption (15% of women read one newspaper daily, against 40% of men) is due to the high illiteracy rate among women.

On the other hand, the education system in Jordan has been criticised by some writers. Most of them relate the mismanagement and the weakness of the country's economy to education. Majdoubeh (1998, p. 2) argued that:

Some may wish to place mismanagement in a cultural context. We attribute every thing to overall culture and to the process of education. Our educational institutions have not succeeded

(effectively, that is) in providing us with enough efficient, able, devoted, creative, and competent individuals.

Likewise, Al-Faleh (1989) contended that the educational system in Arab countries, including Jordan, tends to stress memory development, rather than initiative or intelligence. He viewed the education system as one of the major constraints on the development of management capability in Jordan. According to Al-Faleh, the universities and their graduates have had little impact on developing the quality of Jordanian management. In his words:

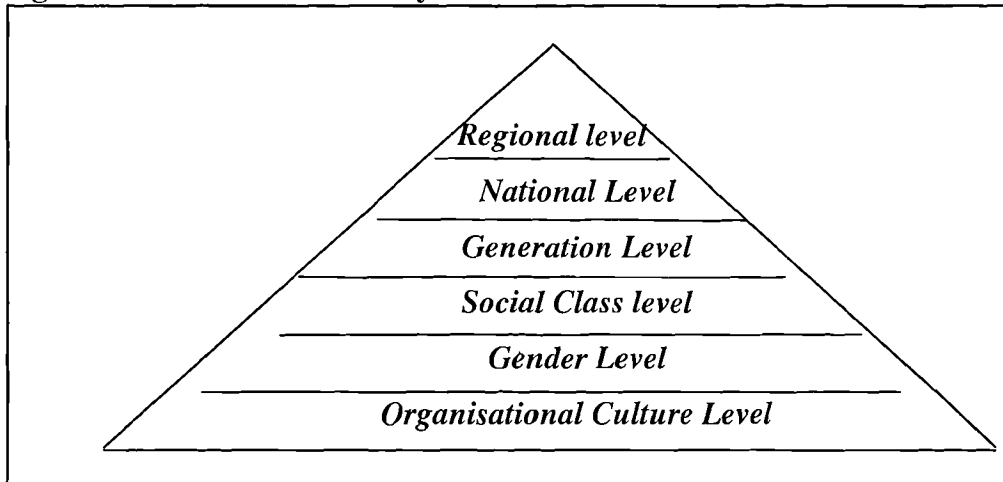
A third constraint [on the development of management capability] is the aversion of the Jordanian graduate to “apprenticeship”. He is unwilling to start at the bottom in an organisation and to work his way up gradually by means of his own ability or via a course of postgraduate training (p. 23).

In spite of all these criticisms, the Jordanian education system remains one of the best education systems in the Middle East.

4.5.3 THE CULTURAL CHARACTERISTICS OF THE JORDANIAN SOCIETY

All the previously discussed indicators of the geographical, historical, political, economical and social environments interact to produce a certain type of culture that influences individual behaviour. According to Hofstede (1997, p. 4), “every person carries within him or her self patterns of thinking, feeling, and acting which were learned through out their life time”. Hofstede (1984) defined culture as “the interaction aggregate of common characteristics that influence a human group’s response to its environment” (p. 21). Thus, while personality determines the individual’s behaviour, culture determines the identity of a human group. Hofstede (1997) argued that there are six layers of culture, namely: national level (country), regional level, generation level, social class level and organisational level. It can be suggested that the six cultural layers named by Hofstede do exist in the Jordanian context, which was not included in the sample of his well known study entitled “Cultures and organisations: Software of the mind”. However, the ranking of these layers which are proposed in this study are different from that suggested by Hofstede. These layers are ranked according to their suggested influential role on individual behaviour in Figure (4-3). As can be seen from Figure (4-3), the most influential cultural layer in Jordan and most Arab countries is the regional layer. The regional level in the Jordanian and Arabian context includes *religion, language and history*.

Figure 4-3: The six cultural layers of the Jordanian culture.



Source: *Adapted from Hofstede (1997).*

As mentioned earlier, Islam is the official religion of the country; however, some minority non-Muslims also live in Jordan. More specifically, “around 90% of the population are Muslims and 10% are Christians” (Salem, 1992, p. 115). Since these Christians are living in an Islamic environment, they have been affected by the Islamic traditions for over 1400 years (Muna, 1980). The Islamic rules regulate all aspects of human life, including social and economical aspects of Muslim society. Islam is not simply a religion, it is a way of life. According to Ali (1996):

*One of the most influential forces in the Arab world that moulds and regulates individuals and group behaviour and outlooks is Islam. Religion is an influential force in the Arab world ... Islam is a comprehensive religion that regulates not only the ascetic, but also the worldly tendencies. Almost all-social, political, and military precepts are covered in the **Quran** [Muslims holy book] along with the piety of the soul and moral aspects of individual behaviour (p. 6).*

The relationship between the individual and Allah (God) is governed by a concept known as *Tawheed*. It means the complete loyalty to the only *Creator* of this world. Considering this concept, the individual in Jordanian and other Muslim societies is expected to do good deeds, such as respecting his/her parents and elder people, visiting relatives and neighbours and so on. The *Tawheed* concept states that individuals will be rewarded or punished for every good or bad thing they have done in the day of judgement.

The effects of religion on individual’s productivity, economic development and work outcomes is one of the interesting issues in the recent management literature, after Weber’s (1958) study of the Protestant Work Ethic. Since 1958 a stream of researchers (e.g., Blau and Ryan, 1997) have investigated the role of Protestant Work Ethic on employee work outcomes. In line with Weber’s views some other studies have

attempted to examine the impact of Islamic Work Ethic (IWE) on organisations. The IWE is “an orientation toward work. It implies that work is a virtue in light of man’s need and a necessity to establish equilibrium in one’s individual and social life” (Ali, 1993, p. 507). As an example, Ali (1993) studied IWE in Saudi Arabia. He found that the managers were highly committed to IWE, and showed a moderate tendency toward individualist. All in all, religion or Islam is the most important regional factor that determines individual’s behaviour in Jordan and other Arab countries. The second factor of regional level is the language. The Arabic language “has been singled out by many scholars to be the pre-eminent element in the definition of an Arab” (Muna, 1980, p. 6). The Arabic language is the language of the holy Quran, Muslims recite or listen to the Quranic verses more than once a day. With its “... phonetic, beauty, richness of synonym, imagery and majesty, [Arabic language] arouses people’s passion and produces an intense and emotional impact” (Ali, 1996, p. 6). Most verbal and written communications in Jordan are in this language. The last factor of the regional level is history. It is this third regional element that Jordan shares with other Arab countries. According to Hourani (1962):

A full definition [of what is meant by Arab nation] would include also a reference to a historic process: to a certain episode in history in which the Arabs played a leading part, which was important not only for them but for the whole world, and in virtue of which indeed they could claim to have been something in human history (p. 2, cited in Muna, 1980).

Thus, the history is another source of pride for Jordanian and Arab people. It cannot be disregarded in describing the Arab world and their culture (Muna, 1980). In summary, religion, language and history are the major determinant of Arab culture. According to Muna (1980, p. 6), “Arab ... [people] share with each other three closely interrelated bases of identity and commonality: *Religion, language and history*” (Muna’s emphasis).

The second influential layer of Jordanian culture is the national culture. Despite sharing one regional culture, each Arab State has its own national culture. Under the umbrella of Arab culture, Jordan has its own history, tribes, customs, ... etc that makes it distinguishable from other Arab states. According to the National Information System (www.nis.gov.jo, state organisation):

Jordan will always take pride in the imprints made by Arab tribes which come from the Arabian Peninsula in pre-Islamic times and contributed at an early date to the establishment and maintenance of ties between the Arabian Peninsula and the Mediterranean region.

In general, “Jordanians are quite conservative in their social way of life. They keep their Arab identities and values” (Salem, 1992, p. 116). Jordan’s culture as well as people are mixed. Overall, four groups of Jordanian societies can be named: nomadic (Badouins), semi-nomadic, semi-sedentary and sedentary. The interactions of these four groups throughout the history have produced a unique national culture that influence individual’s behaviour in Jordan. Yousef (1997) argued that researchers, especially in the Arabic context, should pay special attention to the role of national culture in influencing the behaviour and work outcomes of the employees. He concluded:

Managers should pay attention to the impact of national culture on such relationships when making decisions regarding improving the level of satisfaction of their employees with the security of their jobs in order to improve organisational commitment and performance (191).

The third cultural layer highlighted in Figure (4-3) is the generation level. The grand parents in Jordan tend to be more conservative than the parents and their children. For example, the regional (Arab world) and national (Jordan) loyalty of the new generations tend to be weaker than that of the old. Although very few studies, if any, has investigated the nature of job mobility in Jordan, those who live in that context can notice that employees of the new generations tend to change employment more frequently than the old. In other words, the older employees in the Jordanian context tend to show high commitment levels to their employers than younger employees.

Suliman and Iles (1998) examined organisational commitment in the Jordanian context. They found that older employees tend to show higher levels of affective commitment; however, younger employees exhibit higher levels of continuance commitment. Hence, the behaviour of the individual in the society and the work organisation is influenced by his/her generation group. The fourth cultural layer is the social class level. It is assumed that social class has an influence on individual’s behaviour. Therefore, some companies in most countries, including Jordan, tend to produce goods and services that satisfy the needs of different social classes. Understanding the behaviour of each social class within a country is an inevitable issue in the modern organisation. According to Hofstede (1997, p. 17):

Social class is associated with educational opportunities and with person’s education or profession; this even applies in countries which their governments call socialist, preaching a classless society. Education and occupation are in themselves powerful sources of cultural learning. there is no standard definition of social class which applies across all countries, and people in different countries distinguish different types and numbers of class. The criteria for allocating a person to a class are often cultural: symbols play an

important role, such as accent in speaking the national language, the use and non-use of certain words, and manners.

In general, Jordanian society can be divided into three social stratifications: high class (minority), middle class (majority) and lower class. Each one of these social classes has its own sub-culture that determines members' behaviour and identity. The fifth cultural level is the gender level. Being male or female in the Jordanian and Arab context implies a certain way of behaviour which if violated by him or her; the community may not forgive. The gender group in Jordan plays an important role in determining individual identity. Jordanian society, like other Arab societies, is a male society, where the separation by gender is closely related to the concept of honour (*Ird*). Female members of the society are expected to behave in a certain proper (modest) way to which she should stick. However, if she did not follow the culturally defined path of females, honour could be lost. For example, loud speech or laugh, appearing in public or smoking could lead to a loss of honour. Those females who caused the loss of family honour are subject to males' punishment, which is a right given by custom. On the other hand, males who lose honour because of behaving in an unacceptable way are normally ostracised and lose face and standing in society. According to Moore (1998, p. 8):

In Arab societies where extended families are prevalent (especially in rural areas), senior men are accorded authority over others, and their forms of control over women include extremely restrictive codes of behaviour, a practice of gender segregation, and a powerful culture and religious ideology linking family honour (ird) to female virtue. Men are entrusted with safeguarding family honour through control over female members.

Since the community is male oriented, it is more flexible for male than female member. The behaviour of lower and middle class females is much more restricted than those of higher class's females. More recently, community views towards female members have started to change. Jordan signed the United Nation's Convention on the Elimination of Discrimination Against Women (CEDAW) in 1980, which was ratified by parliament in 1992. In 1993 a Jordanian female was succeeded in becoming the only Jordanian women to be elected to the 80-member Lower House of Parliament.

The female role in work organisations will be discussed later, when discussing cultural impacts on management style in Jordan. The segregation between males and females will remain one of the major features of the Jordanian society until the majority of individuals change their thinking; that is yet to start. The last cultural layer that may influence individual behaviour in the Jordanian context is organisational culture. This

organisational concept, which has been a fashionable topic since the early 1980s, is discussed in chapter two of this study. There is a belief among researchers that it has an impact on employees work outcomes and organisational effectiveness. According to Brody (1993, p. 21), “effective managers are mindful that the productivity of their organisations is greatly influenced by culture”. As can be understood from Figure (4-3), organisational culture has the weakest effect on Jordanian individual behaviour. As is the case in most third world organisations, Jordanian work organisations have failed to establish strong corporate cultures that can compete with the other cultural layers in influencing employees’ behaviour. Jordanian employees’ behaviour in the work place is mainly determined by Arab culture, national culture and generational culture. This does not mean that employees have no loyalty towards their organisations, as some researchers (e.g. Al-Shammari, 1990) argue. Organisational culture and organisational commitment are separate concepts. The weakness of organisational culture does not necessary mean that employees’ organisational commitment is also weak. Unlike most Western people, familial and tribal affiliation tends to occupy the priority in most Jordanians’ identification hierarchy. According to Muna (1980, p. 36):

When Arabs meet their countrymen for the first time, they usually attempt to establish each other’s family identity. In the West, on the other hand, it appears that the initial conversation revolves around a person’s occupation or profession. In Japan, introductions were made with reference to the one’s organisation or company, rather than profession.

Thus, the challenge that faces Jordanian and third world organisations in this global era is to build strong cultures that can compete with the employee’s family and tribe in influencing his/her behaviour.

4-5-4 JORDANIAN CULTURAL AND MANAGEMENT STYLE

The six layers of culture which discussed earlier interact with each other to influence individual behaviour in the workplace. The degree of this interaction and the resulting behaviour vary from individual to individual. While some employees are controlled by the regional culture (Islam, Arab history and Arabic language), others’ behaviour is determined by social class culture. More recently, the effective management of diversity, including cultural diversity, in the workplace has become an inevitable issue in the modern organisation.

As mentioned earlier, the ultimate success of the organisation is to establish a culture that can compete among other cultural layers (figure 4-3) that constitutes an individual’s

cognitive map. Some researchers (e.g., Connell, 1999 and Shoenberger, 1997) propose different strategies for changing a weak organisational culture to a competent one. Unfortunately, some of these culture change programmes are missing the point. For example, Guest (1992), Legge (1995) and Meek (1988) argue that cultural change programmes should consider changing employees' values and behaviours to produce more competitive firms. As an example Meek (1988, p. 455) asserted that:

The problem is one of changing people's values, norms and attitudes so that they make the "right" and necessary contribution to the healthy collective "culture" despite (or in ignorance of) any inherent conflict of individual and group interest or the way in which power, authority and control are structured in the organisation.

Management effect on the corporate culture is considerable (Connell, 1999), but not to the extent of changing employees' values, norms and attitudes. Normally, individuals join organisations at a mature age, after maintaining certain patterns of thinking, feeling and acting. According to Hofstede (1997, p. 4):

Every person carries within him or herself patterns of thinking, feeling and potential acting which were learned throughout their life time. Much of it has been acquired in early childhood, because at that time the person is most susceptible to learning and assimilating. As soon as certain patterns of thinking, feeling and acting establish themselves within a person's mind (s) he must unlearn these before being able to learn something different, and unlearning is more difficult than learning for the first time.

Thus, employees' values and behaviours, which are learned before joining the organisation, are often tacit and deep, to the extent of resisting change (Connell, 1997; Shoenberger, 1997).

As far as Jordan and other Arab states are concerned, the issue of changing people's values, norms and attitudes, especially those related to the regional and national layers, is more complicated. This can simply be understood when the factor of religion, as an example of one of the regional layer's elements, is considered. According to Muna (1980, p. 7):

Islam is not simply a religion, it is a way of life. Islamic teaching and laws cover the relations of man to God, men's relations with each other, as well as man's relations toward himself. The duties of man towards the community and those of community towards man are described and prescribed by Islamic teachings.

Since Islam is a way of life, organisations will find it difficult to change employees' values, norms and attitudes that are deeply rooted in Islamic culture. Hence, instead of wasting time in trying to change these well established values and behaviours

organisations should acknowledge them and look to succeed through proper management of diversity in the workplace. The effective management of diversity may develop organisational culture. However, the organisation that ignores employees' values, norms and attitudes and tries to impose its own values and behaviours may collapse, especially in the Arabic context. Competing successfully in the Arabic markets not only depends on providing quality products or services but mainly on the familiarity with Arab customs, expectations and values systems. El-Khouly and Buda (1995) argued that multinational organisations which operate in different cultures should not only adapt to local market, but also to local socio-cultural, circumstances. They asserted:

To overlook the importance of the cultural variations in other countries would most likely result in costly and failed assignments for both the firm and the general manager. If the culture value-match is not attended to in the selection process, the likelihood of failure to execute the firm's strategy will also be increased (p. 117).

After acknowledging employees' cultural backgrounds, organisations can start building their own cultures. It can be argued that the most successful (strong) organisational cultures are those who recognise and respect their employees' values, norms and attitudes. According to Nystrom (1993, p 43):

The strength of an organisation's culture refers to the degree of consensus among members about which norms prevail and which values dominate in importance. Organisations with strong cultures provide more meaning and guidance to their employees. A strong set of norms and values can substitute for more bureaucratic co-ordination and control methods such as hierarchical supervision, plans, budget, and formal procedures. Thus, organisational culture may be able to infuse members with an ardent feeling of organisational commitment while avoiding the negative reactions so often generated by a bureaucratic approach to management.

In short, organisations should define and understand all cultural layers of 'mental programming' carried within their employees before starting to establish their own layers that should not contradict employees' culture. Defining and implementing the right corporate values is a top priority, and a vital influence on the success of organisations (El-Khouly and Buda, 1997).

On the other hand, the socio-cultural factors of the Jordanian and Arab people appear to have a tangible impact on the way they manage their organisations. According to Muna (1980, p. 5):

The societal and business environment in which the Arab executive [or employee] lives and works has considerable impact on his attitudes

and behaviour. The societal structure of the Arab world has certain distinctive characteristics which determine managerial thinking.

Ali (1993) investigated the relationship between managerial value systems and work satisfaction in some Arab countries. He found that the work orientation of Arab managers is influenced by Arab traditions and culture. In another study, Ali (1996) examined organisational development in the Arab world, arguing that management theory in the Arab world is influenced by societal values, beliefs, norms and work and social experiences. The major features of the Jordanian and Arab management are discussed below.

Gender

Gender is one of the cultural layers (figure 4-3) discussed earlier. According to Hofstede (1997, p. 85), “a particular part of our mental programs depend (in most countries) on whether we were born as a girl or as a boy”. Gender culture, as well as the other levels of culture, is learned, not inherited. All social identities, including gender, are based on people’s tendency to classify themselves and others into diverse social categories, and this creates the distinction between ‘we’ and ‘they’ or ‘in-group’ and ‘out-group’. Although they live in different societal and cultures, most women throughout the world tend to share one thing in common:

Living under the rule of religion-supported patriarchies (i.e., family and social systems in which male power over women and children derives from the traditional social role of fatherhood and is supported by both religious decrees and a political economy in which the family unit retains a significant productive role (Moore, 1998, p. 8).

Gender segregation, especially in the workplace, is deeply rooted in Jordan’s national culture. However, the Jordanian Constitution clearly states that males and females are equal before the law, have the right to assume public office, and the right to work. In reality, this equality right offered by the law to female members of society does not exist. Jordanian society, like other Arab societies is reluctant to abandon its traditional view of women as primarily committed to the house and children (Abdalla, 1996). According to FAFO (1998), 52% of Jordanian women are not allowed to study abroad; around 58% cannot visit relatives outside town alone; around 40% cannot visit doctors alone; and 30% cannot go to the local market alone. Generally, females in Jordan are not welcomed in work organisations. The government’s new labour law, which went into effect in 1996, includes an article on working mothers that prohibits employees from terminating their jobs or giving notice about termination if they are in the 6th

month of their pregnancy or maternity leave. It also allows mothers 10 weeks paid maternity leave, compared to the previous allowance of 8 weeks, an hour a day for breast feeding during the first year after delivery, and a year's unpaid leave to care for their new-borns. Due to increased educational attainment, positive employment experiences and a loss of idealism about the traditional female role, the participation of women in the labour force has kept on increasing (Abdalla, 1996). The statistics show that it has more than doubled; rising from 7.7 in 1979 to 15% in 1993 (Department of Statistics, *www.dos.gov.jo*).

According to FAFO (1998) survey, only 15% of adult women are in the labour force, as most women stop working when they get married. While the general unemployment rate is placed at 17%, it breaks down to 15% for men and 27% for women. Although working females are increasing in Jordan, compared with the early 1980s, they are kept on the bottom level of the managerial ladder, as is the case in most Third World countries, and even some developed countries. According to Davidson and Cooper (1992, p. 13) "while it seems relatively easy for women to gain employment at the lower levels of organisations, it is still proving very difficult for them to reach upper, middle and senior management positions, even in the more enlightened USA". Despite prohibiting gender segregation, the Jordanian Labour Law (JLL) seems to have no power over management. Male managers and male employees tend to respect the Bedouin values that consider "family honour depend on women's chastity" (Abdalla, 1996, p. 29), more than the JLL.

According to the *Star* newspaper (8 August 1998), the stereotypes about women influencing the minds of men; that women are fragile, whose place is in the home to produce children, still very much exists; it has not progressed. Thus, women in Jordanian society are expected to stay at home, and are discouraged from getting employed. Those minority who join the work force for one reason or another suffer from discrimination. For example, working women suffer from low wages compared to those given to their males counterparts for doing the same tasks (the *Star*, 8 August 1998). A Jordanian female planning engineering expressed her feelings as: "THEY LIKE me, but only under one condition: to stay a pussycat, they even advise me not to argue, just to listen and keep my professional views away from the office, since they claim to understand better than I do" (the *Star*, 13/08/1998, p. 2). Although most of employment sectors nowadays are open to women, the majority of working Jordanian females are employed in the service sector, and few of them work in the industrial sector. In some Arab countries, females are allowed only to join certain types of jobs. For example,

Qatari women are allowed to work in only three types of organisations, namely: schools, hospitals and social work (Abdalla, 1996). Considering the current situation of women in the society, it can be argued that the debate over gender discrimination, especially in the Arab world, is far from over. The following quotation briefly summarised the current condition of the females in the Arab world:

While Arab women are willing to accept more responsibilities in the political, occupational, educational and societal spheres, Arab men are not willing to share these responsibilities with them. The men's traditional stance and the many rules and regulations surrounding women ... may lead to fewer opportunities to utilise a potential native female work force ... Despite the appearances of opulence, moderate advancement and achievements, it seems that - Arabian women are locked in restrictive traditional roles. (Abdalla, 1996, p. 37).

Nepotism

Nepotism as a managerial construct is derived from the Latin word *Nepot*, which means nephew. Webster's Third New International Dictionary (1986) defines it as "favouritism shown to nephews and other relatives, as by giving them positions because of their relationship rather than their merit" (p. 1510). Hayajenh, Maghrabi and Al-Dabbagh (1994) defined nepotism as "the employment of relatives in the same organisation or the use of family influence to employ them in other organisations" (p. 60). Hofstede (1997) argued that nepotism is a feature of collectivist societies (e.g., China). He concluded that the special treatment of relatives "in an individualist society [e.g., USA] ... would be considered nepotism and intensely immoral, but in a collectivist environment it is immoral *not* to treat one's in-group members better than others" (p. 62, Hofstede's emphasis). Hofstede's results revealed that Arab countries hold an individualistic culture. Individualism pertains to "societies in which the ties between individuals are loose: everyone is expected to look after himself or herself, and his or her immediate family" (p. 51). Contrary to Hofstede's argument, it can be suggested that nepotism is one of the major features of the Arabic culture and management. Thus, nepotism can be found in both collectivist and individualist cultures. Ali (1996) argued that the reality of the Arab organisation indicates that favouritism and paternalism are common in Arab organisations. Likewise, Abdalla, Maghrabi and Raggad (1998, pp. 559-560) asserted:

The socio-cultural structure in the Arab world has its origin in tribal and kinship relations. These tribal and extended-family ties constitute the basic institutions which shape the individual and societal values, norms and behaviours ... These values and norms encourage nepotism in Arab societies in order to fulfil the individual's responsibility

toward his or her family. The tribal system requires a strong commitment from all individuals to their tribes.

Abdalla and Al-Homoud (1995) studied management training in development practices in one of the Arab countries. They argued that the staffing, promotion and maintenance systems adopted by most Arab organisations are influenced by personal connections and nepotism. Thus, the generalisability of Hofstede's argument regarding nepotism and culture to all Arab countries is somewhat limited.

As is the case in most Arab states, nepotism in Jordanian society and organisations is a daily practice. However, there is a general agreement about the negative impact of nepotism over individuals, groups, organisations and the country. It is viewed as unhealthy phenomenon. Therefore, there are continuous calls nowadays for avoiding it, especially in public sector organisations. From among the daily debates on the Jordanian media over nepotism, the following quotation is selected as an example:

If you were asked to name the major cause behind poor performance in most, if not all, of our public institutions, what would you say? I would say it is mismanagement ... One cannot overemphasise the role of management (or mismanagement). While one can live with one, two, three or ten incompetent or corrupt employees (though in principal we should not tolerate even that), one cannot live with incompetent or corrupt administrator ... our society can be turned into something categorically different and better over night. It has great potential. It is top leader is great, the majority of its citizens (the 60% above) are great, where is the problem?.

The selection is the problem, selection is the solution. Let's select honestly and carefully. (Majdoubeh, 1998, researcher's emphasis added).

The managers in Jordan and other Arab countries are the major source of nepotism. Since they have the power, the majority of managers at all levels pay special consideration to family and friendship ties when they select, reward, promote and sack employees. In general, the whole managerial decisions in most Arab countries are highly influenced by nepotism. Al-Faleh (1989) examined cultural influences on the Jordanian management development. He concluded, "nepotism is regarded as natural and acceptable. Arab managers view their organisations as family units and often assume a paternal role in them. They value loyalty over efficiency" (p. 21). The majority of Jordanian managers believe that nepotism complicates their work and negatively influence the effectiveness of the organisation. Hayajeneh *et al.* (1994) assessed the effect of nepotism on human resources managers in Jordan. Over three-quarter of the surveyed managers (166 manager) agreed that nepotism complicates personnel's role in training for executive succession, and that organisations which allow

nepotism are less effective than organisations that prohibit it. Likewise, Abdalla *et al.* (1998) examined the perception of human resource managers toward nepotism in Jordan and USA. The study results revealed “a surprise lack of enthusiasm for nepotism in the surveyed business organisations in the USA and Jordan” (p. 563). The results also showed high agreement with statements against nepotism relative to little agreement with those supporting nepotism. The study did not find significant differences between the levels of agreement reported by USA managers and those of the Jordanian for arguments about nepotism. Both USA and Jordan are individualist countries; however, there is a wide cultural differences between USA (West) and Jordan (East). Therefore, one may doubt the results of Hahajeneh *et al.*'s study. In reality, Arab managers, including Jordanian managers, practice nepotism as a daily task; however, when they formally (e.g., interviews or questionnaires) are requested to express their views about this issue, they tend to criticise it. Muna (1980) assessed the Arab executives' views about nepotism, he asserted that:

The struggle about nepotism was reported by only three executives- two Lebanese and one Jordanian. One executive indicate that many of his relatives are 'angry of him', because of the self imposed regulation prohibiting nepotism in his organisation. But he quickly added that his help to his close-knit extended family takes the form of financial assistant and education grants. The rest of the executives seemed to accept this strong socio-cultural pressure to hire relatives, although four of them considered it a potential burden since they had ultimately to accept the final responsibility if their relatives performance were poor (p. 33-34, researcher's emphasis added).

To conclude, nepotism is an inevitable issue in Arab organisations. Some Arab researchers have generated considerable concern about it; however, very little empirical research has been conducted in this area. Unfortunately, these few studies have not significantly contributed to the understanding and management of nepotism in the Arab organisations. Since the direct victims of nepotism are employees, future studies in this field should examine their views and perceptions and compare them with those of managers. According to Hayajeneh *et al.* (1994, pp. 66-67):

Nepotism could distort the procedures of employment selection and promotion. In other words, nepotism or favouritism could replace qualifications in such procedures. If this is the case, it would affect job satisfaction and motivation, diminishing employees' work involvement and organisational commitment.

Lifetime Employment

As is the case in most Arab organisations, Jordanian organisations, especially in the public sector, follow the lifetime employment policy. Although this employment policy

seems to be successful in some other countries like Japan, it does not seem to be contributing much to the success of Jordanian and Arab organisations. Table (4-11) shows some of the characteristics of Arab, Western and Japanese organisations.

Table 4-11: Characteristics of the Western, Japanese and Arab organisations.

<i>Western</i>	<i>Japanese</i>	<i>Arab</i>
1- Short-term employment	Lifetime employment	Lifetime employment
2- Individual decision making	Consensual decision making	Individual decision making
3- Individual responsibility	Collective responsibility	Individual responsibility
4- Rapid evaluation and promotion	Slow evaluation and promotion	Slow evaluation and promotion
5- Explicit formalised control	Implicit, informal control	Explicit formalised control
6- Specialised career path	Non-specified career path	Highly specialised career path
7- Segmented concern	Holistic concern	Highly segmented concern

Source: Adapted from Plunkett and Greer (2000).

As can be seen from Table (4-11), there are some major differences between the three management styles. These differences may be partly due to the management development, and mainly due to the cultural factors of the three settings, i.e. Western, Far-Eastern and Middle Eastern. Arabic organisations tend to share the life-time employment policy and slow promotion system with Japanese organisations, and individual decision making, individual responsibility and explicit formalised control with Western organisations. Since the Japanese management style is often related to the success of Japanese enterprises, most Western organisations have borrowed many of its concepts. As an example, some Western organisations have adopted a long-term employment policy as a means of increasing employees' loyalty and performance. On the contrary, some Jordanian and Arab organisations are shifting from lifetime employment to short-term employment. It is generally assumed that lifetime employment is one of the major causes of weak organisational performance in Jordan and other Arab countries. Since employees are assured, implicitly or explicitly, of lifetime employment, irrespective about how they perform their tasks, they do not care about doing a good job. According to Slocombe and Dougherty (1998, p. 472), "... employees whose jobs are quite secure may desire the status and the paycheck that go with their position, but because their jobs are secure, they may not put forth much effort". Suliman (1995) argued that some Arab employees tend to engage in a side business while they are working in the organisation. They even use organisational

resources, such as the telephone, fax and office, to perform their own business. He argued that lifetime employment and lack of commitment and codes of ethics are the major reasons for this behaviour. Jordanian and Arab organisations need to learn from Japanese management style, especially in relation to lifetime employment. However, two suggestions can be offered to overcome this dilemma. First, this employment policy can be retained, but a policy of a quarterly or at least annual performance appraisal against a certain set of objectives should be established. Secondly, short-term employment, with the possibility of extension based on the employee performance in a given period of time, can be adopted. Until the problems associated with lifetime employment are resolved, this employment policy will remain one of the major weaknesses of the Jordanian and Arabic management.

Innovation

Innovation or creativity in the work place are often what keeps an organisation competitive (Katz and Kahn, 1978). Surviving in today's fast changing environment is not easy. Only innovative organisations are able to cope with unstable and continuously changing demands and markets. The mix of the 4P's (product, price, place and promotion) for an organisation should remain distinguishable from those of other organisations. In order to remain distinguishable, employees at all managerial levels should be motivated to innovate. Thus, '*innovate or die*' and '*innovate or evaporate*'. As far as Jordan and other Arab countries are concerned, there is a strong belief that innovation is one of the most important competitive weapons that a modern organisation can hold in today's global competition market. According to Awamleh (1994) the "growing competition, internationalism and changing circumstances make innovation an inevitable prerequisite for growth, success and survival of any private or public organisation" (p. 52). However, in reality "innovation and risk taking are activities which seem to be more often punished than rewarded" (Al-Faleh, 1989, p. 20). Arabic culture, especially the part that related to Islamic culture, views innovation as a normal, processional, goal oriented, continuous or open-ended process, maintaining equilibrium, planned and managed by people (Ali, 1996). However, Arab managers, in general, tend to discourage questioning old established habits of doing work.

Since the cultural characteristics of Arab management are issues which are beyond the scope of this study, some major observations can be summarised in the following points:

- 1- Autocratic (authoritarian) management style is predominant.

- 2- Weak communication between management and employees.
- 3- A strong preference toward a consultative style of decision making. However, “this consultation is usually carried out on a person-to-person basis, thus avoiding group meetings. Moreover, decisions are often made in an informal and unstructured manner” (Al-Faleh, 1989, p. 20).
- 4- Weak management and value of time.
- 5- Little concern for training and delegation of authority.
- 6- A low trust atmosphere.
- 6- Negative perception of workers union role in the organisation, and the work towards controlling it if it has come to existence at all.
- 7- Little opposition and resistance from employees.
- 8- Individual motivation (individualistic culture) rather than collective motivation (collectivist culture) is predominant. Accordingly, the employee tends to attribute success to his/her own effort and skills, and failure to other co-workers.

Hence, the question that remains unanswered is: *Where is the problem of Arabic management? Is it the culture, or the people?* The problem is the people, not the culture. There is a general agreement among researchers that Arabic culture is one of the oldest and greatest cultures on earth. As an example, “issues of equity and justice, consultation and fairness, hard work and discipline, honesty and faithfulness, cleanliness and prohibition of bribes are detailed in the scriptures” (Ali, 1996, p. 15). However, the majority of the Arab people are unaware of the genuine aspects of their culture, due to cultural discontinuity (Ali, 1996). Therefore, a large segment of Arab managers, including Jordanian, are not familiar with these precepts, and often tend to violate them in practice (Ali, 1996). Thus, it is the responsibility of research and development units in Jordanian and Arab organisations to highlight and bring to the forefront the enlightened aspects of the culture, especially those related to work and behaviour. If it is properly utilised, the culture will significantly contribute to the success of organisations. As an example “... the Islamic values and culture, if correctly identified and understood, would facilitate organisational change and development” (Ali, 1996, p. 19).

4-6 CONCLUDING REMARKS

This chapter has shed light on Jordan’s geographical, historical, political, and economical environments. Since the variables under scrutiny in this study are assumed to be influenced by the socio-cultural characteristics of each setting, the socio-cultural indicators of Jordanian and Arab society are also discussed. Within the general

framework of culture, the distinctive features of Jordanian and Arab management were also highlighted. It is generally suggested that Jordanian culture has clear impacts on the employee behaviour in organisations. Therefore, the six layers of this culture were examined, namely: regional level, national level, generation level, social-class level, gender level, and organisational culture level.

After these brief guidelines about Jordan's political, economical, and socio-cultural factors, the methodology used in examining PWE, OC and performance variables in the Middle Eastern context will be discussed in the next chapter.

Chapter Five

The Study Methodology

THE STUDY METHODOLOGY

5.1 INTRODUCTION

This chapter discusses the methods used to examine the work environment, commitment and performance concepts in Jordanian industrial firms. It highlights several issues related to the investigation of the study. However, the main issues discussed are the study population and sample, variable definitions, measurements and hypotheses, statistical analysis, pilot studies and the psychometric properties of the study measures. Since the scope of each research is determined by its own situation and other factors, such as the context, the sample and variables, the last part of this chapter discusses the major limitations of the this study.

5.2 POPULATION OF THE STUDY

The population of this study comprises 26,661 full-time employees, representing all workers in the 42 industrial companies registered in the Amman Financial Market (AFM). Table (5-1) lists, in alphabetical order, these 42 companies, their establishment years and the total number of employees in each company.

5.2.1 WHY THE INDUSTRIAL SECTOR?

Although the Jordanian government claims that it has done all that it could to improve the performance of the industrial sector, the economy remains heavily dominated by the service sector, which contributes about 65% to GDP. Nonetheless, the industrial sector is “expected to be the main driving force behind the country’s economic development in the years to come” (Ministry of Planing, 1996, p. 39). It has been established that the advanced technology and capital are not enough to help this sector to play its important role in the economy. In this context, Aryee and Debrah (1992, p. 176) asserted:

The sustained interest in organisational commitment stems, in part, from the recognition of the limitation of technological innovation in creating and sustaining competitive advantage. For this reason, many organisations are turning from control model to a commitment model in managing their workforce ... This is because employees who are committed to their employing organisation have been shown to enhance organisational effectiveness through their high levels of job performance and work quantity, and low levels of tardiness, absenteeism and turnover.

Together with capital and technology, the factors that influence employee (the main factor of production) productivity should be understood and managed properly.

Table 5-1: The Jordanian industrial companies registered in AMF.

No	Company Name	Established In	Workers No.
1	<i>Al-zai ready wear</i>	1992	183
2	<i>Aladdin industries</i>	1981	151
3	<i>Arab aluminium industry - aral</i>	1976	295
4	<i>Arab centre for pharmaceuticals</i>	1983	163
5	<i>Arab paper conversion & trading</i>	1978	70
6	<i>Dar al-dawa development & investment</i>	1975	414
7	<i>General investment</i>	1955	85
8	<i>Intermediate petrochemicals</i>	1980	119
9	<i>International smokes and cigarettes</i>	1992	233
10	<i>Jordan ceramic industries</i>	1966	529
11	<i>Jordan dairy</i>	1968	180
12	<i>Jordan new cables</i>	1992	103
13	<i>Jordan paper and cardboard</i>	1973	238
14	<i>Jordan petroleum refinery</i>	1956	3989
15	<i>Jordan phosphate mines</i>	1953	5516
16	<i>Jordan printing & packaging</i>	1972	54
17	<i>Jordan rock wool industries</i>	1981	108
18	<i>Jordan resources industry</i>	1991	135
19	<i>Jordan steel</i>	1993	13
20	<i>Jordan sulfo chemicals</i>	1983	122
21	<i>Jordan tanning</i>	1957	261
22	<i>Kawther investment</i>	1988	100
23	<i>Livestock and poultry</i>	1976	69
24	<i>Middle east complex for eng. electronics</i>	1994	519
25	<i>National aluminium industry</i>	1994	11
26	<i>National cable & wire manufacturing</i>	1983	243
27	<i>National chlorine industry</i>	1991	109
28	<i>National steel industry</i>	1979	128
29	<i>Rafia industrial</i>	1974	149
30	<i>The Arab chemical detergents</i>	1973	96
31	<i>The Arab international food factories</i>	1994	5
32	<i>The Arab pharmaceutical</i>	1964	1002
33	<i>The Arab potash</i>	1958	7134
34	<i>The industrial, commercial</i>	1961	528
35	<i>The Jordan cement company</i>	1951	2753
37	<i>The Jordan pipes manufacturing</i>	1973	165
38	<i>The Jordan worsted mills</i>	1962	192
39	<i>The public mining</i>	1973	57
40	<i>Union chemical and vegetable oil industries</i>	1993	127
40	<i>Universal chemical industries</i>	1981	55
41	<i>Universal modern industries</i>	1989	202
42	<i>Woollen industries</i>	1964	56
Total			26661

Thus, the main goal behind selecting the industrial sector is to understand its current role in influencing employees' commitment and performance. This understanding, together with other official and non-official efforts, such as the new investment law mentioned in chapter four, would support the development of this important sector. Compared with other economic sectors, especially the service sector, the industrial

sector is somewhat disregarded in the Jordanian and Arab management literature. Mistakenly, some people, especially in the Arab world, believe that this sector is in need of equipment, tools, advanced technology and other technical resources more than management research. Therefore, the majority of management studies in the Middle East are directed towards the service sector, i.e. banks, insurance, hospitals, ... etc, which are highly developed, mainly because of this plethora of research. In this context, it can be remembered that some of the major concepts in management and human relations were provoked by the Hawthorn studies conducted in the Western Electric Company (industrial firm). Implementing state of the art technology alone will not improve an organisation's effectiveness, nor will it solve its problems. As mentioned earlier, one of the major problems of Third World organisations, especially industrial firms, is mismanagement. Since the main factors of production, i.e., land, labour and capital, are worthless without good management, Jordan and other Third World countries report very weak progress in industry, compared with developed countries. Actually, the main factor that classifies a country as developed or less developed (or First World and Third World) is the development of the industrial sector in that country. Although it is less commonly used, the term Second World is now used to describe some Asian countries (Tigers), such as Malaysia which have made good progress in industry, higher than Third World progress and lower than industrialised countries' success.

The industrial companies registered in AFM were selected for three major reasons. Firstly, as mentioned earlier, the work environment and employees' commitment in any organisation takes time to develop. Therefore, it will be without value to examine these factors in newly (e.g., one or two years) established organisations. Most Jordanian industrial companies not registered in AFM are new organisations, whereas all industrial firms registered in AFM, as can be seen from Table (5-1), are well-established and old companies. Secondly, the AFM industrial sector includes all Jordanian large-scale industries, which actively contribute to the country's GDP. As mentioned earlier, mining industries only, which are registered in AFM, account for about 68% of Jordan's total exports. Lastly, AFM is one of the leading stock exchange markets in the region. It plays a significant role in developing Jordan's economy. Therefore, there is a need for further efforts to develop this important organisation through developing the performance of its registered companies. This will contribute significantly to AFM's competitive edge at the regional level.

5.3 SAMPLE OF STUDY

The Systematic Random Sampling (SRS) system is used to select the study sample. Compared with other sampling methods, such as Simple Random Sampling and Stratified Random Sampling, SRS is viewed as the best sampling system in this study because:

- 1) The list of all the population elements is available. According to Sekaran (1992, p. 241) if the "... the listing of the [population] elements is conveniently available in one place, then systematic sampling procedure will offer the advantages of the ease and quickness in developing the sample".
- 2) systematic sampling is easier to draw without mistakes.
- 3) It is more precise than Simple Random Sampling (best fitted when generalizability of the findings to the whole population is the objective of the study), because SRS is more evenly spread over the population.

Nevertheless, to avoid systematic biases such as periodic or job level arrangement which are the only disadvantages of the SRS method reported in the literature, the alphabetical order of population elements is used. Moreover, to maximise the generalisation of findings to the whole population, 20 companies employing 7030 worker were selected, representing 47.6% of the all registered companies, and 26.4% of the total number of employees (table 5-1). However, two selected companies refused to co-operate, because of the preparation of annual accounts. Using the same sampling system, two other companies were selected in the second draw.

Table 5-2: The distribution of the study questionnaire among the industrial types.

<i>NO</i>	<i>Type</i>	<i>No. of Co.s</i>	<i>Total No. of Employees</i>	<i>Total No. of Distributed Questionnaires</i>	<i>Total No. of Collected Questionnaires</i>
1	Food industry	4	420	060	060
2	Engineering industry	2	623	089	075
3	Pharmaceutical Industry	1	269	038	038
4	Cotton, weaving & cloth industry	2	504	072	065
5	Petroleum & petrochemical industry	2	3695	525	346
6	Construction industry	4	645	092	087
7	Paper, printing & packing industry	1	206	029	029
8	Chemical industry	3	394	056	049
9	Tanning & leather industry	1	274	039	034
	Totals	20	7030	1000	783

Considering the industrial classification offered by Jordan Industrial Estates Corporation (www.jiec.com) these 20 companies are categorised into 9 industrial groups. These groups are presented in Table (5-2). To minimise cost, save time and effort, and obtain more reliable results by directing the limited resources to study a small sample, 1000 employees were randomly selected from 20 companies. The following equation is adopted in distributing the study questionnaires among the selected companies:

$$X = \frac{Xn}{N} * 1000$$

Where:

X = Total number of questionnaires per company.

Xn = Total number of employees in the company.

N = Total number of employees in the study sample (20 companies).

1000 = Total number of questionnaires.

Table (5-2) presents the nine types of the co-opted industries, the number of companies and employees in each group, total number of distributed questionnaires per industry group, and the total number of collected questionnaires from each industry group. The study questionnaires were distributed to employees at the three managerial levels, i.e. bottom management, middle management, and top management. This three level classification of employees is commonly used in Third World organisations, including Jordan. It is also commonly used in the management literature, especially in the Arab world (e.g., Awamleh, 1996 and Suliman, 1995).

5.4 DESCRIPTION OF THE STUDY SAMPLE

One thousand employees from the top, middle and bottom management working for 20 industrial firms were co-opted in this study. However, only 783 responses were found to be suitable for statistical analysis, as will be explained later in section (5.13). Table (5-3) describes the study sample, using seven biographical variables.

As can be seen from Table (5-3), the total number of male employees co-opted in the study was 627 (80.1%), and the total number of female employees was 156 (19.9%). Thus, there is a wide discrepancy between male and female numbers. The majority (502) of study subjects were married employees, representing 64.1%. The number of non-married employees was 281 (35.9%). Moreover, Table (5-3) shows that 193 employees were of high school level or less, whereas intermediate diploma holders consisted of 232 employee. The majority (352) of respondents were first degree holders and above. Three age levels were reported. The majority (387) of respondents were 35

years or less; 263 were between 36 and 46 years of age, and 133 employees were 47 years and above. Frequencies of organisational tenure (O. tenure) show that the majority (428) of respondents had been with their organisations for 7 years or less. It is clear from Table (5-3) that the majority (363) of co-opted employees had been in their jobs for 7 years or less. The distribution of study subjects according to their job level revealed that the majority (463) of surveyed subjects were at middle management level.

Table 5-3: The description of the study sample.

	<i>Gender</i>	<i>Marital status</i>	<i>Educa- tion</i>	<i>Age</i>	<i>O. Tenure</i>	<i>Job Tenure</i>	<i>Job level</i>
Male	627						
Female	156						
Married		502					
Non-married		281					
High school or less			192				
Diploma			232				
First degree and above			359				
35 years or less				387			
36-46 years				263			
47 years and above				133			
7 years or less					428		
8-13 years					172		
14 years and above					183		
7 years or less						363	
8-13 years						191	
14 years and above						229	
Top level.							099
Middle level							463
Bottom level.							221
Total	783	783	783	783	783	783	783

5.5 VARIABLES OF THE STUDY

There are three kinds of variables in this study:

(a) The independent variables: The ones that influence the dependent and mediating variables in either a positive or negative way. The independent variable in this study is the global variable of the PWE and its 13 dimensions, and the seven demographic variables.

(b) The mediating variables: The ones that influence both the dependent and independent variables in either a positive or negative way. Their existence has strong

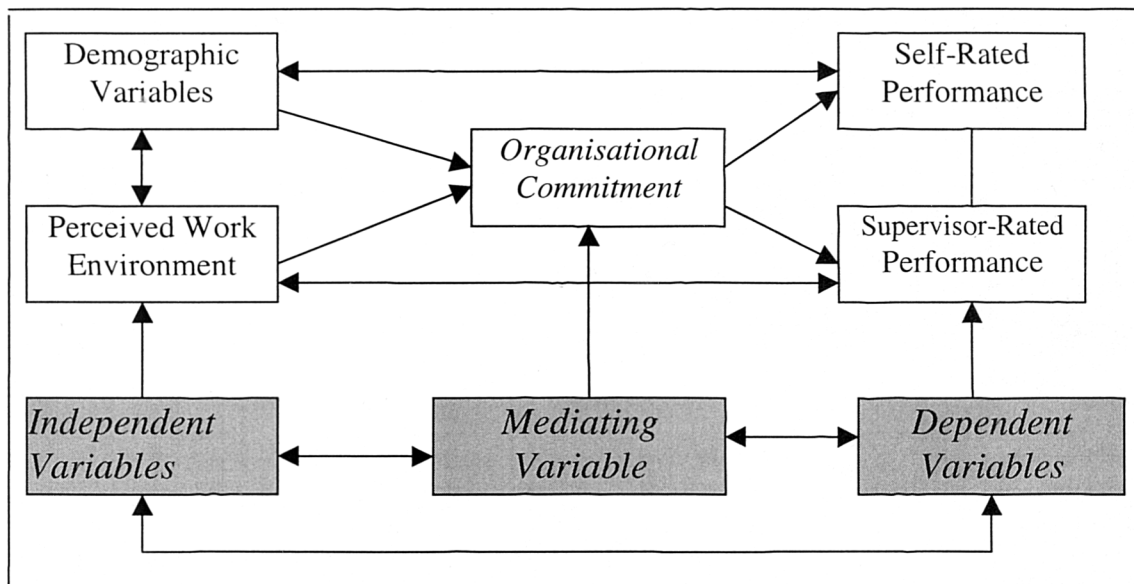
contingent effects on their relationship. The mediating variables of the study are OC and its two components (AC and CC).

(c) The dependent variables: These are the main variables in this study. The variability is predicted or explained for the purpose of better management. The dependent variables of the study are the work performance (self and supervisor-ratings) and its five dimensions.

5.6 THE STUDY MODEL

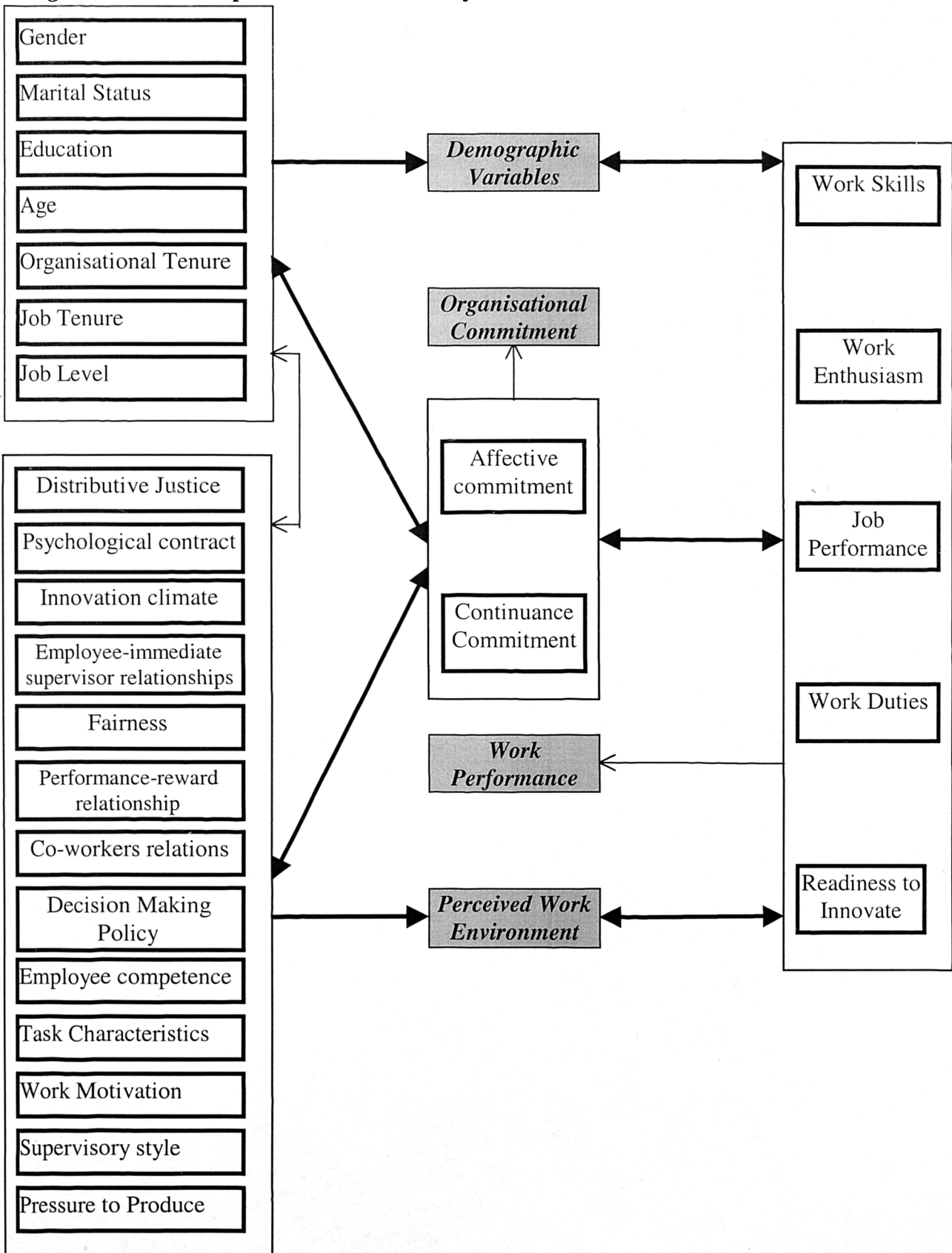
The proposed relationships between the above mentioned study variables can be represented in diagrammatic form. Figure (5-1) represents the parsimonious model, and Figure (5-2) the full model.

Figure 5-1: The Parsimonious model of the study.



As can be seen from these diagrams, perceived work environment and its 13 dimensions, and the seven demographic variables represent the independent variables; organisational commitment and its two dimensions the mediating variables; whereas work performance (self-ratings and immediate supervisor ratings) and its five dimensions represent the dependent variables. The shaded boxes in the middle of the flowchart contain the global variables.

Figure 5-2: The complete model of the study.



5.7 THE OPERATIONAL DEFINITIONS OF THE STUDY VARIABLES

The study variables can be operationally defined as follows:

5.7.1 DEMOGRAPHIC VARIABLES

- 1) Gender: The respondents' sex, defined as male or female.
- 2) Marital status: The social status of the respondent, given as married or non-married.
- 3) Education: The education level that the respondent has attained, e.g. less than high school, high school and first degree or above.
- 4) Age: The respondent age group, given in years' range, e.g. between 25 and 35 years.
- 5) Organisational tenure: The number of years that the respondent has spent in his/her organisation.
- 6) Job tenure: The number of years that the respondent has spent in his/her job or occupation.
- 7) Job level: The respondent's work level in his/her current organisation. Three levels are given, i.e., top management, middle management and bottom management.

5.7.2 PERCEIVED WORK ENVIRONMENT (PWE)

The PWE is those stimuli, constraints on freedom, and reward and punishment that affect worker attitudes, such as OC and performance (Forehand and Gilmer, 1964).

The thirteen dimensions of PWE can be operationally defined as follows:

- 1) Supervisory style: the degree to which the supervisor is open, supportive and considerate.
- 2) Task characteristics: the extent to which the jobs or tasks are characterised by variety, challenge, worthwhile, accomplishment, ... etc.
- 3) Co-workers relation: the degree to which co-workers are trusting, supporting, friendly, and co-operative.
- 4) Work motivation: the degree to which employees show concern for the quality of work, try to get ahead, their involvement in work, ... etc.
- 5) Employee competence: the extent to which management gives employees the proper training and 'know-how' to do their job.
- 6) Decision-making policy: the degree to which employees take part in decision making, especially that is related to their own tasks or jobs.
- 7) Performance-rewards relationship: the extent to which rewards such as promotions and salary increases are based on performance, rather than on other considerations, such as nepotism and favouritism.

- 8) Pressure to Produce: The extent to which the employee feels a pressure on him/her to produce or to satisfy his/her boss.
- 9) Employee-immediate supervisor relationships: The degree to which the employee is able to effectively communicate with his/her boss, and trust him/her.
- 10) Distributive Justice: The degree to which the employee perceives the distribution of rewards, praises and promotions among organisational members to be fair.
- 11) Psychological contract: The beliefs that the employee holds regarding what he/she should give and receive with respect to his/her employer.
- 12) Innovation climate: The degree to which the employee perceives the work environment as supporting creativity and innovation, and questioning old established habits of doing work.
- 13) Fairness: The degree to which employees feel that their performance evaluation is fair and free from any biases.

5.7.3 ORGANISATIONAL COMMITMENT (OC)

OC is a strong desire to remain a member of the organisation; a firm belief in, and acceptance of, the values and goals of the organisation, and a readiness to exert considerable effort on behalf of the organisation.

The three facets of organisational commitment can be defined as:

- I) Affective commitment: An emotional attachment to an organisation, characterised by the acceptance of the organisational values and willingness to remain with the organisation (Porter *et al.*, 1982).
- II) Continuance Commitment: The degree to which the employee feels a necessity to maintain organisational membership because of increasing personal investment in the organisation, such as time and job status, and the scarcity of alternative jobs (Beaker, 1960).

5.7.4 WORK PERFORMANCE

Work performance is the degree to which the employee is carrying out his/her work in a certain social and physical environment. The dimensions of work performance are:

- a- Understanding work duties: The degree to which the employee is capable of carrying out his/her work as planned.
- b- Work skill: Represents the extent to which the employee has sufficient technical know-how to execute his/her job.

- c- Work enthusiasm: Reflected in the extent to which the employee displays enthusiasm towards his/her work. This could be high and renewable or the reverse.
- d- Job performance: The extent to which the employee is efficient, and his/her work outcomes are free of errors.
- e- Readiness to Innovate: The degree to which employees are creative, innovative and ready to question the old established habits of doing work.

5.8 VARIABLE MEASUREMENT

Except for the demographic variables, Likert 5-point scale is used in the self-administered questionnaire. The nominal scale is used with the seven demographic variables. The study variables are measured as follows:

5.8.1 DEMOGRAPHIC VARIABLES

Seven demographic variables were used:

- 1) Gender is measured by assigning respondents to two categories: (a) males and (b) females.
- 2) Marital status is measured by categorising subjects into two groups (a) married and (b) non- married.
- 3) Education is measured by asking the co-opted employees to select their educational level from among six groups: (a) less than high school, (b) high school, (c) college degree, (d) graduate degree, (e) high diploma (f) masters degree or above. This scale is selected after considering the Department of Statistics' (www.dos.gov.jo) results of the 1998 that relate to the education and labour force statistics in Jordan. The reason behind selecting this scale was to provide a chance to all selected subjects to respond to this question without asking them to write down their educational level, which might not be acceptable to some employees.
- 4) Age is measured by asking the respondent to select their age group from among five age groups: (a) less than 25 years, (b) 25 to 35, (c) 36 to 46, (d) 47 to 57, and (e) 58 and above. This age scale was found to be the most suitable scale, because it takes into account the indicators of age for the Jordanian labour force produced by the Department of Statistics (1998). Since age is a sensitive issue to some employees, especially female employees, a wide age interval is selected (10 years).
- 5) Organisational tenure is measured using five tenure groups: (a) one year or less (b) 2 to 7, (c) 8 to 13, (d) 14 to 19, and (e) 20 years or above. This scale is selected in the light of the pilot study (results) that was conducted in three Jordanian industries.
- 6) Job tenure is measured using the same scale mentioned in (5) above.

7) Job level is measured by asking respondents to select their level from among three options: (a) top level, (b) middle level and (c) bottom level. This type of job level classification is common in most Third World organisations, especially in the Arab world.

5.8.2 PERCEIVED WORK ENVIRONMENT (PWE)

The multidimensional instrument developed by Newman (1977, pp. 523-524) is used as the base in developing the measurement of the PWE variable. After piloting Newman's scale, and making the necessary modifications in its phraseology for the purpose of accuracy and objectivity of translation into the Arabic language, eight dimensions were adapted from this scale. Appendix (1) shows the items used in developing these eight PWE dimensions. These eight dimensions are presented below, together with the numbers of items, as shown in the questionnaire (the English version- appendix one):

- 1) Co-workers relations is measured using 4 items (3, 4, 7, 8).
- 2) Performance-reward relationship is measured using four items (21, 22, 23, 24).
- 3) Decision making policy is measured using four items (15, 16, 19, 20).
- 4) Employee competence is measured using two items (11, 12).
- 5) Task characteristics variable is measured using four items (1, 2, 5, 6).
- 6) Work Motivation is measured using two items (9, 10).
- 7) Supervisory style is measured using four items (13, 14, 17, 18).
- 8) Pressure to Produce is measured using two items (25, 26).

These dimensions represent the key aspects of work environment, as found and demonstrated by some studies (e.g., Ashforth, 1985; Jackofsky, Slocum, 1988 and Al-Shammari, 1991). Four reasons can be given for adapting these eight dimensions from Newman's PWE scale:

a- In work environment theory, Campbell and Beaty's (1971) measure of work environment has been found to be a reliable and comprehensive measure. This scale was used as a foundation for the Newman's PWE measure.

b- PWE measure is a result of many empirical researches conducted by Newman (e.g., Newman, 1975) for the purpose of developing more precise and reliable measures of PWE. His two important criteria for the development of PWE were: "it had to be comprehensive and descriptive" (p. 522).

c- The eight dimensions of Newman's scale used in this study are the basic dimensions of the PWE, used in many valuable studies in this field (Ashforth, 1985; Jackofsky and Slocum, 1988).

d- PWE is suitable to use at the organisational level of analysis, as well as at the individual level of analysis (Newman, 1977).

On the other hand, the remaining five PWE dimension scales developed by the researcher are:

1- Employee-immediate supervisor relationships are measured using eight items scale (41, 42, 43, 44, 45, 46, 47, 48).

2- Distributive Justice is measured using four items (33, 34, 35, 36).

3- Psychological contract is measured using six items (27, 28, 29, 30, 31, 32).

4- Innovation climate is measured using five items (49, 50, 51, 52, 53).

5- Fairness is measured using four items (37, 38, 39, 40).

5.8.3 ORGANISATIONAL COMMITMENT (OC)

Allen and Meyer's (1991) scales of Affective Commitment (AC) and Continuance Commitment (CC) were used to measure employees' commitment. Originally, each scale comprised eight items. However, the original scales were revised according to the pilot study results. In its revised form, the AC scale included nine items (1 to 9), and CC, six items (10 to 15). These items are presented in Part Three of the study questionnaire (English: appendix 1, Arabic: appendix 2). Employees in Jordanian industrial firms were asked whether or not each item described their affective or continuance commitment to their organisation, as they perceived and felt it. They responded by circling the "strongly agree" = 5 ... "strongly disagree" = 1, format, next to each item in the commitment scale. Three reasons can be given for adopting the Meyer and Allen's (1991) scale in this study:

a- Due to good progress in commitment research, the earlier rather confusing definitions of the 1960s and 1970s that conceptualise commitment as a unidimensional concept are no longer used. The new idea of OC that replaced the old one states that different factors of commitment have different relationships to organisational behaviour (Iles *et al.*, 1990). According to Lydka (1994, p. 59):

It is now generally accepted that organisational commitment is a multidimensional construct comprising at least attitudinal and behavioural commitment. Some of the ambiguity surrounding the concept of commitment and the lack of consistent findings may have arisen from studies trying to examine commitment as a unidimensional phenomenon.

Meyer and Allen's multidimensional scale is the most reliable measurement of multifaceted OC (Benkhoff, 1997; Jaros, 1997; Suliman and Iles, 1999a; Travaglione *et al.*, 1998). According to Benkhoff (1997b, p. 128):

*For commitment research to get out of its current quagmire, two approaches seem feasible for future research. The first is to **abandon the popular definition by Porter et al. (1974)** [unidimensional] and to explore the [OC] dimensions separately, in line with the alternative definitions of commitment ... The second is that **researchers could use Allen and Meyer's scales** which are based on a different commitment concepts and have been tested for homogeneity (Researcher's emphasis added).*

b- A number of empirical researches have proved that the two components of commitment (AC and CC) are conceptually and empirically separable (e.g., Hackett *et al.*, 1991; Randall and O'Driscoll, 1997; Suliman and Iles, 1998b; Somers, 1995; Meyer, 1991; Liou, 1994; Jaros *et al.*, 1993; McGee and Ford, 1987).

c- The second widely used alternative for measuring commitment is the Organisational Commitment Questionnaire (OCQ) model of Porter *et al.* (1974). If the 15-item OCQ is compared with the revised 9-item affective commitment questionnaire (AC) used in this study, no substantial difference can be found. Actually, the OQC was the base for developing the original scale of the AC measure (Allen and Meyer, 1990, p. 3). All in all, the two-component model of commitment used in this study can said to be comprehensive and reliable.

5.8.4 WORK PERFORMANCE

Two methods of performance measures are used in this study, namely:

1) The Self Performance Rating (SPR), as a *subjective measure* is widely used in the most recent management literature (e.g., Farh *et al.*, 1991; Furnham and Stringfield, 1998; and Somers and Birnbaum, 1991 and Yu and Murphy, 1993).

2) The Immediate-supervisor Performance Ratings (ISPR), as an *objective measure* of performance is also widely used in recent management literature (e.g., Baruch, 1996; Liden, Stilwell and Ferris, 1996 and Makine and Levy, 1998).

The subjective measures of performance may be criticised on the grounds that employees are not able to evaluate their performance accurately because of biases, such as poor introspection (Cheng and Kalleberg, 1996; Locke, Latham and Erez, 1988). On the other hand, "objective measures, such as supervisor ratings and output measures, are useful only in specific settings and cannot be applied to the whole labour force" (Cheng and Kalleberg, 1996, p. 117). As a way of solving the above-mentioned

problems that are associated with the measures of performance, this study incorporates both subjective and objective measures of performance. A scale adapted from Suliman's (1995) and Farh *et al.*'s (1991) scales of performance is used to measure the SPR and ISPR. Suliman's scale of performance was tested in Sudanese industrial firms, which is quite similar to the Jordanian environment, as both Sudan and Jordan share one regional culture. After surveying 1000 employees and managers, Suliman's scale was found to be highly reliable ($\alpha = 0.93$). Moreover, Farh *et al.*'s scale of performance is also reliable and widely used in the management literature (e.g., Yu and Murphy, 1993). Considering the pilot studies results, the scale was revised, and comprised five dimensions. The items that makeup the factors of performance can be found in part four (SPR) and part five (ISPR) of the study questionnaire (appendix 1). The dimensions and items' numbers are:

- 1- Work Skills (WS): SPR (3 items: 4, 5, 6); ISPR (2 items: 4 and 5).
- 2- Work Enthusiasm (WE): SPR (3 items: 7, 8, 9); ISPR (3 items: 6, 7, 8).
- 3- Job Performance (JP): SPR (3 items: 10, 11, 12); ISPR (3 items: 9, 10, 11).
- 4- Understanding Work Duties (UWD): SPR (3 items: 1, 2, 3); ISPR (3 items: 1, 2, 3).
- 5- Readiness to Innovate (RI): SPR (3 items: 13, 14, 15); ISPR (4 items: 12, 13, 14, 15).

5.9 HYPOTHESES OF THE STUDY

An hypothesis is an educated guess about a problem solution. The hypotheses of this study are defined as conjectured relationships between study variables. "HO" represents the null hypothesis that is expressed as: no (significant) relationship between study variables, "HA" is the opposite of the null. It is a statement expressing a relationship between study variables. According to the study variable relationships that appear in Figures (5-1, 5-2), the study hypotheses can be divided into 14 major groups. Using the 'HO' definition, the study hypotheses can be stated as follows:

(1) Gender and PWE, OC and Performance

- 1) Ho: *There is no significant difference between males and females in the perception of work environment in Jordanian industrial firms.*
- 2) HO: *There is no significant difference between male and female employees in the commitment they show toward their organisations in Jordanian industrial firms.*
- 3) HO: *There is no significant difference between male and female employees in rating self performance in Jordanian industrial firms.*

4) HO: *There is no significant difference between male and female employees in the performance they show in the workplace, as rated by their immediate supervisors in Jordanian industrial firms.*

(2) Marital Status and PWE, OC and Performance

5) HO: *There is no significant difference between married and non-married employees in the perception of work environment in Jordanian industrial firms.*

6) HO: *There is no significant difference between married and non-married employees in the commitment they show toward their organisations in Jordanian industrial firms.*

7) HO: *There is no significant difference between married and non-married employees rating self performance in Jordanian industrial firms.*

8) HO: *There is no significant difference between married and non-married employees in immediate supervisor rated performance in Jordanian industrial firms.*

(3) Education and PWE, OC and Performance

9) HO: *There are no significant differences between employees' educational levels in the perception of work environment in Jordanian industrial firms.*

10) HO: *There are no significant differences between employees' educational backgrounds in the commitment they show toward their organisations in Jordanian industrial firms.*

11) HO: *There are no significant differences between employees' educational levels in rating self performance in Jordanian industrial firms.*

12) HO: *There are no significant differences between employees' educational levels in immediate supervisor rated performance in Jordanian industrial firms.*

(4) Age and PWE, OC and Performance

13) HO: *There are no significant differences between employee age levels in the perception of work environment in Jordanian industrial firms.*

14) HO: *There are no significant differences between employee age levels in the commitment they show toward their organisations in Jordanian industrial firms.*

15) HO: *There are no significant differences between employees age levels in rating self performance in Jordanian industrial firms.*

16) HO: *There are no significant differences between employee age levels in immediate supervisor rated performance in Jordanian industrial firms.*

(5) Organisational Tenure and PWE, OC and Performance

17) HO: *There are no significant differences between employee organisational tenures in the perception of work environment in Jordanian industrial firms.*

18) HO: *There are no significant differences between employee organisational tenures in the commitment they show toward their organisations in Jordanian industrial firms.*

19) HO: *There are no significant differences between employee organisational tenures in rating self performance in Jordanian industrial firms.*

20) HO: *There are no significant differences between employee organisational tenures in immediate supervisor rated performance in Jordanian industrial firms.*

(6) Job Tenure and PWE, OC and Performance

21) HO: *There are no significant differences between employee job tenures in the perception of work environment in Jordanian industrial firms.*

22) HO: *There are no significant differences between employee organisational tenures in the commitment they show toward their organisations in Jordanian industrial firms.*

23) HO: *There are no significant differences between employee job tenures in rating self performance in Jordanian industrial firms.*

24) HO: *There are no significant differences between employee job tenures in immediate supervisor rated performance in Jordanian industrial firms.*

(7) Job level and PWE, OC and Performance

25) HO: *There are no significant differences between employee job levels in the perception of work environment in Jordanian industrial firms.*

26) HO: *There are no significant differences between employee job levels in the commitment they show toward their organisations in Jordanian industrial firms.*

27) HO: *There are no significant differences between employee job levels in rating self performance in Jordanian industrial firms.*

28) HO: *There are no significant differences between employee job levels in immediate supervisor rated performance in Jordanian industrial firms.*

(8) Perceived Work Environment and Organisational commitment

29) HO: *Perceived work environment in Jordanian industries will not significantly explain variance in employees' organisational commitment.*

30) HO: *The dimensions of perceived work environment in Jordanian industries will not significantly explain variance in employees' organisational commitment.*

31) HO: *Perceived work environment in Jordanian industrial firms will not significantly explain the variance in employees' affective commitment.*

32) HO: *Perceived work environment dimensions in Jordanian industries will not significantly explain the variance in employees' affective commitment.*

33) HO: *Perceived work environment in Jordanian industrial firms will not significantly explain the variance in employees' continuance commitment.*

34) HO: *Perceived work environment dimensions in Jordanian industries will not significantly explain the variance in employees' continuance commitment.*

(9) Perceived Work Environment and Self Performance Rating

35) HO: *Perceived work environment in Jordanian industries will not significantly explain the variance in employee self rated performance.*

36) HO: *Perceived work environment dimensions in Jordanian industries will not significantly explain the variance in employee self rated performance.*

37) HO: *Perceived work environment dimensions in Jordanian industries will not significantly explain the variance in employee self-rated work skills.*

38) HO: *Perceived work environment dimensions in Jordanian industries will not significantly explain the variance in employee work enthusiasm, as rated by him or herself.*

39) HO: *Perceived work environment dimensions in Jordanian industrial firms will not significantly explain the variance in employee job performance, as rated by him or herself.*

40) HO: *Perceived work environment dimensions in Jordanian industrial firms will not significantly explain the variance in employee understanding of work duties, as rated by him or herself.*

41) HO: *Perceived work environment dimensions in Jordanian industrial firms will not significantly explain the variance in employee readiness to innovate, as rated by him or herself.*

(10) Perceived Work Environment and the Immediate Supervisor Performance Rating

42) HO: *Perceived work environment in Jordanian industrial firms will not significantly explain the variance in employee performance, as rated by his/her immediate supervisor.*

43) HO: *Perceived work environment dimensions in Jordanian industrial firms will not significantly explain the variance in employee performance, as rated by his immediate supervisor.*

44) HO: *The perceived work environment dimensions in Jordanian industrial firms will not significantly explain the variance in employee readiness to innovate, as rated by his/her immediate supervisors.*

45) HO: *Perceived work environment dimensions in Jordanian industrial firms will not significantly explain the variance in employee understanding of his/her work duties, as rated by his/her immediate supervisor.*

46) HO: *Perceived work environment dimensions in Jordanian industrial firms will not significantly explain the variance in employee job performance, as rated by his/her immediate supervisor.*

46) HO: *Perceived work environment dimensions in Jordanian industrial firms will not significantly explain the variance in employee work skills, as rated by his/her supervisor.*

47) HO: *Perceived work environment dimensions in Jordanian industrial firms will not significantly explain the variance in employee work enthusiasm, as rated by his/her supervisor.*

(11) Mediating Role of Organisational Commitment

48) HO: *Organisational commitment will not significantly mediate the relationship between perceived work environment and self-rated performance.*

49) HO: *Affective commitment will not significantly mediate the relationship between perceived work environment and self-rated performance.*

50) HO: *Continuance commitment will not significantly mediate the relationship between perceived work environment and self-rated performance.*

51) HO: *Organisational commitment will not significantly mediate the relationship between perceived work environment and immediate supervisor performance rating variables.*

52) HO: *Affective commitment will not significantly mediate the relationship between perceived work environment and immediate supervisor performance rating variables.*

53) HO: *Affective commitment will not significantly mediate the relationship between perceived work environment and immediate supervisor performance rating variables.*

(12) Organisational Commitment and Self Performance Rating

54) HO: *Organisational commitment in Jordanian industrial firms will not significantly explain the variance in employees' self-rated performance.*

55) HO: *Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' self-rated performance.*

56) HO: *Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' work skill, as rated by themselves.*

57) HO: *Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employee work enthusiasm, as rated by themselves.*

58) HO: *Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employee job performance, as rated by themselves.*

60) HO: *Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' work duties, as rated by themselves.*

61) HO: *Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' readiness to innovate, as rated by themselves.*

(13) Organisational Commitment and Immediate Supervisor Performance Rating

62) HO: *Organisational commitment in Jordanian industrial firms will not significantly explain the variance in employees' performance, as rated by their immediate supervisors.*

63) HO: *Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' performance, as rated by their supervisors.*

64) HO: *Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' readiness to innovate, as rated by their supervisors.*

65) HO: *Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' work duties, as rated by their supervisors.*

66) HO: *Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' job performance, as rated by their supervisors.*

67) HO: *Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' work enthusiasm, as rated by their supervisors.*

68) HO: *The organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' work skills, as rated by their supervisors.*

(14) Self Performance Rating and Immediate Supervisor Performance Rating

69) HO: *There will be no significant difference between the employee and the immediate supervisor in rating employee performance in Jordanian industrial firms.*

5.10 STATISTICAL ANALYSIS

The data of this study are analysed using the Statistical Package for Social Sciences (SPSS-X) and Microfit programs. The following statistical measures are used:

5.10.1 DESCRIPTIVE STATISTICS

Four kinds of descriptive statistics were used to analyse the collected data:

- 1) Frequency distribution (FD) is used to obtain the frequency of all demographic data, as well as the subjects' responses to the study instrument questions.
- 2) The histogram with normal curve is obtained to test the distribution of the study data, i.e. normal or non-normal distribution. According to Kinnear and Gary (1997, p. 116) "The histogram of a sample of scores may suggest that it has been drawn from a normal population (or one which is nearly so)".
- 3) Scatterplot (scattergrams) is also used to test the relationships between study variables. The dependent variable takes the vertical axis and the independent variable the horizontal axis.
- 4) Measures of central tendencies and dispersion (mean, median, mode and standard deviation) are used to examine the psychometric properties of the study measures, test the respondents' answers and to test the distribution of the collected data.

5.10.2 INFERENCE STATISTICS

Eleven measures of inferential statistics are used to test study variables:

- 1) Factor analysis is one of the data reduction tests. The six main conditions of using this test were checked before applying it. These conditions are:
 - i) The data is normally distributed.
 - ii) The study sample is not small.
 - iii) Handling the blank responses.
 - iv) Checking for the determinant of the correlation matrix. If the determinant value is "larger than 0.0001, the matrix can be assumed not to suffer from multicollinearity or singularity" (Kinnear and Gray, 1997, p. 316).
 - v) Checking for Kaiser-Meyer-Olkin (KMO) value. This test examines the adequacy of sampling for using factor analysis. If the KMO value is greater than 0.5, the factor analysis can be used.
 - vi) Checking for the significance of 'Bartlett test of Sphericity' value. To use factor analysis, the Bartlett test should be .05 or less. If it is not significant "... then there is a danger that the correlation matrix is an identity matrix (i.e. the diagonal elements are 1

and the off-diagonal elements are 0) and therefore unsuitable for [factor analysis]" (Kinnear and Gray, 1997, p. 317).

The factor analysis test is used to achieve four goals:

a- Since the four major variables (PWE, OC, SPR and ISPR) of this study are multidimensional concepts, there was a need to examine the dimensionality of each variable, and to define the number of dimensions that constitute each global variable. According to Norusis (1985, p. 123), factor analysis can be used "to determine the number of dimensions required to represent a set of variables".

b- To refine or filter the items of each scale and sub-scale in order to retain the significant items and delete the non-significant items. For example, two items from the original affective commitment scale of Meyer and Allen (1991) were deleted, because they did not satisfactorily (.50+) load with the other six items.

c- As the major data reduction method, factor analysis is also used to reduce the number of study variables, especially the dimensions of each global scale. For example, the dimensions of SPR and ISPR scales were reduced from six facets to five facets, because the items of the 'quality of work' and 'quantity of work' dimensions were loaded on one factor rather than two different factors in both scales.

d- Together with the reliability test, factor analysis is used to examine the internal consistency of the study instrument.

2) The reliability test is used to examine the internal consistency of the study instrument, the global variables' scales, and the scales of dimensions. The major goal behind using this test is to examine the validity and reliability of study scales in measuring the study variables. In other words, to what extent do the adopted scales measure the variables under scrutiny in this study? The model used for reliability test is Cronbach's alpha. The closer the alpha's value to 1.0, the higher the scale reliability, and the better the scale chances to measure the variable. Compared with other models, such as split-half, Cronbach's alpha is widely used in the management literature, because it examines all items in a given scale jointly, rather than dividing them into two halves (split-half model). According to Kervin (1992, p. 508) Cronbach's alpha is:

An alternative [method], better than the split-half method, examines the relationships among all items simultaneously, rather than just relying on a single arbitrary division of the scale into two halves. Cronbach's alpha is the most frequently used [reliability] measure (Kervin's emphasis).

3) The Kolmogorov-Smirnov (K-S) test is also used to examine the normality of the collected data. Before testing the study hypotheses, the distribution of the collected data

may be tested in order to define the most suitable statistical method (parametric or non-parametric), and the suitable measures (e.g. t-test and regression). The K-S test "... can be used to test the assumption of normality of distribution" (Kinnear and Gray, 1997, p. 116).

4) The analysis of Variance (ANOVA) is commonly used "to decide if the means of two or more populations are equal" (Stevenson, 1978, p. 265). ANOVA is also used to examine how much of the variance in the dependent variable will be explained when several independent variables influence it (Sekaran, 1992). Since the study data is normally distributed, and the aim is to test the significant mean differences between more than two groups, ANOVA is used to test the first 28 hypotheses mentioned above. According to Sekaran (1992, p. 268) "Analysis of Variance (ANOVA) will help to examine if there are significant mean differences among more than two groups". Although they are just two groups, gender and marital status hypotheses are tested using ANOVA, because the sets of dependent variables of the four major variables (PWE, OC, SPR and ISPR) are more than two in all gender and marital status hypotheses. For example, employees' gender (independent) against PWE and its 13 dimensions (dependent variables).

5- Means Test (MT) is used to support the findings obtained from the ANOVA test. One of the most important reasons behind using MT is to summarise the relationship between two variables when one is measured on an interval scale and the other on nominal scale (Norusis, 1991). Provided that the four major variables in this study are measured on the interval scale and the demographic variables are measured on the nominal scale, the MT is used to examine hypothesis numbers 1 to 28 mentioned above.

6- Correlation test is used to examine the strength, direction, and significance of the relationships between the study variables. Since the distribution of the study data is normal, the Pearson correlation coefficient is used to explore the strength of the relationships (r), the direction of the relationships (+/-), and the significance of the relationships ($< .05$ or $> .05$). Normally, the closer the correlation coefficient to +1.0 or -1.0, the stronger the relationship between the two variables. Two methods of correlation tests are used to examine study hypotheses. The bivariate correlation test is used with some other measures to examine some of the above mentioned hypotheses (29 to 68). The partial correlation with some other measures is also used to test hypotheses 48 to 54.

7- The Multiple Regression Analysis (MRA) is used to examine the relationship between a set of independent variables and one dependent variable. The MRA "is

probably the most frequently used statistical procedure in business research. It examines the effects of quantitative or category independent variables on a quantitative dependent” (Kervin, 1992, p. 580). Whereas the correlation test defines the strength, direction and significance of relationship between two variables, it provides no idea of how much of the variance in the dependent variable will be explained when several independent variables influence it (Sekaran, 1992; Stevenson, 1978; Norusis, 1991). The MRA is used to test some of the above hypotheses, namely hypotheses 30 to 34, 36 to 41, 43 to 47, 55 to 61, and 63 to 68. One of the major goals behind using MRA is “to identify the subset of independent variables that are most useful for predicting the dependent variable” (Norusis, 1985, p. 9). Since the current study includes 21 independent variables, three mediating variables and five dependent variables (figure 5-1), the MRA was found to be the most suitable analysis to examine the above mentioned hypotheses. Two methods of MRA are used. First, the enter method is most well known method of MRA. By using this method, the computer will enter a group of variables all at once. For example, the 13 dimensions of PWE are all regressed against the global variable of OC. This method helps to understand how much of the variance in a dependent variable, OC in the above example, is explained by a group of dependent variables (PWE dimensions). However, from the results of the enter method it is difficult to decide which independent variable (s) has explained more variance in the dependent variable. To solve this problem, the stepwise method is used as a second approach. By using the stepwise method, the independent variables are entered and removed one at a time. This process “... continues until the F statistics do not indicate that any variables in the equation should be removed, nor that any variables that are not in the equation need to be entered” (Norusis, 1991, p. 385).

Since organisations' resources are limited, especially in Third World countries, they are more interested in the recommendations that provide them with the most important factor (s) to manage, rather than providing an arbitrary list of factors. For example, most Jordanian organisations are not able to manage the 13 dimensions of the PWE, because of limited resources. However, they can select according to their resources if they are provided with an orderly list of the important PWE factors that affect employees' OC and performance. The MRA with the stepwise method is one of the most practical statistical procedures that helps to achieve this goal. According to Sekaran (1992, p. 271):

Multiple regression analysis helps us to understand how much of the variance in the independent variable is explained by a set of predictors. If we want to know which, among the set of predictors, is the most

important in explaining the variance, which is next most important, and so on, a stepwise multiple regression analysis can be done (Researcher's emphasis added).

To define the most important independent variables that influence dependent variables, the ordered standardised Beta weight (s) (obtained from stepwise), and the bivariate correlation tests are used. The regressor with the highest Beta weight tends to have the highest correlation with the dependent variable, and so on (Kinnear and Gary, 1997). The two major assumptions of MRA, checking for normality and multicollinearity, were taken into consideration before using it to examine the above mentioned hypotheses.

8- The Simple Regression Analysis (SRA) is also used to examine hypotheses numbers 29,35, 42, 54 and 62. Since "*correlation and regression analysis* involve analysing sample data to learn if and *how two or more variables relate to each other in a population*" (Stevenson, 1978, p. 355, Stevenson's emphasis). These two measure are used to test the above hypotheses. Although the SRA results can tell how much of the variance in the dependent variable has been explained by the independent variable, they provide no information about the direction of the relationship. Therefore, the correlation test is used to support the findings from the SRA, together with some graphs.

9- Significant Mean Differences Between Two Groups (T-Test) is used when there is interest in knowing whether two groups are different from each other on a particular variable of interest (Anderson, Sweeney and Williams, 1987; Neter *et al.*, 1979; Sekaran, 1992). Since one of the aims of this study is to examine the difference in employee's performance, as rated by him/herself (employees' group) and by his/her immediate supervisor (managers' group), the t-test is used to examine hypothesis number 69 mentioned above. Moreover, a better test of the hypothesis that the population variances are equal is the Levene test (Norusis, 1991). Within the t-test analysis, the Levene test is also used to examine the difference between employees' group and supervisors' group in rating employees' performance. A graph test is also used to examine this relationship. This test indicates whether or not there is a significant mean difference in a dependent variable between two groups.

10- The Curve Estimation (CE) is one of the regression analysis methods. It examines the relationship between the independent and dependent variables, and presents this relationship in the form of a graph. The CE is sometimes used to support the findings obtained from the above mentioned tests.

11- Baron and Kenny's (1986) three step process is a model that tests the mediation role of mediating variables. Mediating variables have been a debatable issue in management

and other social sciences literature for a long time. The main issue in these debates was how to test the mediation role of a given variable? In 1986 Baron and Kenny developed a model for testing this mediation role. The process of this model is explained in chapter six. Since then the three steps model, which was found to be highly reliable, is widely used in the management literature (e.g., Yperen, Berg, and Willering, 1999 and Tompson and Werner, 1997), this model has been used in this study to examine hypotheses number 48 to 53, together with partial correlation, which is also a common test of mediating variables.

5.11 DATA COLLECTION METHODS

Two kinds of data collection methods are used in this study, namely: primary and secondary sources. These two sources are discussed below.

5.11.1 PRIMARY SOURCE

The primary data of this study were collected using a self-administered questionnaire. The questionnaire contained five parts. The first part, that included seven questions, was used to collect some information about the respondent's demographic backgrounds, namely: gender, age, marital status, education, organisational tenure, job tenure and job level. Using Likert's 5-point scale, the second section comprised 58 statements, measuring the global perceived work environment variable as well as its 13 factors. The third part examined employee's overall organisational commitment and its two components, i.e. affective and continuance commitment. Using the self-rating and immediate-supervisor rating systems, the last part was used to collect some information about respondent's performance. The same questions (those measuring the five performance's dimensions) were answered by the respondent and his/her immediate supervisor.

Considering the aims of this study, as well the high reliability of its scales provided by the pilot studies results, the questionnaire was found to be the best method of collecting primary data. According to Sekaran (1992, p. 200) "a questionnaire is an efficient data-collection mechanism when the researcher knows exactly what is required and how to measure the variables of interest". Following the discussion of the aims of the study with the co-opted industrial companies (mostly the research and development managers), the personally administered questionnaire was found to be the most efficient way of collecting data compared with other methods, e.g. mailing questionnaires. The companies, which were scattered in two different cities (Amman and Zarqa), agreed to allow the randomly selected employees to respond to the questionnaire at the workplace.

Moreover, the researcher was given the opportunity to introduce the topic and the aims of the study to the subjects, in order to motivate them to give honest answers.

5.11.2 SECONDARY SOURCES

The secondary data were collected from United Kingdom, United States and Jordan. Two languages were used in collecting data, namely the English and Arabic languages. Seven major sources of data were used:

- 1- Books and periodicals.
- 2- Data bases, such as BIDS, UMI and IDEAL.
- 3- The world wide web (www), or the internet.
- 4- Conferences.
- 5- Training courses.
- 6- Newspapers.
- 7- Governmental reports (monthly and annual).

5.12 THE PILOT STUDIES

In a field visit to Jordanian industrial firms, two pilot studies were conducted. The purpose of the pilot studies was to test the study instruments; more specifically the questionnaire phrases, clarity, length, layout, and items' relevance to the investigation of the study.

The study questionnaire was translated into Arabic, with great attention to the meanings and ideas embodied in the items. The Arabic translation of the questionnaire was then translated back into English by an expert colleague in the Arabic and English languages. After comparing the latter English version of the questionnaire with the original, the researcher was satisfied with the accuracy and quality of the translated version.

5.12.1 THE FIRST PILOT STUDY

The first pilot study was conducted with the co-operation of fifteen randomly selected employees working for a Jordanian industrial company. The employees answered the study questionnaire in the presence of the researcher, and whenever they asked for any help to understand a word, answering system, or a question, the researcher clarified it.

After listening to the respondents' comments and suggestions, the results from the first pilot study revealed the following:

- a- The need for simplifying the notions and phrases of some of the questionnaire items, especially in part two, i.e. PWE.

b- The 3-point scale (Yes, ? and No) used in parts two and part three was confusing to 13 respondents. Their view was that the answering options were too limited.

c- There was no complaint regarding the demographic variables scales.

d- The questions measuring respondents' work environment, organisational commitment and performance at this stage revealed no major inconsistencies. The minor inconsistencies revealed traced back to reasons mentioned in "a" above, not to the substance of the items.

Having the results of the first pilot study, and with the help of a professional translator and organisational behaviour professor, the questionnaire was simplified and clarified. In addition, to overcome the problem of narrowness connected with the 3-point scale, the 5-point and 7-point scale were offered as two options to the participants. It was felt that extending the answering options in parts two and three of the study questionnaire to Likert 5-point scale would remove this problem. The minor inconsistency attributed to the translation process was subsequently avoided by a careful choice of the appropriate Arabic words, and by simplifying notions and phrases.

5.12.2 THE SECOND PILOT STUDY

At this stage, 100 employees working for three different industrial companies were randomly selected, none of whom participated in the first pilot study. They were asked to fill in the modified version of the study questionnaire, distributed among them without any interference from the researcher. Also they were asked to write down any comments or suggestions regarding the questionnaire's clarity, answering options, layout and length. The results of the second pilot study can be summarised into the following three points:

a- There were no complaints regarding the length of the questionnaire from the respondents.

b- Regarding the questionnaire clarity and layout, no complaints were passed to the researcher either verbally or in writing.

c- There were no complaints regarding the 5-point scale.

5.12.3 THE FINAL OUTCOME

Having the results of the 95 respondents (95% of the total number of questionnaires) returned to the researcher, the questionnaire in its revised form was thought to be consistent with the goals of the study. In its modified version, following the second pilot

study, the questionnaire comprised 115 questions. The collected data from the second pilot studies were analysed using the SPSS computer program to test the appropriateness of these scales to measure the study variables. The results of this test can be summarised in three points.

1- The factor analysis results was used to examine the dimensionality of the study variables. Since the pilot sample was small, the minimum factor loading of 0.30 suggested by Nunnally (1978) is used to examine the dimensionality of study variables. Fifty seven items of PWE were loaded representing thirteen dimensions. Two dimensions of OC out of three were loaded on two factors. Seven items of Affective Commitment (AC) loaded on factor one, and six items of Continuance Commitment (CC) loaded on factor two. Nevertheless, Normative Commitment (NC) which is known as the third commitment factor in the management literature, did not load as a third factor. However, two of its items loaded on factor one, together with the AC seven items, and this could explain the overlap found in the literature between these two constructs (Meyer, 1997; Suliman and Iles, 1999a). Thus, the AC scale was recomputed to involve 9 items, and CC to include 6 items. Eighteen items of SPR and ISPR, representing six dimensions for each variable, were loaded.

2- The reliability test results revealed that the scales of PWE ($\alpha = 0.89$), AC ($\alpha = 0.84$), CC ($\alpha = 0.67$), SPR ($\alpha = 0.94$), and ISPR ($\alpha = 0.84$) are reliable. However, the scale of NC was found to be weak ($\alpha = 0.47$). Considering the factor analysis results, and the reliability test findings, the NC scale was deleted, and only two commitment dimensions were resolved to be included in the main study (AC and CC). According to Meyer (1997, p. 183):

Studies have also revealed stronger than expected correlations between the ACS and NCS, suggesting that feelings of affective attachment and sense of obligation to an organisation are not independent of one another. The two scales also tend to show similar patterns of correlation with antecedents and outcomes measures. A recent modification of the NCS did not correct these problems (see Meyer, Allen and Smith, 1993).

5.13 THE STUDY QUESTIONNAIRE

Questionnaires were distributed to 1000 employees in 20 industrial firms in Jordan. The surveyed employees were randomly selected from three managerial levels, i.e. top, middle and bottom.

1. The total number of usable questionnaires returned was 874, i.e. 87.4% of the total number of questionnaires (1000).

2. After processing the returned questionnaires, the researcher resolved to proceed with only 783 questionnaires to the analysis stage.
3. The total number of discarded questionnaires after the filtering process was 91 (9.1%). Twenty one questionnaires were completely empty; 41 questionnaires missed more than 25% of the questions (i.e. more than 25% of the instrument questions were unanswered); 18 questionnaires contained critical omissions; 11 questionnaires were arbitrarily completed, such as ticking more than one box for a single question in the Likert's 5-point scale. Lastly, 13 blank responses were found in 9 questionnaires. Because the number of missing values was small (two blank response in each four questionnaires, and only one in each five questionnaires), these 9 questionnaires were included in the data analysis.
4. The total number of un-returned questionnaires was 126, representing 12.6% of the total number of questionnaires issued. Considering this number of non-returned questionnaires, the response rate of study subjects (87.4%) can be said to be very high.
5. The last part of the questionnaire was intended to be answered by the employees' immediate supervisors.

5.14 HANDLING BLANK RESPONSES

As mentioned above, some of the study subjects left some questions unanswered. They were perhaps unable to understand the question, and did not want to ask the researcher about it; were not willing to answer; or simply had forgotten to answer them. Fortunately, the number of these respondents and blank answers was few, 9 employees and 13 answers. These 13 blank responses were scattered among the last three parts of the 13 questionnaires.

According to Kervin (1992, p. 508) "missing data can be a serious problem in multivariate analysis". To avoid data analysis problems that may occur because of having blank responses among the defined data (Norusis, 1991), the mid-point in the scale was assigned for each blank response. This method of handling blank responses is commonly used in social studies, especially when the scale is interval, as is in the current study. According to Sekaran (1992, p. 277) "... a common way of dealing with this problem [blank responses] is to give the mid-point in the scale as the value". Thus, provided that the number of blank responses was small and the scale used was a Likert 5-point scale that provides a chance for neutrality (neither agree nor disagree), the value of '3' was given for each blank response.

5.15 THE INTERNAL CONSISTENCY OF THE STUDY INSTRUMENT

The internal consistency of a given measure is indicative of the items' homogeneity (Sekaran, 1992). In this study, the inter-item consistency reliability (ICR) is used to measure the internal consistency of the study questionnaire. The most popular and well-known test of ICR is Cronbach's Coefficient Alpha (Cronbach's Alpha Cronbach, 1946).

5.15.1 TEST-RETEST RELIABILITY

Table 5-4: Results of the reliability test for the study instrument items.

Variable	Total number of items	Total number of cases	Cronbah's alpha	Cronbah's alpha 1998 (pilot study)
Study data	98	783	0.97	0.92

The reliability test was conducted for all retained items (98 items) from the factor analysis test (chapter 6), i.e. PWE (53 items), OC (15 items), SPR (15 items) and ISPR (15 items). The reliability of a scale "... indicates the stability and consistency with which the instrument is measuring the concept and help to assess the 'goodness' of a measure" (Sekaran, 1992, p. 173).

After re-coding all negatively worded items in the questionnaire and reversing them, the reliability test using Cronbach's alpha was conducted. The test included 98 items and 783 cases. Table (5-4) presents the final results of this test. As can be seen from this table, Cronbach's alpha for the 783 cases and 98 items is 0.97. Reliabilities over 0.6 are generally considered to be acceptable. Thus, the ICR of the measures used in this study can be considered to be very acceptable. Moreover, Table (5-4) also shows that the Cronbach's alpha reported in the pilot study in 1997 was 0.92. When these two alpha values are compared together, no large deviation is found. Thus, it can be suggested that the study instruments' reliability is stable over time.

5.16 THE PSYCHOMETRIC PROPERTIES OF STUDY MEASURES

To obtain a clearer picture of the scales used in this study, each scale (global variables) and sub-scale (dimensions) were examined using the descriptive statistics and the reliability test. In other words, the extent to which each scale is able to measure the variable or the dimension was explored. The collected data was analysed using the SPSS-X computer program to test the appropriateness of these scales in measuring the study variables.

5.16.1 PERCEIVED WORK ENVIRONMENT (PWE)

Using Cronbach's alpha, the scale of PWE as measuring a global concept (53 items) was found to be reliable. Its alpha value of 0.96 indicates that the instrument is measuring the construct reliably. Nonetheless, the psychometric properties of PWE dimensions generated from the factor analysis test were separately tested.

5.16.1.1 EMPLOYEE-IMMEDIATE SUPERVISOR RELATIONSHIP (EISR)

Table 5-5: Results of the reliability test for EISR.

NO	Item	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
1	PWE45	3.3	1.3	1	5	.9083
2	PWE46	3.1	1.3	1	5	.9053
3	PWE47	3.2	1.3	1	5	.9082
4	PWE48	3.1	1.2	1	5	.9062
5	PWE49	3.4	1.2	1	5	.9103
6	PWE50	3.5	1.2	1	5	.9067
7	PWE51	3.4	1.2	1	5	.9047
8	PWE52	3.3	1.2	1	5	.9063

After analysing the 8 items of this dimension, Cronbach's alpha was found to be 0.92. Table (5-5) presents the results of a reliability test. Mean values were between 3.1 and 3.5, and standard deviation values fell between 1.2 and 1.3 for the 8 items. Moreover, the alpha values in Table (5-5) indicate that the overall alpha value (.92) cannot be maximised by the deletion of any single item. In other words, all alpha values (alpha if item deleted column) that appear in Table (5-5) are less than the overall alpha (0.92). In addition, the minimum and maximum columns in Table (5-5) indicate that the respondents' answers for the 8 items ranged from 1 (strongly disagree) to 5 (strongly agree). Thus, it can be suggested that there is homogeneity between the EISR elements. In other words, the psychometric properties of this PWE dimension suggest that it is highly reliable.

5.16.1.2 DISTRIBUTIVE JUSTICE (DJ)

Table 5-6: Results of the reliability test for DJ.

NO	Item	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
1	PWE37	2.9	1.2	1	5	.8526
2	PWE38	2.7	1.2	1	5	.8204
3	PWE39	2.7	1.2	1	5	.8066
4	PWE40	2.8	1.2	1	5	.8673

The Cronbach's alpha for DJ was found to be 0.87, and this value of alpha denotes that the DJ scale is highly reliable. The psychometric properties of this scale are presented in Table (5-6). These properties show that there is high internal consistency among the four components of this scale, and this supports the reliability of DJ measurement.

5.16.1.3 PSYCHOLOGICAL CONTRACT (PC)

Table 5-7: Results of the reliability test for PC.

NO	Item	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
1	PWE29	3.3	1.2	1	5	.8521
2	PWE30	3.3	1.2	1	5	.8489
3	PWE31	3.4	1.2	1	5	.8492
4	PWE32	3.4	1.1	1	5	.8551
5	PWE33	3.3	1.2	1	5	.8662
6	PWE34	3.4	1.2	1	5	.8711

The results of the reliability test revealed that the scale of this PWE dimension is reliable. The alpha value was found to be 0.88. Table (5-7) presents the mean, standard deviation (SD), minimum and maximum responses and the change in alpha value if a certain item is deleted for the six elements of this dimension. The mean and SD values show that these items are homogeneous. Moreover, all alpha values in Table (5-7) are less than the PC general alpha value (0.88), and this indicates that there is no disharmony among the PC elements.

5.16.1.4 INNOVATION CLIMATE (IC)

Table 5-8: Results of the reliability test for IC.

NO	Item	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
1	PWE53	3.2	1.2	1	5	.8967
2	PWE54	3.2	1.2	1	5	.8857
3	PWE55	3.2	1.2	1	5	.8948
4	PWE56	3.0	1.2	1	5	.8911
5	PWE57	3.1	1.2	1	5	.8874

The Cronbach's alpha for this PWE component was found to be 0.91. The psychometric properties of IC scale are presented in Table (5-8). The mean, SD, minimum, maximum and alpha in Table (5-8) denote that there is a harmony between the five items of IC. Moreover, the last column in Table (5-8) implies that the IC

overall alpha value (0.91) cannot be maximised by the deletion of any single item. Hence, it can be proposed that the scale of this PWE dimension is highly reliable.

5.16.1.5 CO-WORKERS RELATIONS (CR)

Using the reliability test, the scale of CR (composed of 4 items) was found to be reliable. The Cronbach's alpha value for this PWE dimension is 0.80. Table (5-9) presents the summary of reliability test results for this construct.

Table 5-9: Results of the reliability test for CR.

NO	Item	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
1	PWE3	3.6	1.1	1	5	.7350
2	PWE4	3.3	1.1	1	5	.7320
3	PWE7	3.2	1.2	1	5	.7815
4	PWE8	3.4	1.1	1	5	.7432

5.16.1.6 SUPERVISORY STYLE (SS)

Table 5-10: Results of the reliability test for SS.

NO	Item	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
1	PWE15	3.6	1.2	1	5	.7602
2	PWE16	3.7	1.2	1	5	.7655
3	PWE19	3.5	1.2	1	5	.7519
4	PWE20	3.2	1.1	1	5	.8008

Four items comprised the scale of SS. The reliability test results that appear in Table (5-10) indicate that there is high inter-item consistency among these four elements. The Cronbach's alpha value for this dimension is 0.82. As can be seen from the table, this overall alpha value cannot be maximised by the deletion of any single item of this scale.

5.16.1.7 PERFORMANCE-REWARD RELATIONSHIPS (PRR)

Table 5-11: Results of the reliability test for PRR.

NO	Item	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
1	PWE23	3.0	1.2	1	5	.8241
2	PWE24	3.0	1.3	1	5	.7817
3	PWE25	2.9	1.2	1	5	.7944
4	PWE26	3.0	1.3	1	5	.8063

The results of the reliability test revealed that the Cronbach's alpha (0.84) for PRR is well above the lower acceptable limit, i.e. $0.84 > .60$. In addition, the summary of the reliability test results presented in Table (5-11) suggests that the psychometric properties

of PRR scale are highly reliable.

5.16.1.8 DECISION MAKING POLICY (DMP)

The psychometric properties of the DMP are presented in Table (5-12). Provided that there is no serious deviation among the four items comprising this concept, and that the overall alpha value 0.79 is bigger than the four alpha values appearing in Table (5-12), it can be suggested that the DMP scale is reliable.

Table 5-12: Results of the reliability test for DMP.

NO	Item	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
1	PWE17	3.1	1.2	1	5	.7310
2	PWE18	3.2	1.2	1	5	.7225
3	PWE21	3.2	1.1	1	5	.7621
4	PWE22	3.1	1.2	1	5	.7536

5.16.1.9 EMPLOYEE COMPETENCE (EC)

Table 5-13: Results of the reliability test for EC.

NO	Item	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
1	PWE11	3.9	1.0	1	5	-
2	PWE12	4.0	1.0	1	5	-

The Cronbach's alpha for EC was found to be 0.81. As shown in Table (5-13), the two items of this dimension have similar mean and SD values. Moreover, the column of 'alpha if item deleted' in Table (5-13) is blank, because alpha can not be calculated for a single item.

5.16.1.10 TASK CHARACTERISTICS (TC)

Table 5-14: Results of the reliability test for TC.

NO	Item	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
1	PWE1	3.9	1.0	1	5	.7954
2	PWE2	3.6	1.1	1	5	.7484
3	PWE5	3.6	1.2	1	5	.7024
4	PWE6	3.3	1.2	1	5	.7296

After including the four items of the TC variable in the reliability test, the results showed that this scale is reliable (alpha = 0.80). The psychometric properties of this scale are presented in Table (5-14). As can be seen from this table, the four items of this variable's scale have similar values of mean and SD, and this suggests that there is consistency between them. The results also show that the subjects' responses for these

four items ranged between ‘strongly agree = 5’ to ‘strongly disagree = 1’. The results presented in the last column of Table (5-14) indicate that there is a great cohesion between the four elements comprising TC’s scale, because its overall alpha value (0.80) remained higher than the other four alpha values.

5.16.1.11 FAIRNESS

Table 5-15: Results of the reliability test for Fairness.

NO	Item	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
1	PWE41	2.3	1.26	1	5	.8170
2	PWE42	2.9	1.21	1	5	.8134
3	PWE43	3.1	1.19	1	5	.8038
4	PWE44	3.1	1.21	1	5	.8327

The Cronbach’s alpha of 0.86 for the fairness dimension of PW is acceptable. Table (5-15) shows the results of the reliability test used to test the psychometric properties of the fairness scale. Given these results, together with the overall alpha value of 0.86, it can be proposed that the fairness scale is highly reliable.

5.16.1.12 EMPLOYEE WORK MOTIVATION (EWM).

Table 5-16: Results of the reliability test for EWM.

NO	Item	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
1	PWE9	4.0	1.0	1	5	-
2	PWE10	4.0	1.0	1	5	-

The measure of this variable contains only two items. The alpha value for these two items was found to be 0.90. Given this alpha value, together with the psychometric properties of the EWM scale presented in Table (5-16), it can be concluded that this concept’s measure is reliable.

5.16.1.13 PRESSURE TO PRODUCE (PP)

Table 5-17: Results of the reliability test for PP.

NO	Item	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
1	PWE27	2.9	1.2	1	5	-
2	PWE28	2.9	1.3	1	5	-

The ‘pressure to produce’ concept was also composed of two elements. The answers for these two questions ranged from strongly disagree (1) to strongly agree (5) (table 5-

17). In addition, the mean and SD values in Table (5-17) indicate that these two items are satisfactorily measuring PP. The alpha value (0.76) for PP scale indicates that it is reliable.

5.16.2 ORGANISATIONAL COMMITMENT (OC)

The reliability test results revealed that this global concept is highly reliable. Its alpha value was found to be 0.82. However, more details about the psychometric properties of this scale can be obtained by looking at its items and dimensions mean, SD and values of alpha if an item deleted from the scale.

5.16.2.1 AFFECTIVE COMMITMENT (AC)

Table 5-18: Means, standard deviations and reliabilities of the affective commitment.

Variable	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
AC1	3.3	1.2	1	5	.9036
AC2	3.4	1.2	1	5	.8977
AC3	3.5	1.2	1	5	.9002
AC4	3.4	1.3	1	5	.8991
AC5	3.4	1.2	1	5	.8983
AC6	3.5	1.2	1	5	.8987
AC7	3.5	1.3	1	5	.9005
AC8	3.4	1.2	1	5	.9034
AC9	3.4	1.2	1	5	.9106

To assess the psychometric properties of the AC scale, Cronbach's alpha, together with the descriptive statistics, was used. The parsimonious 9 item instrument which was adapted from Porter *et al.*'s (1974) commitment scale (OCQ) was found to be reliable ($\alpha = 0.92$). Table (5-18) presents the means, SDs, and alpha's values if any item is deleted from the AC scale.

5.16.2.2 CONTINUANCE COMMITMENT (CC)

Table 5-19: Means, standard deviations and reliabilities of continuance commitment.

Variable	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
CC1	3.6	1.1	1	5	.8103
CC2	3.6	1.2	1	5	.7727
CC3	3.6	1.1	1	5	.7807
CC4	3.3	1.2	1	5	.7740
CC5	3.4	1.2	1	5	.7682
CC6	3.4	1.2	1	5	.7619

Although it was found to be less reliable than the AC scale, the alpha's value ($\alpha = 0.81$) of the CC instrument is still within the acceptance level. Table (5-19) presents the findings of the reliability test. Compared with the AC scale, the mean and SD values of the CC scale are less homogeneous. Although AC means and SD ranged from 3.3 to 3.5, and from 1.2 to 1.3 respectively, CC elements' mean and SD ranged from 3.3 to 3.6, and 1.1 to 1.2 respectively. From these differences in mean and SD values, it can be suggested that there was less agreement among co-opted employees on the CC elements, and high agreement on the AC elements. Therefore, these results are reflected in the values of alpha for both scales. The AC scale reported high alpha (0.92), because there is a high consistency between its items, compared with the consistency of the CC scale's ($\alpha = 0.81$) items.

5.16.3 SELF PERFORMANCE RATING (SPR)

The scale of this concept was found to be reliable. The alpha value of 0.86 indicates that the instrument is measuring the concept satisfactorily. Tables (5-20) to (5-24) provide full information about the psychometric properties of this variable's dimensions scales.

5.16.3.1 WORK SKILLS (WS)

Table 5-20: Results of the reliability test for WS.

Variable	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
SPR4	4.1	0.8	1	5	.7855
SPR5	4.1	0.8	1	5	.6716
SPR6	4.1	0.8	1	5	.7378

The reliability test results reveal that the alpha value for the WS concept amounted to 0.81. Considering this alpha value, as well as the psychometric properties of the WS measure presented in Table (5-20), it can be suggested that the scale of the WS is highly reliable. Table (5-20) presents the reliability test results.

5.16.3.2 WORK ENTHUSIASM (WE)

Table 5-21: Results of the reliability test for WE.

Variable	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
SPR7	4.2	0.8	1	5	.7257
SPR8	4.2	0.8	1	5	.6815
SPR9	4.2	0.8	1	5	.7623

The three items of WE were found to be homogeneous, with the Cronbach's alpha being 0.80. The psychometric properties of this scale are presented in Table (5-21).

5-17-3-3 JOB PERFORMANCE (JP)

Table 5-22: Results of the reliability test for JP.

Variable	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
SPR10	4.1	0.8	1	5	.6719
SPR11	4.1	0.8	1	5	.5613
SPR12	4.2	0.8	1	5	.5196

Although it is somewhat low, the JP alpha value (0.77) is still within the acceptance level. The psychometric properties of this scale are presented in Table (5-22).

5.16.3.4 WORK DUTIES (WD)

Table 5-23: Results of the reliability test for WD.

Variable	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
SPR1	4.0	0.9	1	5	.5913
SPR2	4.0	0.9	1	5	.4833
SPR3	4.1	0.8	1	5	.5601

The scale of WD scored an alpha value of 0.71 when tested for reliability. Hence, the WD scale can said to be reliable. Table (5-23) presents the results of the reliability test.

5.16.3.5 READINESS TO INNOVATE (RI)

Table 5-24: Results of the reliability test for Readiness to Innovate (RI).

Variable	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
SPR16	3.9	0.9	1	5	.6238
SPR17	3.9	0.9	1	5	.5062
SPR18	3.7	1.0	1	5	.6101

The measurement of the RI concept was tested using a reliability test. The scale of this concept was found to be reliable (alpha = 0.68). The results of the reliability test are presented in Table (5-24).

5-16-4 IMMEDIATE SUPERVISOR PERFORMANCE RATING (ISPR)

The reliability test results for this global concept revealed that its scale is highly reliable. The Cronbach's alpha was found to be 0.94. This value indicates that the ISPR

scale is measuring the performance concept satisfactorily. There are five dimensions for this general variable. The psychometric properties for these five components of ISPR were separately tested. The results of these tests are presented in five tables from Table (5-25) to (5-29).

5.16.4.1 READINESS TO INNOVATE (RI)

Table 5-25: Results of the reliability test for Readiness to Innovate (RI).

Variable	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
ISPR15	3.2	1.2	1	5	.8605
ISPR16	3.0	1.2	1	5	.8218
ISPR 17	2.9	1.2	1	5	.8268
ISPR 18	2.8	1.2	1	5	.8422

As will be discussed in the next chapter, the RI factor of ISPR loaded as the first factor in the factor analysis test, and when tested for reliability it scored the highest alpha value (0.87) among the ISPR dimensions. Table (5-25) presents the results of the reliability test.

5.16.4.2 WORK DUTIES (WD)

Table 5-26: Results of the reliability test for Work Duties (WD).

Variable	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
ISPR 1	3.6	1.0	1	5	.8492
ISPR 2	3.4	1.0	1	5	.7357
ISPR 3	3.4	1.1	1	5	.8370

The WD concept scale was found to be reliable. Its Cronbach's alpha value amounted to 0.86. Table (5-26) presents the psychometric properties of this concept's scale.

5-17-4-3 JOB PERFORMANCE (JP)

Table 5-27: Results of the reliability test for Job Performance (JP).

Variable	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
ISPR 10	3.3	1.1	1	5	.7924
ISPR 11	3.3	1.1	1	5	.7605
ISPR 12	3.3	1.1	1	5	.8127

The Cronbach's alpha for JP was found to be 0.85. Thus, it can be suggested that the scale of the JP is highly reliable. The results of the reliability test conducted to examine the psychometric properties of JP scale are presented in Table (5-27).

5.16.4.4 WORK ENTHUSIASM (WE)

Table 5-28: Results of the reliability test for Work Enthusiasm (WE).

Variable	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
ISPR 7	3.5	1.1	1	5	.7998
ISPR 8	3.4	1.1	1	5	.7282
ISPR 9	3.4	1.2	1	5	.7899

The results of the reliability test revealed that the overall alpha value of the WE scale is 0.84. Considering this value of Cronbach's alpha, together with the rest of psychometric properties results presented in Table (5-28), it can be concluded that the measure of the WE is highly reliable.

5.16.4.5 WORK SKILLS (WS)

Table 5-29: Results of the reliability test for WS.

Variable	Mean	Std Dev	Minimum	Maximum	Alpha if item deleted
ISPR 5	3.4	1.1	1	5	-
ISPR 6	3.4	1.1	1	5	-

The WS dimension of ISPR has scored an alpha value of 0.76 in the reliability test. Based on this alpha value and the psychometric properties of the WS scale presented in Table (5-29), it can be suggested that the scale is reliable.

5.17 THE GOODNESS-OF-FIT OF STUDY DATA

After assessing the study variables through factor analysis and testing their reliabilities, the distribution of the data was examined before testing the study hypotheses. There are two major methods for testing data, namely, the parametric method and the non-parametric method. The parametric method assumes that the data have been derived from a normal distribution, or one which is nearly so. The t-test, for example, is one of the parametric tests widely used by researchers in the social sciences. On the other hand, the non-parametric method does not make any specific assumptions about the population distribution. However, in general "when there are serious violations of the assumptions of the t-test, non-parametric tests can be used instead" (Kinnear and Gray, 1997, p.138).

The following items and scales were retained from the factor analysis results, and were found to be reliable when tested against internal consistency reliability:

- (a) Fifty-three items measuring the global variable of perceived work environment (PWE), and its 13 dimensions.
- (b) Fifteen items measuring the general concept of organisational commitment (OC), and its two components.
- (c) Fifteen elements measuring the overall variable of self-performance rating (SPR), and its five factors.
- (d) Fifteen elements measuring the global variable of immediate-supervisor performance rating (ISPR), and its five dimensions.

Thus, the total number of questions that will be tested, excluding biographical variables, is 98.

5.17.1 THE NORMALITY TEST

Two kinds of normality test were used to examine the distribution of the study data.

5-18-1-1 MEASURES OF CENTRAL TENDENCY

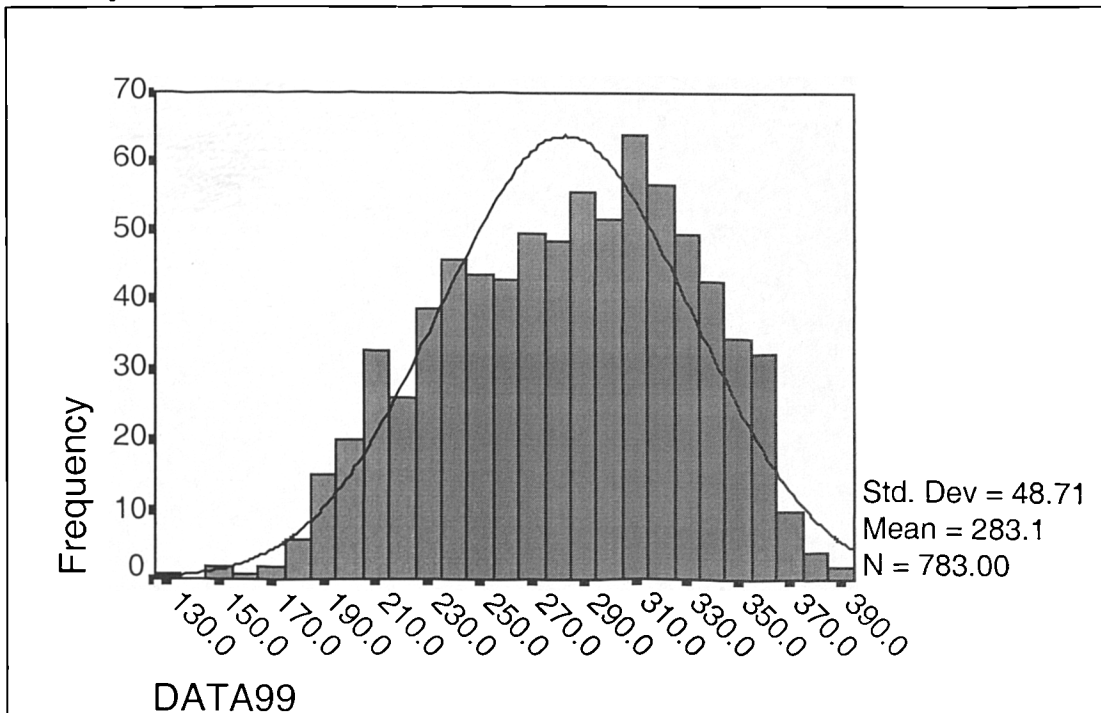
Table 5-30: Results of the descriptive statistic test for the study instrument.

Variable	Mean	Median	Mode
98 items	283	287	287

One of the most important properties of normal distribution is the identity of central tendency measures. Therefore the mean, median and the mode of the 98 items of the study instrument were tested. Using the SPSS-X descriptive statistic test, the results (table 5-30) show that the mean is 283, the median 287 and the mode 287.

From these results, it can be seen that the median and mode values are identical. However, the value of the mean (283.1) is slightly below this figure. Furthermore, to test the distribution of the data, a histogram with normal curve was also obtained (figure 5-3).

Figure 5-3: The histogram and superimposed normal curve of the distribution of study data.



From this histogram, it can be noticed that about 90% of the data are under the normality curve. When this histogram is compared with the standard normal distribution histogram, no major differences were found. Based on the measures of central tendency and the histogram findings, it can generally be concluded that the study data are normally distributed, or nearly so.

5.17.1.2 MEASURES OF CENTRAL TENDENCY FOR THE STUDY VARIABLES

Table 5-31: Results of the central tendency measures for study variables.

NO	Variable	Mean	Median	Mode
1	Perceived work environment (PWE)	173	175	193
2	Organisational commitment (OC)	052	052	050
3	Self performance rating (SPR)	061	061	060
4	Immediate Supervisor performance rating (ISPR)	049	051	052

Note: *decimals are adjusted.*

To obtain a clearer picture about the data's normality, the 98 items were broken down into four different variables. These variables, together with their relevant items, were mentioned at the beginning of this section. Table (5-31) presents the mean, median and mode values for the four variables. By examining the central tendency measures of PWE, it can be seen that the difference between the mean and median is very small, i.e. 173 and 175 respectively. Nonetheless, the gap between the value of these two measures on one hand and the mode value (193) on the other hand is quite clear. Thus, given these findings, it is unwise at this stage to conclude

that the PWE distribution is normal. Therefore, decisions about the normality of PWE will be postponed until the results of K-S test of normality are obtained.

With respect to the OC, Table (5-31) shows that the differences between the three measures of central tendency are small. Hence, it can be assumed that the data distribution of OC is normal. Moreover, the mean, median and mode values of SPR in Table (5-31) are very similar, and close to the standard normal distribution. Thus, it can be suggested that its data are normally distributed. In addition, the ISPR measures of central tendency are also homogeneous. Therefore, it can be concluded that its data distribution is in line with normal distribution standards.

To summarise, the measures of central tendency have shown that, in general, the distribution of the study data is normal. However, the PWE central tendency measures were not homogeneous. Therefore, it was difficult to judge whether its distribution is nearly normal. The decision is delayed until the significance of k-S Z is tested. This measure is the second kind of normality test mentioned earlier.

5.17.1.3 ONE-SAMPLE K-S TEST

Table 5-32: Results of the sample K-S (normality) test for the study data and variables.

NO	Variable	K-S Z	2-Tailed P
1	Data 99 (98 items)	1.51	.02
2	Perceived Work Environment (53 items)	1.39	.04
3	Organisational Commitment (15 items)	1.57	.01
4	Self-rating of Performance (15 items)	1.81	.00
5	Supervisor-rating Performance (15 items)	1.93	.00

To support the findings obtained from the central tendency measures, and to further examine the distribution of the PWE, the Kolmogorov-Smirnov goodness-of-fit test is used. According to Kinnear and Gray (1997, p.116) “the Kolmogorov-Smirnov test can be used to test the assumption of normality of distribution. This test compares the centiles of the observed data with the corresponding centiles of normal distribution”. The results of this test are summarised in Table (5-32).

From this table, it can be seen that the ‘data 99’ variable that represents the study’s 98 items has a K-S Z value of 1.51, and a significance level of .02. Given that the significance level of Z is less than .05 or even less than .025, it can be proposed that the study data are normally distributed. Moreover, the K-S sample test was also used to test the normality of four global variables of the study. Using the normality test for PWE 53 items, the K-S Z value was found to be 1.39 and its

significance level equals .04 (table 5-32). Provided that the significance level of K-S Z is less than .05, and given the central tendency measures mentioned earlier, it can now be suggested that the distribution of PWE data is nearly normal. In addition, the results of the normality test for OC presented in Table (5-32) indicate that the distribution of the data is normal (K-S Z = 1.93, Sig Z = .01). Furthermore, the SPR and ISPR variables in Table (5-32) have also passed the normality test. The SPR concept K-S Z value is 2.81 and Sig Z is .00, and the ISPR K-S Z value is 1.93 and Sig Z is .00. According to Neter, Wasserman and Whitmore (1979, p. 78):

When testing for normality (or any other distribution), it frequently is not important whether the population is exactly normal or is simple close enough to a normal distribution that this distribution is a reasonable model ... Many statistical tests that assume a normal population are quite robust and hence are satisfactory even in the absence of exact normality.

From the results of the central tendency measures, histogram with normal curve, the Kolmogorov-Smirnov test and considering the above argument of Neter *et al.* (1979), it can be concluded that the study data are nearly normally distributed. Therefore, the parametric methods will be used to test the study hypotheses.

5.18 CONFIDENCE INTERVAL

The results of the goodness of fit of the study data have shown that the distribution of the study data is nearly normal. Thus, “in any normal distribution of sample means [x] with population mean μ and standard deviation σ_M , the following statement is true: *over all sample of size N, the probability is .95 for the event $-1.96 \sigma_M \leq x \leq +1.96 \sigma_M$* ” (Hays, 1988, p. 236).

5.19 THE LIMITATIONS OF THE STUDY

Four major limitations of this study can be reported:

- (1) The study has focused only on one economic sector (industry) and this makes the generalisation of the results to the other economic sectors, such as the service sector, somewhat limited.
- (2) The study results that concern gender relationships with PWE, OC and performance may have been affected by the big gap between the total number of male (627) and female (156) employees co-opted in the study. Jordanian and Arab female participation in the labour force is limited, especially in the industrial sector (Suliman, 1995). Considering the current situation of female employees in Jordan and other Arab countries that was discussed in chapter 4, it can be argued that most

random sampling procedures are likely to face the same gender gap. Accordingly, studies whose primary interest is gender relationships with other organisational concepts should adopt the Stratified Random Sampling to a void such gap.

(3) Given the unique cultural characteristics of Jordan discussed earlier, it can be suggested that the generalisability of the study findings to the other cultural settings (non-Arab) is somewhat limited.

(4) Compared with the Western literature, the management literature in the Arabic context is relatively scarce, especially that related to the variables under scrutiny in this study. For example, only one commitment study (Awamleh, 1996), and two work environment (Al-Shammari, 1990, 1994) studies were found in the Jordanian context. According to Awamleh (1996, p. 68):

It may be worthy of mention, at the beginning, that studies on this subject matter [commitment] are relatively abundant in western management literature, while such literature is noticeably thin in developing countries, including Jordan. To the best of the researcher's knowledge, this study is the first one on organisational commitment in Jordan. This conclusion was reached after surveying available library sources. The researcher has found only one relevant study undertaken in Saudi Arabia.

In addition, there is some paucity in the literature with respect to studies in interrelationships between organisational variables. Very few studies have examined work environment, commitment and performance relationships, and this may have somewhat restricted cross-cultural comparisons, which is an important issue in this era of globalisation.

5.20 CONCLUDING REMARKS

This chapter discussed the methodological issues relating to the examination of perceived work environment, organisational commitment and performance in Jordanian industries. After introducing the aims of the investigation, the study population, sample and the variables and their definitions and measurements were presented and discussed. The study hypotheses and the statistical analyses used to examine these hypotheses were also highlighted. The data collection method, the system of handling blank responses, and the internal consistency of the study measures were also discussed. In addition, the pilot studies conducted to examine the study instrument were also presented and discussed in this chapter. The distribution of the study data that defined the most suitable statistical measures for analysing the collected data was also examined. The four major limitations of the study were also discussed at the end of this chapter.

After discussing the main relevant methodological issues to this study, and defining the study hypotheses and the most suitable measures for testing them, the next chapter will examine the 69 hypotheses presented in this chapter. These hypotheses were developed in a way that matches the requirement of the use of each measure. For example, the format of the hypothesis that will be examined using the ANOVA test is different from the format for the regression and t-test hypotheses.

Chapter Six

The Survey Results

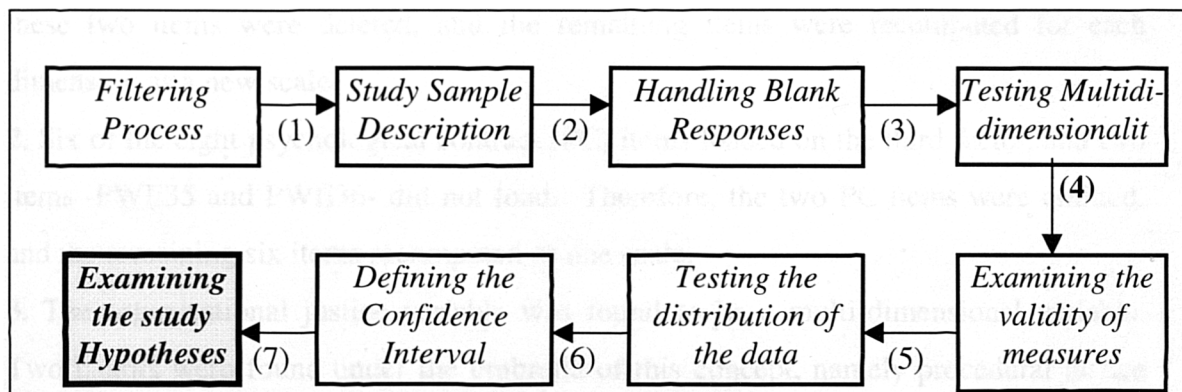
THE SURVEY RESULTS

6.1 INTRODUCTION

The previous chapter introduced and discussed the methods that this study uses in examining work environment, commitment and performance in Jordanian industries. Based on these methods, this chapter aims at examining the primary data of the study to achieve three main objectives. Firstly, to test the multidimensionality of the study measures. Secondly, to examine the central tendency and variability of the study variables. Lastly, to test the hypotheses of the study, as mentioned in the previous chapter. Seven descriptive measures are used to examine the study data and hypotheses, i.e. frequency distribution, mean, mode, median, standard deviation, histogram and scatterplots. In addition, eleven inferential statistic tests are also used, namely factor analysis, multicollinearity, K-S sample, reliability, one-way ANOVA, means, simple regression, multiple regression, curve estimation, correlation and t-test.

Nonetheless, to establish the basic statistical assumptions against which the study hypotheses are to be tested, and to define the relevant measures, the distribution of the collected data is examined using the goodness-of-fit test, as mentioned in the previous chapter. In summary, the process of data analysis adopted in this study can be represented by the following diagram.

Figure 6-1: The steps of data analysis.



As can be seen from Figure (6-1), the collected questionnaires were first refined using a manual filtering process to check their suitability for statistical analysis, and the study sample was described. The method of handling blank responses was also defined, and factor analysis was conducted to examine the dimensionality and reliability of the study variables and scales. Furthermore, the inter-item consistency reliability was used to examine the homogeneity of scales; the goodness-of-fit test was conducted to examine the normality of collected data; the confidence interval

against which the hypothesis will be tested was also defined. As mentioned earlier, the focus of this chapter will be on steps (4) and (7); however, the previous chapter has already discussed the remaining steps of Figure (6-1).

6-2 THE MULTIDIMENSIONALITY OF THE PWE, OC, SPR AND ISPR

Before testing the study hypotheses the dimensionality of the study variables was tested. Generally, this analysis ensures that only significant and reliable factors load on a certain rotation method. Hence, factor analysis is the most reliable test to determine if PWE, OC, SPR and ISPR are multifaceted constructs, and how many dimensions there are in each global variable.

6.2.1 THE PERCEIVED WORK ENVIRONMENT (PWE)

In order to assess the dimensionality of PWE, its 57 items were factor analysed using the Principal Factors (component) (PF) method, followed by the Varimax rotation. The PF method produces parameter estimates that are the most likely to have produced the observed correlation if the sample is from a multivariate normal population. Moreover, the Varimax method rotates to simplify the interpretation of factors. Table (6-1) presents the results of the factor analysis test for PWE. These results can be summarised under the following points:

1. Two items -PWE13 and PWE14- from the employee competence dimension and employee work motivation component did not load on Varimax rotation. Accordingly, these two items were deleted, and the remaining items were recomputed for each dimension as a new scale.
2. Six of the eight psychological contract (PC) items loaded on the third factor, and two items -PWE35 and PWE36- did not load. Therefore, the two PC items were omitted, and the remaining six items recomputed as one scale.
3. The organisational justice variable was found to be a multi-dimensional variable. Two factors were found under the umbrella of this concept, namely procedural justice and distributive justice.
4. Procedural justice itself was found to be a multidimensional concept. The 12 items comprising this variable loaded on two different factors, i.e. factor 1 and factor 11 (table 6-1). In the light of these results, factor eleven's items -PWE41 to PWE45- were recomputed as one scale and termed the *fairness* dimension of procedural justice. Moreover, the remaining items of factor 1, which originally included two different dimensions (trust and two-way communication) were also recomputed as one scale and called the *employee-immediate supervisor relationship*.

Table 6-1: Factor loading of PWE.

<i>Items</i>	<i>F1</i>	<i>F2</i>	<i>F3</i>	<i>F4</i>	<i>F5</i>	<i>F6</i>	<i>F7</i>	<i>F8</i>	<i>F9</i>	<i>F10</i>	<i>F11</i>	<i>F12</i>	<i>F13</i>
PWE45	.57												
PWE46	.67												
PWE47	.66												
PWE48	.67												
PWE49	.68												
PWE50	.73												
PWE51	.72												
PWE52	.66												
PWE37		.75											
PWE38		.82											
PWE39		.81											
PWE40		.66											
PWE29			.69										
PWE30			.75										
PWE31			.73										
PWE32			.74										
PWE33			.68										
PWE34			.64										
PWE53				.66									
PWE54				.70									
PWE55				.75									
PWE56				.70									
PWE57				.68									
PWE3					.73								
PWE4					.68								
PWE7					.68								
PWE8					.71								
PWE15						.70							
PWE16						.70							
PWE19						.69							
PWE20						.65							
PWE23							.58						
PWE24							.69						
PWE25							.68						
PWE26							.61						
PWE17								.58					
PWE18								.59					
PWE21								.71					
PWE22								.64					
PWE11									.79				
PWE12									.80				
PWE1										.78			
PWE2										.75			
PWE5										.55			
PWE6										.53			
PWE41											.52		
PWE42											.52		
PWE43											.65		
PWE44											.64		
PWE9												.75	
PWE10												.73	
PWE27													.74
PWE28													.69

Note: Decimals have been omitted in the item loading values.

(5) The multicollinearity between the produced factors was checked, and the value of the determinant of correlation matrix was found to be 1.5. Since this value is greater than 0.00001, it can be concluded that the matrix did not suffer from multicollinearity or singularity. In addition, the value of the Kaiser-Meyer-Olkin (KMO), which is a measure of sampling adequacy, was found to be 0.95. Provided that this value is more than 0.5, it can be suggested that the factor analysis test has proceeded correctly, and that the sample used was adequate.

Furthermore, the results of the Bartlett test of sphericity were also obtained. The results showed that the Bartlett test was highly significant (Sig. = 0.000), which indicates that the factor analysis processes were correct and suitable for testing multidimensionality.

(6) According to the above analysis of organisational justice, the total number of PWE dimensions increased from 11 to 13 dimensions (table 6-1).

(7) The remaining PWE dimensions that emerged from the factor analysis, such as co-workers relations and supervisory style, are presented in Table (6-1). As can be seen from this table, all items load more than *0.50*, because the option of suppressing absolute values less than 0.50 was chosen before running the test.

Table 6-2: Definitions of PWE multivariate scales.

<i>Factor</i>	<i>Definition</i>
F1	Employee-immediate supervisor relationship
F2	Distributive justice
F3	Psychological contract
F4	Innovation climate
F5	Co-workers relations
F6	Supervisory style
F7	Performance-reward relationship
F8	Decision making policy
F9	Employee competence
F10	Task characteristics
F11	Fairness
F12	Employee work motivation
F13	Pressure to produce

To conclude, the factor analysis test for the PWE variable has resulted in two additional factors, “Fairness” and “employee-immediate supervisor relationship”, instead of reducing the original number of PWE dimensions.

6.2.2 ORGANISATIONAL COMMITMENT (OC)

Table (6-3): Factor loading of OC

Items	Factor 1	factor 2
AC1	.76	
AC2	.83	
AC3	.80	
AC4	.81	
AC5	.82	
AC6	.81	
AC7	.79	
AC8	.75	
AC9	.52	
CC1		.58
CC2		.73
CC3		.70
CC4		.73
CC5		.75
CC6		.77

Note: *Decimals have been omitted in the items loading values.*

For the purpose of testing the multi-dimensionality of OC, the 15 items comprising this concept were also factor analysed. Using the Varimax rotation, two factors were identified. The first factor is affective commitment (AC, 9 items); the second factor is continuance commitment (CC, 6 items). The results of OC factor analysis are presented in Table (6-3). The determinant of the correlation matrix was found to be 5.4, which means that the two factors did not suffer from multicollinearity or singularity. The KMO measure was found to be 0.89, indicating adequacy of sampling, and Bartlett's test of sphericity was found to be highly significant (Sig. = 0.000).

6.2.3 SELF PERFORMANCE RATING (SPR)

In order to test the significance of the SPR's items and dimensions, the 18 questions of this variable were factor analysed. The final results of this analysis are shown in Table (6-4). As is clear from this table, five dimensions were successfully loaded, scoring 0.55 and over on the Varimax rotation. These factors are work skills (F1), work enthusiasm (F2), job performance (F3), work duties (F4) and readiness to innovate (F5). Three items from the work quality and work quantity components loaded together on factor 3 (table 6-4). One item (SPR12) from work quantity and two items from the work quality variable (SPR10 and SPR11) loaded together. Therefore, the quality and quantity of work items loaded on factor 3 were re-computed as one component, named as job performance.

Table 6-4: Factor Loading of Self-Performance Rating Variable.

<i>Items</i>	<i>Factor1</i>	<i>Factor2</i>	<i>Factor3</i>	<i>Factor4</i>	<i>Factor5</i>
SPR4	.55				
SPR5	.72				
SPR6	.69				
SPR7		.68			
SPR8		.78			
SPR9		.74			
SPR10			.69		
SPR11			.68		
SPR12			.72		
SPR1				.77	
SPR2				.76	
SPR3				.71	
SPR16					.60
SPR17					.80
SPR18					.79

Note: *Decimals have been omitted in the item loading values.*

Furthermore, provided that three items from readiness to innovate loaded together as one scale, items SPR13, SPR14 and SPR15 were dropped and items SPR16, SPR17 and SPR18 recomputed as one scale. The values of the correlation matrix and the KMO and the significance of Bartlett were found to be 1.41, .89 and 0.000 respectively, indicating the reliability of the factor analysis results.

To conclude, based on the factor analysis test results, the number of SPR dimensions was reduced to five instead of six, and the work quality and work quantity dimensions of SPR were merged together in one dimension, called job performance. Table (6-4) presents the final outcomes of the factor analysis test.

6-2-4 IMMEDIATE SUPERVISOR PERFORMANCE RATING (ISPR)

Based on Varimax rotation, the 18 items making up the ISPR variable were factor analysed in order to examine its multifaceted nature. These 18 items were the same items of SPR, but in a different format. The final results of this analysis are presented in Table (6-5). This table shows that five dimensions significantly loaded on five factors. Firstly, the four items loading on the first factor represent the readiness to innovate dimension. These four items were recomputed as one scale. However, the remaining item (ISPR14) which did not load on these four items was deleted. Secondly, the three items relating to work duties loaded together on the second factor. Thirdly, as was the case in SPR, items ISPR10, ISPR11, and ISPR12 of the work quality and quantity dimensions loaded together under factor 3.

Table 6-5: Factor Loading of Immediate Supervisor Performance Ratings variable.

Items	Fctor1	Factor2	Factor3	Factor4	Factor5
ISPR15	.60				
ISPR16	.75				
ISPR 17	.82				
ISPR 18	.80				
ISPR 1		.79			
ISPR 2		.79			
ISPR 3		.69			
ISPR 10			.76		
ISPR 11			.71		
ISPR 12			.53		
ISPR 7				.66	
ISPR 8				.74	
ISPR 9				.57	
ISPR 5					.63
ISPR 6					.75

Note: *Decimals have been omitted in the item loading values.*

Thus, after excluding item ISPR13 (which did not load) they were recomputed as one scale, and named as “job performance”. Fourthly, the three items measuring employees’ work enthusiasm loaded together under factor four. Lastly, only two items (ISPR5 and ISPR6) out of three of the work skills construct loaded on factor 5. The third item (ISPR4) did not load on either factor. Hence, this item was omitted and the remaining two items were recomputed as one scale (table 6-5). The reliability and validity of the above results were examined using the correlation matrix, KMO and Bartlett tests. Considering the values of the correlation matrix (3.63), KMO (0.95) and the Bartlett (0.000), it can be concluded that the results are highly reliable.

To summarise, five dimensions out of six were retained from the factor analysis test. The items relating to the work quality and work quantity dimensions of ISPR significantly loaded together on one factor.

6.3 CENTRAL TENDENCY AND VARIABILITY OF STUDY CONCEPTS

The mean, median, mode and standard deviation of all the study variables were obtained. The results of these central tendency measures are presented in Table (6-6).

6.3.1 PERCEIVED WORK ENVIRONMENT (PWE)

As shown in Table (6-6), the mean of PWE is 3.3. This value designates that the majority of respondents viewed the work atmosphere as neutral, yet inclined towards the positive direction.

Table 6-6: Measures of central tendencies and standard deviations (averages) for the study variables.

NO	Variable	Mean	Median	Mode	SD
1	<i>Perceived work environment</i>	3.3	3	4	1.2
2	Employee-supervisor relationship	3.3	3	4	1.2
3	Distributive Justice	2.8	3	2	1.2
4	Psychological contract	3.4	3	4	1.2
5	Innovation	3.1	3	3	1.2
6	Co-workers relations	3.4	3	4	1.1
7	Supervisory style	3.5	4	4	1.2
8	Performance-reward relationship	3.0	3	3	1.3
9	Decision making policy	3.1	3	4	1.1
10	Employee competence	4.0	4	4	1.1
11	Task characteristics	3.5	4	4	1.1
12	Fairness	3.0	3	3	1.2
13	Motivation	4.0	4	4	1.0
14	Pressure to produce	2.9	3	4	1.3
15	<i>Organisational commitment</i>	3.5	4	4	1.2
16	Affective commitment	3.4	4	4	1.2
17	Continuance commitment	3.5	4	4	1.1
18	<i>Self-rating of performance</i>	4.1	4	4	0.9
19	Work skills (self-rating)	4.1	4	4	0.9
20	Work enthusiasm (self-rating)	4.2	4	4	0.8
21	Job performance (self-rating)	4.1	4	4	0.8
22	Work duties (self-rating)	4.1	4	4	0.9
23	Readiness to Innovate (self-rating)	3.8	4	4	0.9
24	<i>Supervisor-rating of performance</i>	3.3	3	4	1.1
25	Readiness to Innovate (supervisor-rating)	3.0	3	4	1.2
26	Work duties (supervisor-rating)	3.5	4	4	1.0
27	Job performance (supervisor-rating)	3.3	3	4	1.1
28	Work enthusiasm (supervisor-rating)	3.4	4	4	1.1
29	Work skills (supervisor-rating)	3.4	3	4	1.1

Moreover, the median value (3) of PWE is exactly halfway between the two groups, i.e. agree/strongly agree and disagree/strongly disagree. Furthermore, the mode value (4) indicates that the majority of study subjects were happy with their work climate. In addition, the standard deviation value (1.2) of PWE indicates that there is a clear dispersion around the mean (3.3). Given these results of the central tendency measures and the standard deviation, it can be concluded, in general, that employees in Jordanian industrial firms perceive their work environment positively. However, there is a clear variance in employees' views with respect to work climate.

With respect to the PWE dimensions (table 6-6), nine components were found to have mean, median, mode and standard deviation values that were similar to the global form of PWE discussed above. However, for the variable of distributive justice, dissimilar

results were reported. As shown in Table (6-6), the mean = 2.8, median = 3, mode = 2 and the standard deviation = 1.2. These results imply that employees in Jordanian industries perceive distributive justice negatively in their organisations. In other words, they feel that the distribution of responsibilities, salaries, promotions, ... etc, among employees is unfair. The mode value (2 = disagree) indicates that the majority of the study subjects in the 20 industrial firms disagreed that there was a positive 'distributive justice' climate. In addition, the central tendency measures and standard deviations of three PWE dimensions that co-opted employees tended to report neutrality (3 = undecided) in their responses to the questionnaire statements. The mean, median and mode for Fairness, innovation climate and performance-reward relationships were all equal to 3, except for the innovation mean at 3.1.

6.3.2 ORGANISATIONAL COMMITMENT (OC)

The values of the OC mean, median, mode and standard deviation are presented in Table (6-6). These values of central tendency measures ranged between 3.5 for the mean and 4 for the median and mode. Hence, we can generally conclude that employees in Jordanian industries tend to exhibit high loyalty toward their organisations. However, the standard deviation value (1.2) suggests that there is apparent dispersion in employees' views of OC.

As indicated in Table (6-6), the results of the central tendency measures of affective and continuance commitments are very similar. Thus, employees' commitment toward their organisations is a coin with two faces. In the first face, there are the emotionally attached employees; in the second face, there are the employees who are committed merely because they have valuable investments in their organisations. Nonetheless, the two dimensions of commitment reported similar standard deviation (SD) values, i.e. 1.2 each.

6.3.3 SELF PERFORMANCE RATING (SPR)

The central tendency measures and standard deviation for SPR were found to be as follows: mean = 4.1, median = 4, mode = 4, SD = 0.9 (table 6-6). The central tendency measures show that Jordanian industry employees tend to rate their performance highly. On the other hand, the SD value of SPR is less than 1, signifying a small variation among respondents' answers. This mean that the majority, if not all, of respondents rated their performance as good (4) or very good (5).

The five dimensions of SPR reported central tendency and SD values similar to SPR (table 6-6). These results also indicate that the respondents tended to show higher levels of work skills, work enthusiasm, job performance, understanding of work duties and innovation ability, as rated by themselves.

6.3.4 IMMEDIATE SUPERVISOR PERFORMANCE RATING (ISPR)

The central tendency measures and SD of ISPR are presented in Table (6-6). The mean equals 3.3, the median equals 3, the mode equals 4, and the SD equals 1.1. These results indicate that the overall performance of employees in Jordanian industries, as rated by their supervisors, is good. Nevertheless, the SD value (1.1) proclaims there to be some variation in supervisors' responses.

On the other hand, the five dimensions of ISPR show results similar to the ones discussed above (table 6-6). Nonetheless, the mode in the five dimensions equals 4, and this denotes that the general evaluation of employees' performance is positive.

6.4 HYPOTHESES TESTING

The study hypotheses are tested according to the guidelines given in chapter five. The general hypotheses are tested first, and after that the sub-hypotheses, if any. Moreover, the demographic variable hypotheses are examined first, and after that the hypotheses related to the investigation of the four major variables.

6.4.1 Gender and perceived work environment

Ho: There is no significant difference between males and females in the perception of work environment in Jordanian industrial firms.

HA: There is a significant difference between males and females in the perception of work environment in Jordanian industrial firms.

To test this hypothesis, two methods of comparing means were used, namely one-way ANOVA and means tests. The first row in Table (6-7) presents the summary of these tests. As can be seen from this table, the F value of .00 is not significant (Sig F = 0.99). Moreover, the means test results in the same table show that there is no significant difference between male (172.96) and female (172.90) means. This implies that the difference in the means for the males and females on perceived work environment is not significant.

Table 6-7: Results of one-way ANOVA and means tests for Gender and PWE, OC, SPR and ISPR.

NO	Variable	Males	Females	F value	Sig F
1	<i>Perceived work environment</i>	172.96	172.90	.00	.99
2	Employee-supervisor relationship	26.41	25.66	1.14	.29
3	Distributive Justice	11.19	10.59	2.54	.11
4	Psychological contract	19.92	20.91	4.04	.05
5	Innovation	15.62	15.50	0.07	.79
6	Co-workers relations	13.56	13.41	0.22	.64
7	Supervisory style	13.89	14.24	1.09	.30
8	Performance-reward relationship	11.91	11.85	0.03	.87
9	Decision making policy	12.64	12.40	0.57	.45
10	Employee competence	08.01	07.72	3.07	.08
11	Task characteristics	13.92	14.74	6.65	.01
12	Fairness	12.14	12.12	0.00	.96
13	Motivation	08.01	07.88	0.50	.48
14	Pressure to produce	05.75	05.88	0.43	.51
15	<i>Organisational commitment</i>	52.08	49.93	6.26	.01
16	Affective commitment	30.99	29.87	2.21	.14
17	Continuance commitment	21.09	20.06	5.31	.02
18	<i>Self-rating of performance</i>	61.27	59.65	5.99	.02
19	Work skills (self-rating)	12.46	12.07	4.45	.04
20	Work enthusiasm (self-rating)	12.71	12.21	7.62	.01
21	Job performance (self-rating)	12.33	12.32	0.01	.94
22	Work duties (self-rating)	12.22	11.98	1.76	.19
23	Readiness to Innovate (self-rating)	11.54	11.07	5.73	.02
24	<i>Supervisor-rating of performance</i>	49.49	48.04	1.68	.20
25	Readiness to Innovate (supervisor-rating)	11.99	11.81	0.23	.63
26	Work duties (supervisor-rating)	10.47	10.10	2.22	.14
27	Job performance (supervisor-rating)	09.88	09.70	0.49	.49
28	Work enthusiasm (supervisor-rating)	10.35	09.83	4.19	.04
29	Work skills (supervisor-rating)	6.79	06.60	1.20	.27

Hence, the null hypothesis is substantiated. These results therefore indicate that there is no significant difference between men and women in their perceptions of work environment in Jordanian industries. In addition, Table (6-7) also presents the results of means and ANOVA tests for the 13 PWE dimensions and gender. These results show that only two PWE factors are significant. These factors are task characteristics ($F = 6.65$, Sig $F = .01$) and psychological contract ($F = 4.04$, Sig $F = .05$). Provided that the male means for these both dimensions are larger than those of female (table 6-7), it can

be proposed that male employees in Jordanian industries tend to perceive these two work environment factors more positively than their female counterparts.

6.4.2 GENDER AND ORGANISATIONAL COMMITMENT

HO: There will be no significant difference between male and female employees in the commitment they show toward their organisations in Jordanian industrial firms.

HA: There will be a significant difference between male and female employees in the commitment they show toward their organisations in Jordanian industrial firms.

One-way ANOVA and means tests were conducted to test this hypothesis. From Table (6-7) it can be noticed that the F value of 6.26 is significant at .025. The significance of the F value indicates that there is a clear difference between male and female commitment in Jordanian industrial firms. Thus, the null hypothesis is not supported. Furthermore, Table (6-7) shows that the male's mean (52.08) is greater than the female mean (49.93). This indicates that male employees in Jordanian industries tend to show higher organisational commitment than their female counterparts.

On the other hand, out of two OC dimensions only one was found to be significantly different, as can be seen from Table (6-7). The continuance commitment (CC) F value of 5.31 is significant at .025. Moreover, the male employee mean (21.09) of CC is higher than the female mean (20.06). Thus, male employees in Jordanian industrial firms tend to show higher continuance commitment than female employees. Nevertheless, gender's overall role in influencing employees' affective commitment was found to be non-significant ($F = 2.21$, Sig. $F = .14$).

6.4.3 GENDER AND SELF PERFORMANCE RATINGS

HO: There is no significant difference between male and female employees in self rated performance in Jordanian industrial firms.

HA: There is a significant difference between male and female employees in self rated performance in Jordanian industrial firms.

From Table (6-7) it can be seen that the F value of 5.99 is significant (Sig. $F = .02$). Hence, the null hypothesis is rejected. In addition, the male's mean (61.27) is higher than the female's mean (59.65), and this signifies that male employees in Jordanian industrial firms tend to rate their performance more highly than their female counterparts.

Nonetheless, Table (6-7) shows that three SPR dimensions out of five are significantly different. These factors are work enthusiasm ($F = 7.62$, Sig. $F = .01$), readiness to innovate ($F = 5.73$, Sig. $F = .02$) and work skills ($F = 4.45$, Sig. $F = .04$).

Furthermore, the means test for these three SPR components revealed that the male employees' mean is higher than that of female. Hence, male employees in Jordanian industries tend to report higher work enthusiasm, greater readiness to innovate and higher work skills than female employees, as rated by themselves. Nevertheless, differences in the job performance and work duties dimensions of SPR were found to be non-significant.

6.4.4 GENDER AND IMMEDIATE SUPERVISOR PERFORMANCE RATINGS

HO: There is no significant difference between male and female employees in the performance they show in the workplace, as rated by their immediate supervisors in Jordanian industrial firms.

HA: There is a significant difference between male and female employees in the performance they show in the workplace, as rated by their immediate supervisors in Jordanian industrial firms.

As can be seen From Table (6-7) the F value of 1.68 is non-significant ($.195 > .05$). Thus, the null hypothesis is supported. Therefore, it can be concluded that employees' gender in Jordanian industries does not explain any variance in their overall performance, as rated by their immediate supervisors. On the other hand, Table (6-7) shows that the effect of gender on work duties, readiness to innovate, job performance and work skills dimensions of the ISPR is also not significant. However, its effect on the work enthusiasm factor is significant ($F = 4.19$, Sig $F = .04$). Considering the mean values of males (10.35) and females (9.83), it can be suggested that the male employees tend to show higher work enthusiasm, as rated by immediate supervisors, than female employees in Jordanian industrial firms.

6.4.5 MARITAL STATUS AND PERCEIVED WORK ENVIRONMENT

HO: There is no significant difference between married and non-married employees in the perception of work environment in Jordanian industrial firms.

HA: There is a significant difference between married and non-married employees in the perception of work environment in Jordanian industrial firms.

Table 6-8: Results of one-way ANOVA and means tests for marital status and PWE, OC, SPR and ISPR.

NO	Variable	Married	Non-married	F value	Sig F
1	<i>Perceived work environment</i>	<i>174.51</i>	<i>170.14</i>	<i>2.59</i>	<i>.11</i>
2	Employee-immediate supervisor relationship	26.76	25.37	5.65	.02
3	Distributive Justice	11.05	11.09	0.01	.91
4	Psychological contract	20.19	19.98	0.26	.61
5	Innovation climate	15.87	15.11	3.90	.05
6	Co-workers relations	13.83	12.99	10.37	.00
7	Supervisory style	14.09	13.74	1.60	.21
8	Performance-reward relationship	11.90	11.88	0.01	.93
9	Decision making policy	12.64	12.51	0.23	.63
10	Employee competence	07.94	7.96	0.03	.85
11	Task characteristics	14.16	13.95	0.63	.43
12	Fairness	12.26	11.93	1.16	.28
13	Employee work motivation	08.04	07.89	1.09	.30
14	Pressure to produce	05.79	05.74	0.07	.79
15	<i>Organisational commitment</i>	<i>52.64</i>	<i>49.88</i>	<i>15.10</i>	<i>.00</i>
16	Affective commitment	31.36	29.70	7.11	.01
17	Continuance commitment	21.28	20.18	8.77	.00
18	<i>Self-rating of performance</i>	<i>61.31</i>	<i>60.30</i>	<i>3.35</i>	<i>.07</i>
19	Work skills (self-rating)	12.46	12.25	1.95	.16
20	Work enthusiasm (self-rating)	12.67	12.49	1.41	.23
21	Job performance (self-rating)	12.35	12.30	0.13	.72
22	Work duties (self-rating)	12.27	12.01	2.85	.09
23	Readiness to Innovate (self-rating)	11.56	11.25	3.45	.06
24	<i>Supervisor-rating of performance</i>	<i>49.67</i>	<i>48.36</i>	<i>2.00</i>	<i>.16</i>
25	Readiness to Innovate (supervisor-rating)	11.92	12.00	0.07	.79
26	Work duties (supervisor-rating)	10.53	10.15	3.53	.06
27	Job performance (supervisor-rating)	10.02	09.53	4.92	.03
28	Work enthusiasm (supervisor-rating)	10.33	10.10	1.23	.27
29	Work skills (supervisor-rating)	06.85	06.58	3.72	.05

Table (6-8)- one-way ANOVA and mean- shows that the F value of 2.59 is not significant (Sig. F = .11 > .05). This means that there is no significant difference between married and non-married employees in the perception of work environment in Jordanian industries. Thus, the null hypothesis is substantiated. Furthermore, out of the 13 factors of PWE only three were found to be significant. These dimensions are co-workers relations (F = 10.37, Sig. F = .00), employee-immediate supervisor

relationships ($F = 5.65$, Sig $F = .02$) and innovation climate ($F = 3.90$, Sig $F = .05$). As can be seen from Table (6-8) the married employees' mean for these three PWE components is higher than non-married mean. Therefore, it can be proposed that married employees in Jordanian industries tend to perceive these three PWE factors more positively than non-married employees.

6.4.6 MARITAL STATUS AND ORGANISATIONAL COMMITMENT

HO: There is no significant difference between married and non-married employees in the commitment they show toward their organisations in Jordanian industrial firms.

HA: There is a significant difference between married and non-married employees in the commitment they show toward their organisations in Jordanian industrial firms.

Table (6-8) shows that the F value of 15.10 is highly significant (Sig $F = .00$). Based on this finding, it can be suggested that marital status is associated with significant differences in employees' organisational commitment. In other words, the null hypothesis is not substantiated. Moreover, the results in the same table show that the mean (52.46) of married employees is higher than non-married employees (49.88). This result thus indicates that married employees in Jordanian industrial firms tend to show higher levels of organisational commitment than non-married employees. Nevertheless, marital status also significantly influences employees' affective ($F = 7.11$, Sig. $F = .01$) and continuance commitment ($F = 8.77$, Sig. $F = .00$). In addition, the means test results reveal that the means of married employees for these two OC dimensions higher than that of the female employees (table 6-8). Hence, married employees in Jordanian industries tend to show higher levels of affective and continuance commitment than non-married employees.

6.4.7 MARITAL STATUS AND SELF PERFORMANCE RATING

HO: There is no significant difference between married and non-married employees in self rated performance in Jordanian industrial firms.

HA: There is a significant difference between married and non-married employees in self rated performance in Jordanian industrial firms.

From the results of the one-way ANOVA presented in Table (6-8), it can be seen that the F value of 3.35 is non-significant (Sig. $F = .07 > .05$). Hence, the null hypothesis is supported. In addition, the marital status variable was also found to be not associated with any significant variance in the five dimensions of the SPR (table 6-8). These

results thus indicate that there is no significant difference between married and non-married employees in self rated performance or any of its five factors.

6.4.8 MARITAL STATUS AND THE ISPR

HO: There is no significant difference between married and non-married employees in the immediate supervisor rated performance in Jordanian industrial firms.

HA: There is a significant difference between married and non-married employees in the immediate supervisor rated performance in Jordanian industrial firms.

Table (6-8) shows that the F value of 2 is non-significant (Sig. F = .16 > .05). This result thus indicates that there is no significant difference in married and non-married employees' performance in Jordanian industries, as rated by immediate supervisors. Hence, the null hypothesis is supported. Table (6-8) also shows that the marital status effect on the four ISPR factors is not significant. However, it has significantly influenced the job performance dimension (F = 4.92, Sig. F = .03). Married employees' mean (10.02) for this dimension is higher than that of the non-married employees (9.53). Considering this result, it can be proposed that married employees in Jordanian industrial firms tend to show higher supervisory rated job performance than non-married employees

6.4.9 EDUCATIONAL LEVEL AND PERCEIVED WORK ENVIRONMENT

HO: There are no significant differences between employee educational levels in the perceptions of work environment in Jordanian industrial firms.

HA: There are significant differences between employee educational levels in the perceptions of work environment in Jordanian industrial firms.

One-way ANOVA and means tests were used to examine this hypothesis. The results of these tests are presented in Table (6-9). As can be seen from this table, the F value of 1.79 is non-significant (Sig F = .18 > .05). Hence, there is no significant difference between well and less well educated employees in their perceptions of work environment. Thus, the null hypothesis is supported.

Table 6-9: Results of one-way ANOVA and means tests for education and PWE, OC, SPR and ISPR.

NO	Variable	High school and under	Intermediate Diploma	First degree and above	F value	Sig F
1	<i>Perceived work environment</i>	175.62	168.94	182.45	1.79	0.18
2	Employee-supervisor relationship	26.63	26.11	27.38	1.38	.24
3	Distributive Justice	11.06	11.16	11.77	4.94	0.03
4	Psychological contract	19.87	19.79	21.44	0.59	0.45
5	Innovation	15.66	15.52	16.56	1.80	0.18
6	Co-workers relations	14.05	13.10	14.04	1.08	0.18
7	Supervisory style	14.32	13.37	14.77	1.33	0.25
8	Performance-reward relationship	12.29	11.67	12.83	0.08	0.77
9	Decision making policy	12.78	12.02	13.38	2.74	0.10
10	Employee competence	08.21	07.63	08.26	0.56	0.45
11	Task characteristics	14.20	13.46	14.91	0.01	0.93
12	Fairness	12.22	11.85	12.92	1.79	0.18
13	Motivation	08.37	07.59	08.12	0.12	0.73
14	Pressure to produce	05.97	05.68	05.72	1.30	0.26
15	<i>Organisational commitment</i>	53.63	50.70	53.11	0.02	0.88
16	Affective commitment	31.54	29.71	32.46	0.81	0.37
17	Continuance commitment	22.10	20.99	20.65	3.70	.01
18	<i>Self-rating of performance</i>	62.04	60.13	62.47	2.08	0.08
19	Work skills (self-rating)	12.74	12.22	12.61	1.96	0.10
20	Work enthusiasm (self-rating)	12.80	12.34	12.61	2.16	0.06
21	Job performance (self-rating)	12.47	12.25	12.72	1.19	0.31
22	Work duties (self-rating)	12.49	12.29	12.54	1.78	0.19
23	Readiness to Innovate (self-rating)	11.55	11.33	11.99	1.88	0.11
24	<i>Supervisor-rating of performance</i>	50.42	47.37	52.42	0.02	0.88
25	Readiness to Innovate (supervisor-rating)	11.95	11.52	13.15	3.30	0.01
26	Work duties (supervisor-rating)	10.72	10.00	10.78	0.00	0.97
27	Job performance (supervisor-rating)	10.11	09.60	10.51	0.71	0.40
28	Work enthusiasm (supervisor-rating)	10.66	09.77	10.87	0.01	0.93
29	Work skills (supervisor-rating)	06.99	06.49	07.12	0.03	0.85

In addition, the influence of education on 12 PWE dimensions was found to be non-significant. However, its effect on distributive justice is significant ($F = 4.94$, $\text{Sig } F = .03$). As can be seen from Table (6.49) the mean (11.77) of the 'first degree and above' group is higher than the means of other two educational groups. Thus, employees' perception of distributive justice (DJ) in Jordanian industries is affected by their

educational backgrounds; well-educated employees perceive DJ more positively than less educated employees.

6.4.10 EDUCATIONAL LEVEL AND ORGANISATIONAL COMMITMENT

HO: There are no significant differences between employee educational backgrounds in the commitment they show toward their organisations in Jordanian industrial firms.

HA: There are significant differences between employee educational backgrounds in the commitment they show toward their organisations in Jordanian industrial firms.

Considering the F value of .02 and its significance level .88 in Table (6-9), it can be concluded that the null hypothesis is supported. Thus, the educational level variable in Jordanian industrial firms does not explain significant variance in the organisational commitment construct. Also the educational level variable does not significantly influence the affective commitment dimension of OC. On the contrary, it significantly affects the continuance commitment factor. From Table (6-9), it can be seen that the CC's F value of 3.70 is significant at .025, and that the mean (22.10) of the lowest educational level (high school and under) is greater than the other two levels. These results thus indicate that less educated employees in Jordanian industries tend to show higher levels of continuance commitment than highly educated employees.

6.4.11 EDUCATION LEVEL AND SELF PERFORMANCE RATING

HO: There are no significant differences between employee educational levels in self rated performance in Jordanian industrial firms.

HA: There are significant differences between employee educational levels in self rated performance in Jordanian industrial firms.

Table (6-9) shows that the F value of 2.08 is non-significant (Sig F = .634 > .05). Hence, the null hypothesis is supported. Similarly, Table (6-9) shows that differences on the five SPR dimensions are also non-significant. Hence, employees' educational backgrounds in Jordanian industrial firms does not play any significant role in predicting the differences in their overall self rated performance, or any of its components.

6.4.12 EDUCATION AND THE ISPR

HO: There are no significant differences between employee educational levels in immediate supervisor rated performance in Jordanian industrial firms.

HA: There are significant differences between employee educational levels in immediate supervisor rated performance in Jordanian industrial firms.

Since the F value of .02 in Table (6.49) is non-significant (Sig F = .88 > .05), it can be proposed that the null hypothesis is supported. Thus, the educational level variable in Jordanian industrial firms does not explain significant variance in the global concept of ISPR. Furthermore, Table (6-9) shows that educational level differences in work duties, work skills, job performance and work enthusiasm dimensions of ISPR are not significant. However, its influence on the readiness to innovate factor is significant (F = 3.3, Sig F = .01). As can be seen from Table (6-9) the mean (13.15), of the 'first degree and above' level is higher than that of the other two levels. Therefore, it can be proposed that the well-educated employees 'readiness to innovate' in Jordanian industries is more highly rated than that of the less educated employees.

6.4.13 AGE AND PERCEIVED WORK ENVIRONMENT

HO: There are no significant differences between employee age levels in the perceptions of work environment in Jordanian industrial firms.

HA: There are significant differences between employee age levels in the perceptions of work environment in Jordanian industrial firms.

To test this hypothesis, one-way ANOVA and means tests were conducted. The results of these tests are presented in Table (6-10). As can be seen from this table, the F value of 8.77 is significant at .01. Thus, the null hypothesis is not supported. Considering the significance of the alternative hypothesis, it can be conclude that there are significant differences between employee age levels in the perception of work environment in Jordanian industrial firms. Moreover, the means' test results in Table (6-10) show that the third age group (47 years and above) has the highest mean value (283.6). Thus, older employees in Jordanian industrial firms tend to perceive their work environment more positively than their younger peers. Except for the employee competence and pressure to produce variables, all the PWE dimensions show significantly differences. As can be seen from Table (6-10), the third age group's mean values for these significant PWE factors are higher than that the means of other age groups. Hence, older employees tend to perceive their 11 PWE factors, as well as the overall work environment, more positively than younger employees.

Table 6-10: Results of One-way ANOVA and means tests for age and PWE, OC, SPR and ISPR.

NO	Variable	35 years and under	36-46 years	47 years and above	F value	Sig. F
1	<i>Perceived work environment</i>	<i>174.11</i>	<i>170.37</i>	<i>283.60</i>	<i>8.77</i>	<i>.00</i>
2	Employee-supervisor relationship	26.51	26.06	29.23	5.62	.00
3	Distributive Justice	11.07	10.84	13.23	8.08	.00
4	Psychological contract	20.27	19.62	21.36	2.72	.00
5	Innovation climate	15.70	15.30	17.75	6.54	.00
6	Co-workers relations	13.42	13.44	14.69	4.84	.00
7	Supervisory style	14.42	13.69	14.95	6.28	.00
8	Performance-reward relationship	12.07	11.76	13.61	6.79	.00
9	Decision making policy	12.71	12.41	14.11	7.21	.00
10	Employee competence	07.91	07.81	08.00	1.07	.37
11	Task characteristics	14.09	13.88	15.11	6.28	.00
12	Fairness	12.22	11.99	13.89	5.09	.00
13	Employee work motivation	08.06	07.89	08.19	2.71	.03
14	Pressure to produce	05.83	05.68	06.53	2.65	.10
15	<i>Organisational commitment</i>	<i>50.81</i>	<i>51.59</i>	<i>55.65</i>	<i>5.58</i>	<i>.00</i>
16	Affective commitment	30.39	30.11	33.62	4.30	.00
17	Continuance commitment	20.42	21.48	22.04	3.44	.00
18	<i>Self-rating of performance</i>	<i>59.88</i>	<i>61.29</i>	<i>63.22</i>	<i>4.18</i>	<i>.00</i>
19	Work skills (self-rating)	12.10	12.44	12.80	2.05	.09
20	Work enthusiasm (self-rating)	12.48	12.68	12.96	1.51	.20
21	Job performance (self-rating)	12.05	12.27	13.11	5.98	.00
22	Work duties (self-rating)	12.11	12.24	12.51	1.09	.36
23	Readiness to Innovate (self-rating)	11.16	11.65	11.84	3.26	.01
24	<i>Supervisor-rating of performance</i>	<i>50.07</i>	<i>48.27</i>	<i>53.00</i>	<i>4.67</i>	<i>.00</i>
25	Readiness to Innovate (supervisor-rating)	12.20	11.64	13.16	3.58	.01
26	Work duties (supervisor-rating)	10.61	10.22	10.85	2.57	.04
27	Job performance (supervisor-rating)	09.90	09.71	11.01	4.62	.00
28	Work enthusiasm (supervisor-rating)	10.45	10.04	10.94	3.89	.00
29	Work skills (supervisor-rating)	06.91	06.66	07.03	2.96	.02

6.4.14 AGE AND ORGANISATIONAL COMMITMENT

HO: There are no significant differences between employee age levels in the commitment they show toward their organisations in Jordanian industrial firms.

HA: There will be significant difference between employee age levels in the commitment they show toward their organisations in Jordanian industrial firms.

Table (6-10) shows that the F value of 5.58 is significant (Sig F = .00). Thus, the null hypothesis is not supported. This result thus indicates that the age variable can significantly explain variance in organisational commitment. In effect, there are significant differences between younger and older employees in organisational commitment in Jordanian industrial firms. As can be seen from Table (6-10), the older employees group has the highest mean value (55.65). Hence, older employees in Jordanian industrial firms tend to show higher levels of organisational commitment than younger employees.

On the other hand, the age variable has also significantly affected AC (F = 4.30, Sig F = .00) and CC (F = 3.44, Sig F = .00) dimensions of OC (table 6-10). Moreover, the means test results reveal that the '47 years and above' group has the highest mean value for AC (33.62) and CC (3.44). Given these results, it can be concluded that older employees in Jordanian industries tend to show higher levels of organisational, affective and continuance commitments than younger employees.

6.4.15 AGE AND SELF PERFORMANCE RATINGS

HO: There are no significant differences between employee age levels in self rated performance in Jordanian industrial firms.

HA: There are significant differences between employee age levels in self rated performance in Jordanian industrial firms.

Given that the F value of 4.18 (table 6.50) is significant at .01, it can be concluded that the null hypothesis is rejected. On the other hand, Table (6-10) shows that only two SPR factors are significant, namely job performance (F = 5.98, Sig F = .00) and readiness to innovate (F = 3.26, Sig F = .01). Moreover, the results of the means test in the same table reveal that the third age level (47 years and above) shows the highest mean values for SPR and its two significant factors. Thus, older employees rated their overall performance, job performance and readiness to innovate in Jordanian industrial firms more highly than younger employees.

6.4.16 AGE AND IMMEDIATE SUPERVISOR PERFORMANCE RATINGS

HO: There are no significant differences between employee age levels in the immediate supervisor rated performance in Jordanian industrial firms.

HA: There are significant differences between employee age levels in the immediate supervisor rated performance in Jordanian industrial firms.

From Table (6-10) it can be seen that the F value of 4.67 is significant at .00. This result thus indicates that there are significant differences between the means of the three age levels in terms of performance, as rated by immediate supervisors. Thus, the null hypothesis is not supported. In addition, Table (6-10) shows that differences in the five dimensions of ISPR are significant. Furthermore, the means of '47 years and above' group for the global ISPR and its components are higher than that of the other two age groups. This result indicates that older employees' overall performance and its dimensions, as rated by their immediate supervisors, are higher in Jordanian industries than younger employees' performance.

6.4.17 ORGANISATIONAL TENURE AND PERCEIVED WORK ENVIRONMENT

HO: There are no significant differences between employees' organisational tenure in the perceptions of work environment in Jordanian industrial firms.

HA: There are significant differences between employees' organisational tenure in the perceptions of work environment in Jordanian industrial firms.

To examine this hypothesis, one-way ANOVA and means tests were used. The results of these tests are presented in Table (6-11). Considering the F value of 6.04 and its significance level (Sig F = .00) the null hypothesis is rejected. Thus, employees in Jordanian industries perceive their work environment differently, according to their organisational tenure.

In addition, excluding the innovation climate, fairness and pressure to produce dimensions of PWE, organisational tenure also significantly influences all work environment factors. Furthermore, means of the longer tenure group (14 years and above) in terms of global PWE and its ten significant components are higher than those of shorter tenure groups. Hence, employees with longer organisational tenure tend to perceive the overall work environment and its significant factors more positively than those who have spent less time in their organisations.

6.4.18 ORGANISATIONAL TENURE AND ORGANISATIONAL COMMITMENT

HO: There are no significant differences between employees' organisational tenure in the commitment they show toward their organisations in Jordanian industrial firms.

HA: There are significant differences between employees' organisational tenure in the commitment they show toward their organisations in Jordanian industrial firms.

Table 6-11: Results of one-way ANOVA and means tests for organisational tenure and PWE, OC, SPR and ISPR.

NO	Variable	7 years or less	8-13 years	14 years and over	F value	Sig F
1	<i>Perceived work environment</i>	174.38	166.30	183.46	6.04	.01
2	Employee-supervisor relationship	26.55	25.95	27.81	3.24	.00
3	Distributive Justice	10.75	11.23	12.28	6.11	.00
4	Psychological contract	20.46	18.65	21.25	5.15	.00
5	Innovation climate	15.96	15.05	16.28	2.09	.08
6	Co-workers relations	13.11	13.22	14.61	9.02	.00
7	Supervisory style	14.36	13.25	14.63	4.51	.00
8	Performance-reward relationship	12.09	11.38	12.57	2.53	.04
9	Decision making policy	12.81	11.69	13.63	7.02	.00
10	Employee competence	08.04	07.46	08.24	6.06	.00
11	Task characteristics	14.48	12.97	14.67	6.60	.00
12	Fairness	11.96	12.14	12.90	1.86	.12
13	Employee work motivation	8.04	07.59	08.56	7.60	.00
14	Pressure to produce	05.88	05.73	06.08	1.46	.21
15	<i>Organisational commitment</i>	51.21	50.90	54.70	5.41	.00
16	Affective commitment	30.64	30.26	32.83	4.02	.00
17	Continuance commitment	20.57	20.64	21.87	1.99	.09
18	<i>Self performance rating</i>	60.63	60.59	62.92	5.54	.00
19	Work skills (self-rating)	12.37	12.35	12.80	3.53	.01
20	Work enthusiasm (self-rating)	12.72	12.55	12.76	1.75	.14
21	Job performance (self-rating)	12.21	12.38	12.66	3.27	.01
22	Work duties (self-rating)	12.13	12.15	12.61	3.22	.01
23	Readiness to Innovate (self-rating)	11.20	11.15	12.10	6.42	.00
24	<i>Immediate supervisor performance rating</i>	49.70	47.4	52.14	3.93	.00
25	Readiness to Innovate (supervisor-rating)	12.05	11.36	12.78	2.99	.02
26	Work duties (supervisor-rating)	10.49	10.08	11.00	3.48	.01
27	Job performance (supervisor-rating)	10.05	09.57	10.34	2.81	.03
28	Work enthusiasm (supervisor-rating)	10.33	09.89	10.98	4.08	.00
29	Work skills (supervisor-rating)	06.80	06.50	07.05	2.79	.03

From Table (6-11) it can be seen that the F value of 5.41 is significant (Sig F = .00). This result shows that there are significant differences between employees' organisational tenure in OC. Therefore, the null hypothesis is rejected, and it is concluded that organisational tenure explains the variance in OC. Although the AC dimension of OC is significant (F = 4.02, Sig F = .00), the continuance commitment factor is not significant (table 6-11). Furthermore, Table (6-11) shows that the '14 years and above' tenure group shows the highest mean values for global OC (54.7) and its AC component

(32.83). To this end, it can be concluded that employees who have spent longer time in their organisations tend to show higher organisational and continuance commitment levels than those who have spent less time in their organisations.

6.4.19 ORGANISATIONAL TENURE AND SELF PERFORMANCE RATINGS

HO: There are significant differences between employees' organisational tenure in rating their performance in Jordanian industrial firms.

HA: There are significant differences between employees' organisational tenure in rating their performance in Jordanian industrial firms.

Table (6-11) shows that the F value of 5.54 is significant (Sig F = .00). Thus, the null hypothesis is not supported. On the other hand, except for the work enthusiasm factor, all other SPR dimensions are significantly different (table 6-11). As can be seen from Table (9-11), the '14 years and above' tenure level has the highest mean values for general SPR and its four significant factors. This result indicates that the employees with longer organisational tenure tend to show higher levels of overall self-rated performance and its significant factors than shorter tenure employees.

6.4.20 ORGANISATIONAL TENURE AND ISPR

HO: There are no significant differences between employees' organisational tenure in immediate supervisor rated performance in Jordanian industrial firms.

HA: There are significant differences between employees' organisational tenure in immediate supervisor rated performance in Jordanian industrial firms.

Considering the F value of 3.93 and its significance level (Sig F = .00), the null hypothesis is rejected (table 6-11). With respect to the ISPR dimensions, Table (6-11) shows that its five factors are significantly different. In addition, the means test results reveal that the longer tenure group shows the highest mean values for the global ISPR variable and its dimensions. Thus, according to their immediate supervisors' ratings, employees with longer organisational tenure tend to show higher levels of overall performance, readiness to innovate, work duties, job performance, work enthusiasm and work skills than those with shorter tenure.

6.4.21 JOB TENURE AND PERCEIVED WORK ENVIRONMENT

HO: There are no significant differences between employees' job tenure in the perceptions of work environment in Jordanian industrial firms.

HA: There are significant differences between employees' job tenure in the perceptions of work environment in Jordanian industrial firms.

Table 6-12: Results of one-way ANOVA and means tests for job tenure and PWE, OC, SPR and ISPR.

NO	Variable	7 years or less	8-13 years	14 years and over	F value	Sig F
1	<i>Perceived work environment</i>	168.94	169.94	183.39	6.86	.00
2	Employee-supervisor relationship	25.22	26.04	28.38	6.14	.00
3	Distributive Justice	10.46	11.35	11.88	4.46	.00
4	Psychological contract	19.73	19.42	20.95	2.68	.03
5	Innovation climate	15.51	15.41	16.21	1.81	.12
6	Co-workers relations	13.06	13.30	14.53	6.36	.00
7	Supervisory style	13.90	13.71	14.67	3.33	.01
8	Performance-reward relationship	11.61	11.43	12.89	4.92	.00
9	Decision making policy	12.39	12.21	13.60	6.85	.00
10	Employee competence	07.85	07.72	08.33	3.37	.01
11	Task characteristics	14.00	13.66	14.67	3.33	.01
12	Fairness	11.63	11.67	12.86	3.61	.01
13	Employee work motivation	07.78	07.86	08.39	3.69	.01
14	Pressure to produce	05.85	05.73	06.05	2.80	.15
15	<i>Organisational commitment</i>	50.28	51.61	54.18	6.03	.00
16	Affective commitment	29.49	30.87	32.65	4.85	.00
17	Continuance commitment	20.80	20.74	21.53	2.17	.07
18	<i>Self performance rating</i>	60.18	60.05	63.36	8.46	.00
19	Work skills (self-rating)	12.28	12.17	12.92	5.50	.00
20	Work enthusiasm (self-rating)	12.63	12.32	12.94	3.01	.02
21	Job performance (self-rating)	12.14	12.16	12.85	6.09	.00
22	Work duties (self-rating)	12.16	11.95	12.55	3.32	.01
23	Readiness to Innovate (self-rating)	10.99	11.45	12.11	8.23	.00
24	<i>Immediate supervisor performance rating</i>	48.51	48.45	52.01	6.22	.00
25	Readiness to Innovate (supervisor-rating)	11.83	11.68	12.66	4.22	.00
26	Work duties (supervisor-rating)	10.22	10.24	10.92	3.98	.00
27	Job performance (supervisor-rating)	09.71	09.75	10.48	5.15	.00
28	Work enthusiasm (supervisor-rating)	10.04	10.16	10.87	5.82	.00
29	Work skills (supervisor-rating)	06.71	06.61	07.10	3.66	.00

To test this hypothesis, one-way ANOVA and means tests were used. The results of these tests are presented in Table (6-12). As can be seen from this table, the F value of 6.86 is significant at .00. This result thus indicates there are significant differences between employees' job tenures in how they perceive work environment. Thus, the null hypothesis is rejected. Furthermore, the results of Table (6-12) also show that the 11 factors of PWE are also significant. However, differences innovation climate and pressure to produce are non-significant. On the other hand, the means test results show that the '14 years and above' tenure group report the highest mean values for PWE and its significant dimensions. Hence, employees with longer job tenure in Jordanian industries tend to perceive the work environment and its factors more positively than shorter tenure employees.

6.4.22 JOB TENURE AND ORGANISATIONAL COMMITMENT

HO: There are no significant differences between employees' organisational tenure in the commitment they show toward their organisations in Jordanian industrial firms.

HA: There are significant differences between employees' organisational tenure in the commitment they show toward their organisations in Jordanian industrial firms.

From Table (6-12) it can be seen that the F value of 6.03 is significant (Sig F = .00). Thus, job tenure plays a significant role in predicting employee commitment in Jordanian industries. Therefore, the null hypothesis is rejected. Moreover, Table (6-12) shows that the affective commitment factor of OC is significant, but continuance commitment is not significant. In addition, the '14 years and above' group shows the highest mean values for OC and AC (table 6-12). This means that longer job tenure employees in Jordanian industrial firms are more committed than shorter tenure employees.

6.4.23 JOB TENURE AND SELF PERFORMANCE RATINGS

HO: There are no significant differences between employees' job tenure in self rated performance in Jordanian industrial firms.

HA: There are significant differences between employees' job tenure in self rated performance in Jordanian industrial firms.

Table (6-12) shows that the F value of 8.46 is significant at .00. Thus, the null hypothesis is not supported. Moreover, the five components of SPR variable also show significant differences. Furthermore, the third job tenure group (14 years and above) shows means of SPR and its factors that are higher than that of other two groups (table

6-12). This result indicates that employees with longer job tenures in Jordanian industries tend to rate their performance more positively than those with less tenure.

6.4.24 JOB TENURE AND IMMEDIATE SUPERVISOR PERFORMANCE RATINGS

HO: There are no significant differences between employees' job tenure in immediate supervisor rated performance in Jordanian industrial firms.

HA: There are significant differences between employees' job tenure in immediate supervisor rated performance in Jordanian industrial firms.

From Table (6-12) it can be seen that the F value of 6.22 is significant (Sig F = .00 < .01). Moreover, the five components of ISPR are also significantly different. Given these results, it can be concluded that job tenure can significantly explain variance in the global form of ISPR, as well as in its five dimensions. Thus, the null hypothesis is not supported. Furthermore, the third job tenure group (14 years and above) in Table (6-12) shows the highest mean values for ISPR and its dimensions. Hence, it can be suggested that employees with longer job tenures in Jordanian industries are more positively rated by their immediate supervisors than those with shorter job tenures.

6.4.25 JOB LEVEL AND PERCEIVED WORK ENVIRONMENT

HO: There are no significant differences between employee job levels in their perceptions of work environment in Jordanian industrial firms.

HA: There are significant differences between employee job levels in their perceptions of work environment in Jordanian industrial firms.

To examine this hypothesis, one-way ANOVA and means tests were used. The results of these tests are presented in Table (6-13). As can be seen from this table, the F value of 30.96 is highly significant (Sig F < .01). Thus, the null hypothesis is rejected. Furthermore, the 13 dimensions of PWE also show highly significant differences. On the other hand, the top management group in Table (6-13) shows higher mean values for PWE and its factors than middle and lower management levels. This result indicates that the top management employees in Jordanian industrial firms tend to perceive the overall work environment and 12 of its factors more positively than middle and bottom level employees. Nevertheless, the mean results of the pressure to produce dimension of PWE indicate that top level employees experience higher levels of production pressure than lower level employees.

Table 6-13: Results of one-way ANOVA and means tests for job level and PWE, OC, SPR and ISPR.

NO	Variable	Top management	Middle management	Bottom management	F value	Sig F
1	<i>Perceived work environment</i>	198.92	169.40	168.74	30.96	.00
2	Employee-supervisor relationship	13.10	25.66	25.81	14.10	.00
3	Distributive Justice	13.03	10.73	168.74	13.04	.00
4	Psychological contract	22.79	19.70	25.81	13.70	.00
5	Innovation climate	18.15	18.25	10.90	14.49	.00
6	Co-workers relations	15.29	13.34	19.80	14.60	.00
7	Supervisory style	15.81	13.65	15.18	14.36	.00
8	Performance-reward relationship	14.55	11.60	13.18	24.82	.00
9	Decision making policy	14.85	12.36	13.80	24.17	.00
10	Employee competence	08.60	07.84	13.80	06.92	.00
11	Task characteristics	15.88	13.91	11.32	15.38	.00
12	Fairness	14.48	11.83	12.06	19.77	.00
13	Employee work motivation	08.55	07.96	07.88	5.50	.00
14	Pressure to produce	06.85	05.60	05.65	13.37	.00
15	<i>Organisational commitment</i>	55.31	51.38	50.57	08.90	.00
16	Affective commitment	35.95	30.27	29.47	23.92	.00
17	Continuance commitment	19.33	21.11	21.11	05.47	.00
18	<i>Self performance rating</i>	63.15	60.60	60.70	05.08	.01
19	Work skills (self-rating)	12.80	12.32	12.34	02.25	.11
20	Work enthusiasm (self-rating)	12.78	12.59	12.57	00.45	.64
21	Job performance (self-rating)	12.85	12.23	12.30	04.54	.01
22	Work duties (self-rating)	12.67	12.09	12.13	03.41	.03
23	Readiness to Innovate (self-rating)	12.04	11.37	11.36	04.10	.02
24	<i>Immediate supervisor performance rating</i>	57.44	47.94	48.14	26.57	.00
25	Readiness to Innovate (supervisor-rating)	14.70	11.52	11.62	27.71	.00
26	Work duties (supervisor-rating)	11.92	10.17	10.18	18.13	.00
27	Job performance (supervisor-rating)	11.52	09.65	09.52	19.22	.00
28	Work enthusiasm (supervisor-rating)	07.76	06.60	06.62	12.21	.00
29	Work skills (supervisor-rating)	07.76	06.60	06.62	15.74	.00

6.4.26 JOB LEVEL AND ORGANISATIONAL COMMITMENT

HO: There are no significant differences between employee job levels in the commitment they show toward their organisations in Jordanian industrial firms.

HA: There are significant differences between employee job levels in the commitment they show toward their organisations in Jordanian industrial firms.

From Table (6-13) it can be seen that the F value of 8.9 is significant at .01. This result thus significantly departs from the expectation under the null hypothesis, and the alternative hypothesis is supported. In addition, the affective ($F = .23.92$, Sig $F = .00$) and continuance commitment ($F = .5.47$, Sig $F = .00$) dimensions of OC are also significantly different. Since the mean values of the top management group for OC, AC and CC are greater than the mean of the other groups, it can be proposed that top level employees in Jordanian industrial firms are more committed than lower level employees.

6.4.27 JOB LEVEL AND SELF PERFORMANCE RATINGS

HO: There are no significant differences between employee job levels in self rated performance in Jordanian industrial firms.

HA: There are significant differences between employee job levels in self rated performance in Jordanian industrial firms.

Given the F value of 5.08 in Table (6-13) and its significance level of .01, it can be proposed that the null hypothesis is not supported. Excluding the work enthusiasm factor, all the other dimensions of SPR show significant differences. In addition, the top management group shows the highest mean values for SPR and its significant components, compared with other two groups. This result thus indicates that the top level employees in Jordanian industrial firms tend to rate their performance more positively than lower level employees.

6.4.28 JOB LEVEL AND IMMEDIATE SUPERVISOR PERFORMANCE RATINGS

HO: There are no significant differences between employee job levels in immediate supervisor rated performance in Jordanian industrial firms.

HA: There are significant differences between employee job levels in immediate supervisor rated performance in Jordanian industrial firms.

Table (6-13) shows that the F value of 26.57 is significant (Sig $F = .00$). Hence, the null hypothesis is rejected. In addition, Table (6-13) also shows that the five dimensions of ISPR are significantly different. On the other hand, the means test results show that the top job level group reports the highest mean values for ISPR and its factors. Hence, the higher level employees' overall performance and its dimensions in Jordanian industries are more highly rated by their supervisors than is the case for lower level employees.

6.4.29 THE PWE AND ORGANISATIONAL COMMITMENT

HO: The perceived work environment in Jordanian industries will not significantly explain the variance in employees' organisational commitment.

HA: The perceived work environment in Jordanian industries will significantly explain the variance in employees' organisational commitment.

Table 6-14: Results of multiple R, Regression ANOVA and correlation for PWE and OC global concepts.

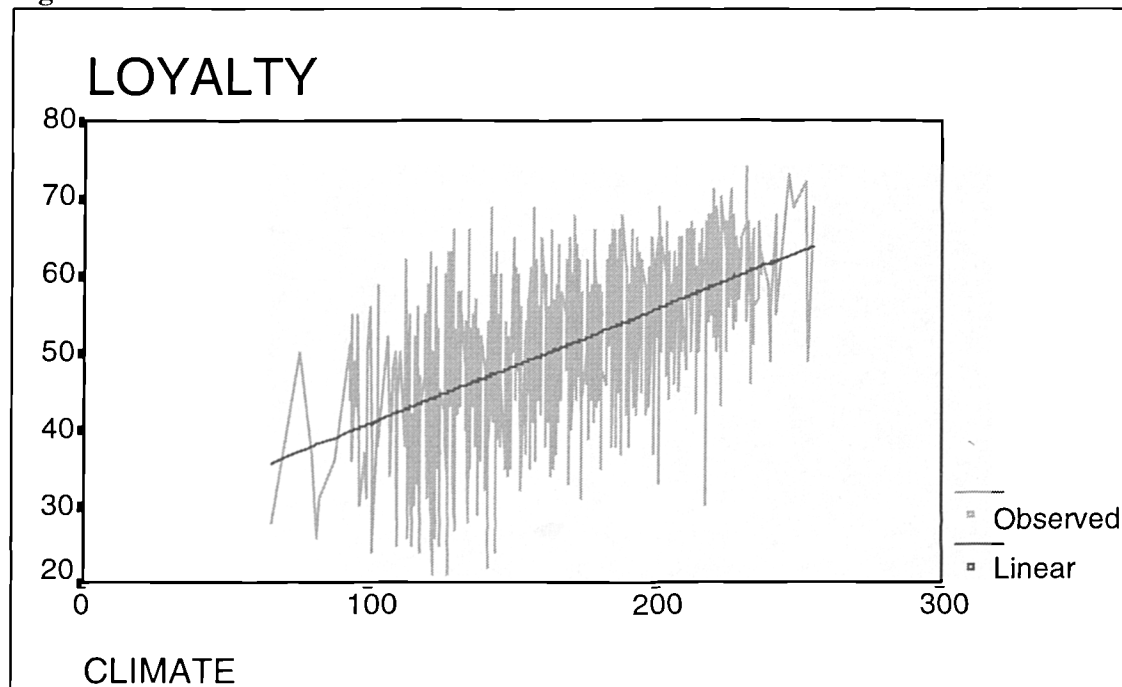
F	Sig. F	T value	Sig. T	Multiple R	R square	Adjusted R square	Beta	<i>r</i>	<i>p</i> value
362.4	.00	19.03	.00	.56	.317	.316	.56	.56	.00
Normality		Heteroscedasticity		Serial correlation		Coefficient			
13.04 (.04)		27.65 (.000)		0.17 (.679)		.15			

To test this hypothesis, the global variable of PWE was regressed against the general variable of OC. Table (6-14) shows that the F value of 362.4 and the t value of 19.03 are highly significant (significance level < .01). Thus, the null hypothesis is not supported. Moreover, the *r* value of .56 is also highly significant (*p* = .00). Hence, it can be proposed that PWE can significantly explain variance in OC. Provided that the sign of *r* value is positive, it can be assumed that the more positive the perception of work environment in Jordanian industries, the higher the employees' organisational commitment, and vice versa. In addition, from Table (6-14) it can be noticed that the values of Multiple R, *r* and beta are equal. The multiple R is the correlation coefficient between the observed and predicted values of the dependent variable. Its value of .56 indicates that there is a linear relationship between PWE and OC. Normally, in two variable regression, the multiple R takes the *absolute* value of the Pearson correlation between the target variable and the independent variable. Therefore, the multiple R value's sign cannot be used to define the direction of any relationship, simply because it can not have a negative value. Moreover, beta "gives the number of standard deviations change on the dependent variable that will be produced by a change of one standard deviation on the independent variable concerned" (Kinnear and Gray, 1997, p. 265). Thus, a change of one standard deviation in PWE produces a change of .56 of standard deviation in OC (table 6-14). Hence, beta takes the value of multiple R and *r* when two variables are regressed against each other.

Furthermore, Table (6-14) also shows that the value of R square is .317, and this means that PWE can explain the variance in OC to the extent of 31.7%. R square

increases in value as the number of explanatory variables in an equation is increased. Therefore, the value of adjusted R square that corrects this bias should be considered. Accordingly, it can be said that the true variance that PWE can explain in OC is 31.6%, i.e. the adjusted R square value in Table (6-14). To support these findings obtained from the regression and correlation tests, the curve estimation test was used. As can be seen in Figure (6-2) there is a linear relationship between climate (PWE) and loyalty (OC).

Figure 6-2: Result of curve estimation test for PWE and OC.



In summary, considering the results of the regression, correlation and curve estimation tests, it can be proposed that perceived work environment in Jordanian industrial firms can significantly explain variance in employees' organisational commitment.

6.4.30 THE PWE DIMENSIONS AND OC

HO: The dimensions of perceived work environment in Jordanian industries will not significantly explain the variance in employees' organisational commitment.

HA: The dimensions of perceived work environment in Jordanian industries will significantly explain the variance in employees' organisational commitment.

Three tests were used to examine this hypothesis, namely *Single* test of Microfit and *Stepwise* and *Correlation* tests of SPSS-X. Table (6-15) shows that the F value of 31.02 is significant at .01.

Table 6-15: Results of Single analysis for PWE dimensions and OC.

NO	Variable	T value	Sig. T	Coefficient
1	Employee competence	1.25	.213	.22
2	Psychological contract	2.43	.015	.17
3	Distributive justice	2.89	.004	.26
4	Decision making policy	0.89	.372	.10
5	Employee-immediate supervisor relationships	2.67	.008	.16
6	Fairness	-0.52	.604	.06
7	Innovation climate	5.75	.000	.48
8	Employee work motivation	1.78	.076	.32
9	Performance-reward relationships	-1.03	.302	.11
10	Pressure to produce	-2.40	.017	.36
11	Co-workers relations	1.44	.149	.15
12	Supervisory style	0.13	.897	.01
13	Task characteristics	.04	.967	.00

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
31.02 (0.00)	.33	11.99 (0.00)	21.76 (0.00)	0.11 (.744)

In addition, the R-Bar Squared value of .33 implies that the dimensions of PWE can collectively explain the variance in OC to the extent of 33%. Given these findings, it can be suggested that the null hypothesis is rejected.

On the other hand, from Table (6-15) it can be seen that only five dimensions of PWE are significant. These variables are psychological contract, distributive justice, employee-immediate supervisor relationships, innovation climate and pressure to produce. Table (6-15) shows that normality distribution of the data has been violated (11.99, Sig. Level 0.00). Given the large sample of the study (1000 subjects), it can be suggested that this problem is of less effect on the accuracy and reliability of the above results. In addition, Table (6-15) shows that the above model obtained from the single method of Microfit program is heteroscedastic (i.e., disturbances have different variances). Since the nature of the data used in this study is cross-sectional, it can be assumed that heteroscedasticity is of less importance in this study.

To define the most important dimensions of PWE in predicting variance in OC, the stepwise method of regression test was used. The results of stepwise regression were re-examined using the single method of Microfit program.

As can be seen from this Table (6-16), six variables out of 13 were entered one after another in the stepwise analysis as the most important factors of PWE in predicting 34% of the variance in OC.

Table 6-16: Results of Single test (Microfit) and correlation (SPSS) for PWE dimensions and OC.

Variable	T value	Sig. F	Coefficient	r	p value
1. Innovation climate	5.86	.00	.47	.52	.00
2. employee-immediate supervisor relationships	2.95	.00	.16	.49	.00
3. Psychological contract	2.50	.01	.16	.42	.00
4. Distributive justice	2.64	.01	.22	.40	.00
5. Employee work motivation	2.51	.01	.42	.2:	.01
6. Pressure to produce	2.39	.02	.34	-.33	.00

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
53.55 (0.00)	0.34	13.67 (0.00)	23.09 (0.00)	0.11 (.732)

Furthermore, Table (6-16) shows that innovation climate was entered in the first step of analysis. The correlation test results in the same table, reveal that innovation climate has the highest significant correlation ($r = .52$) with OC. Nonetheless, the pressure to produce dimension of PWE was entered in the last step showing a negative relationship with OC. These results thus mean that the six dimensions of PWE have explained 34% of the variance in OC. Nevertheless, the relationships of these 6 PWE components with OC are also presented in Table (6-16). As can be seen from this table, the correlation coefficients of these six dimensions are highly significant. In addition, it is no surprise that the regressor with the largest t-value also has the largest correlation (.52) with the dependent variable (OC), i.e., innovation climate.

In summary, the 13 dimensions of PWE significantly and collectively predicted 33% of the variance in OC. However, 6 dimensions only out of 13 were found to be the most important components in explaining this variance.

6.4.31 PERCEIVED WORK ENVIRONMENT AND AFFECTIVE COMMITMENT

HO: Perceived work environment in Jordanian industrial firms will not significantly explain variance in employees' affective commitment.

HA: Perceived work environment in Jordanian industrial firms will significantly explain variance in employees' affective commitment.

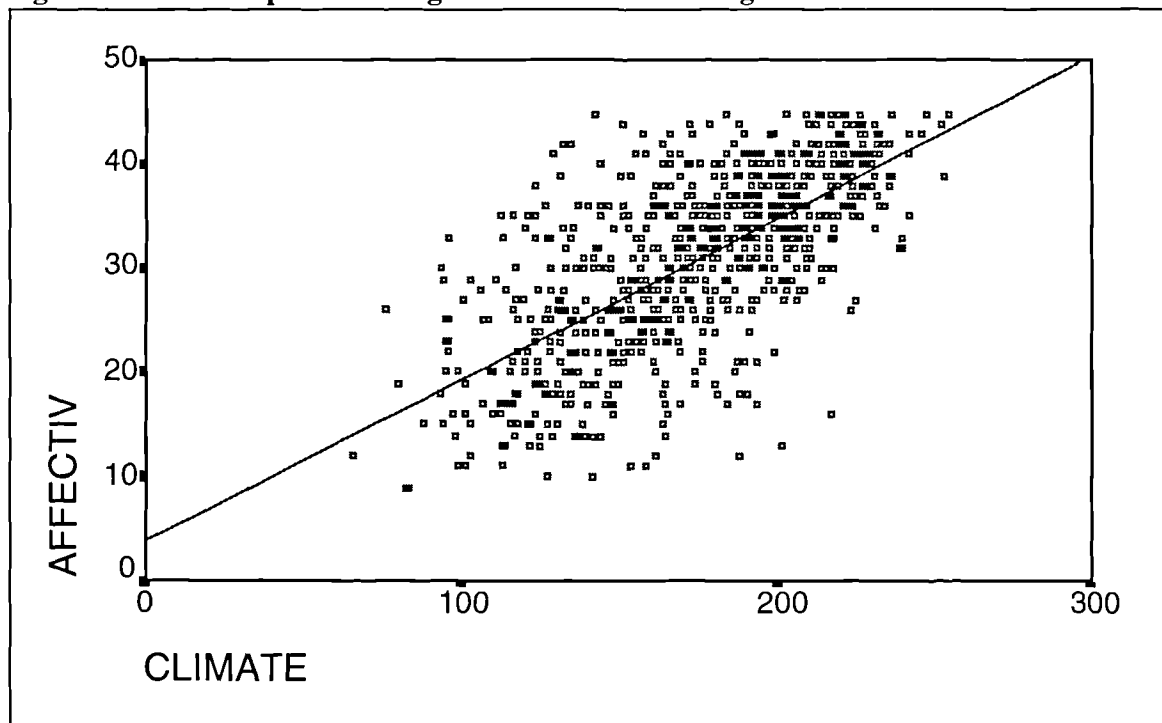
Table 6-17: Results of multiple R, regression ANOVA and correlation for PWE and AC.

Variables	Multiple R	Adjusted R square	F value	Sig. F	T value	Beta	Sig. T	r	p value
PWE and AC	.68	.46	657.7	.00	25.65	.68	.00	.68	.00

Normality	Heteroscedasticity	Serial correlation	Coefficient
12.15 (.002)	25.35 (.000)	1.56 (.212)	.16

To test this hypothesis, the PWE variable was regressed against AC, and the results are presented in Table (6-17). From this table, it can be seen that the F value of 657.7 and the t value of 25.65 are significant at .01. Thus, the null hypothesis is not supported. Moreover, the beta and *r* values of .68 indicate that there is a significant positive relationship between PWE and AC. Furthermore, the adjusted R square value of .46 implies that PWE can explain the variance in AC to the extent of 46%. To support these findings and to clarify the relationship between PWE and AC, the scatterplot of these two variables is displayed. As can be seen from Figure (6-3), there is a linear relationship between PWE (climate on x-axis) and AC (affective on y-axis).

Figure 6-3: Scatterplot with regression line of PWE against AC.



To conclude, the perceived work environment in Jordanian industrial firms significantly explains the variance in employees' affective commitment. The more positive the perceptions of work environment, the higher the affective commitment, and vice versa.

6.4.32 THE PWE'S DIMENSIONS AND AFFECTIVE COMMITMENT

HO: The perceived work environment dimensions in Jordanian industries will not significantly explain the variance in employees' affective commitment.

HA: The perceived work environment dimensions in Jordanian industries will significantly explain the variance in employees' affective commitment.

Table 6-18: Results of Single test (Microfit) for PWE dimensions and AC.

NO	Variable	T value	Sig. T	Coefficient
1	Employee competence	1.26	.209	.17
2	Psychological contract	3.79	.000	.20
3	Distributive justice	1.94	.053	.14
4	Decision making policy	.31	.758	.03
5	employee-immediate supervisor relationships	3.65	.000	.17
6	Fairness	0.16	.872	.01
7	Innovation climate	5.74	.000	.37
8	Employee work motivation	1.65	.099	.23
9	Performance-reward relationships	0.63	.529	.05
10	Pressure to produce	2.96	.003	.35
11	Co-workers relations	2.99	.003	.24
12	Supervisory style	-.07	.944	.00
13	Task characteristics	1.54	.123	.12

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
53.55 (0.00)	0.47	13.72 (0.00)	18.89 (0.00)	0.717 (.397)

To test this hypothesis, the *single* and *stepwise* methods of regression test were used, together with the correlation test. Table (6-18) shows that the F value of 53.55 is significant (Sig. F = .00). Furthermore, the R-Bar-Square value of .47 implies that the 13 factors of PWE can significantly and collectively explain 47% of the variance in AC. Considering these results, it can be suggested that the null hypothesis is not supported. Table (6-18) also presents the t values and their significance levels for all PWE dimensions. As can be seen from this table, five dimensions of PWE are significant (Sig. T < .05). These dimensions are psychological contract, employee-immediate supervisor relationships, innovation climate, pressure to produce and co-workers relations.

To define the most important PWE factors in affecting employees' affective commitment, stepwise method was used. Table (6-19) presents the final results of this test after re-examining it using the single method of Microfit.

Table 6-19: Results of Single test (Microfit) and correlation (SPSS) for PWE dimensions and AC.

Variable	T value	Sig. T	Coefficient	<i>r</i>	<i>p</i> value
1. Psychological contract	4.95	.00	.25	.51	.00
2. employee-immediate supervisor relationships	5.01	.00	.20	.57	.00
3. Innovation climate	6.68	.00	.42	.59	.00
4. Employee work motivation	2.30	.02	.30	.32	.00
5. Pressure to produce	-3.76	.00	.42	-.40	.00
6. Co-workers relations	4.22	.00	.31	.45	.00

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
114.02 (0.00)	0.46	12.45 (0.00)	19.62 (0.00)	0.87 (.352)

As shown in Table (6-19), six factors of PWE were significantly ($F = 114.02$, $\text{Sig } F = .00$) loaded in the stepwise analysis, explaining 46% (R-Bar-Square) of variance in AC. Furthermore, Table (6.19) shows that the t values for these 6 components are significant ($< .05$). In addition, their correlations with AC are also significant and positive, except for the pressure to produce concept (table 6-19). Although its correlation is significant, the pressure to produce variable shows an inverse relationship (-.11) with AC. This negative sign of r indicates that the higher the pressure to produce, the lower the affective commitment, and vice versa. Moreover, innovation climate, compared to the other five variables in Table (6-19) shows the highest correlation value (.59) and highest t value (6.68). Above all, it has been entered in the first step in the stepwise test. Therefore, it can be suggested that this variable is the most important factor of the work environment in influencing employees' affective commitment.

To summarise, the dimensions of perceived work environment significantly and collectively predict 47% of the variance in affective commitment. However, only six factors were found to be important in accounting for this variance.

6.4.33 THE PWE AND CONTINUANCE COMMITMENT

HO: The perceived work environment in Jordanian industrial firms will not significantly explain the variance in employee continuance commitment.

HA: The perceived work environment in Jordanian industrial firms will significantly explain the variance in employee continuance commitment.

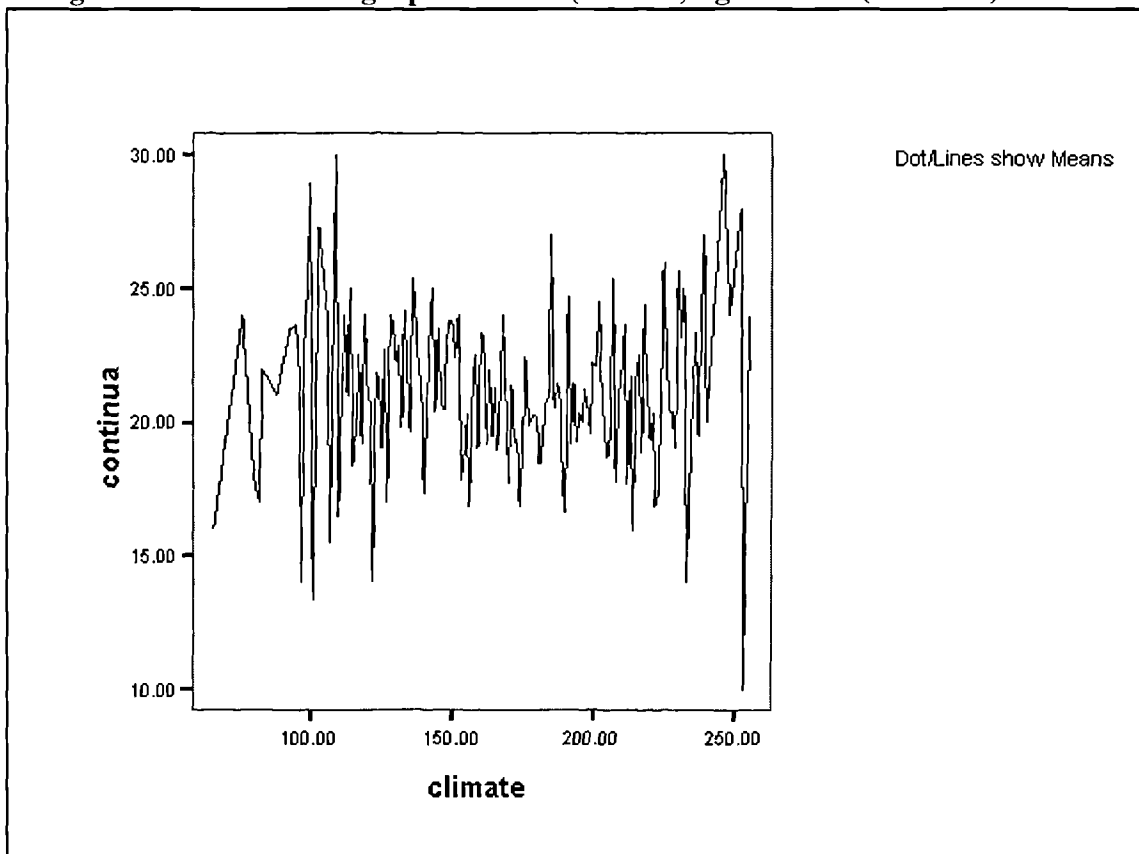
Table 6-20: Results of multiple R, regression ANOVA and correlation for PWE and CC.

Multiple R	Adjusted R square	F value	Sig. F	T value	Sig. T	Beta	r	p value
.05	.00	1.94	.16	-1.40	.16	-.05	-.05	.16

Normality	Heteroscedasticity	Serial correlation	Coefficient
26.56 (.000)	1.28 (.258)	0.37 (.544)	.01

To test this hypothesis, perceived work environment was regressed against continuance commitment. The results of this regression are presented in Table (6-20). This table shows that the F value of 1.94 and the t value of -1.40 are non-significant. In addition, the values of multiple R (.05) and the adjusted R square (.00) indicate that the proportion of the variance of CC accounted for by the regression is non-significant, i.e. 0.00%.

Figure 6-4: Interactive graph of PWE (climate) against CC (continua).



Moreover, the beta value of -.05 in the same table denotes that the change in CC produced by a positive increment of one standard deviation in the PWE is very weak. Furthermore, to investigate the relationship between PWE and CC, a bivariate correlation test was used. As can be seen in Table (6-20), the correlation coefficient of -.05 is not only weak, but is also non-significant ($p = .16 > .05$).

Furthermore, the interactive graph with line method selected was also used to examine the PWE-CC relationship. As can be seen from Figure (6-4), there is no linear relationship between these two variables. Given these results of the regression, correlation and interactive graph tests, it can be suggested that PWE does not seem to play a significant role in affecting employees' CC. Thus, the null hypothesis is supported.

In summary, the perceived work environment in Jordanian industrial firms does not play a significant role in explaining the variance in employees' continuance commitment.

6.4.34 THE DIMENSIONS OF THE PWE AND CONTINUANCE COMMITMENT

HO: The perceived work environment dimensions in Jordanian industries will not significantly explain the variance in employees' continuance commitment.

HA: The perceived work environment dimensions in Jordanian industries will significantly explain the variance in employees' continuance commitment.

Table 6-21: Results of Single test (Microfit) for PWE dimensions and CC.

NO	Variable	T value	Sig. T	Coefficient	r	p
1	Employee competence	0.45	.68	.04	-	-
2	Psychological contract	-.83	.41	.04	-	-
3	Distributive justice	2.18	.03	.13	.03	.44
4	Decision making policy	1.03	.30	.07	-	-
5	employee-immediate supervisor relationships	-.26	.79	.01	-	-
6	Fairness	-1.02	.31	.07	-	-
7	Innovation climate	2.01	.05	.11	.01	.90
8	Employee work motivation	0.78	.440	.09	-	-
9	Performance-reward relationships	2.40	.02	.16	- .09	.05
10	Pressure to produce	0.15	.95	.01	-	-
11	Co-workers relations	-1.40	.16	.09	-	-
12	Supervisory style	0.29	.77	.02	-	-
13	Task characteristics	-1.83	.07	.12	-	-

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
1.83 (0.04)	0.014	21.83 (0.00)	1.81 (0.18)	0.257 (.612)

Table (6-21) shows that the F value of 1.8 is significant ($.0346 < .05$). Thus, PWE factors can collectively and significantly influence employees' CC. The R-Bar-Square value in the same table provides the percentage of this influence, that is 1.4% (table 6-21). Given these results, it can be proposed that the dimensions of PWE are of importance when the target is developing employees' continuance commitment. Thus, the null hypothesis is not supported. However, only three PWE dimensions out of 13 were found to be significant: performance-reward relationships, distributive justice and innovation climate. Despite being significant in the regression test, the distributive justice and innovation climate factors showed a non-significant correlation with CC (table 6-21). However, the correlation test results also show that the performance-reward relationships and CC are inversely and significantly ($p = .02$) related ($r = -.09$). The negative sign of this correlation indicates that employees who feel an imbalance between the efforts they put in the work and the rewards they get in return tend to show higher continuance commitment, and vice versa.

On the other hand, the regression test with stepwise method selected was used to define the most important PWE dimensions in influencing CC. The results of this test were re-examined using single test of Microfit program. The results obtained from the single test and the correlation test are presented in table (6-22). As can be seen from this table, only one factor of PWE was significantly entered in the stepwise analysis, namely task characteristics. Its F value of 7.9 is significant at .01. This variable explains 0.9% of the variance in CC, which is weak. In addition, the results of correlation test reveal that task characteristics is significantly (.05) and negatively related ($r = -.10$) to CC. Thus, the more positive the perception of task characteristics (TC), the lower the continuance commitment, and vice versa.

Table 6-22: Results of the Single (Microfit) and correlation tests (SPSS) for PWE dimensions and CC.

Variable	T value	Sig. T	Coefficient	<i>r</i>	<i>p</i>
Task characteristics	-2.8	.01	-.14	-.10	.05

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
7.9 (0.01)	0.01	24.68 (0.00)	.15 (0.70)	0.437 (.509)

To conclude, the PWE factors significantly and collectively explain 1% of the variance in continuance commitment. However, only three PWE dimensions played a

significant role in accounting for this variance; performance-reward relationships, distributive justice and innovation climate. Nonetheless, only two dimensions were found to be the most important predictors of continuance commitment, namely performance-reward relationships and task characteristics.

6.4.35 PERCEIVED WORK ENVIRONMENT AND SELF PERFORMANCE RATINGS

HO: The perceived work environment in Jordanian industries will not significantly explain the variance in employee self rated performance.

HA: The perceived work environment in Jordanian industries will significantly explain the variance in employee self rated performance.

Table 6-23: Results of multiple R and regression ANOVA for PWE and SPR.

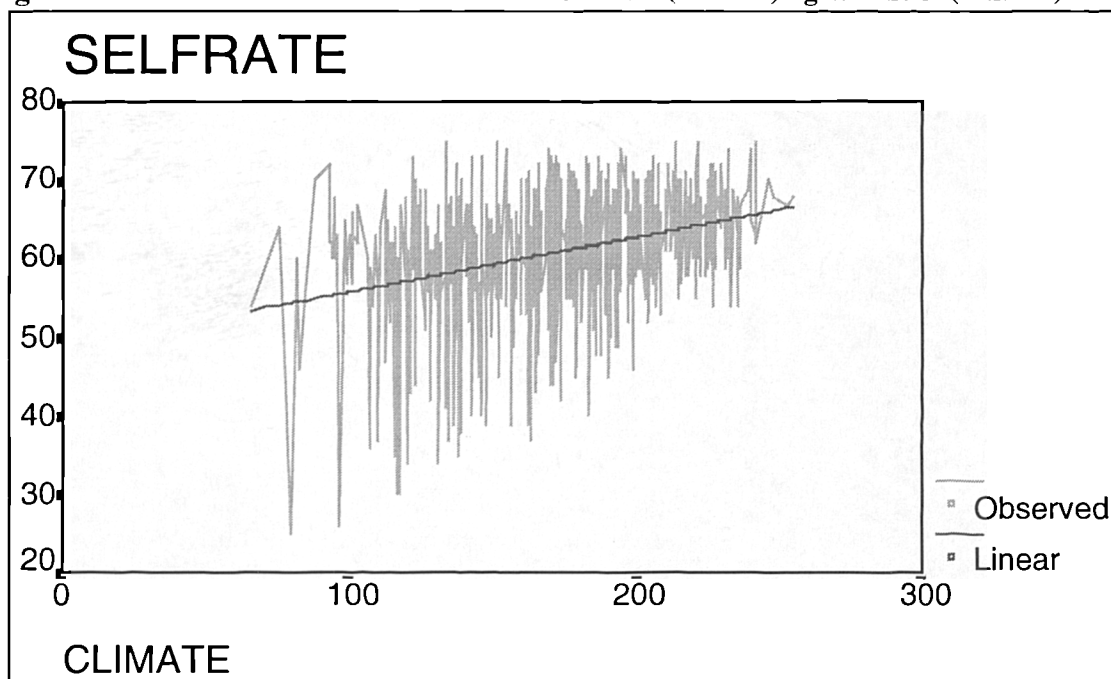
Multiple R	Adjusted R square	F value	Sig. F	T value	Sig. T	Beta
.34	.12	104.7	.00	10.23	.00	.34

Normality	Heteroscedasticity	Serial correlation	Coefficient
238.71 (.000)	45.88 (.000)	35.03 (.000)	.07

To test this hypothesis, perceived work environment was regressed against self rated performance. The results of this regression are presented in Table (6-23). As can be seen from this table, the multiple R and beta values (.34) show that there is a significant positive relationship between PWE and SPR. Therefore, the more positive the perception of work environment, the higher the self rated performance, and vice versa. Moreover, the F (104.7) and t values (10.23) are highly significant (Sig F = .00), and this implies that PWE can significantly explain the variance in SPR. In addition, the adjusted R square value of .12 in Table (6-23) signifies that the estimate of the proportion of the variance of SPR accounted for by regression is 12%.

On the other hand, the curve estimation test was also used to examine the association between the variables of PWE and SPR. Figure (6-5) shows that there is a moderate relationship between these two variables. Given the results of multiple R, regression ANOVA and curve estimation, it can be suggested that the null hypothesis is not supported.

Figure 6-5: Results of curve estimation test of PWE (climate) against SPR (selfrate).



6.4.36 PWE DIMENSIONS AND SELF PERFORMANCE RATINGS

HO: The perceived work environment dimensions in Jordanian industries will not significantly explain the variance in employees' self rated performance.

HA: The perceived work environment dimensions in Jordanian industries will significantly explain the variance in employees' self rated performance.

Table 6-24: Results of the Single test for PWE dimensions and SPR.

NO	Variable	T value	Sig. T	Coefficient
1	Employee work motivation	6.05	.00	.90
2	Employee competence	3.97	.00	.61

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
17.18 (0.00)	0.20	126.27 (0.00)	87.64 (0.00)	30.11 (.000)

Table (6-24) shows that the F value of 17.18 is highly significant (Sig. level = .00). Furthermore, the R-Bar-Square value of .20 indicates that the PWE dimensions can significantly explain the variance in SPR to the extent of 20%. Thus, the null hypothesis is rejected. Nonetheless, the results of regression test show that only two PWE dimensions are significant: employee work motivation and employee competence (table 6-24).

Table 6-25: Results of Single (Microfit) and correlation tests (SPSS-X) for PWE dimensions and SPR.

<i>NO</i>	<i>Variable</i>	<i>T value</i>	<i>Sig. T</i>	<i>Coefficient</i>	<i>r</i>	<i>p value</i>
1	Employee work motivation	6.20	.00	.92	.39	.00
2	Employee competence	4.22	.00	.61	.33	.00
3	Employee-immediate supervisor relationships	2.77	.01	.10	.28	.01
4	Supervisory style	2.39	.02	.19	.32	.00

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
50.33 (0.00)	0.20	128.28 (0.00)	90.49 (0.00)	25.8 (.000)

On the other hand, regression analysis with stepwise method selected was also used to define the most important PWE dimensions in influencing employees' self performance rating. The final results of this test, as obtained from the Microfit, are presented in Table (6-25). Four PWE factors were significantly ($F = 50.33$, $\text{Sig. } F = .00$) loaded in stepwise method, namely employee work motivation, employee competence, employee-immediate supervisor relationships and supervisory style. As can be seen from Table (6-25), the dimension with the highest t value (6.20) has the highest correlation (.24) with SPR. Therefore, employee work motivation can said to be the most important PWE factor in explaining the variance in employee self rated performance.

In summary, perceived work environment factors significantly and collectively explain 20% of the variance in self rated performance. However, only four dimensions out of 13 predicted this variance in self rated performance.

6.4.37 PWE DIMENSIONS AND THE WORK SKILLS FACTOR OF SPR

HO: Perceived work environment dimensions in Jordanian industries will not significantly explain the variance in employees' work skills, as rated by themselves.

HA: Perceived work environment dimensions in Jordanian industries will significantly explain the variance in employees' work skills, as rated by themselves.

Table 6-26: Results of the Single test (Microfit) for PWE dimensions and work skills factor of SPR.

NO	Variable	T value	Sig. T	Coefficient
1	Employee work motivation	5.96	.00	.26
2	Employee competence	3.66	.00	.16
3	Task characteristics	-2.35	.02	-.06

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
11.07 (0.00)	0.15	83.72 (0.00)	62.24 (0.00)	13.24 (.000)

To test this hypothesis, Single method of regression analysis was used. The final results of this test are presented in Table (6-26). As can be seen from this table, the F value of 11.7 is significant at .00. Moreover, the R-Bar-Square value (0.15) indicates that PWE dimensions can explain the variance in work skills to the extent of 15%. Given these results, it can be suggested that the null hypothesis is not supported. However, only three PWE factors were found to be significant when regressed against work skills, namely employee work motivation, employee competence and task characteristics (table 6-26).

Table 6-27: Results of the Single (Microfit) and Correlation (SPSS-X) tests for PWE dimensions and work skills factor of SPR.

NO	Variable	T value	Sig. T	Coefficient	r	p value
1	Employee work motivation	6.18	.00	.26	.35	.00
2	Employee competence	3.18	.00	.16	.29	.01
3	Supervisory style	2.49	.01	.05	.26	.01

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
46.60 (0.00)	0.15	75.13 (0.00)	76.14 (0.00)	17 (.000)

On the other hand, to define the most important PWE dimensions in influencing employees' work skills, stepwise and correlation tests were conducted. The results of stepwise were re-examined using Microfit program. The results are presented in Table (6-27). Only three PWE factors were significantly (F = 46.6, Sig. F = 00) entered in this test: employee work motivation, employee competence and supervisory style (table 6-27). As can be seen from Table (6-27), these three variables explain 15% of the variance in work skills. Furthermore, Table (6-27) presents the T values and its

significance level, and the correlation and its significance level for these three PWE factors. As can be seen from this table, the employee work motivation variable has the highest T value (6.18) and the highest correlation (.35). Thus, it can be proposed that the employee work motivation factor is the most important predictor of work skills.

To summarise, perceived work environment dimensions significantly and collectively predict 15% of the variance in work skills. However, the concept of employee work motivation was found to be the most important predictor of work skills.

6.4.38 PWE DIMENSIONS AND THE WORK ENTHUSIASM FACTOR OF SPR

HO: Perceived work environment dimensions in Jordanian industries will not significantly explain the variance in employee self rated work enthusiasm.

HA: Perceived work environment dimensions in Jordanian industries will significantly explain the variance in employee self rated work enthusiasm.

Table 6-28: Results of the Single test (Microfit) for PWE dimensions and work enthusiasm factor of SPR.

NO	Variable	T value	Sig. T	Coefficient
1	Employee work motivation	6.10	.00	.26
2	Employee competence	3.53	.00	.15
3	Innovation climate	2.74	.01	.05

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
13.52 (0.00)	0.17	154.93 (0.00)	63.60 (0.00)	24.2 (.000)

The Single method of Microfit program was used to test this hypothesis. The results of this test are presented in Table (6-28). These results show that the F value Of 13.52 is highly significant (Sig F = .00). Moreover, the magnitude of the R-Bar-Square value (.19) indicate that PWE dimensions significantly explain the variance in work enthusiasm (17%). Hence, the null hypothesis is not supported. However, Table (6-28) shows that three PWE dimensions are significant: employee work motivation, employee competence and innovation climate.

On the other hand, stepwise regression and correlation tests were also used to define the most important PWE factor (s) in influencing employees' work enthusiasm. Table (6-29) shows that three variables were significantly retained in the final step of stepwise analysis (re-examined using Microfit), i.e. work motivation, employee competence and innovation climate. The R-Bar-Square value (.17) suggests that these three factors of PWE can explain the variance in employees' work enthusiasm to the extent of 17%.

Out of these three variables, employee work motivation has the highest t value and the highest correlation. Therefore, it can be proposed that this factor is the most important PWE dimension in influencing work enthusiasm.

Table 6-29: Results of the Single (Microfit) and correlation (SPSS-X) tests for PWE dimensions and work enthusiasm factor of SPR.

NO	Variable	T value	Sig. T	Coefficient	r	p value
1	Employee work motivation	7.06	.00	.28	.37	.00
2	Employee competence	4.02	.00	.16	.30	.00
3	Innovation climate	4.05	.00	.05	.24	.02

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
54.62 (0.00)	0.17	75.13 (0.00)	61.82 (0.00)	28.4 (000)

To conclude, PWE dimensions significantly explain the variance in work enthusiasm. However, three factors were found to be the most important variables in accounting for this variance.

6.4.39 PWE DIMENSIONS AND THE JOB PERFORMANCE DIMENSION OF SPR

HO: Perceived work environment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' self rated job performance.

HA: Perceived work environment dimensions in Jordanian industrial firms will significantly explain the variance in employees' self rated job performance.

Table 6-30: Results of the Single (Microfit) test for PWE dimensions and job performance factor of SPR.

NO	Variable	T value	Sig. T	Coefficient
1	Employee competence	3.57	.00	.14
2	Employee work motivation	2.77	.01	.11
3	Employee-immediate supervisor relationships	2.04	.04	.03
4	Psychological contract	2.42	.02	.04

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
7.80 (0.00)	0.10	39.04 (0.00)	67.06 (0.00)	3.01 (.083)

To test this hypothesis, the Single regression analysis (Microfit) was carried out. The results of regressing the 13 PWE dimensions against job performance can be seen in Table (6-30). The F value of 7.8 is significant at .01 level. Moreover, considering the R-Bar-Square (.10) value, it can be proposed that 10% of the variance in job

performance has been significantly explained by the 13 PWE factors. Thus, the null hypothesis is rejected. However, the results of regression analysis in Table (6-30) show that four PWE dimensions out of 13 are significant. These variables are employee competence, employee work motivation, employee-immediate supervisor relationships and psychological contract.

Table 6-31: Results of the Single (Microfit) and Correlation (SPSS-X) tests for PWE dimensions and job performance factor of SPR.

NO	Variable	T value	Sig. T	Coefficient	r	p value
1	Employee competence	4.2	.00	.16	.26	.02
2	Employee work motivation	3.76	.00	.14	.26	.02
3	Psychological contract	3.37	.00	.04	.21	.03

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
30.2 (0.00)	0.10	39.92 (0.00)	73.06 (0.00)	3.10 (.078)

Stepwise regression (re-examined using Microfit) and correlation tests were also used to determine the most important PWE dimensions in explaining the variance in employees' job performance. Table (6-31) shows that three PWE dimensions significantly loaded in stepwise analysis, namely employee competence, employee work motivation and psychological contract. Given that employee competence has the largest correlation (.26) and the highest t value (4.16), it can be nominated as the most important predictor of job performance.

In short, perceived work environment factors significantly and collectively explain 10% of the variance in employees' job performance. However, the effect of three factors in indicating this variance was found to be significant (10%).

6.4.40 PWE DIMENSIONS AND THE WORK DUTIES FACTOR OF SPR

HO: Perceived work environment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' understanding of work duties, as rated by themselves.

HA: Perceived work environment dimensions in Jordanian industrial firms will significantly explain the variance in employees' understanding of work duties, as rated by themselves.

To test this hypothesis, the 13 dimensions of PWE were entered as independent variables, and the work duties factor was entered as the dependent variable in the Single regression analysis of the Microfit. The results of this test are presented in Table (6-32).

Table 6-32: Results of the Single test (Microfit) for PWE dimensions and work duties factor of SPR.

NO	Variable	T value	Sig. T	Coefficient
1	Employee work motivation	3.93	.00	.18
2	Employee competence	2.003	.05	.09

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
7.20 (0.00)	0.09	50.84 (0.00)	30.53 (0.00)	11.20 (.001)

This table shows that the F value of 7.2 is highly significant (Sig. level = .00). Moreover, the R-Bar-Square (.09) values indicate that the dimensions of PWE can collectively and significantly explain 9% of the variance in the work duties variable. Given these results, it can be proposed that the null hypothesis is not substantiated. In addition, Table (6-32) reveals that only two PWE dimensions are significant, i.e. employee work motivation and employee competence.

Table 6-33: Results of Single (Microfit) and Correlation (SPSS-X) tests for PWE dimensions and work duties factor of SPR.

NO	Variable	T value	Sig. T	Coefficient	r	p value
1	Employee work motivation	4.04	.00	.18	.28	.02
2	Fairness	2.60	.01	.05	.21	.03
3	Supervisory style	2.15	.03	.05	.24	.02
4	Employee competence	2.16	.03	.09	.21	.03

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
23.19 (0.00)	0.10	48.83 (0.00)	31.86 (0.00)	12.03 (.001)

Furthermore, stepwise regression analysis (re-examined using Microfit) was also conducted to define the most important PWE dimensions in explaining variance in work duties. Using this test, four independent variables were significantly (F = 23.19, Sig F = .00) loaded (table 6-33). These variables are employee work motivation, fairness, supervisory style and employee competence. The R-Bar-Square (.10) value indicates that these four dimensions explain 10% of variance in work duties. On the other hand, the correlation test was also conducted in order to support the findings of stepwise analysis. The results of this test revealed that these four PWE factors show significant

positive correlations with work duties (table 6-33). However, the employee work motivation variable shows the highest correlation value (.28) and the largest t value (4.04). Therefore, this appears to be the most important PWE dimension in predicting the variance in work duties.

To conclude, the 13 dimensions of perceived work environment significantly explained 9% of the variance in work duties. However, four perceived work environment factors were selected by stepwise analysis as the most important variables, predicting 10% of the variance in this variable.

6.4.41 PWE DIMENSIONS AND THE READINESS TO INNOVATE FACTOR OF SPR

HO: Perceived work environment dimensions in Jordanian industrial firms will not significantly explain the variance in employees’ readiness to innovate, as rated by themselves.

HA: Perceived work environment dimensions in Jordanian industrial firms will significantly explain the variance in employees’ readiness to innovate, as rated by themselves.

Table 6-34: Results of the Single test (Microfit) for PWE dimensions and readiness to innovate factor of SPR.

Variable	T value	Sig. T	Coefficient
Employee work motivation	2.27	.02	.11

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
3.90 (0.00)	0.05	43.29 (0.00)	10.78 (0.00)	26.23 (.000)

To test this hypothesis, the 13 PWE dimensions were regressed against readiness to innovate using single test of Microfit. The results of this regression analysis are presented in Table (6-34). The F value of 3.9 is significant at .00. In addition, the R-Bar-Square (.05) value indicates that the PWE dimensions can explain the variance in readiness to innovate to the extent of 5%. However, the regression results in table (6-34) show that only one dimension of PWE is significant, i.e. employee work motivation. Nonetheless, stepwise regression (re-examined using Microfit) and correlation tests were also conducted to identify the most important PWE dimensions in influencing employees’ readiness to innovate. As shown in Table (6-35), only two dimensions of PWE are significantly (F = 20.02, Sig F = .00) entered in the stepwise analysis, i.e. performance-reward relationships and employee work motivation.

Table 6-35: Results of Single (Microfit) and Correlation (SPSS-X) tests for PWE dimensions and the readiness to innovate factor of SPR.

NO	Variable	T value	Sig. T	Coefficient	r	p value
1	Performance-reward relationships	3.92	.00	.08	.18	.04
2	Employee work motivation	3.74	.00	.16	.17	.04

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
20.03 (0.00)	0.05	47.51 (0.00)	6.48 (0.01)	22.05 (.000)

Furthermore, these two variables show significant, positive and similar relationships with work duties (table 6-35). Thus, the more positive the perception of performance-reward relationships and work motivation, the higher the employees' readiness to innovate, and vice versa.

To summarise, perceived work environment dimensions play a significant role in explaining the variance in employees' readiness to innovate. However, the role of performance-reward relationships and employee work motivation was found to be more important than the remaining 11 dimensions.

6.4.42 PWE AND IMMEDIATE SUPERVISOR PERFORMANCE RATINGS

HO: Perceived work environment in Jordanian industrial firms will not significantly explain the variance in employees' performance, as rated by their immediate supervisors.

HA: The perceived work environment in Jordanian industrial firms will significantly explain the variance in employees' performance, as rated by their immediate supervisors.

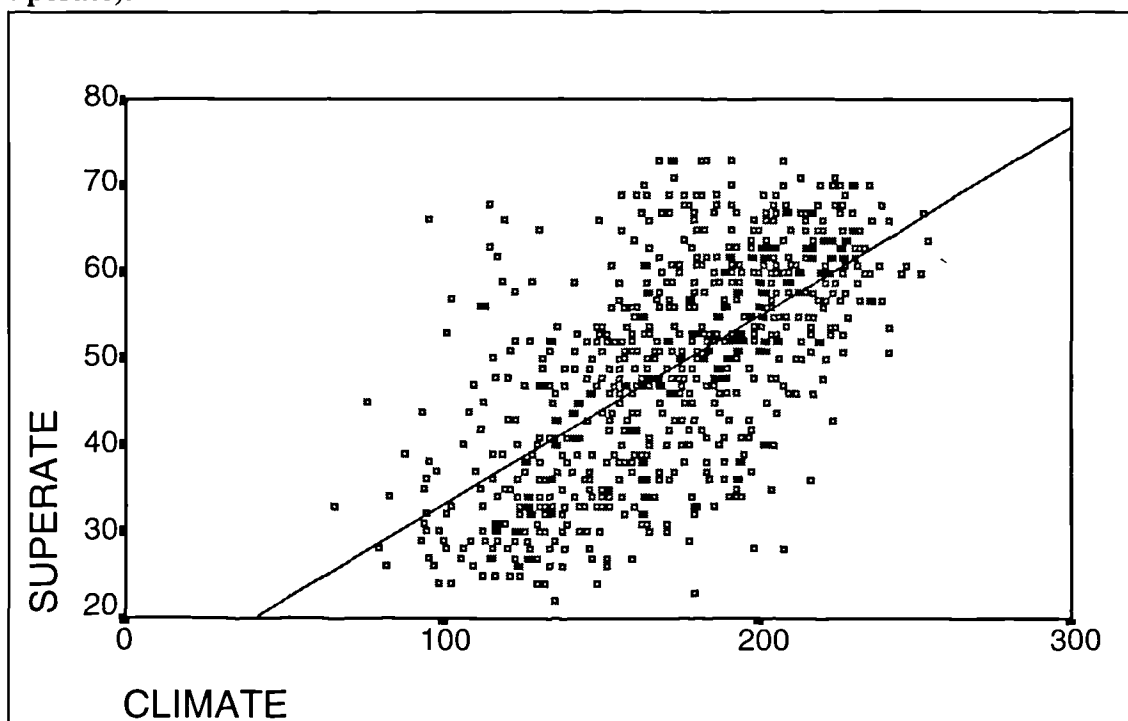
Table 6-36: Results of the multiple R and regression ANOVA for PWE and ISPR.

Multiple R	Adjusted R square	F value	Sig. F	T value	Sig. T	Beta
.64	.41	551.7	.00	23.49	.00	.64

Normality	Heteroscedasticity	Serial correlation	Coefficient
6.47 (.039)	19.7 (.000)	11.24 (.001)	.22

To test this hypothesis, perceived work environment was regressed against immediate supervisor performance ratings. The results of this regression are presented in Table (6-36) above. As can be seen from this table, the F value of 551.7 and the t value of 23.49 are significant at .00. Moreover, the multiple R (.64) and the beta (.64) values indicate that there is a significant positive relationship between PWE and ISPR. Hence, the more positive the perception of the work environment, the higher the employees' immediate supervisor rated performance, and vice versa. In addition, the adjusted R square value of .41 implies that the global concept of PWE can explain the variance in ISPR to the extent of 41%.

Figure 6-6: Scatterplot with fitted regression line of PWE (climate) against ISPR (superate).



On the other hand, the scatterplot with fitted regression line was also obtained to examine the relationship between PWE and ISPR. Figure (6-6) reveals that there a strong linear relationship between these variables. Considering all these findings, it can be proposed that the null hypothesis is rejected.

6.4.43 PWE DIMENSIONS AND THE ISPR

HO: Perceived work environment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' performance, as rated by immediate supervisors.

HA: Perceived work environment dimensions in Jordanian industrial firms will significantly explain the variance in employees' performance, as rated by immediate supervisors.

Table 6-37: Results of the Single (Microfit) and correlation (SPSS-X) tests for the PWE dimensions and ISPR.

NO	Variable	T	Sig. T	Coefficient	r	p
1	Employee-immediate supervisor relationships	4.33	.000	.31	.56	.00
2	Performance-reward relationships	3.21	.00	.39	.51	.00
3	Supervisory style	3.01	.00	.38	.50	.00
4	Innovation climate	2.30	.02	.23	.50	.00
5	co-workers relations	2.70	.01	.33	.44	.00
6	Employee competence	2.42	.02	.51	.32	.01
7	Employee work motivation	2.41	.02	.52	.37	.00
8	Pressure to produce	-2.11	.04	-.39	-.38	.00

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
46.02 (0.00)	0.43	3.24 (0.20)	14.03 (0.00)	4.86 (.028)

To test this hypothesis, the single test of Microfit program was used. Table (6-37) presents the results of this analysis. As can be seen from this table, the F value of 46.02 is significant at .01. In addition, the R-Bar-Square value of .43 indicates that the PWE dimensions significantly and collectively explain 43% of variance in ISPR. Thus, the null hypothesis is not supported. However, eight PWE dimensions were found to be significant (table 6-37). Furthermore, the correlation test results revealed that these eight dimensions are significantly and positively related to ISPR, except pressure to produce. The negative sign of the t value and the correlation coefficient indicate that the pressure to produce variable is inversely related to ISPR. This means that the higher the pressure to produce, the lower the employees' supervisor rated performance, and vice versa. On the other hand, the positive correlation sign for the remaining seven dimensions indicates that the more positive the perception of these PWE factors, the higher the performance, and vice versa. Nevertheless, the employee-immediate supervisor relationships variable can said to be the most important PWE dimension in

affecting ISPR, because it has the highest t value (4.33) and the highest correlation (.56). Nonetheless, stepwise analysis was also used to examine the importance of the PWE factors. However, the results obtained were similar to those presented in Table (6-37).

In summary, the 13 components of perceived work environment significantly and collectively explain 43% of the variance in ISPR. However, only 8 factors were found to be significant.

6.4.44 PWE FACTORS AND THE READINESS TO INNOVATE FACTOR OF ISPR

HO: Perceived work environment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' readiness to innovate, as rated by their immediate supervisors.

HA: Perceived work environment dimensions in Jordanian industrial firms will significantly explain the variance in employees' readiness to innovate, as rated by their immediate supervisors.

Table 6-38: Results of the Single (Microfit) and Correlation (SPSS-X) tests for PWE dimensions and the readiness to innovate factor of ISPR.

NO	Variable	T value	Sig. T	Coefficient	r	p
1	Employee-immediate supervisor relationships	2.65	.01	.07	.46	.00
2	Supervisory style	2.76	.01	.13	.42	.00
3	co-workers relations	2.56	.01	.11	.38	.00
4	Performance-reward relationships	2.17	.03	.10	.44	.00
5	Pressure to produce	2.49	.01	.16	-.35	.00

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
27.00 (0.00)	0.30	1.78 (0.20)	9.95 (0.00)	0.06 (.813)

To test this hypothesis both single (Microfit) and correlation (SPSS-X) tests were used. As can be seen from Table (6-38) the F value of 27 is significant at .01. Furthermore, R-Bar-Square value of .30 indicates that the PWE factors have explained 30% of the variance in readiness to innovate. Thus, the null hypothesis is not supported. However, the regression results in Table (6-38) show that only five components of PWE are significant. These factors are employee-immediate supervisor relationships, supervisory style, co-workers relations, performance-reward relationships and pressure to produce. To test the significance of these five facets, the correlation test was used. The results (table 6-38) show that the five factors are significantly related to readiness to

innovate. Unlike the other variables, pressure to produce is negatively related to readiness to innovate. Hence, the pressure that management in Jordanian industrial firms puts on employees to produce more reduces their readiness to innovate. Given the the correlations presented in Table (6-38), it can be suggested that the employee-immediate supervisor relationships variable is the most important PWE factor in explaining the variance in readiness to innovate. It has the highest correlation (.46).

On the other hand, stepwise regression was also conducted to identify the most significant PWE dimensions in predicting the variance in readiness to innovate. The results were similar to those presented in Table (6-38). However, innovation climate was entered, together with the previously mentioned factors, as a significant variable. The correlation test results show that it is significantly ($p = .00$) and positively related ($r = .42$) to readiness to innovate. This means that the more positive the perception of innovation climate, the higher the employees' readiness to innovate, and vice versa. In addition, the six dimensions retained from stepwise analysis, including innovation climate, explain 30% of the variance in readiness to innovate.

To conclude, the perceived work environment dimensions significantly explain 30% of the variance in readiness to innovate. However, the employee-immediate supervisor relationships factor plays the most important role in predicting this variance.

6.4.45 PWE FACTORS AND THE WORK DUTIES FACTOR OF ISPR

HO: Perceived work environment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' understanding of their work duties, as rated by their immediate supervisors.

HA: Perceived work environment dimensions in Jordanian industrial firms will significantly explain the variance in employees' understanding of their work duties, as rated by their immediate supervisors.

To test this hypothesis, the 13 dimensions of PWE were regressed against the work duties component of ISPR. The results of this regression analysis (Single test) are presented in Table (6-39) above. As can be seen from this table, the F value of 30.2 is significant at .00. Moreover, the R-Bar-Square value of .33 indicates that the 13 dimensions of PWE can collectively and significantly explain 33% of variance in work duties. As shown in Table (6-39), five components of PWE are significant. Nonetheless, stepwise analysis (re-examined using Microfit) was used together with the correlation test to examine the importance of these five factors, and to identify if there are any other dimensions that may count. The final results of these tests are presented in

Table (6-40).

Table 6-39: Results of the Single test (Microfit) for PWE dimensions and The work duties factor of ISPR.

NO	Variable	T value	Sig. T	Coefficient
1	Employee work motivation	4.25	.00	.22
2	Employee-immediate supervisor relationships	2.53	.01	.04
3	Supervisory style	2.82	.00	.09
4	Performance-reward relationships	2.17	.03	.06
5	Employee competence	2.60	.01	.13

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
30.20 (0.00)	0.33	2.08 (0.35)	13.07 (0.00)	7.15 (.007)

As can be seen from this table, seven dimensions of PWE are significantly ($F = 54.9$, $\text{Sig } F = .000$) entered in stepwise analysis. The R-Bar-Square (.33) value shows that these seven variables predict the variance in work duties to the extent of 33%. Hence, these seven variables' influence on the work duties factor is equivalent to the 13 dimensions' influences on this variable, that is 33% for each group.

On the other hand, the correlation test results presented in Table (6-40) show that these seven constructs are significantly and positively related to work duties. Based on the correlation results and the t values (table 6-40), the employee work motivation ($t = 4.23$) and the employee-immediate supervisor relationships ($r = .46$) can be identified as the most important PWE dimensions in influencing work duties.

To summarise, the 13 dimensions of perceived work environment significantly predict 33% of the variance in the work duties variable. However, seven factors out of these 13 dimensions explain the same percentage of variance in work duties.

Table 6-40: Results of the Single (Microfit) and correlation (SPSS-X) tests for PWE dimensions and the work duties of ISPR.

NO	Variable	T value	Sig. T	Coefficient	r	p
1	Employee work motivation	4.23	.00	.22	.39	.00
2	Employee-immediate supervisor relationships	3.28	.00	.05	.46	.00
3	Supervisory style	3.16	.00	.09	.44	.00
4	Performance-reward relationships	2.99	.00	.08	.41	.00
5	Employee competence	2.89	.00	.14	.32	.00
6	Innovation climate	2.40	.02	.05	.42	.00
7	Co-workers relations	2.17	.03	.06	.38	.00

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
54.90 (0.00)	0.33	2.22 (0.33)	16.24 (0.00)	7.80

6.4.46 PWE FACTORS AND THE JOB PERFORMANCE FACTOR OF ISPR

HO: Perceived work environment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' job performance, as rated by their immediate supervisors.

HA: Perceived work environment dimensions in Jordanian industrial firms will significantly explain the variance in employees' job performance, as rated by their immediate supervisors.

The regression analysis (Microfit) was used to test this hypothesis. Table (6-41) presents the results of this test. As can be seen from this table, the F value of 28.35 is significant at .01.

Table 6-41: Results of the Single test (Microfit) for PWE dimension and the job performance factor of ISPR.

NO	Variable	T value	Sig. T	Coefficient
1	Employee-immediate supervisor relationships	4.09	.00	.08
2	Performance-reward relationships	3.11	.00	.10
3	Supervisory style	2.91	.00	.10

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
28.35 (0.00)	0.31	1.45 (.49)	15.89 (0.00)	1.78 (.182)

Moreover, the R-Bar-Square value of .31 indicates that the PWE can explain 31% of

variance in employees' job performance. Considering these findings, the null hypothesis is rejected. Table (6-41) shows that only three PWE factors are significant, namely employee-immediate supervisor relationships, performance-reward relationships and supervisory style.

Table 6-42: Results of the Single (Microfit) and Correlation (SPSS-X) tests for PWE dimensions and the job performance of ISPR.

NO	Variable	T value	Sig. T	Coefficient	r	p
1	Employee-immediate supervisor relationships	4.97	.000	..08	.49	.00
2	Performance-reward relationships	3.98	.00	.11	.45	.00
3	Supervisory style	3.47	.00	.11	.43	.00
4	Innovation climate	2.06	.04	.05	.44	.00
5	Co-workers relations	2.33	.02	.07	.37	.00
6	Employee competence	2.45	.01	.13	.26	.02

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
61.03 (0.00)	0.32	1.45 (.49)	15.89 (0.00)	2.18 (.140)

Nevertheless, stepwise analysis and the correlation test were also conducted to identify the most important PWE dimensions in explaining the variance in employees' job performance. The results of stepwise analysis (re-examined using Microfit) revealed that six PWE factors are significant ($F = 61.3$, $\text{Sig } F = .000$). These six dimensions are listed in Table (6-42). The R-Bar-Square (.32) value indicates that these six PWE factors can predict 32% of the variance in job performance. Furthermore, the correlation test results (table 6.82) show that the six factors are significantly and positively related to performance. The magnitude of the correlations ranged between .49 for the employee-immediate supervisor relationships variable to .26 for the employee competence component. However, the employee-immediate supervisor relationships variable has the highest t value (4.97) and the largest correlation (.49). Therefore, it could be identified as the most important predictor of employee job performance in Jordanian industrial firms.

Therefore, it can be concluded that the perceived work environment dimensions significantly explain 31% of variance in employee supervisory rated performance. However, only six variables account for a higher variance (32%) than the 13 dimensions.

6.4.47 PWE FACTORS AND THE WORK SKILLS DIMENSION OF ISPR

HO: Perceived work environment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' work skills, as rated by their supervisors.

HA: Perceived work environment dimensions in Jordanian industrial firms will significantly explain the variance in employees' work skills, as rated by their supervisor.

The Single regression test (Microfit) was used to examine this hypothesis. The results of this test are presented in Table (6-43). As can be seen from this table, the F value of 24.3 is significant (Sig. F = .00). Furthermore, the R-Bar-Square value of .28 shows that the PWE dimensions explain 28% of the variance in work skills. These results thus suggest the rejection of the null hypothesis. However, Table (6-43) shows that six dimensions of PWE are significant. When the stepwise analysis was used, these same six variables were also selected as the most important factors. They account independently for 28% of variance in work skills. The correlation test results presented in Table (6-43) reveal that these six dimensions are significantly and positively related to work skills. The magnitude of these correlations ranged between .43 and .30. Since the employee-immediate supervisor relationships variable has the highest t value (2.93) and the highest correlation (.43), it can be proposed as the most important PWE factor in influencing work skills.

Table 6-43: Results of the Single (Microfit) and Correlation (SPSS-X) tests for PWE dimensions and the work skills factor of ISPR.

NO	Variable	T value	Sig. T	Coefficient	r	p
1	Employee-immediate supervisor relationships	2.93	.00	.04	.43	.00
2	Performance-reward relationships	2.78	.01	.06	.40	.00
3	Innovation climate	2.52	.01	.04	.41	.00
4	Employee work motivation	2.88	.00	.11	.34	.00
5	Co-workers relations	2.60	.01	.06	.37	.00
6	Employee competence	2.74	.01	.11	.30	.00

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
24.2 (0.00)	0.28	2.9 (.35)	6.99 (0.01)	1.81 (.178)

In short, perceived work environment dimensions significantly explain the variance in employees' work skills. Nevertheless, six factors out of thirteen played the major role in accounting for this variance.

6.4.48 PWE FACTORS AND THE WORK ENTHUSIASM FACTOR OF ISPR

HO: Perceived work environment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' work enthusiasm, as rated by their supervisors.

HA: Perceived work environment dimensions in Jordanian industrial firms will significantly explain the variance in employees' work enthusiasm, as rated by their supervisor.

The Single regression model of Microfit was adopted to examine this hypothesis. The results of this test are presented in Table (6.84) above. Since that the F value of 33 is significant at .01, it can be suggested that the null hypothesis is not supported.

Table 6-44: Results of the Single test for PWE dimensions and the work enthusiasm factor of ISPR.

NO	Variable	T value	Sig. T	Coefficient
1	Employee-immediate supervisor relationships	4.82	.000	.09
2	Performance-reward relationships	2.44	.01	.07
3	Employee work motivation	2.95	.00	.16
4	Employee competence	2.71	.01	.14

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
33 (0.00)	0.35	2.08 (0.35)	17.46 (0.00)	13 (.000)

The R-Bar-Square value (.35) shows that the PWE dimensions can explain 35% of variance in work enthusiasm. Despite this high level of prediction, only four dimensions of PWE were found to be significant. These factors are listed in Table (6-44). To investigate the importance of these four variables, and to identify the other relevant factors, if any, stepwise analysis (re-examined using Microfit) and the correlation test were used. The final results of these tests are presented in Table (6-45) below.

As can be seen from this table, seven factors loaded in the step-by-step analysis of the stepwise test. The F value of 60.1 for these factors is significant. In addition, the R-Bar-Square (.35) value indicates that these seven variables can predict 35% of the variance in employees' work enthusiasm. The correlations (table 6-45) of the seven components are significant, and range from moderate (.31) to strong (.52) coefficients

Table 6-45: Results of the Single (Microfit) and Correlation (SPSS-X) tests for PWE dimensions and the work enthusiasm factor of ISPR.

NO	Variable	T value	Sig. T	Coefficient	r	p
1	Employee-immediate supervisor relationships	5.68	.00	.09	.52	.00
2	Performance-reward relationships	3.39	.00	.09	.43	.00
3	Employee competence	3.03	.00	.16	.31	.00
4	Employee work motivation	2.64	.01	.14	.35	.00
5	Fairness	2.01	.04	.06	.46	.00
6	Supervisory style	1.96	.051	.06	.43	.00
7	Co-workers relations	2.11	.0351	.06	.38	.00

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
60.07 (0.00)	0.35	1.86 (0.54)	17.80 (0.00)	14.55 (.000)

Nonetheless, the t value (5.68) and the correlation value (.52) of the employee-immediate supervisor relationships indicates that it plays the major role in explaining this variance. Although it was entered in the second step and remained significant until the sixth step, the supervisory style factor significance was violated (.051 > .05) in the last step of stepwise analysis and single test (Microfit). However, this violation is very weak (.0006). Moreover, its t value of 1.96 is exactly the break point between the significant and non-significant levels (see chapter five). Furthermore, Table (6-45) shows that the correlation coefficient (.43) of supervisory style are higher than co-workers relations' correlation (.38). Given this, it can be concluded that seven dimensions of PWE play significant role in predicting changes in work enthusiasm.

In summary, the 13 perceived work environment factors significantly explain 35% of the variance in work enthusiasm. Nevertheless, seven dimensions out of these 13 factors explain together the same percentage of variance, i.e. 35%.

6.4.49 THE ROLE OF OC IN MEDIATING THE RELATIONSHIP BETWEEN PWE AND SPR

HO: Organisational commitment will not significantly mediate the relationship between perceived work environment and self performance ratings variables.

HA: Organisational commitment will significantly mediate the relationship between perceived work environment and self performance ratings variables.

To test this hypothesis, the three-step process recommended by Baron and Kenny (1986) was used. According to this approach, three separate equations should be estimated: Firstly, the mediating variable is regressed on the independent variable; secondly, the dependent variable is regressed on the independent variable; and lastly, the dependent variable is simultaneously regressed on the independent variable and the mediating variable. As Baron and Kenny say:

To establish mediation, the following conditions must hold: First, the independent variable must affect the mediator in the first equation; second, the independent variable must be shown to affect the dependent variable in the second equation; and third, the mediator must affect the dependent variable in the third equation. If these conditions all hold in the predicted direction, then the effect of independent on the dependent variable must be less in the third equation than in the second equation. Perfect mediation holds if the independent variable has no effect when the mediator is controlled (p. 1177).

However, partial mediation is indicated when the independent variable's effect is reduced in magnitude, but is still significant when the mediator is controlled. Nevertheless, since it has been recommended by Baron and Kenny (1986), the three-step process of testing mediation is widely used in management research (e.g. Vandewalle, Dyne and Kostova, 1995 and Tompson and Werner, 1997).

Table 6-46: Results of the mediated regression approach for OC (PWE-SPR).

NO	Dependent variable	Independent variable	Beta	T value	Sig. T	F value	Sig. F	Adjusted R square
1	OC	PWE	.56	19.04	.00	362.4	.00	.32
2	SPR	PWE	.34	10.23	.00	104.7	.00	.12
3	SPR	PWE	.27	6.77	.00	57.6	.00	.13
		OC	.12	3.08	.00			

The results of the three-step process are presented in Table (6-46) above. As can be seen from this table, PWE affected the OC in the first equation, and also affected SPR in the second equation. Although the mediator (OC) influenced SPR in the third equation,

the independent variable (PWE) remains highly significant ($t = 6.77$, $\text{Sig } T = .00$) in the same equation. Thus, the null hypothesis is supported. However, the beta value of PWE in the third equation has been diminished by .07 (.34-.27). This means that the inclusion of OC in the third equation has reduced the effect of PWE on SPR. Hence, organisational commitment can be said to be partially mediating the relationship between perceived work environment and self performance ratings.

In addition, bivariate and partial correlation tests were also used to examine the mediating nature of organisational commitment. The results of these tests are presented in Table (6-47) above. Including OC, the bivariate test results in this table show that the correlation ($r = .34$) between perceived work environment and self rated performance is significant ($p = .00$). However, when OC is controlled, the magnitude of the correlation coefficient reduces from .34 to .24. Hence, these findings are in line with the above results of the three-step process with respect to the partial mediation role of OC.

Table 6-47: Results of the correlation test between PWE, OC and SPR.

Bivariate correlation			
	PWE	OC	SPR
PWE	1.000		
OC	.56 $p = .00$	1.000	
SPR	.34 $p = .00$.28 $p = .02$	1.000

Partial correlation		
	PWE	SPR
PWE	1.000	
SPR	.24 $p = .02$	1.000

To conclude, the results of the three-step process and the correlation test revealed that organisational commitment does not fully mediate the relationship between perceived work environment and self rated performance. However, these results show that organisational commitment plays a partial mediation role in this relationship; that is, its presence modifies the PWE-SPR relationship.

6.4.50 AFFECTIVE COMMITMENT'S MEDIATING ROLE IN THE PWE-SPR RELATIONSHIP

HO: Affective commitment will not significantly mediate the relationship between perceived work environment and self rated performance variables.

HA: Affective commitment will significantly mediate the relationship between perceived work environment and self rated performance variables.

Table 6-48: Results of the mediated regression approach for AC (PWE-SPR).

NO	Dependent variable	Independent variable	Beta	T value	Sig. T	F value	Sig. F	Adjusted R square
1	AC	PWE	.68	25.65	.00	657.7	.00	.46
2	SPR	PWE	.34	10.23	.00	104.7	.00	.12
3	SPR	PWE	.27	6.00	.00	55.3	.00	.12
		AC	.10	2.30	.02			

To test this hypothesis, the three-step approach and the correlation test were used. The results of these tests are presented in Tables (6-48) and (6-49). Table (6-48) shows that PWE and AC remained significant in the third equation. However, the PWE beta weight diminished from .34 in the second equation to .27 in the third equation. This means that the inclusion of AC in the third equation affected the influence of PWE on SPR. Thus, the full mediation of AC is not supported, yet partial mediation is indicated.

Table 6-49: Results of the correlation test between PWE, AC and SPR.

Bivariate correlation			
	PWE	OC	SPR
PWE	1.000		
AC	.68 p = .00	1.000	
SPR	.34 p = .00	.29 p = .00	1.000

Partial correlation		
	PWE	SPR
PWE	1.000	
SPR	.21 p = .02	1.000

To support these findings, bivariate and the partial methods of correlation test were conducted. Considering AC, the PWE-SPR relationship tends to be significant and positive, with a correlation coefficient value of .34 (table 6-49). However, when AC is

controlled, the magnitude of this correlation decreases to .21, yet is still significant and positive. Hence, the partial mediating role of affective commitment in the relationship between perceived work environment and self rated performance is established. Given the three-step process and the correlation test results, it can be proposed that the null hypothesis is accepted.

In short, AC does not fully mediate the PWE-SPR relationship, but does play a partial mediation role in this relationship.

6.4.51 CONTINUANCE COMMITMENT'S MEDIATING ROLE IN THE PWE-SPR RELATIONSHIP

HO: Continuance commitment will not significantly mediate the relationship between perceived work environment and self rated performance variables.

HA: Continuance commitment will significantly mediate the relationship between perceived work environment and self rated performance variables.

Table 6-50: Results of the mediated regression approach for CC (PWE-SPR relationship).

NO	Dependent variable	Independent variable	Beta	T value	Sig. T	F value	Sig. F	Adjusted R square
1	CC	PWE	-.05	-1.40	.16	1.9	.16	.00
2	SPR	PWE	.34	10.23	.00	104.7	.00	.12
3	SPR	PWE	.34	10.34	.00	56.6	.00	.12
		CC	.07	2.035	.04			

To test this hypothesis, the three-step process together with the correlation test were used. The first condition of mediation according to the three-step process states that “the independent variable must affect the mediator in the first equation” (Baron and Kenny, 1986, p. 1177). Given the fact that PWE does not influence continuance commitment in the first equation (table 6-50), it can be proposed that the first condition of mediation is violated. Moreover, the beta weight (.34) and the adjusted R square value (.12) of PWE in equation (2) remained unchanged in equation (3) when PWE and CC were simultaneously regressed against SPR. This means that the influence of perceived work environment on self rated performance is not affected by continuance commitment. Given these results, it can be suggested that continuance commitment does not play any significant role in mediating the PWE-SPR relationship. Thus, the null hypothesis is supported.

Table 6-51: Results of the correlation test between PWE, CC and SPR.

Bivariate correlation			
	PWE	CC	SPR
PWE	1.000		
CC	-.05 p = .17	1.000	
SPR	.34 p = .00	.05 p = .15	1.000

Partial correlation		
	PWE	SPR
PWE	1.000	
SPR	.35 p = .00	1.000

In line with the three-step process findings, the results of the correlation tests revealed that continuance commitment does not mediate the PWE-SPR relationship. As can be seen from table (6-51), PWE and SPR show significant positive correlation ($r = .34$) in the bivariate method of correlation test. However, when CC is controlled the magnitude of correlation does not diminish; on the contrary, it increases ($r = .35$).

In summary, the results of the three-step process and the correlation test show that continuance commitment does not play any role in mediating the relationship between perceived work environment and self rated performance.

6.4.52 THE ROLE OF OC IN MEDIATING THE PWE-ISPR RELATIONSHIPS

HO: Organisational commitment will not significantly mediate the relationship between perceived work environment and immediate supervisor rated performance variables.

HA: Organisational commitment will significantly mediate the relationship between perceived work environment and immediate supervisor rated performance variables.

Table 6-52: Results of the mediated regression approach for OC (PWE-ISPR relationship).

NO	Dependent variable	Independent variable	Beta	T value	Sig. T	F value	Sig. F	Adjusted R square
1	OC	PWE	.56	19.04	.00	362.4	.00	.32
2	ISPR	PWE	.64	23.45	.00	551.7	.00	.41
3	ISPR	PWE	.56	17.20	.00	291.5	.00	.43
		OC	.14	4.33	.00			

The mediated regression approach of Baron and Kenney (1986) and the correlation test results were used to test this hypothesis. Given the results of Table (6.92), it can be suggested that the three mediation conditions are established. However, in the third equation the PWE concept remained highly significant (Sig t = .00). This indicates that the assumption of full mediation is not indicated. Nevertheless, the effect of PWE on ISPR in the third equation is diminished, i.e. the beta weight reduced from .64 in equation (2) to .56 in equation (3). Therefore, the possibility of partial mediation is indicated.

The first part of Table (6-53) shows that the correlation between PWE and ISPR is .64. However, when OC is controlled (second part) the correlation magnitude falls to .52. Hence, organisational commitment has partially mediated the PWE and ISPR relationship. Given the results of the mediated regression and correlation test, it can be concluded that the null hypothesis is supported.

Table 6-53: Results of the correlation test between PWE, OC and ISPR.

Bivariate correlation			
	PWE	OC	ISPR
PWE	1.000		
OC	.56 p = .00	1.000	
ISPR	.64 p = .00	.46 p = .00	1.000

Partial correlation		
	PWE	ISPR
PWE	1.000	
ISPR	.52 p = .00	1.000

To summarise, organisational commitment does not fully mediate the relationship between perceived work environment and immediate-supervisor rated performance; but it does play a partial role in this relationship.

6.4.53 AFFECTIVE COMMITMENT'S MEDIATING ROLE IN THE PWE-ISPR RELATIONSHIP

HO: Affective commitment will not significantly mediate the relationship between perceived work environment and immediate supervisor rated performance variables.

HA: Affective commitment will significantly mediate the relationship between perceived work environment and immediate supervisor rated performance variables.

Table 6-54: Results of the mediated regression approach for AC (PWE-ISPR relationship).

NO	Dependent variable	Independent variable	Beta	T value	Sig. T	F value	Sig. F	Adjusted R square
1	AC	PWE	.68	25.65	.00	657.7	.00	.46
2	ISPR	PWE	.64	23.45	.00	551.7	.00	.41
3	ISPR	PWE	.52	14.16	.00	297.3	.00	.43
		AC	.19	5.01	.00			

In order to test this hypothesis, the Baron and Kenney (1986) model of testing mediation and the correlation test were used. In general, the results of the three-step process presented in Table (6-54) show that the three mediation conditions are fulfilled. Given that PWE remained significant in the third equation, full mediation is not supported. However, the change of PWE beta weight from .64 in equation (2) to .52 in equation (3) indicates that partial mediation is demonstrated.

Table 6-55: Results of the correlation test between PWE, AC and ISPR.

Bivariate correlation			
	PWE	AC	ISPR
PWE	1.000		
AC	.68 p = .00	1.000	
ISPR	.64 p = .00	.54 p = .00	1.000

Partial correlation		
	PWE	ISPR
PWE	1.000	
ISPR	.45 p = .00	1.000

On the other hand, the first part of Table (6-55) shows that the relationship between PWE and ISPR is .64. However, when the effect of AC is controlled (part two), the

correlation coefficient is diminished from .64 to .45. Thus, partial mediation is indicated. Based on these findings, the null hypothesis is supported.

To summarise, affective commitment does not fully mediate the relationship between perceived work environment and immediate supervisor rated performance. However, it plays a significant role in partially mediating this relationship.

6.4.54 CONTINUANCE COMMITMENT'S MEDIATING ROLE IN THE PWE-ISPR RELATIONSHIP

HO: Continuance commitment will not significantly mediate the relationship between perceived work environment and immediate supervisor rated performance variables.

HA: Continuance commitment will significantly mediate the relationship between perceived work environment and immediate supervisor rated performance variables.

Table 6-56: Results of the mediated regression approach for CC (PWE-ISPR relationship).

NO	Dependent variable	Independent variable	Beta	T value	Sig. T	F value	Sig. F	Adjusted R square
1	CC	PWE	-.05	-1.40	.1635	1.9	.1635	.00
2	ISPR	PWE	.64	23.45	.0000	551.7	.0000	.41
3	ISPR	PWE	.64	23.48	.0000	275.9	.0000	.41
		CC	.02	00.66	.5090			

The mediated regression approach and correlation test were used to examine this hypothesis. From Table (6-56), it can be seen that the PWE does not influence CC in the first equation. Thus, the first condition of mediation is broken. In addition, CC remained non-significant in the third equation. Hence, the third condition is also violated. Furthermore, the PWE beta weight (.64) and the adjusted R square value (.41) of equation (2) remained stable in equation (3). This means that the interference of CC in the third equation did not reduce the effect of PWE on ISPR. Given these results, it is proposed that CC does not fully or partially mediate the relationship between PWE-ISPR. Therefore, the null hypothesis is supported. However, to support this decision, the correlation test was also conducted. The results of these tests are presented in Table (6-57).

Table 6-57: Results of the correlation test between PWE, CC and ISPR.

Bivariate correlation			
	PWE	CC	ISPR
PWE	1.000		
CC	-.05 p = .17	1.000	
ISPR	.64 p = .00	-.01 p = .70	1.000

Partial correlation		
	PWE	ISPR
PWE	1.000	
ISPR	.64 p = .00	1.000

These results show that CC's relationships with PWE ($r = -.05$) and ISPR ($r = -.01$) are not significant (significance level $> .05$). Moreover, the PWE relationship ($r = .64$) with ISPR remained unchanged in the both methods of correlation, i.e. the bivariate and the partial methods. Thus, the results of correlation test mirror those obtained from the three-step analysis.

To conclude, CC does not play any role in mediating the relationship between perceived work environment and immediate supervisor rated performance.

6.4.55 OC AND SELF PERFORMANCE RATINGS

HO: Organisational commitment in Jordanian industrial firms will not significantly explain the variance in employee self rated performance.

HA: Organisational commitment in Jordanian industrial firms will significantly explain the variance in employee self rated performance.

Table 6-58: Results of the multiple R and regression ANOVA for OC and SPR.

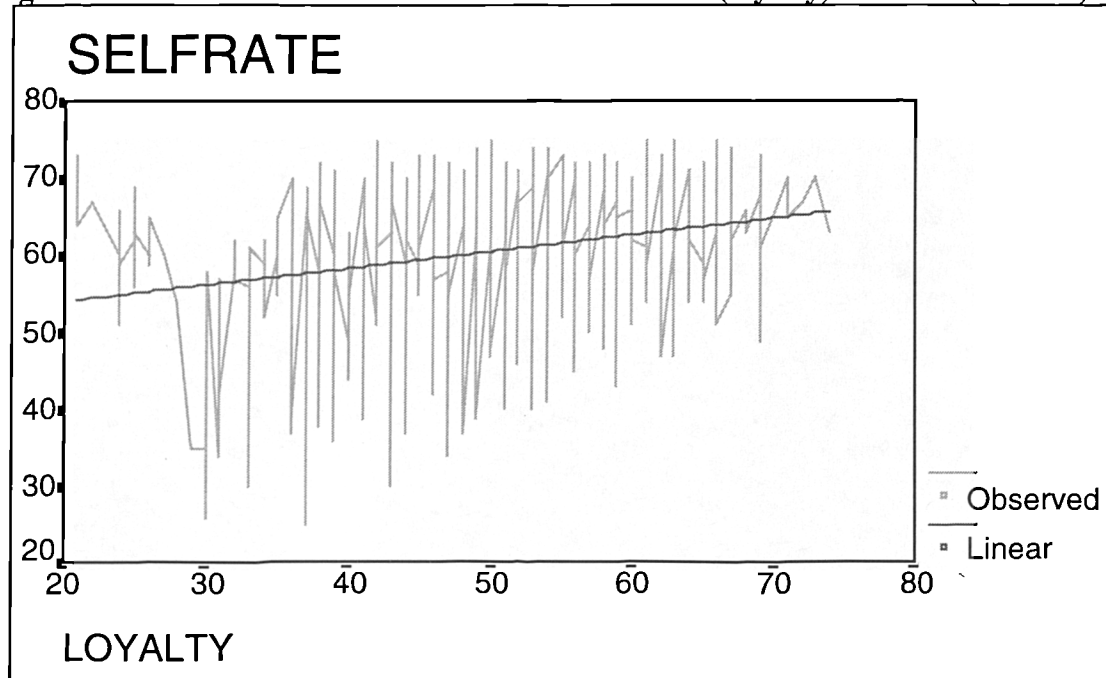
Multiple R	Adjusted R square	F value	Sig. F	T value	Sig. T	Beta
.28	.08	65.7	.00	8.11	.00	.28

Normality	Heteroscedasticity	Serial correlation	Coefficient
268.56 (.000)	34.35 (.000)	45.44	.21

To test this hypothesis, organisational commitment was regressed against self rated performance. The results of this regression are presented in Table (6-58) above. As can

be seen from this table, the F value of 65.7 is significant (Sig F = .00). Moreover, the values of multiple R (.28) and the beta (.28) indicate that there is a significant positive relationship between OC and SPR. That is, the higher the employees' commitment, the higher their self rated performance, and vice versa.

Figure 6-7: Result of the curve estimation test of OC (loyalty) and SPR (selfrate).



On the other hand, the curve estimation test was also used to examine the association of OC and SPR. As can be seen from Figure (6-7), there is a moderate linear relationship between these two variables. Hence, given all these results, it can be suggested that the null hypothesis is not supported. Thus, employees' organisational commitment in Jordanian industries can significantly explain variance in self rated performance.

6.4.56 OC FACTORS AND SELF PERFORMANCE RATINGS

HO: Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employee self rated performance.

HA: Organisational commitment dimensions in Jordanian industrial firms will significantly explain the variance in employee self rated performance.

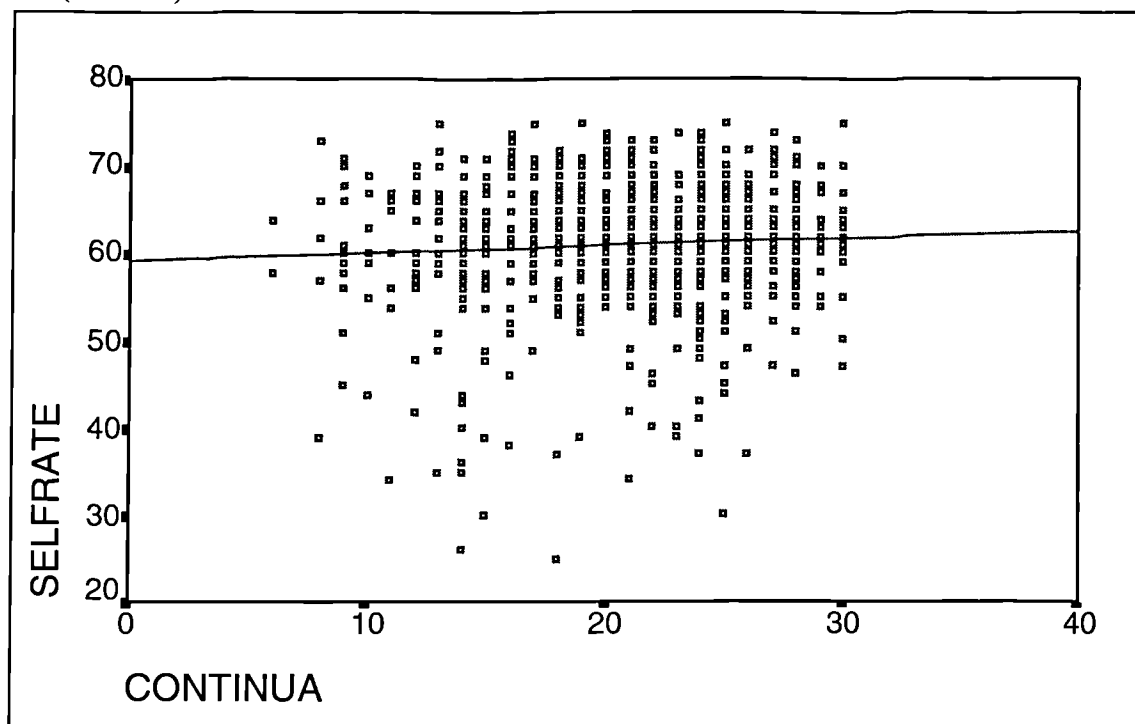
Table 6-59: Results of the Single (Microfit) and Correlation (SPSS-X) tests for OC dimensions and SPR.

NO	Variable	T value	Sig. T	Coefficient	r	p
1	Affective commitment	8.51	.00	.26	.29	.02
2	Continuance commitment	1.78	.08	.09	.05	.15

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
37.30 (0.00)	0.09	278.79 (0.54)	36.13 (0.00)	43.6 (.000)

To test this hypothesis, Single regression (Microfit) and the correlation test (SPSS-X) were used. The results of these tests are presented in Table (6-59). From this table, it can be seen that the F value of 37.30 is significant at .01. Moreover, the R-Bar-Square (.09) value indicates that the two dimensions of OC significantly and collectively explain 9% of variance in self rated performance.

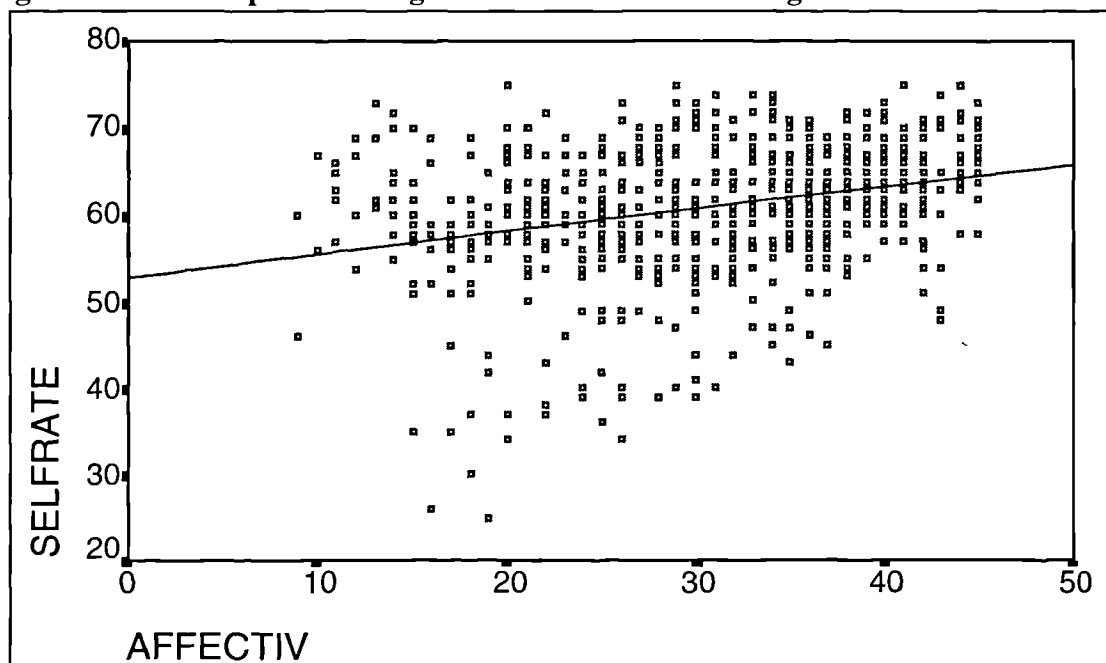
Figure (6-8): The scatterplot with fitted regression line of CC (continua) against SPR (selfrate).



Thus, the null hypothesis is rejected. Nonetheless, the results of Table (6-59) also reveal that the t value (1.78) and the correlation coefficient (.05) of CC are not significant (significance level $> .05$). Figure (6-8) presents the relationship between CC and SPR. The horizontal shape of the regression line indicates that there is no linear relationship between these two variables.

On the other hand, the t value (8.51) and the correlation (.29) of AC are highly significant (significant level $< .01$). Figure (6-9), the scatterplot, also shows that there is a linear relationship between AC and SPR. Thus, the higher the AC, the higher the employee self rated performance, and vice versa.

Figure 6-9: Scatterplot with regression line added of AC against SPR.



From the results of the regression and correlation tests, taken together with the scatterplots, it can be seen that AC is the variable that counts in terms of the relationships of OC with SPR. In other words, AC plays the major role in explaining the variance in SPR; CC's role in this relationship is not only very weak, but is also non-significant.

On the other hand, stepwise analysis was also conducted to support the above findings. Affective commitment significantly loads in the first and single step of this analysis. It independently explains 8.25% of variance in SPR. Despite not loading at all, CC remained non-significant in the first single step. Hence, these results suggest that AC is the most important OC dimension in predicting changes in SPR.

In summary, affective and continuance commitment significantly explain 9% of the variance in self rated performance; however, this variance is explained only by affective commitment.

6.4.57 OC DIMENSIONS AND THE WORK SKILLS FACTOR OF SPR.

HO: Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employee work skill, as rated by themselves.

HA: Organisational commitment dimensions in Jordanian industrial firms will significantly explain the variance in employee work skill, as rated by themselves.

Table 6-60: Results of the Single (Microfit) and Correlation (SPSS-X) tests for OC dimensions and the work skills factor of SPR.

NO	Variable	T value	Sig. T	Coefficient	r	p
1	Affective commitment	7.04	.00	.06	.24	.02
2	Continuance commitment	1.66	.10	.02	.05	.17

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
49.60 (0.00)	0.06	141.25 (0.00)	32.04 (0.00)	36.21 (.000)

To test this hypothesis, the single regression and the correlation test were used. Table (6.100) shows that the F value of 26.2 is significant at the .01 level. The R-Bar-Square value (.06) indicates that the two dimensions of OC can significantly and collectively explain 6% of the variance in work skills. Hence, the null hypothesis is not supported. However, the t value (1.66) of CC is not significant (.10 > .05). Moreover, its correlation ($r = .05$) with work skills is also non-significant ($p = .17$).

On the other hand, in the stepwise analysis only one step was reported in which the AC was significantly loaded. It explains independently 5.85% of the variance in SPR. On the contrary, CC did not load, and remained non-significant in the first single step. Thus, the results of enter and stepwise regression, together with the correlation test findings indicate that AC is the most important predictor of work skills. The positive sign of its correlation ($r = .24$) indicates that the higher the employees' affective commitment, the higher their work skills, and vice versa.

To conclude, the dimensions of organisational commitment significantly predict the variance in work skills. However, affective commitment plays the only significant part in explaining this variance.

6.4.58 OC dimensions and work enthusiasm factor of SPR.

HO: Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employee self rated work enthusiasm.

HA: Organisational commitment dimensions in Jordanian industrial firms will significantly explain the variance in employee self rated work enthusiasm.

Table 6.61: Results of the Single (Microfit) and Correlation (SPSS-X) tests for OC dimensions and the work enthusiasm factor of SPR.

NO	Variable	T value	Sig. T	Coefficient	r	p
1	Affective commitment	6.67	.00	.06	.23	.02
2	Continuance commitment	1.30	.20	.02	.04	.30

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
22.80 (0.00)	0.05	214.45 (0.00)	27.58 (0.00)	39.24

The single regression (enter and stepwise methods) and correlation tests were used to examine this hypothesis. Table (6-61) shows that the F value of 22.3 is significant (Sig. F = .00). This means that AC and CC significantly explain variance in work enthusiasm. Thus, the null hypothesis is not supported. The R-Bar-Square value of .05 indicates that these OC factors are significantly related to work enthusiasm, and that they can explain 5% of variance in this variable. Nevertheless, CC's role in explaining this variance is very weak, yet not significant. The results of the correlation shown in Table (6-61) indicate that the relationship ($r = .04$) of CC with work enthusiasm is not significant ($p = .299$). Furthermore, the results of the stepwise (single) revealed that AC is the key factor in the OC dimensions' relationship with work enthusiasm. It was significantly entered in the first and single step, explaining 5.20% of variance in work enthusiasm. On the other side, CC did not load at all, and remained non-significant in the first step. Thus, the results of regression and the correlation tests confirm that AC is the most important OC dimension in affecting employees' work enthusiasm. It shows the highest t value (6.67) and the highest correlation (.23). The positive sign of this correlation indicates that the higher the AC, the higher the work enthusiasm, and vice versa.

In summary, organisational commitment dimensions significantly explain the variance in work enthusiasm. However, this variance is only caused by the affective commitment factor.

6.4.59 OC FACTORS AND THE JOB PERFORMANCE FACTOR OF SPR.

HO: Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employee self rated job performance.

HA: Organisational commitment dimensions in Jordanian industrial firms will significantly explain the variance in employee self rated job performance.

Table 6-62: Results of the Single (Microfit) and Correlation (SPSS-X) tests for OC dimensions and the job performance factor of SPR.

NO	Variable	T value	Sig. T	Coefficient	r	p
1	Affective commitment	6.11	.00	.05	.21	.02
2	Continuance commitment	-0.42	.68	-.00	-.02	.54

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
18.90 (0.00)	0.04	109.14 (0.00)	20.95 (0.00)	5 (.025)

To test this hypothesis, the single regression and the correlation tests were adopted. The results of these tests are presented in Table (6-62). As can be seen from this table, the F value of 18.9 is significant at .01. Thus, the null hypothesis is not supported. The R-Bar-Square (.04) value indicates that the OC dimensions have significantly affected employees' job performance, and explained 4% of its variance. However, t values for both AC (6.11) and CC (-.04) indicate that AC plays the major role in causing this variance. Table (6-62) shows that it has a significant positive relationship ($r = .21$) with job performance. Thus, the higher the AC, the higher the self rated job performance, and vice versa.

In short, organisational commitment dimensions have significantly and collectively explained the variance in job performance. However, the affective commitment factor played the major role in accounting for this variance.

6.4.60 OC DIMENSIONS AND THE WORK DUTIES FACTOR OF SPR.

HO: Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employee work duties, as rated by themselves.

HA: The organisational commitment dimensions in Jordanian industrial firms will significantly explain the variance in employee work duties, as rated by themselves.

Table 6-63: Results of the Single (Microfit) and Correlation (SPSS-X) tests for OC dimensions and the work duties factor of SPR.

NO	Variable	T value	Sig. T	Coefficient	r	p
1	Affective commitment	5.91	.00	.05	.20	.02
2	Continuance commitment	2.12	.03	.03	.07	.06

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
19.30 (0.00)	0.04	70.79 (0.00)	11.88 (0.00)	17.09

To test this hypothesis, the single regression and the correlation test were used. From Table (6-63), it can be seen that the F value of 19.3 is significant at .01. This indicates that the OC dimensions significantly explain the variance in work duties. Thus, the null hypothesis is not supported. However, the role of AC in explaining this variance seems to be greater than that of CC. The AC t value (5.91) and the significance level (.00) are larger than CC's t value (2.12) and significance level (.03). Above all, AC's correlation ($r = .20$) with work duties is positive, moderate and highly significant ($p = .00$). However, CC's correlation ($r = .06$) is weak, yet not significant ($p = .061$). Given these results, it can be suggested that AC is more important than CC in affecting work duties. To confirm this suggestion, stepwise analysis was used. The results of this test revealed similar findings to those presented in Table (6-63) above. AC was entered in step (1) and CC in step (2). Hence, it can be confirmed that AC is more important than CC in predicting variance in work duties, and that the higher the AC, the better the understanding of work duties, and vice versa.

To conclude, organisational commitment factors significantly explain 4% of the variance in work duties. Nevertheless, affective commitment accounts for more variance than continuance commitment in this variable.

6.4.61 OC FACTORS AND THE READINESS TO INNOVATE FACTOR OF SPR.

HO: Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employees readiness to innovate as rated by themselves.

HA: Organisational commitment dimensions in Jordanian industrial firms will significantly explain the variance in employees readiness to innovate, as rated by themselves.

Table 6-64: Results of the Single (Microfit) and Correlation (SPSS-X) tests for OC dimensions and the readiness to innovate factor of SPR.

NO	Variable	T value	Sig. T	Coefficient	r	p
1	Affective commitment	4.53	.00	.04	.16	.03
2	Continuance commitment	1.48	.14	.02	.05	.19

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
11.20 (0.00)	0.03	44.98 (0.00)	12.75 (0.00)	32.26 (.000)

The single regression and the correlation test were used to test this hypothesis. The results of these tests are presented in Table (6-64) above. As can be seen from this table, the F value of 11.2 is highly significant (Sig. level = .00). Moreover, the R-Bar-Square value of .03 indicates that the OC factors can significantly explain the variance in readiness to innovate, to the extent of 3%. Thus, the null hypothesis is not supported. The t value (4.53), its significance level (.00) and the correlation coefficient (.16) of AC are higher than those of CC. On the other hand, CC's t value of 1.48 is not significant (Sig. T = .14) and its correlation coefficient (.05) is non-significant ($p = .19$). Therefore, it can be suggested that AC is more important than CC in predicting the change in readiness to innovate, and that the higher the AC, the higher the readiness to innovate, and vice versa.

To summarise, organisational commitment dimensions significantly predict the variance in readiness to innovate. However, the affective commitment component's influence on this construct is higher than continuance commitment.

6.4.62 OC AND THE IMMEDIATE SUPERVISOR PERFORMANCE RATINGS

HO: Organisational commitment in Jordanian industrial firms will not significantly explain the variance in employees' performance, as rated by immediate supervisors.

HA: Organisational commitment in Jordanian industrial firms will significantly explain the variance in employees' performance, as rated by immediate supervisors.

To test this hypothesis, organisational commitment was regressed against immediate supervisor rated performance. The results of multiple R and the regression ANOVA are presented in Table (6-65) above. As can be seen from this table, The F value of 208.6 is significant at .01. The multiple R value (.46) and the beta weight (.46) indicate that there is a significant positive relationship between OC and ISPR, and that the higher the OC, the higher the ISPR.

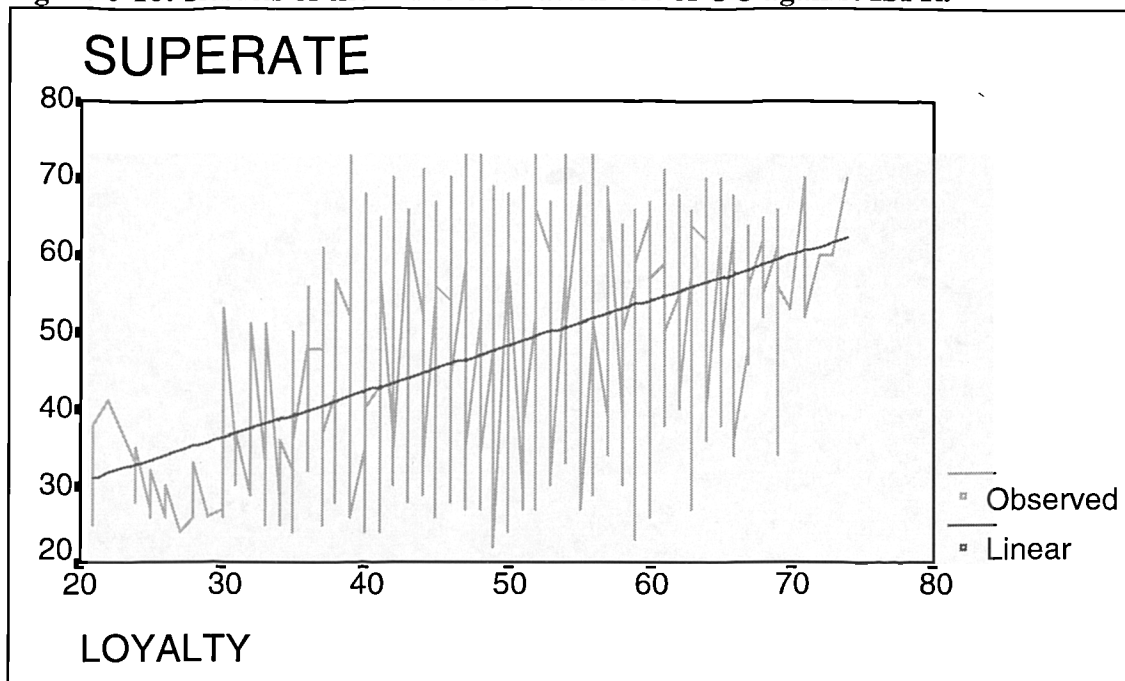
Table 6-65: Results of the multiple R and regression ANOVA for OC and ISPR.

Multiple R	Adjusted R square	F value	Sig. F	T value	Sig. T	Beta
.46	.21	208.6	.00	14.45	.00	.46

Normality	Heteroscedasticity	Serial correlation	Coefficient
7.78 (.020)	1.96 (.161)	14.44 (.000)	.59

The adjusted R square value (.21) indicates that OC can explain the variance in ISPR to the extent of 21%. Based on these findings, the null hypothesis is not supported. On the other hand, the curve estimation test was also used to examine the OC-ISPR relationship. The results of this test are presented in figure (6-10). As can be seen from this figure, there is a strong linear relationship between these two variables.

Figure 6-10: Results of the curve estimation test of OC against ISPR.



To conclude, organisational commitment significantly explains 21% of the variance in immediate supervisor performance ratings.

6.4.63 THE DIMENSIONS OF OC AND ISPR

HO: Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' performance, as rated by immediate supervisors.

HA: Organisational commitment dimensions in Jordanian industrial firms will significantly explain the variance in employees' performance, as rated by immediate supervisors.

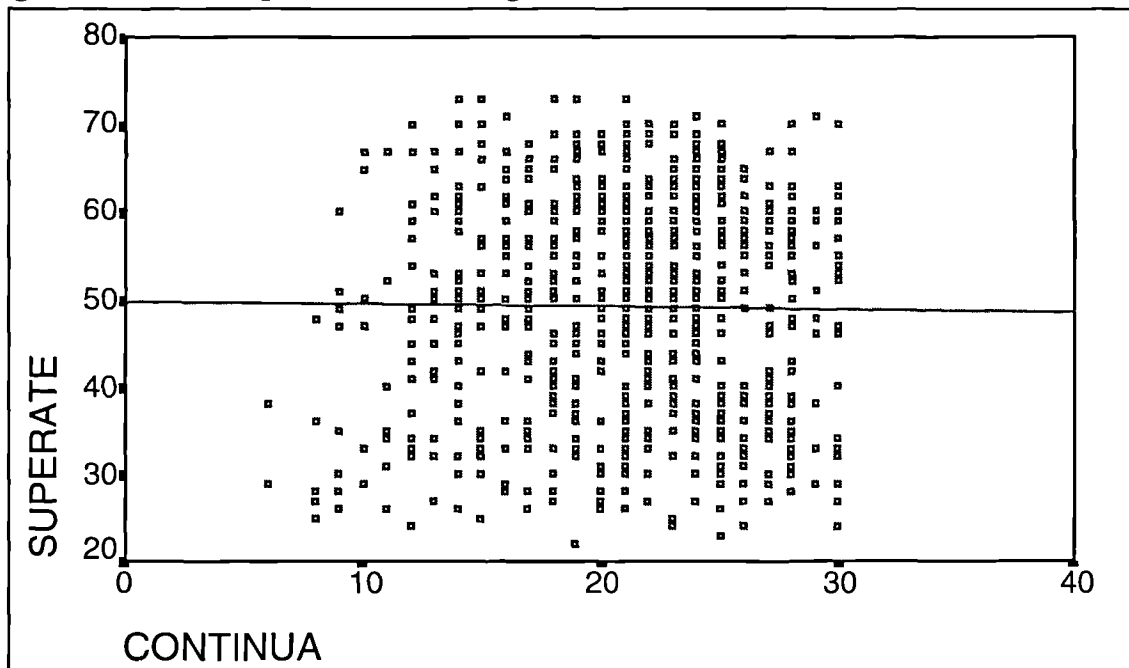
Table 6-66: Results of the Single test (Microfit) and correlation (SPSS-X) tests for OC dimensions and ISPR.

NO	Variable	T value	Sig. T	Coefficient	r	p
1	Affective commitment	17.70	.00	.79	.54	.00
2	Continuance commitment	00.14	.89	.01	-.01	.70

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
314 (0.00)	0.29	1.61 (0.45)	4.99 (0.03)	9.73 (.002)

The single regression and correlation tests were used to examine this hypothesis. Table (6-66) shows that the F value of 314 is significant (Sig. F = .00). Thus, the null hypothesis is not supported. However, the CC significance is not supported (t value = .14, Sig. t = .89) and its correlation ($r = -.01$) is non-significant ($p = .70$).

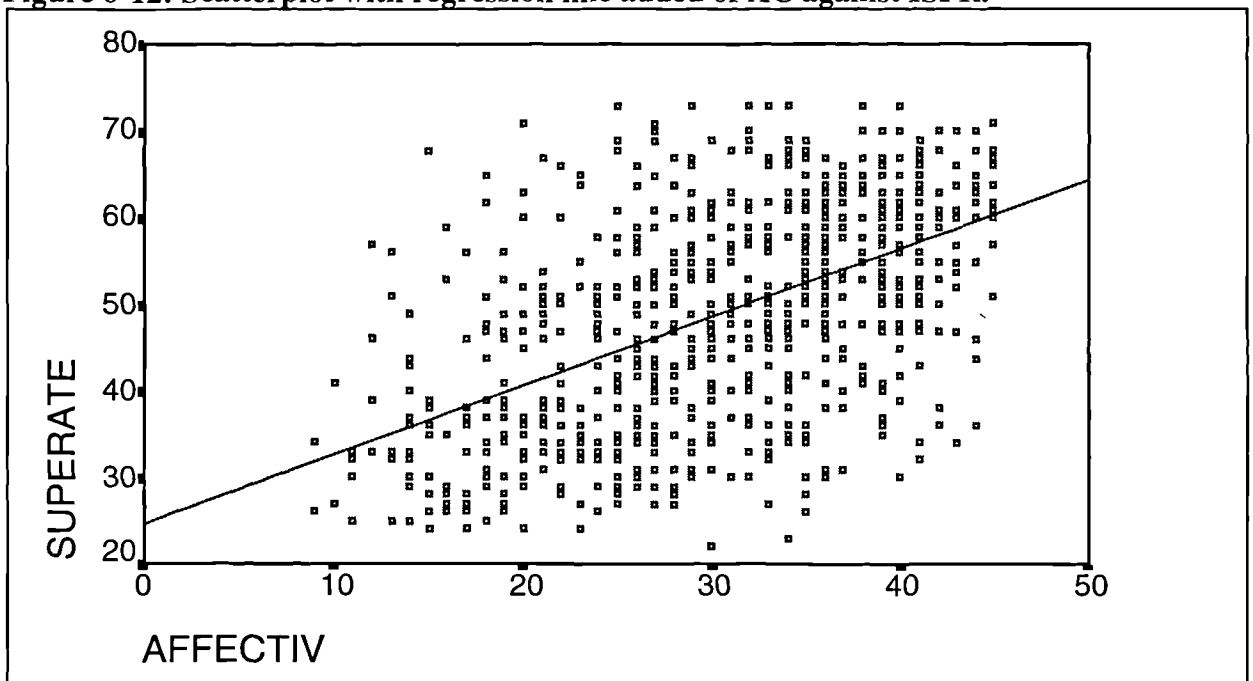
Figure 6-11: Scatterplot with fitted regression line of CC and ISPR.



To highlight these results, the scatterplot with added regression line was obtained. As can be seen from Figure (6-11), the regression line appears to be horizontal, and this means that the CC-ISPR relationship is not significant.

On the contrary, AC's t value (17.70) is highly significant (Sig. t = .00). Furthermore, it has a strong, positive and significant (.00) correlation (.54) with ISPR. Thus, the higher the AC, the higher the employees' supervisory rated performance, and vice versa. To examine AC's relationship with ISPR, the scatterplot with fitted regression line was also used. Figure (6-12) shows that there is a strong relationship between these two variables.

Figure 6-12: Scatterplot with regression line added of AC against ISPR.



6.4.64 OC FACETS AND THE READINESS TO INNOVATE FACTOR OF ISPR

HO: Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' readiness to innovate, as rated by immediate supervisors.

HA: Organisational commitment dimensions in Jordanian industrial firms will significantly explain the variance in employees' readiness to innovate, as rated by immediate supervisors.

Table 6-67: Results of the Single (Microfit) and Correlation (SPSS-X) tests for OC dimensions and the readiness to innovate factor of ISPR.

NO	Variable	T value	Sig. T	Coefficient	r	p
1	Affective commitment	14.16	.00	.23	.45	.00
2	Continuance commitment	00.23	.82	.01	-.01	.82

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
100.30 (0.00)	0.20	0.66 (0.72)	7.36 (0.01)	0.00 (.965)

The single regression and correlation test were used to test this hypothesis. The regression test results presented in Table (6-67) reveal that the F value of 100.3 is significant at .01. Moreover, the R-Bar-Square value of .20 implies that OC dimensions explain 20% of variance in readiness to innovate. Considering these findings, the null hypothesis is rejected. However, the role of the CC factor in explaining this variance appears to be very weak, if any. It has a weak and non-significant (.82 > .05) t value (.23) and non-significant (p = .82) correlation (r = -.00). On the other hand, AC has a significant (.00) t value (14.16) and significant (.00) correlation (r = .45). Since the sign of this correlation is positive, it can be proposed that the higher the affective commitment, the higher the readiness to innovate, and vice versa. Furthermore, considering its high t value (14.16) and the higher correlation (.20), it can be suggested that the AC is more important than CC in influencing readiness to innovate.

To conclude, organisational commitment dimensions significantly predict 20% of the variance in readiness to innovate. However, it is obvious that this variance is largely accounted for by the affective commitment factor, rather than by continuance commitment.

6.4.65 OC DIMENSIONS AND WORK DUTIES FACTOR OF ISPR

HO: The organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' work duties, as rated by their supervisors.

HA: The organisational commitment dimensions in Jordanian industrial firms will significantly explain the variance in employees' work duties, as rated by their supervisors.

Table 6-68: Results of the Single (Microfit) and Correlation (SPSS-X) tests for OC dimensions and the work duties factor of ISPR.

NO	Variable	T value	Sig. T	Coefficient	r	p
1	Affective commitment	15.35	.00	.16	.48	.00
2	Continuance commitment	-1.02	.31	-.02	-.05	.18

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
119 (0.00)	0.23	5.95 (0.051)	8.55 (0.00)	6.60 (.002)

To test this hypothesis, affective and continuance commitment were regressed against the work duties dimension of ISPR. Table (6-68) shows that the F value of 119 is significant ($.00 < .01$). Thus, the null hypothesis is not supported. The R-Bar-Square value of .23 indicates that the OC components can significantly and collectively explain 23% of variance in work duties. However, it is apparent from Table (6-68) that CC does not account for a significant share in this variance, because it has a weak non-significant ($.31 > .05$) t value (-1.02) and non-significant ($.18 > .05$) correlation (-.05). Thus, AC is the variable that plays the major role in accounting for the variance in work duties. This indicates that 23% of the variance has been explained by this factor of OC. Furthermore, its t value (15.35) and correlation (.48) are highly significant (.00). The positive sign of this correlation indicates that the higher the employees' affective commitment, the higher the performance, and vice versa.

In summary, organisational commitment dimensions significantly influence employees' understanding of their work duties. However, the affective commitment factor plays the major role in this effect.

6.4.66 OC DIMENSIONS AND THE JOB PERFORMANCE FACTOR OF ISPR

HO: Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' job performance, as rated by their supervisors.

HA: Organisational commitment dimensions in Jordanian industrial firms will significantly explain the variance in employees' job performance, as rated by their supervisors.

The single regression and the correlation test were used to examine this hypothesis. The results of these tests are presented in Table (6-69) above. As can be seen from this table, the F value of 102.4 is significant at .01. Therefore, the null hypothesis is rejected. From the R-Bar-Square value (.21), it can be understood that the OC dimensions significantly explain 21% of the variance in job performance. Nevertheless, the role of CC in indicating this variance is not significant. It has non-significant (.15 > .05) t value (1.44) and non-significant (.40) correlation (.03). On the other side, AC has significant (.00) t value (14.28) and significant (.00) correlation (.46).

Table 6-69: Results of the Single (Microfit) and Correlation (SPSS-X) tests for OC dimensions and job performance factor of ISPR.

NO	Variable	T value	Sig. T	Coefficient	r	p
1	Affective commitment	14.28	.00	.16	.45	.00
2	Continuance commitment	1.44	.15	.03	.03	.40

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
102.4 (0.00)	0.21	7.52 (0.02)	3.92 (0.05)	5.75 (.016)

Given that AC has the highest t value and the highest correlation, it can be identified as the most important OC factor in predicting supervisory-rated job performance. Hence, the higher the AC, the higher the job performance, and vice versa.

To summarise, organisational commitment factors significantly explain 21% of the variance in job performance. Nevertheless, affective commitment plays the major part in influencing this variable.

6.4.67 OC DIMENSIONS AND THE WORK ENTHUSIASM FACTOR OF ISPR

HO: Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' work enthusiasm, as rated by their supervisors.

HA: Organisational commitment dimensions in Jordanian industrial firms will significantly explain the variance in employees' work enthusiasm, as rated by their supervisors.

In order to test this hypothesis, the organisational commitment dimensions were regressed against work enthusiasm, and the correlation coefficients were also obtained. Table (6-70) shows that the F value of 108.8 is significant at .01. Hence, the null hypothesis is not supported. Although the overall effect of OC dimensions on work enthusiasm is significant, the findings reveal that CC is non-significant. Table (6-70) shows that its t value of -.174 is not significant and its correlation (-.02) is also non-significant (.55).

Table 6-70: Results of the Single (Microfit) and Correlation (SPSS-X) tests for OC dimensions and the work enthusiasm factor of ISPR.

NO	Variable	T value	Sig. T	Coefficient	r	p
1	Affective commitment	14.74	.00	.16	.47	.00
2	Continuance commitment	-.17	.86	-.00	-.02	.55

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
108.80 (0.00)	0.22	7.98 (0.02)	3.47 (0.06)	20.37 (.000)

On the other hand, Table (6-70) shows that the AC correlation and t value are highly significant. Thus, it is AC that significantly explains 22% of the variance in work enthusiasm. The positive sign of its correlation coefficient indicates that employees' work enthusiasm increases if they are affectively committed to their organisations, and vice versa.

To conclude, organisational commitment factors significantly explain 22% of the variance in work enthusiasm variable. However, affective commitment plays the main role in explaining this variance.

6.4.68 OC DIMENSIONS AND THE WORK SKILL FACTOR OF ISPR

HO: Organisational commitment dimensions in Jordanian industrial firms will not significantly explain the variance in employees' work skills, as rated by their supervisors.

HA: Organisational commitment dimensions in Jordanian industrial firms will significantly explain the variance in employees' work skills, as rated by their supervisors.

To test this hypothesis, the single regression and the correlation test were used. Table (6-71) results reveal that the F value of 80.9 is significant (Sig. F = .00). In addition, the R-Bar-Square value of .17 indicates that 17% of the variance in work skills is explained by dimensions of OC. Thus, the null hypothesis is not supported.

Table 6-71: Results of the Single (Microfit) and Correlation (SPSS-X) tests for OC dimensions and the work skills factor of ISPR.

<i>NO</i>	<i>Variable</i>	<i>T value</i>	<i>Sig. T</i>	<i>Coefficient</i>	<i>r</i>	<i>p</i>
1	Affective commitment	12.71	.00	.10	.41	.00
2	Continuance commitment	-.121	.90	-.00	-.02	.61

F	R-Bar-Square	Normality	Heteroscedasticity	Serial correlation
80.90 (0.00)	0.17	5.71 (0.06)	10.30 (0.00)	8.52 (.001)

However, CC has non-significant (.90 > .05) t value (-.12) and non-significant (.61 > .05) correlation (-.02). On the contrary, AC shows significant (.00 > .05) t value (12.71) and significant (.00) correlation (.41). Since the signs of this correlation is positive, it can be suggested that employees with higher affective commitment tend to show higher levels of work skills, and vice versa.

In short, organisational commitment dimensions significantly predict 17% of the variance in work skills. However, the regression and correlation tests reveal that affective commitment plays the main role in explaining this variance.

6.4.69 THE RELATIONSHIP BETWEEN SPR AND ISPR

HO: There will be no significant difference between the employee and the immediate supervisor in rating the employee performance in Jordanian industrial firms.

HA: There will be a significant difference between the employee and the immediate supervisor in rating the employee performance in Jordanian industrial firms.

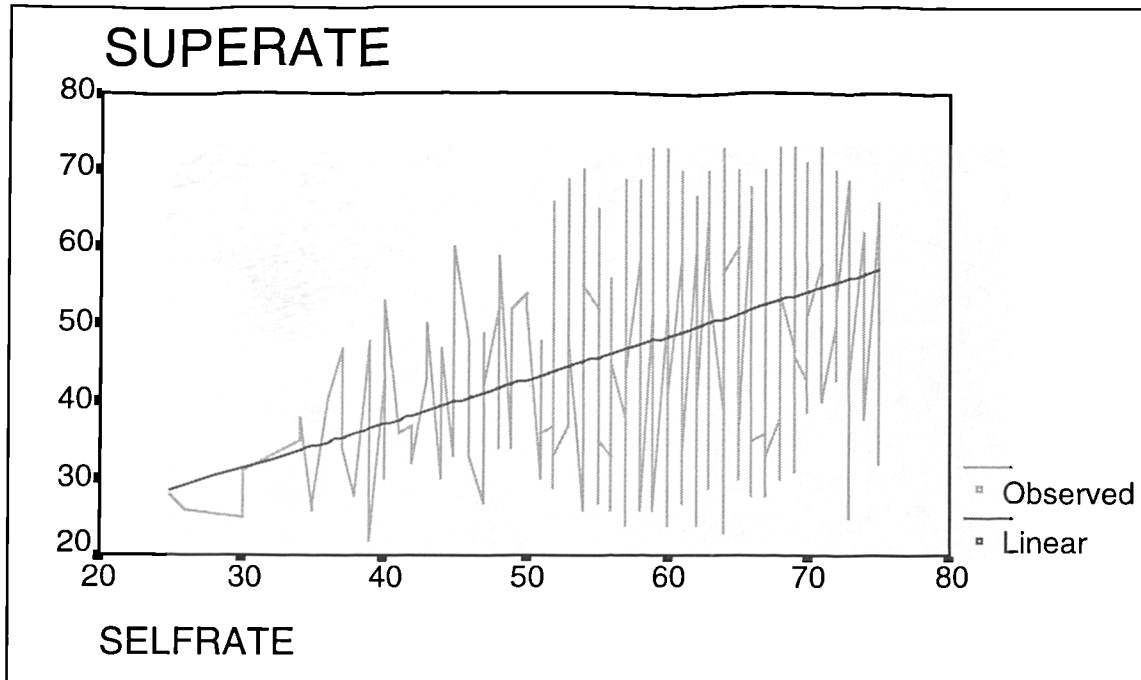
Table 6-72: Results of the t-test and correlation test for SPR and ISPR.

Variables	Mean	SD	Levene's Test		T value	Sig. T	Mean differences	<i>r</i>	<i>p</i>
			F	<i>P</i>					
Self rating	60.95	7.41	289.95	.00	22.72	.00	11.74	.34	.00
Supervisor rating	49.20	12.4							

Since the two groups are different (the employees and supervisors) the independent t-test together with the correlation test are used to examine this hypothesis. From the t-test results in Table (6-72) it can be seen that the t value of 22.72 is significant at the .01 level. Since one of the assumptions for the validity of t-test is homogeneity of variance, the *Levene's* test for homogeneity of variance was also obtained. Since the F value of 289.5 is significant ($p < .05$), the variance can be assumed to be not homogeneous, i.e. equal variances not assumed. These results thus indicate that differences in the means for employees (60.95) and their immediate supervisors (49.20) on performance with standard deviations of 7.41 and 12.43, respectively, are significantly different. In addition, the correlation test results revealed that there is a significant, moderate and positive correlation ($r = .34$) between SPR and ISPR. This means that SPR and ISPR would explain the variance in one another to the extent of 12%. Since the value of this correlation is less than 1, a difference between both performance ratings is established. Nonetheless, the relationship between SPR and ISPR can be represented by the estimation curve (figure 6-13). As can be seen from this estimation curve, there is a significant moderate relationship between these two variables.

Considering all these findings, it can be proposed that the null hypothesis is not supported. Given the mean values of SPR (60.95) and ISPR (49.20), and the fact that the correlation is less than .50, it can be suggested that there is a huge gap between the employees and immediate supervisors in performance ratings in Jordanian industries.

Figure 6-13: Results of the estimation curve of SPR against ISPR.



6.5 CONCLUDING REMARKS

This chapter aimed at presenting the primary data collected from the study survey. It has commenced by examining the multidimensionality of work environment, commitment, self and supervisor rated performance. The results revealed that these four variables are multifaceted constructs. Moreover, the central tendency and variability of study's concepts were also presented and analysed. Generally, the surveyed subjects tended to show positive perceptions toward their work environment, high organisational commitment, high self rated performance and moderate supervisory-rated performance.

On the other hand, the sixty-nine hypotheses that were presented in the previous chapter were examined in this chapter using regression analysis. Despite some violations of the classical linear regression model, this analysis provided fairly strong conclusions which are now summarised. The results reveal that organisational tenure, job tenure and job level variables are the most important demographic factors that influence employees' perceptions of work environment, commitment and performance. Moreover, employees' perception of work environment was found to be significantly related to their organisational commitment; however, it was more related to employees' affective commitment than continuance commitment. In addition, both self and supervisor-rated performance were significantly related to employees' perceptions of work environment. Furthermore, the role of commitment and its two facets in mediating the relationships between perceived work environment on the one hand, and

self and supervisor-rated performance on the other hand were also examined. The results showed that both overall commitment and affective commitment play a partial role in mediating these relationships. However, continuance commitment played no role in affecting these relationships. Moreover, organisational and affective commitment were found to be significantly related to employees' self and supervisor-rated performance. The chapter concluded by examining the relationship between self and supervisor-rated performance. The results revealed a significant and moderate relationship between these two constructs.

The next chapter will analyse the results that this chapter has reached from examining the primary data of the study. More specifically, the following chapter will both discuss and analyse these results, and highlight their implications for both practitioners and researchers.

Chapter Seven

DISCUSSION AND IMPLICATIONS OF THE FINDINGS

DISCUSSION AND IMPLICATIONS OF THE FINDINGS

7.1 INTRODUCTION

After examining the data and testing the hypotheses in chapter six, this chapter will highlight the findings of the study and analyse them. For consistency, the presentation of the findings and the discussion will follow the same sequence as used in chapter six. Accordingly, this chapter will discuss seven major issues. Firstly, the multidimensional nature of PWE, OC, SPR and ISPR, and its implications for both managers and researchers. Secondly, the relationships of the seven demographic variables with the study global variables and their factors. Thirdly, the relationships between the global perceived work environment and its factors on the one hand, and organisational commitment and its two components on the other hand. Fourthly, the relationships between work environment and its dimensions and self and supervisor-rated performance and their facets. The roles played by organisational commitment and its two factors in mediating the relationship between work environment and performance are discussed in part five. Part six considers the relationships between organisational commitment and its factors and self and supervisor and rated performance and their facets. Lastly, it considers the relationships between self and supervisor-rated performance and their dimensions. In addition, the theoretical and managerial implications for each finding are also discussed in the chapter.

7.2 THE MULTIDIMENSIONALITY OF PWE, OC, SPR AND ISPR

Factor analysis was used to examine the multidimensionality of study variables. The findings obtained from this analysis are presented and discussed below:

7.2.1 PERCEIVED WORK ENVIRONMENT (PWE)

The factor analysis results have shown that PWE is a multidimensional variable, comprising 13 dimensions. This finding is in line with the arguments of most work environment studies with respect to the multifaceted nature of this construct. Most of the Western studies (e.g., Litwin and Stringer, 1968; Payne and Pheysey, 1971; Lawler, Hall and Oldham, 1974; Jackofsky and Slocum, 1988; Guzley, 1992; Sparrow and Gaston, 1996 and Griffin and Mathieu, 1997) have conceptualised work environment as a multifaceted concept. Furthermore, most the Middle Eastern studies have also conceptualised work environment as a multidimensional construct (e.g., Al-Hossomi, 1984 and Al-Shammari, 1990). Hence, there is a general consensus on the dimensionality of work environment. However, there appears to be little agreement on

the number and kind of factors that comprise this concept. While some researchers (e.g., Griffin and Mathieu, 1997) argue that only three dimensions make up the PWE variable, others (e.g., Al-Hossomi, 1984) contend that there are 20 dimensions. In addition, there is a group of researchers who suggest different numbers of factors, such as four (Hemingway and Smith, 1999), six (Schnieder, 1973), nine (Litwin and Stringer, 1968), ten (Moss, 1986), eleven (Turnipseed and Turnipseed, 1992), fifteen (Schuster *et al.*, 1997), and nineteen (Payne and Mansfield, 1978). The major reason behind this variation is the nature of the PWE construct. Compared with the other organisational concepts, PWE is a more open concept. Most factors relating to the organisational structure, employees, practices and procedures and management could be included under this global variable.

Unlike most, if not all, work environment or climate scales, the scale used in this study has included some non-traditional PWE factors. Although numerous studies were conducted on *psychological contract*, *distributive and procedural justice*, and *innovation climate*, as separate concepts, few have conceptualised these relatively new variables as PWE dimensions. The loading of these factors together with the other traditional PWE factors (e.g., task characteristics and co-workers relations) suggest that they are work environment dimensions. Perhaps they are the new work environment factors that are characterised by the “fear of downsizing, loss of job security, overwhelming change in technology and the stress of having to do more with less” (ADL Associates, 1998, p. 6). This argument can be supported if the loading order of the PWE factors is considered. As can be seen from the factor analysis results in chapter six, *employee-immediate supervisor relationships* (one of the procedural justice factors), *distributive justice*, *psychological contract*, and, *innovation climate* variables loaded on the first four factors respectively. This indicates that these variables have been perceived by the Jordanian employees as more important than the traditional work environment factors which have dominated the management literature since Forehand and Gilmer’s (1964) study of “environment and employees’ behaviour”. The PWE factors that have “influenced the behaviour of people in the organisation” (Forehand and Gilmer, 1964, p. 362) in the 1960s, 1970s and to some extent the 1980s appear to be changing in this era of globalisation. Baruch (1998) attempted to answer the following question: “Why do the ideas suggested in the early 70’s lose their credibility in the 90’s?” (p. 139). He argued that there are new events in today’s work environment, such as a continuous struggle to survive, which have emerged from tough economic competition. Accordingly, the traditional missions of organisations such as ‘we are

caring for people' and 'employees first' are changing, because organisations have to survive and compete. Thus, "cost effectiveness is what matters. Re-engineering and delayering are now more than buzz words, and applying these processes frequently results in reductions in the number of workers and managers needed, paving the way to repeated cycles of redundancies" (Baruch, 1998, p. 140).

As far as Jordan and other Arab countries are concerned, the issue of 'cost effectiveness' is currently what the organisation's efforts are centred on. For example, to achieve this goal many Jordanian organisations have reduced the number of employees. The Jordanian Labour Law requires companies to consult with the government on any bid to lay off workers, but it does not sanction them with a clear punishment. More recently, 1040 Jordanian employees lost their jobs following efforts by 77 organisations to restructure (Jordan Times, 26 Sep. 1999). An employee expressed his feeling towards this huge lay off as: "We are exhausted. We feel like we are blowing in the wind" (Jordan Times, 26 Sep. 1999, p. 2). The fear of restructuring and its implication to employees is no longer far from the thoughts of the Jordanian employees, even the most senior employees. In fact, "employers fire old workers who are getting a high salary and soon after replace them with new workers with fewer benefits" (Jordan times, 30 Sept. 1999, p. 1).

In such a work environment, factors like *psychological contract* and *distributive justice* seem to be influencing employees' behaviour and attitudes more than other traditional factors, such as task characteristics and decision making policy. On the other hand, *organisational justice* (OJ) was found to be a multidimensional concept, consisting of *distributive and procedural justice*. This finding mirrors some other findings in the management literature. For example, Tang and Baldwin (1996) found that OJ is a two dimensional construct. Contrary to the argument of some studies (e.g., Sapienza and Korsgaard, 1996; Scandura and Lankau, 1997; Moorman and Blakely, 1998 and Mossholder, Bennett and Martin, 1998), the procedural justice (PJ) factor was also found to be multidimensional variable.

Two dimensions comprise this concept, namely: *employee-immediate supervisor relationships* (EISR) and *fairness*. The first dimension of PJ that loaded in the first factor was originally including items of two factors: *two-way communication* and *trust*. Since these two factors measure the relationships between the employee and his/her supervisor (communication and trust relationships), they termed as the EISR following the results of factor analysis, as mentioned earlier in chapter five. The loading of trust and communication items in one factor rather than two supports the argument of some

researchers (e.g., Geller, 1999 and Orlikoff and Totten, 1999) that these items could be subsumed under one factor. Geller (1999), for example, examined interpersonal trust and employees' behaviour. He found that communication is one of the most important pillars of interpersonal trust. He concluded:

How people interact with others is a key determinant of interpersonal trust. What people say- and how they say it- influences trust in both their ability and intentions. Expertise is displayed by spoken or written words and by the confidence and credibility linked to those words. The way something is said, including intonation, pace, facial expressions, hand gestures and overall posture, has greater impact than what is actually said.

Nevertheless, some studies (e.g., Tang and Baldwin, 1996) have treated communication and trust as independent variables.

Implications

In the light of the above discussion, and considering the factor analysis findings, some theoretical and managerial implications can be highlighted. Firstly, organisations and/or managers/practitioners should be aware of the changes in employees' perception of the work environment. Factors (e.g., psychological contract) which were somewhat disregarded and perceived as not important in earlier days, especially in Third World organisations, should now be taken into account. To survive, compete, and succeed, organisations must consider the change in work environment factors that may influence employees' behaviour and attitudes. It is time to revise the old established list of the 1960s and 1970s of work environment factors to include the new factors mentioned above. Even more importantly, organisations should learn how to prioritise these factors according to their own situations.

Secondly, researchers must re-conceptualise the work environment variable in the light of the current change in employment and organisational conditions. It is no longer useful to apply the old measures tailored to examine the work environment of the 1960s and 1970s to investigate the new millennium's work environment. Researchers should develop new measures that take into account the up-to-date perceptions of the third millennium's employee about his/her work environment. In addition, the results have supported the multidimensionality of organisational justice that was reported in some recent Western studies. Moreover, there is a need to investigate the relationship between communication and trust, and whether they are separable factors of work environment or they just complement one another in a way that they could be treated as one factor.

7.2.2 ORGANISATIONAL COMMITMENT (OC)

When tested for dimensionality, OC was found to be a multifaceted construct. Two factors of OC loaded on the factor analysis, namely: *affective* and *continuance commitment*. This result provides some support for the findings reported by some recent Western studies in this field. For example, Meyer and Allen (1984); McGee and Ford (1987); Allen and Meyer (1990); Meyer and Schoorman (1992); Jaros *et al.* (1993); Lydka (1994); Liou and Nyhan (1995); Baker (1995); Allen and Meyer (1996); Jaros (1997); King and Sethi, 1997; Meyer *et al.* (1998); Travaglione *et al.* (1998); and Swailes (1999) have conceptualised OC as a multidimensional concept. In most of these studies, the affective and continuance commitment factors of OC were found to be highly reliable and separable concepts. King and Sethi (1997), for example, examined the multidimensionality of OC. They reported that “the 8-items of ACS loaded on the first factor. Six of the 8 CC items loaded on the second factor. Two items CC7 and CC8- did not load. These results mirror previous analyses conducted by McGee and Ford (1987)” (p. 91). Thus, “... after 35 years of frustrating results” (Benkhoff, 1997a, p. 720), and for the first time in the commitment research history there appears to be a cross-cultural agreement on the multidimensional nature of the organisational commitment.

On the other hand, most Eastern studies (e.g., Alshakha, 1995; Bhuian, Al-Shammari and Jefri, 1996 and Awamleh, 1996) have conceptualised OC as a unidimensional variable. The well-known definition and scale of commitment suggested by Porter *et al.* (1974), less recognised in recent Western studies, seem to be dominating the Arab management literature. The reason behind this tendency to adopt a unidimensional model of commitment could be the lack of up-to-date information about the development of management literature in this field. Getting such information in the Arab context is expensive, because libraries' subscription to Western information resources is limited, and the use of electronic databases is not widely known. Nonetheless, the search of the Arab management literature has resulted in only one study (Abdulla and Shaw, 1999) that has conceptualised OC as a multidimensional construct.

The concept of *normative commitment* (NC), which was dropped following the pilot study results, was found not to be reliable, and it overlapped with the affective commitment (AC) dimension in most commitment studies (e.g., Travaglione *et al.*, 1998). Considering the results of these studies which “... demonstrated a high correlation (exceeded .70) between identification [AC] and internalisation [NC]

commitment (Liou and Nyhan, 1995, p. 103), some researchers have questioned the separability of these two constructs (AC and NC). The loading of two NC items with seven AC items (pilot study), as mentioned earlier, may explain the overlap between these two concepts, as reported in the literature. On the other hand, the results of the factor analysis did not support the multidimensionality of the *continuance commitment* (CC) variable that has been reported by some studies (e.g., McGee and Ford, 1987; Somers, 1993 and Hackett *et al.*, 1994). The ‘limitation of alternative jobs’ and ‘the personal sacrifices’ first proposed by McGee and Ford (1987) as two independent dimensions for the CC variable, found no support in this study. Six items of the CC scale loaded on one factor in the pilot study (115 employee) and in the main study (1000 employee). These items represent the two proposed dimensions of CC. According to Suliman and Iles (2000, p. 79) “the items of Low Perceived Alternatives [CC: Low Alt] and High Personal Sacrifice [CC: Hi Sac] factors (McGee and Ford, 1987) appear to be captured by one factor rather than two”. In both situations, [CC: Low Alt] and [CC: Hi Sac], there is a fear of terminating organisational membership, because of the perceived cost in terms of not getting employed again or losing pensions, friends, familiar environments, ... etc. Thus, it is not a surprise to have these two proposed factors perceived equally by Jordanian employees, and consequently loading under one factor instead of two.

Implications

The findings obtained from the factor analysis test with respect to the dimensionality of CC have some implications for practitioners and researchers. First, organisations and/or managers should be aware that two components of commitment exist in the workplace. Accordingly, two groups of employees can be distinguished when the aim is boosting employees’ commitment: affectively and continuancely committed employees. It is assumed that each one of these groups presents different work behaviours. For example, Meyer and Schoorman (1992) have argued that the first group of employees are more likely to participate, and the second group to produce. Accordingly, continuancely committed employees may perform their duties to the level that is just enough to maintain organisational membership. However, affectively committed employees perform beyond the normal call of duty. According to Suliman and Iles (1999b, p. 16):

... The continuancely committed employee is more likely to leave the organisation at any time he/she feels that the cost-profit relationship has reached the equilibrium point. In other words, the continuancely committed employee may leave his/her employer when the expected benefits from

leaving become higher, or at least equal to, the cost of terminating the organisational membership ...On the other hand, the affectively committed employee may remain because he/she wishes to maintain membership in order to facilitate organisational goals (Mowday et al., 1979). Thus, as long as the exchange relationship (efforts-rewards) between the individual and the organisation exist, he/she may not think of leaving the organisation to which he/she is emotionally attached. Therefore, it can be suggested that affectively committed employees are more likely to maintain organisational membership and contribute to the success of the organisation than continuancely committed employees. However, both types of employees and both dimensions of commitment should be encouraged in organisations. By giving more attention and recognition to the continuancely committed employee we can improve his/her morale and dedication to the level that binds him/her to be emotionally attached to the organisation.

Second, the above mentioned results also suggest some theoretical implications for the management literature that will be discussed in the remainder of this section. The side-bet theory that was first proposed by Becker (1960), and developed later on has found some support from some recent Western studies; has also been supported by the results of this non-western study. Accordingly, the recent multidimensional approach can said to be supported. However, the results provide no support for the validity of normative commitment. This should not necessarily be taken as evidence as either for doubting the existence of *normative commitment* in the real work setting, or doubting the validity of the *normative approach*. Unfortunately, some researchers have started questioning the viability of the normative approach, given the inconsistent findings with respect to this construct discussed earlier. For example, Alshakha (1995, p. 17) argued that "... the *normative approach* does not seem to offer a complete explanation of the organisational commitment construct. Therefore, it is better subsumed into the attitudinal conceptualisation as done by several authors (Mowday *et al.*, 1982; Allen and Meyer, 1990)" (Researcher's emphasis added).

The main problem of the normative approach lies in the scales used to measure it. The Meyer and Allen's (1991) scale of normative commitment used by most researchers is not the most suitable one to examine this construct, at least in the Jordanian and Arab context. Moreover, the inconsistent findings do not provide enough evidence to cast doubt on the validity of the normative approach. It may be worth mentioning that even the organisational commitment concept has suffered for decades from inconsistent findings, yet no one has doubted the viability of the concept. Thus, researchers need to re-examine the scales of normative commitment as a way of developing new scales that take into account the unique cultural characteristics of each setting, as well as the ideas and concepts behind this approach.

The concept of normative commitment, as discussed in chapter two, appears to be highly related to employees' cultural backgrounds (Suliman and Iles, 1999b). There is a need to clarify the reasons behind the overlap between affective and normative commitment, as well as "defining the thin dividing line (if any exists at all) between these two constructs (Suliman and Iles, 1999b, p. 15). In addition, researchers both in the Western and Eastern contexts need to acknowledge the multidimensional nature of commitment, because it is no longer useful to conceptualise this concept as unidimensional. One may argue that the unidimensional conceptualisation of commitment that has dominated management research for decades has been the major reason for the inconsistent findings of many commitment studies. According to Suliman and Iles (in press):

[Researchers] must further study and analyse this construct in its new multifaceted form to put an end to the domination of the attitudinal approach that has resulted in disparate and disappointing results in the past four decades. Only then we can expect encouraging results and a clear picture of the nature, antecedents, consequences and correlates of organisational commitment.

The results of the continuance commitment scale tests provided no support for the multidimensionality of this construct. Since there are few commitment studies in the Arabic context, it will be unwise to conclude that continuance commitment is a unidimensional concept. Therefore, there is a need for further investigation of the dimensionality of this concept, especially in non-western contexts. To provide some comparisons, researchers should not apply management scales, especially multidimensional scales, without examining their psychometric properties, as well as multidimensionality whenever applicable. For example, the only multidimensional commitment study (Abdulla and Shaw, 1999) found in the Arabic context reported that affective and continuance commitment reliabilities were 0.74 and 0.64 respectively. It provided no information about the separability of these two concepts, or about the multidimensionality of the continuance commitment scale. The reliability of the two commitment scales does not necessarily mean that they are distinguishable. The continuance commitment scale, for example, was found to be reliable in this study. However, it was also found to be a unidimensional concept. Hence, the reliability and factor analysis tests are independent tests; each one provides certain information about a given scale that cannot be obtained from interpreting the results of only one test.

7.2.3 WORK PERFORMANCE

The dimensionality of the performance scale was examined using the factor analysis test. The results revealed that the performance concept is a construct consisting of five dimensions. These factors are *work skills*, *work enthusiasm*, *job performance*, *understanding work duties* and *readiness to innovate*. The multifaceted nature of performance is a relatively new idea in the management literature. As mentioned earlier, due to the current competitive pressures on organisations, employees are under pressure to develop new skills and to perform a variety of tasks. The results of this study have disclosed that the Jordanian employee is required to have the necessary work skills to perform the job, be enthusiastic, be a good job performer, be good at understanding work duties, and be ready to innovate. In other words, the traditional list of job description seems to be losing out in this era of globalisation. It is no longer accepted behaviour to reject doing a certain task because it is not in the job description list. Although it continues to exist in most recent organisations, the current list of job description is not static, as before; rather, it is flexible, and subject to amendments at any time. The employee must cope with this change (which is a prevalent phenomenon in the workplace) if he/she wants to keep his/her organisational membership. According to White, Young and Kilcullen (1995, p. 9):

A critical challenge for most organisations is to select applicants who will perform well on the job. Downsizing, job sharing, and the “team-omania” sweeping the nation [USA] have created new pressures on both employees and employers to master multiple work roles and accomplish more with less. Hiring and retaining talented, high quality people is essential to any organisation’s ability to profit from these new directions in an increasingly competitive marketplace (White et al.’s emphasis).

The analysis of both employees and immediate supervisors’ responses revealed the five factors of performance mentioned earlier. However, the order of these dimensions, as provided by factor analysis, is different. The five dimensions named earlier are in the order generated from the self-performance ratings (SPR) variable. The immediate supervisor performance ratings’ (ISPR) factors were ordered from the first to the last, as follows: *readiness to innovate*, *work duties*, *job performance*, *work enthusiasm*, and *work skills*. Most Western studies (e.g., Benkhoff, 1997a; Leong *et al.*, 1994; Ferris, 1981; Furnham and Stringfield, 1998; and Roberts and Reed, 1996) have conceptualised performance as a unidimensional concept. This unidimensional conceptualisation of performance has affected interpretations of its relationships with other organisational concepts (Angle and Lawson, 1994; Benkhoff, 1997a; Campbell *et al.*, 1993; Somers and Birnbaum, 1998). For example, the failure of researchers to establish the missing

link between performance and commitment is partly due to the unidimensional conceptualisation of both variables. According to Angle and Lawson (1994, p. 1542), "... in any investigation of the commitment-performance relationship, *both* the nature of commitment and the nature of performance being measured matter" (Angle and Lawson's emphasis). Furthermore, Somers and Birnbaum, 1998 examined the multidimensionality of performance. They concluded:

Although the multifaceted nature of job performance has been recognised for quite some times, research in this area is characterised by a strong emphasis on one dimension, task efficiency, usually as rated by one's immediate supervisor. As is the case with work-related commitment, however, this view of job performance is changing. Recent development in theory and in the practice of human resource management has led to what has been termed ... as an enlarged criterion space; that is, dimensions of job performance other than (supervisor-rated) task efficiency are increasingly seen as important in understanding human performance in work organisations.

More recently, some Western studies (e.g., Angle and Lawson, 1994; Farh *et al.*, 1991; Kalleberg and Marsden, 1995; Somers and Birnbaum, 1998 and Yu and Murphy, 1993) have recognised the multidimensional nature of performance, and have reported different numbers of dimensions. For example, Farh *et al.* (1991) and Yu and Murphy (1993) argued that performance is four dimensional construct, Angle and Lawson (1994) contended that there are five factors, while Somers and Birnbaum (1998) reported just three facets. This variation could be traced back to the situation of each study. The factors of performance that are recognised by an industrial company may differ from that of a service company, and those valued in a Western context may not be of importance in an Eastern context, and so on. As far as Jordan and other Arab countries are concerned, the unidimensional conceptualisation of performance tends to dominate the management literature. However, some recent studies (e.g., Darwish, 1998; Suliman, 1995 and Suliman and Iles, 1998a) have started to adopt the multifaceted performance concept.

On the other hand, the job performance dimension, which loaded on the third factor in both SPR and ISPR, was originally composed of two components namely: quantity and quality of work. The elements of these two components loaded under one factor, termed *job performance*. This result mirrors some findings reported in the management literature. For example, Farh *et al.* (1991) and Yu and Murphy (1993) reported that quantity and quality of work concepts are two elements of one factor, which they called job performance. However, Kalleberg and Marsden (1995) argued that employees' performance can be measured using two distinct dimensions, namely *quality and*

quantity of work. Nonetheless, Kalleberg and Marsden did not examine the multidimensionality of the performance scale that they proposed. Therefore, one may doubt the separability of these two factors, especially when their relationships with other variables included in the study are considered. *Quality and quantity of work* dimensions were found to be similarly related to affective (.105 and .177 respectively) and continuance commitment (.02 and .05 respectively). Apart from Angle and Lawson (1994), the literature search results revealed that no study has regarded the *readiness to innovate* concept as one of the performance dimensions. However, the current trend in the workplace is to get employees to learn how to be innovative. Expressions such as 'innovate or die', 'get innovative or get dead' and 'innovate or evaporate' have become the basic rule of international global competition. According to Pury (1994, p. 9):

In the long run, companies that focus solely on improving productivity are not likely to survive. While projects to raise quality and efficiency levels are and remain essential for the survival of a company, they are less and less able to provide it with a decisive edge over its competitors because everybody is implementing the same programs. As important as they are, these improvement programs will, therefore, only temporarily improve profitability in a market in which the pressure on prices is overwhelming. In the present environment of globalisation of all economic processes, a company can thus only keep up a good price for its products and earn a decent margin if these products are ahead in the innovation game.

As a support to this common view, the *readiness to innovate* variable loaded on the last factor in the SPR variable, and on the first factor in the ISPR concept. This means that innovation is less valued by Jordanian employees than by their immediate supervisors. However, both groups regarded it as one of the performance dimensions.

Implications

The multidimensionality of the performance concept, supported by the findings of this study, has some implications for both organisations and researchers. Firstly, organisations need to avoid the unidimensional view of performance, and break it down into certain relevant factors, e.g., work skill and innovation. By doing so, the management of performance will be more clearer, more precise and easier, because the performance of employees will be measured against certain factors, and accordingly the weaknesses and strengths of each employee's performance can easily be defined and managed. Moreover, the employee him/herself will be aware of the part (s) of performance that need to be developed in order to meet the required standard. It may sound better for the employee to be told that his/her overall performance is satisfactory, but that a certain part (e.g., understanding work duties) of performance needs some attention, instead of being told that his/her performance is unsatisfactory. Such

ambiguous expressions may reduce the morale of employee, and cause some frustration, which in turn will negatively influence his/her behaviour and work outcomes (Suliman, 1995). In addition, organisations need to communicate clearly to their employees what they want them to do. For example, the organisation should not expect its employees to adopt innovative behaviour without communicating this clearly to them. This clear communication will reduce the gap between the organisation's expectations and employees' behaviour and/or performance.

Secondly, researchers need to reconceptualise performance as a multifaceted concept, and re-examine its relationships with other organisational factors, based on this new conceptualisation. Since "one of the greatest challenges now facing organisations is to develop an ongoing capacity to generate new ideas and to put them into effective practice" (Rough, 1996, p. 48), researchers need to recognise the importance of innovation to the modern organisation. Innovation or readiness to innovate has become one of the most important performance factors that the employee has to demonstrate. Therefore, researchers need to consider innovation as one of the performance facet, and to test its validity using appropriate statistical measures.

7.3 GENDER AND PWE, OC, SPR AND ISPR

The results of the one-way-ANOVA and means test revealed that there is no significant difference between male and female employees in perceptions of overall work environment in Jordanian industrial firms. This result supports Al-Shammari's (1990) argument with respect to the gender-work environment relationship in the Jordanian context. In his words,

The results indicated that there was no significant evidence to suggest that gender determined the way in which individuals perceived the employing organisational climate [PWE]. Similarities rather than differences were evidenced in perceptions of male and female employees (p. 301-302).

Since they share one work environment, male and female employees tend to show similar views towards it, especially because gender discrimination in Jordan is diminishing after the activation of the United Nation act of CEDAW in 1992 (as mentioned in chapter four). Nevertheless, the results also revealed that Jordanian male and female employees tend to show similar perceptions toward the 13 factors of work environment. This finding mirrors some of the findings in the recent management literature. For example, Furnham and Gunter (1994) examined gender and work environment in two public and private organisations. Gender was found to be unrelated to employees' perception of work environment in the public organisation. However, it

was found to be related to perceptions of work environment in the private organisation. The results signified that male employees perceived work environment more positively than their female counterparts. Kirkcaldy and Athanasou (1999) found no relationship between the perception of overall work environment and gender, although gender was found to be related to two work environment factors, i.e., psychological contract and task characteristics. In general, most Western and non-western studies (e.g., Al-Hossomi, 1984; Al-Shammari, 1990, 1994 and Guzley, 1992) have ignored gender's role in affecting the perception of work environment, because they have focused on the relationships between work environment and financial performance (e.g., sales growth, growth profit, return on sales and asset turnover). This tendency of some researchers to link work environment with financial performance has been criticised by other researchers. For example, Schneider (1990) and Sparrow and Gaston (1996) have argued that researchers need to examine the role of work environment in influencing the human system of the organisation, not financial performance.

On the other hand, the study results have shown that gender is not related to affective commitment. This result supports some of the recent meta-analysis findings in this field (e.g., Aven, Parker and McEvoy, 1993 and Mathieu and Zajac, 1990). Moreover, some recent studies in the Arabic context have also reached the same conclusion. For example, Awamleh (1996) examined the gender-affective commitment relationship in Jordanian civil service organisations. The results revealed no significant relationship ($t = .25$, Sig. $T = .81$) between the two variables. Abdulla and Shaw (1999) studied personal factors and commitment in the United Arab Emirates. They found that affective commitment and gender are not significantly related. These findings thus indicate that the suggestions offered by some studies in the 1960s and 1970s (e.g., Grusky, 1966 and Herbiniack and Alutto, 1972) for gender-affective commitment relationships have tended to lose credibility as equality between male and female employees in the workplace and other aspects of life is progressing. Presently, the barriers of employment (e.g., sexual segregation) that faced female workers and have existed for a long time are now tending to disappear.

With respect to the continuance commitment dimension, the results have shown that male employees showed higher levels of commitment than their female counterparts. This result mirrors the findings of some studies (e.g., Ngo and Tsang, 1998), and contradicts others (e.g., Jaros, 1997). Few studies have examined the relationship between these two variables in the Arabic context. Abdulla and Shaw (1999), for example, found that males exhibited higher levels of continuance commitment than

females; however, they provided no explanation for this finding. Two major reasons can be suggested for the tendency of male employees to develop higher continuance commitment than female employees in the Jordanian and Arabic contexts. Firstly, as mentioned earlier, the Arabic society is generally male oriented. The male member in the society is expected to look after his family, which may include a working wife. Normally, the Arabic family depends on the husband's income at the first stage, and on the wife's income, if any, at the second stage. Therefore, males tend to evaluate more highly their organisational investments than females, and show higher concern towards the scarcity of alternative jobs. The society normally forgives or may even respect the female member who terminates her job without having another one lined up; but it never forgives male members who terminate work and stay at home. Secondly, male employees' investments (e.g., pensions and salary) in work organisations is normally higher than females', because most females tend to leave their jobs earlier to look after their children and other family affairs. According to the sexual division of labour that is highly rooted in Arabic culture, the woman's primary role is to look after her children and family, while the man's role is to provide some income for his family. Therefore, the female employee is more likely to terminate her organisational membership at any time, without taking into account the implications of this termination.

The results also revealed that male employees tended to rate their overall performance, as well as their work skills, work enthusiasm and readiness to innovate, more highly than their female counterparts. Generally, compared with females, males tend to overestimate their performance, because female employees tend to respect the cultural norms that describe the decent woman as the one that is humble, simple, modest and always wanting to be under the shadow of a man. Moreover, males by nature, especially in the Arabic context, believe that they are better than females, not only in performance but in all other aspects of life, and females tend to accept and in most cases support this belief. Similar results have been reported elsewhere in the management literature. Baruch (1996) reported significant relationship between gender and self-performance ratings. Male employees tended to rate their performance more positively than females. Likewise, Makiney and Levy (1998) and Slocombe and Dougherty (1998) found that males' self rated performance was higher than females. However, the relationship between these two constructs was not significant.

With respect to the immediate-supervisor performance ratings and gender, the results have shown that neither the global performance nor four of its dimensions are related to gender. However, the work enthusiasm factor of ISPR was found to be related to

gender. Male employees showed higher work enthusiasm than females. In addition to the reasons given earlier, it can be suggested that the female employee tends to show lower enthusiasm because in most cases she has to divide her enthusiasm between her family and work.

7.4 MARITAL STATUS AND PWE, OC, SPR AND ISPR

The results of the one-way-ANOVA and means test revealed no significant relationships between overall perceived work environment and 10 of its factors on the one hand and marital status on the other hand. However, the employee-immediate supervisor relationship, innovation climate and co-worker relations were more positively perceived by married employees than by non-married employees. A married employee tends to show these positive perceptions because he/she receives more organisational rewards (e.g., family allowance) than a single employee. Furthermore, organisational commitment and its two factors were found to be related to marital status. The results revealed that married employees tend to show higher levels of affective and continuance commitment than non-married employees. Since the married employee has more social responsibilities than the single employee, he/she tends to show higher concern about organisational membership and organisational investments. Moreover, terminating membership without having an alternative employment offer seems to be more acceptable for single than for married employees, because a married employee has to meet the daily needs of his/her family and other social obligations, besides his/her own needs. Hence, married employees are in need of continuous income to carry out their duties. These findings provide some support for Abdulla and Shaw's (1999) study, conducted in a similar context. They found a significant relationship between marital status and continuance commitment. Married employees showed higher continuance commitment to their organisations than non-married employees. They argued that "... married individuals may not only have greater obligations (financial and otherwise) which increase their continuance commitment, but also tend to have a greater psychological bond with the organisation" (p. 88).

Unlike other demographic variables, the relationship of marital status with organisational commitment in general, and especially continuance commitment in particular, is somewhat disregarded in the management literature. However, there is a general belief among researchers that married employees are more committed to their organisation than their non-married counterparts. Mathieu and Zajac (1990), who

reported a small positive correlation between organisational commitment and marital status, asserted:

It seems reasonable to predict that marital status may be more related to calculative commitment because married employees are, in general, likely to have greater financial burdens. However, this remains an issue for future research because too few samples were available to conduct such a moderator analysis (p. 178).

With respect to the relationship of marital status with self-performance ratings, the results revealed that there is no significant difference between married and non-married employees in terms of performance rating. Moreover, the five dimensions of self-performance ratings were also found to be unrelated to marital status. Likewise, the results provided no evidence to support the relationships between supervisor performance ratings and marital status. However, two factors out of its five dimensions were found to be of importance in the marital status-performance relationship, namely job performance and work skills. More specifically, married employees showed higher levels of job performance and work skills than their non-married counterparts. Considering this result, it can be suggested that the married employee, especially in the Middle Eastern context, is likely to show higher work skills and job performance, because he/she has more experience than the single employee. Normally, the employee in the Arab World joins the workforce before he/she is married, with an intention of saving some money to prepare for the basic needs of marriage; this normally takes about five years. Thus, married employees, in most cases, tend to have more work experience than non-married employees, as a result they show higher levels of work skills and job performance.

7.5 EDUCATIONAL LEVEL AND PWE, OC, SPR AND ISPR

The analysis of variance and mean test results provided no support for the hypothesised relationships between perceived work environment and the educational level of employees. However, *distributive justice* as one of the PWE factors was found to be related. Well-educated employees in Jordanian industries showed more positive perceptions toward distributive justice in their organisations than less educated employees. Considering this result, it can be suggested that well educated employees normally receive higher organisational rewards, and sometimes less work load, than less educated employees do. Therefore, they tend to perceive the distributive justice more positively than less educated employees.

Nevertheless, the relationship between distributive justice and educational level has been somewhat disregarded in the management literature. Contrary to what was found in this study, Tang and Baldwin (1996), for example, found no significant relationship between these two constructs. With respect to organisational commitment's relationship with educational level, the results revealed that neither global commitment nor the affective dimension were related to educational level. These results are in line with some previous studies (e.g., Abdulla and Shaw, 1999; Awamleh, 1996; Bhuian *et al.*, 1996 and Al-Meer, 1989) in the Middle Eastern context, and contradict some other Western studies (e.g., Allen and Meyer, 1990; Jaros, 1997, Furnham *et al.*, 1996; Mathieu and Zajac, 1990; Meyer and Schoorman, 1998 and Welsch and La Van, 1981). Nonetheless, the less educated employees showed higher levels of continuance commitment than the well-educated employees. This result supports some Western studies (e.g., Wahn, 1998 and Meyer and Schoorman, 1998) in this field, and belie some other Eastern studies (e.g., Abdulla and Shaw, 1999). Two suggestions can be offered for the educational level-continuance commitment linkage reported in this study. Firstly, the work experience of less educated employees is normally not easily transferable, or may not be valued by other organisations. Therefore, such employees may feel a commitment to maintain the organisational memberships in which they have spent a lot of time. According to Wallace (1997, p. 733):

The more firm-specific skills employees have acquired, the least transferable and valuable are their skills to other organisations (Becker, 1964; Doering and Piore, 1971; Williamson, 1975), and the more attached they will be to their current organisation.

Secondly, well-educated employees "... have a greater number of job options and are less likely to become entrenched in any one position or company" (Mathieu and Zajac, 1990, p. 177). Furthermore, the study results provided no support for the relationships between educational level on one hand and self-performance rating and its five dimensions on the other hand.

Similar results were also reported for the educational level-immediate supervisor performance ratings relationship. However, *readiness to innovate* variable as one of the ISPR dimensions was found to be significantly influenced by educational level. Less educated employees in Jordanian industries showed higher levels of readiness to innovate than well-educated employees. Although this issue is not well-addressed in the management literature, an explanation for the education-readiness to innovate linkage from the Arabic perspective can be suggested. Well-educated employees in the industrial sector are normally involved in administrative work, where innovation

chances are limited. However, less educated employees are normally involved in technical tasks, where the chances of innovation are much higher. Accordingly, less educated employees in Jordanian industrial firms tend to show higher *readiness to innovate* levels than well-educated employees. This result provides some support for the ongoing criticism of the Jordanian education system that was discussed in chapter four. Educated individuals are generally criticised, because of their lack of industrial mentality and innovation, and their preference for clerical and administrative work over technical and manual work. According to Al-Faleh (1989, p. 23-24):

A third constraint [against the development of management capability in Jordan] is the aversion of the Jordanian graduate to “apprenticeship”. He is unwilling to start at the bottom in an organisation and to work his way up gradually by means of his own ability or via course of postgraduate training ... [They] dislike manual work [and] lack industrial mentality ... The education system in Arab countries, such as Jordan, tends to stress memory development rather than initiative or intelligence (Researcher’s emphasis added).

7.6 AGE AND PWE, OC, SPR AND ISPR

Except for the *employee competence* and *pressure to produce* factors, the study results revealed that perceived work environment and its dimensions were influenced by the age variable. Older employees showed more positive perceptions of overall work environment and eleven of its factors than younger employees. This result supports the findings reported by some studies, e.g., Payne and Mansfield (1978). Generally, older individuals tend to show some satisfaction with the environment they live or work in, and dislike changing it. On the contrary, younger individuals tend to criticise stable environments, including the work environment, and always look for new changes, events, actions, ... etc. In line with most commitment studies, both Western (e.g., Sheldon, 1971; Herbiniack and Alutto, 1972; Steers, 1977; Welsch and La Van (1981); Mowday *et al.*, 1982; Meyer and Allen, 1984; Lincoln and Kalleberg, 1992) and Eastern (e.g., Al-Meer, 1989; Bhuian *et al.*, 1996; Suliman and Iles, 1998b and Abdulla and Shaw, 1999), older employees were found to be more committed to their organisations than younger employees. With respect to the commitment factors, the study results revealed that older employees tend to show higher levels of both affective and continuance commitment than younger employees.

These findings provide some support for the arguments suggested by March and Simon (1958) and Meyer and Allen (1984). March and Simon (1958) suggested that age should be related to continuance commitment, because of the limited alternative opportunities and greater sunk cost in later years. However, Meyer and Allen (1984)

argued that older workers tend to show higher affective commitment, because they have greater satisfaction with their jobs, have received better positions, and have “cognitively justified” their remaining in an organisation. Thus, the older individual is likely to have been in the same line of work for many years; as such he/she may have accumulated some cognitive justification for his/her job. Nevertheless, the findings related to the role of age in explaining the variance in employees’ affective and continuance commitment contradicts some Western and non-western studies findings in this field. For example, Awamleh (1996) and Mayer and Schoorman (1998) found no relationship between age and affective commitment. Abdulla and Shaw (1999) and Wahn (1998) also reported no significant relationship between age and continuance commitment. On the other hand, the study results have also shown that employees’ age plays a significant role in explaining the variance in the two factors of self-performance ratings variable, namely *job performance* and *readiness to innovate*.

Since the issue of multidimensional performance is a relatively new idea in the management literature, very few, if any, studies have examined age and its relationship to performance factors. However, some studies have investigated global performance and its relationship with age. Baruch (1996) and Liden *et al.* (1996), for example, found no relationship between age and performance. However, Ferris (1981) argued that junior level employees’ age and performance are negatively related, while senior level employees’ age is positively related to performance. The majority of older employees in Jordan, especially in the industrial sector, are less educated. Therefore, they are involved in manual and technical tasks, where the innovation chances are wider than clerical jobs, as mentioned earlier. Moreover, they tend to show higher levels of job performance than younger employees, because the experience they gained throughout their long tenure makes them capable to carry out their tasks more effectively than younger employees. In this context, Barnard (1997) argued that technical workers are important assets for work organisations, and that their presence encourages innovation processes in the workplace, which is necessary for survival and competition. She asserted:

The skills of technical people are an important resource to a firm in meeting strategic objectives. This makes attracting technical talent a high priority item on corporate agendas, and it opens an attractive market for qualified professionals. When there is a high demand for technical services, the same forces drive the creation of new businesses to satisfy demand. Further, when workplace factors leading to dissatisfaction are coupled with promising external opportunities, it is not surprising that in-demand technical professionals leave employers to join a competitor or found a competing

firm. They are pushed into termination by negative situations and, at the same time, pulled by external opportunities (p. 14).

On the other hand, older employees' overall performance, as well as its five factors as rated by their immediate supervisors, were also found to be higher than younger employees' performance. These results support some previous studies (e.g., Baruch, 1996 and Liden *et al.*, 1996) in this field. In addition to the experience factor that is normally related to age, as mentioned earlier, another cultural reason can be suggested for older employees' tendency to show higher levels of performance than younger employees.

As mentioned in chapter four, older people play important roles in Arabic families and society. They are well respected and obeyed by younger people, because to them older people represent the major sources of wisdom and serve as guides. Since younger people are often well educated, they are often employed in managerial jobs, and their span of control often includes some older employees. According to the pressures of values, norms and traditions that impose obedience to older people, managers tend to rate older employees' performance more positively than younger employees' performance. An older employee also expects his/her younger boss to rate his/her performance more highly than his/her younger employees' counterparts. Seniority in the Arabic context tends to outweigh performance. According to Al-Faleh (1989, p. 20), "... within an organisation [in the Arab world], status, position and seniority significantly outweigh ability and performance". Unfortunately, the pressure of the cultural values and norms on the work organisations in the Arab world is very high. There is no distinction between family and social obligations and formal work duties.

The fact that Arab executives and employees bring with them to work organisations cultural and societal values and norms has been shown by some studies (e.g., Hayajneh *et al.*, 1994 and Muna, 1980). Arguing that managerial behaviour in the Arab world is heavily influenced by society's social structure and by the values, norms and expectations of its people, Muna (1980, p. 40) asserted:

These executives perceived their organisations as a family, and they described their roles as using familial terms. Thus, of the twenty nines [56% of the sample], eleven saw their role as a 'father'; six used the term 'elder brother'; and one saw himself as the 'good father' of his organisation (Muna's emphasis).

7.7 ORGANISATIONAL TENURE AND PWE, OC, SPR AND ISPR

The study results revealed that employees with longer organisational tenures tend to perceive their work environment more positively than shorter tenure employees. As mentioned earlier, older employees tend to perceive their work environment more positively than younger employees. Since tenure is related to age, employees with longer tenure are also expected to show more positive perceptions than younger employees. This finding contradicts that reported by Al-shammari (1990). The statistical analyses have also revealed that organisational tenure contributed significantly to the variation in the affective commitment dimension, as well as to overall commitment. However, the variation in the continuance commitment was not explained by the organisational tenure variable. The longer tenure employees in Jordanian industries showed higher levels of organisational and affective commitment than shorter tenure employees. This finding mirrors other results in this field. For example, Salancik (1977), Welsch and La Van (1981), Meyer and Allen (1984), Mathieu and Zajac (1990), Ngo and Tsang (1998), Slocombe and Dougherty (1998), Travaglione *et al.* (1998) found that affective commitment and organisational commitment were positively related to tenure in organisation. That is, the longer the organisational tenure, the higher the level of organisational and affective commitment, and vice versa. Similar results have also been reported in the Middle Eastern context (e.g., Abdulla and Shaw, 1999 and Al-Meer, 1989).

Nonetheless, the linkage found in this study between commitment and organisational tenure tends to contradict other findings (e.g., Awamleh, 1996; Jaros; 1997; Meyer and Schoorman, 1998 and Wahn, 1998). The longer tenure employees tend to show higher levels of organisational and affective commitment than shorter tenure employees, because they have been associated with their organisations for some time and, thus, may have ascended to better positions, or simply have enjoyed working there (Abdulla and Shaw, 1999; Salancik, 1977, Schneider, 1988 and Suliman, 1995). On the other hand, organisational tenure was also found to be related to overall self performance ratings (SPR) and all its facets except work enthusiasm. Likewise, the immediate supervisor performance ratings (ISPR) and its five factors were also significantly related to organisational tenure. That is, longer tenure employees tended to show higher levels of performance than shorter tenure employees, as rated by the employees themselves and their immediate supervisors. Similar findings have also been reported in the management literature (e.g., Baruch, 1996). As suggested by Salancik (1977), longer tenure employees tend to show higher performance levels, because as an employee

becomes more experienced in what he/she is doing, he/she becomes more able to cope with the negative and positive features of his/her job.

7.8 JOB (POSITION) TENURE AND PWE, OC, SPR AND ISPR

Except for the *innovation climate* and *pressure to produce* factors, all factors of perceived work environment, as well as global work environment, were significantly predicted by the job tenure variable. Longer job tenure employees showed more positive perceptions of overall work environment and its factors than shorter tenure employees. Since they are familiar with their job contents, longer job tenure employees may perceive their work environment more positively than shorter tenure employees. Moreover, longer job tenure employees are likely to be in better positions, and gaining more organisational rewards, than shorter tenure employees. Therefore, they tend to perceive the work environment more positively than do shorter tenure employees.

On the other hand, job tenure significantly explained the variance in organisational and affective commitment. However, no significant effect on continuance commitment was reported. Longer job tenure employees showed higher levels of organisational and affective commitment than shorter tenure employees. These results support some studies (e.g., Al-Meer, 1989; Bhuian, 1996 and Mathieu and Zajac, 1990) arguments, i.e., that job tenure is positively related to both organisational and affective commitment. Longer job tenure employees, especially in the Middle Eastern context, gain high positions in the organisation and the society, as well as high organisational rewards. Moreover, they normally do not face the problem of mismatch between expectations and rewards which most shorter tenure employees face. Therefore, they tend to show higher levels of organisational and affective commitment than shorter tenure employees.

Previous studies (e.g., Schmidt and Rader) have suggested that job tenure is related to performance. This was confirmed by the present study, which found that job tenure is a significant predictor of self-rated and supervisor-rated performance. Overall self-rated and immediate supervisor rated performance, as well as the factors of each performance rating, were significantly related to job tenure. Longer job tenure employees showed higher levels of performance than shorter tenure employees. As was suggested earlier, due to the length of service in a given job or profession, the employee tends to master the skills and understand the duties that are related to his/her job. Accordingly, he/she tends to show a higher desire to work and readiness to innovate, which make his/her performance highly rated by him/herself and his/her immediate supervisor.

7.9 JOB LEVEL AND PWE, OC, SPR AND ISPR

Job level was found to be the most important demographic variable in explaining the variance in PWE, OC, SPR and ISPR. The overall perceived work environment, as well as its thirteen factors, were significantly predicted by job level. Employees at the top management level reported more positive perceptions of work environment than middle and bottom level employees, and middle level employees showed more positive perceptions than bottom level employees. This result supports the argument that top level employees are generally more satisfied with their work environment, because the high rewards they receive from their organisations positively influence their perception of the work environment. According to Parther (1999, www.novatrain.com), "... we consistently find that the view of the environment is directly related to the rater's level in the organisation: the higher up in the organisation, the better the environment appears to be" (p. 1). As far as Jordan and other Arab states are concerned, top level employees tend to perceive the organisation as part of their family, and the other employees as family members (Al-Faleh, 1989 and Muna, 1980). Therefore, he/she tends to show positive perception towards family (work) environment. According to Al-Shammari (1990, pp. 303-304) "employees at lower organisational positions had lower perceptions of ... climate than those at higher organisational positions, and vice versa".

On the other hand, job level was found to be a significant predictor of organisational, affective and continuance commitment. Top level employees reported higher levels of commitment than lower level employees did. This result is in line with most western and non-western studies (e.g., Payne and Mansfield, 1978; Welsch and La Van, 1981; Mathieu and Zajac, 1990; Somer *et al.*, 1996; Ngo and Tsang, 1998; and Wahn, 1998) in this field. The argument that is widely accepted by most researchers is that top level employees tend to perceive a congruence between their needs and organisational rewards (Suliman and Iles, 1998a). However, it can be suggested that top level employees, especially in the Arabic context, tend to receive more respect and special status in society. This esteem and status are more valuable to some employees than the financial rewards that they receive from their organisations. Therefore, they tend to show higher levels of commitment even if they are not satisfied with the financial rewards, because the organisation has satisfied some of their important needs (e.g., esteem and status). According to Al-Faleh (1989), some employees in the Arabic context join organisations "... for prestige, social status and power" (p. 24).

Excluding the work skills and enthusiasm factors, overall self-performance ratings, as well as its dimensions, were found to be positively related to job level. That is, the higher the job level, the higher the self-rated performance.

In addition, overall immediate supervisor rated performance and its five factors were significantly predicted by job level. Top level employees showed higher levels of performance, as rated by their immediate supervisors. These results support the argument that top level employees are generally satisfied with their jobs, are committed to their organisations, and thus tend to show higher performance levels than lower level employees. Yousef (1998), for example, examined job security, commitment and performance in the United Arab Emirates. The study revealed that top level employees were satisfied with their job security, highly committed to their organisations, and tended to show higher levels of performance.

In summary, the previous presentation and analysis of the study findings have examined the relationships of perceived work environment, organisational commitment, self performance ratings and immediate supervisor ratings variables and their factors with the demographic variables. Generally, four demographic variables were found to be the most important predictors of the above-mentioned variables, namely age, organisational tenure, job tenure and job level.

Implications

Considering the above discussion of the results, some managerial and theoretical implications can be suggested. Firstly, organisations should understand the reason behind the tendency of younger employees to show less positive perceptions of the work environment, lower commitment and lower performance than older employees. The existence of such a gap may negatively influence overall organisational performance. Therefore, organisations must try to bridge this gap by creating a positive work environment that meets the needs of both older and younger employees. Creating such environment may enhance younger employees' perceptions of work environment, commitment and performance.

Organisations, especially in the Middle East, may need to avoid their preference for seniority, status and position over ability and performance. Old age does not necessarily mean good performance. Thus, over-rating older employees' performance and under estimating younger employees' performance based on cultural norms, values and attitudes, not performance criteria, may create a frustrating work environment for younger employees. Consequently, their commitment and performance may be negatively affected. This mix between cultural values, norms and attitudes and formal

work is one of the major problems in Third World organisations. Unfortunately, the main causes of these problems are managers, who are supposed to create a fair and trustful environment that facilitates the achievement of organisational goals. According to Al-Faleh (1989, p. 22) “it has become evident that management capacity is still the major obstacle to development in Jordan”. Likewise, shorter tenure (organisational and job) and lower level employees’ tendency to report lower perceptions of work environment, commitment and performance also need to be understood and addressed. To reduce the performance gap, organisations can provide or send lower performing employees to some training and courses that are relevant to their work, and subsequently reward them after an improvement in performance is reported. This may positively influence their perceptions of work climate, and increase their organisational commitment.

Secondly, this study has provided some important information about how personal characteristics interact in determining work environment, commitment and performance, about which little is known at present. These results with respect to the relationships between employees’ age and job level and commitment provide support for the side-bet view of commitment (Becker, 1960). Older employees showed higher level of continuance commitment than younger employees. Furthermore, this study was among the first to definitively explore the role of employees’ marital status in influencing their commitment. The results supported the idea that married employees may not only have greater financial burdens, but also tend to have a greater psychological bond with the organisation. Researchers need to pay some attention to the role of biographical variables in organisations. Unfortunately, most researchers tend to under-estimate their importance, and normally use them to describe the study sample. For example, “despite the relatively large body of research exploring organisational commitment issues, *little is known about how personal characteristics interact in determining organisation commitment*” (Abdulla and Shaw, 1999, p. 77, researcher’s emphasis added).

The importance of demographic variables to work organisations and the community as a whole are greater than is generally assumed. For example, the increasing number of older employees in a given society may mean that the majority of its organisation members are older employees. This in turn may imply that neither the society nor its organisations will be able to catch up with the global levels of efficiency, creativity and innovation, because older employees in most societies tend to dislike change and are less ready to innovate. Smith and Hoy (1992) examined older employees’ satisfaction and commitment in small business. They concluded:

The U. S. Small Business Administration (1988) predicted that one of the three major trends that will affect small business through the 1990s is changing demographics ... A critical component of the changing demographics is the aging of the population in general and the labour force specifically. Firms will be dependent on this group of workers, not simply because of their increasing numbers, but because of the skills and experience they possess if higher levels of productivity are to be attained. However, firms that are not growing rapidly or where technologies are not changing significantly may find an older work force makes them less competitive. This is undoubtedly true in large firms where seniority systems exist and where older workers historically resist learning new skills. The reluctance of the previously trained and experienced older workers to learn new skills may affect the smaller organisation even more severely.

All in all, the relationships between demographic variables and the four main concepts (PWE, OC, SPR and ISPR) of this study, is a step towards a greater understanding of organisational variables in the global business environment.

7.10 PWE AND ORGANISATIONAL COMMITMENT

Simple and multiple regression, correlation and curve estimation tests were used to examine the relationships between work environment and commitment. The results revealed that the overall work environment significantly explained 31.6% of the variance in overall commitment. However, when the 13 dimensions of work environment were regressed against overall commitment using the stepwise method, seven factors were found to be significant. According to their loading order (from first to last), these variables are *innovation climate*, *employee-immediate supervisor relationships*, *psychological contract*, *co-workers relations*, *distributive justice*, *employee work motivation* and *pressure to produce*. Apart from the *pressure to produce* factor, the overall work environment and its significant dimensions tend to be positively related to overall commitment. That is, the more positive the perception of overall work environment and its significant factors, the higher the overall commitment that employees tend to show in Jordanian industries, and vice versa. However, pressure to produce was found to be negatively related to commitment. Thus, the higher the pressure to produce, the lower the organisational commitment, and vice versa.

These linkages between perceived work environment and its factors on one hand, and global organisational commitment on the other hand, support some studies (e.g., Bolon, 1997; Brewer, 1996; Brooks and Seers, 1991; Jansen, 1994; Mishra, 1992; Somers *et al.*, 1996 and Welsch and La Van, 1981) in this field. Somers *et al.* (1996), for example, examined the impact of work environment on Korean employees' organisational

commitment. They concluded that the "... perceptions of the [work environment] of these Korean employees was directly related to their commitment. Korean employees and managers who had more positive climate perceptions had higher levels of organisational commitment" (p. 986). Moreover, Mishra (1992) found that perceived work environment was positively and significantly related to employees' commitment, and explained 37% of its variance. Since work environment includes all structural, managerial and individual factors, it tends to influence employees' behaviour and attitudes, including organisational commitment. Employees' loyalty can be said to be directly related to positive work environments and to the organisation that has provided such environment. According to Awamleh (1996, p. 66), "management of any organisation should try its best to increase employees' levels of commitment through creating an appropriate atmosphere".

Thus, if employees are pleased with the contents of their work environment they are likely to be prepared to show higher levels of organisational commitment, because their needs are satisfied. Furthermore, the *innovation climate* factor was found to be the most important predictor of employees' commitment in Jordanian industries. The positive perception of innovation climate positively influenced employees' commitment. This indicates that Jordanian employees tend to dislike routine tasks, and value creativity and innovation over restrictive conformity. Therefore, they tend to show higher organisational commitment when the work environment supports innovation, and low commitment when innovative ideas tend to be more punished than rewarded. According to Jansen (1994, p. 63) "positive personal outcomes- greater role clarity, organisational involvement, and satisfaction, lower role conflict and [less] willingness to leave the organisation- are associated with innovation; negative personal outcomes are associated with restrictive conformity". Since the industrial sector has a more technical environment, people have more chances to be independent minded and to devise better ways to do things. Thus, when the new ideas of operational and middle level employees are championed and developed by top managers, employees will show higher levels of commitment. Jansen (1994) examined innovation climate and restrictive conformity roles in influencing employees' involvement (commitment). He concluded, "involvement is positively associated in an innovative climate and negatively associated with restrictive conformity" (p. 74).

In addition, *employee-immediate supervisor relationships*, which is one of the procedural justice factors and one of the PWE dimensions, was found to be the second most important predictor of commitment. As mentioned earlier, this variable is a result

of integrating two components together in one factor, namely trust and two-way communication. Jordanian employees who have confidence and trust in their immediate supervisors, and who are satisfied with their communication with them, showed higher levels of organisational commitment. Schnake and Dumler (1987) argued that social cues from the immediate supervisor play an important role in employee task-related perceptions. Johnston, Vardarajan, Futrell and Sager (1987) examined employee's satisfaction with his/her relationship with the supervisor and the commitment he/she shows toward the organisation. They found that there was a significant positive relationship between these two variables. Likewise, Kozlowski and Doherty (1989) suggested that employee-immediate supervisor relationships influence employees' perceptions of work environment via shared interpretations. Tang and Baldwin (1996) examined the role of procedural justice in influencing employees' satisfaction and commitment. The study results revealed positive relationships between *trust and two-way communication* (two independent factors of procedural justice) variables on one hand, and *organisational commitment* on the other hand.

Ting (1997) examined the role of employee's relationship with his/her supervisor in influencing the commitment he/she shows in the workplace. The study results revealed that 32% of the variance in employee's commitment is explained by the type of relationship with supervisors. He concluded that managers need to develop a mutually trustworthy relationship with employees by communicating effectively with them. Mossholder *et al.* (1998) reported a positive relationship between procedural justice and commitment. They argued:

Procedural justice creates expectations of fair treatment in the long run; signalling to organisation members that they are valued, which should encourage greater commitment in return ... individuals in work units whose justice context reflects more fair treatment will report higher levels of job satisfaction and organisational commitment.

Likewise, Scandura and Lankau (1997) found a strong, positive and significant relationship between employees' perception of climate for justice and organisational commitment. Hence, the relationship (trust and communication) between the employee and his/her immediate supervisor plays important role in influencing employees' commitment, because individuals include procedural justice considerations when cognitively appraising their work context (Mossholder *et al.*, 1998). Thus, perceived fair treatment and effective communication are critical for continuation of the relational contract, which often involves issues of commitment to the organisation (Rousseau and Parks, 1992). Since " culture has a great influence on individual and managerial

climate” (Al-Faleh, 1989, p. 19), it can be suggested that Jordanian employees tend to be influenced more by their relationships with managers than their Western counterparts.

The immediate supervisors in most Third World countries (including Jordan) have more power than they really deserve. For example, most of them have a right to fire an employee for any reason, even if it is personal, and the employee has no right to complain. However, if the employee decided to negotiate the problem with higher management, they would tend to support the supervisor’s point of view, even if it is wrong. Unfortunately, the employee’s opinion towards his/her immediate supervisor is neither listened to nor respected. Therefore, there is a need “... to create a climate of opinion in Jordan which will be more favourable to management development” (Al-Faleh, 1989, p. 29). Moreover, in the absence of a labour union, the formation of which is discouraged by management, the employee tends to be heavily influenced by his/her relationship with his/her immediate supervisor. According to Suliman and Iles (1998b) Third World employees are under pressure to produce, because “... there is no labour union, its power is weak, and/or it is heavily controlled by management, as is the case in Jordan and most other Third World countries. Employees must work hard to guarantee continuity of membership” (p. 9). In such a situation, the relationship between the employee and his/her supervisor will positively or negatively influence employee commitment, if it is perceived to be good or bad. This relationship provides employees with some information concerning their individual fit with the organisation, and whether a relationship with it should be continued.

The third important work environment factor in its relationship with commitment is the *psychological contract*. The results revealed that employees who showed positive perceptions of their psychological contract tended to show higher levels of organisational commitment, and vice versa. This finding supports the argument that unmet expectations result in a lack of commitment and increased turnover (e.g., Arnold, 1996; Hiltrop, 1996; Dayne and Ang, 1998; DeCotii and Summers, 1987; Hallier and James, 1997; Schalk and Freese, 1997 and Roehling, 1997). Organisational commitment to meet employees’ expectations normally results in employees’ commitment to achieve organisational goals. According to DeCotii and Summers (1987), “when an organisation commits itself to meet the needs and expectations of its members, its members commit to the service of the organisation in terms of its goals and values” (p. 467). Thus, to be successful “organisations need to integrate as far as possible the needs and values of the organisation with those of the individual, so that the

later believe that if the organisation thrives, he or she will thrive too” (Hiltrop, 1996, p. 36). Iverson *et al.* (1996) examined employees’ commitment and trust in service relationships. They concluded:

*In considering the nature of trust between individuals and organisations, we posit that **organisations create “psychological contracts”** ... with employees, based on the messages that an employee receives regarding what the organisation expects from the individual and what the individual can expect in return. **The contracts affect the behaviour of employees towards customers, as well as the type and degree of commitment to the organisation.** (Researcher’s emphasis added).*

Likewise, Schalk and Freese (1997) argued that the psychological contract plays an important role in influencing employees’ commitment, which is a crucial issue in situations of creating new employment deals. They suggested that the ideal new employment deal would be a win-win agreement based on clarified mutual expectations, based on “... mutual responsibility between employees and employers, leading to mutual understanding and commitment, and improved organisational effectiveness” (p. 108).

The fourth important factor of the work environment in explaining the variance in employees’ commitment is *co-workers relations*. The results revealed that the more positive the perception of co-workers relations, the higher the organisational commitment, and vice versa. This finding agrees with most studies (e.g., Bolon, 1997; Ting, 1997; Ting, 1996; Jonston, Varadarajan, Futrell and Sager, 1987) findings in this field. Ting (1996), for example, examined the relationship between co-workers relations and organisational commitment. The survey of 56,767 employees revealed that these two variables were positively and significantly related ($r = 0.34$, $p < .001$). Bolon (1997) studied satisfaction with co-workers relations and commitment among a hospital employees. He found that the employees who are satisfied with their relationships tended to show higher levels of commitment than those who are less satisfied. Likewise, Tierney (1999) argued that an employee’s relationship with his/her work team should have significance for employee perceptions of the environment. He suggested that “understanding employees’ climate perceptions would necessitate understanding the “meaningful social unit” ... to which the employee belonged, in particular, those interactions characterised by greater immediacy and frequency” (p. 121). Tierney concluded:

In order to enhance the potential for positive change, organisations must be willing to support supervisors and teams in their attempts to develop high quality interactions. At the same time, they must also provide team members with conditions likely to culminate in favourable impressions of the work

environment which in turn should result in greater positive discourse regarding change-centred factors (p. 131).

Hence, the employee's relationship with his/her co-workers tends to influence his/her commitment to the organisation as a whole. Drawing on the Maslow's (1954) theory of hierarchy of needs, some employees join work organisations, because they need to belong to a group of people or to be loved by others. Thus, if the group fails to satisfy their belonging and love needs for a reason or another (e.g., inter-group conflict), the employees are likely to be less satisfied with the group and less committed to the organisation. Like other Arab societies, the Jordanian society values group affiliation, and encourages individuals to be in a group. Accordingly, in Arabic organisations "in-group affiliation and group interaction, kinship ties are important" (Al-Faleh, 1989, p. 20).

On the other hand, *distributive justice* loaded on step five of the stepwise regression. It was found to be significantly and positively related to commitment. That is, the more positive the perception of distributive justice, the higher the organisational commitment, and vice versa. This result mirrors some researchers' findings in this field. For example, Tang and Baldwin (1996) found a positive relationship between distributive justice and commitment. They concluded, "... both distributive and procedural justice are important in predicting employees' subsequent personal satisfaction and commitment to the organisation" (p. 30). Likewise, Iverson *et al.*'s (1996) study results revealed that "both distributive justice and benevolence had significant impacts on the level of organisational commitment" (p. 40). Martin and Bennett (1996) also reported similar results. Hence, the fairness in distributing rewards, praises, promotions, work loads, ... etc. among employees is a critical issue in work organisations, because it helps in creating a healthy environment, which is necessary for the achievement of organisational goals. Unfair distribution, or the favouritism or nepotism will not only make a conflict between management and employees, but it will also affect employees' relations with each other. This may result in a hostile and frustrating work environment, because the employee will neither be satisfied with the management nor with his/her work team or co-workers. In such an environment, the employee's morale is likely to decrease, and this may negatively influence his/her commitment.

On the other hand, the *employee work motivation* factor loaded on step number six of the stepwise method. The correlation test results showed that motivation and organisational commitment were significantly and positively related. The results of stepwise and correlation tests indicate that motivation is an important factor in

predicting commitment, and that the higher the motivation, the higher the organisational commitment, and vice versa. This supports the common argument in the management literature that motivated employees are normally committed to their organisations (e.g., Mowday *et al.*, 1979). For example, the meta-analysis study results of Mathieu and Zajac (1990) revealed that the “overall motivation exhibited a corrected correlation of $r_t = .563$, with 100% of the variance across five studies accounted for by artefacts” (p. 182). Similarly, Orpen (1997) and Welsch and La Van (19881) found that work motivation tended to positively and significantly influence organisational commitment. Furthermore, Staw (1984) examined the relationship between motivation and organisational commitment in the Japanese context. He found that the Japanese model of motivation emphasises attachment, co-operation, achievement of organisational goals, extending extra effort on behalf of the organisation, and loyalty and service to the long-term interests of the organisation. Hence, motivated employees tend to show higher levels of organisational commitment, because the rewards they receive from the organisation positively influence their morale and bind them to be committed. The relationship between motivation and commitment was discussed in chapter two of this study.

The last work environment factor that loaded on stepwise regression is *pressure to produce*. Unlike the previously discussed factors, pressure to produce was found to be negatively associated with commitment. Employees who perceived higher levels of pressure to produce tended to show lower levels of organisational commitment, and vice versa. Normally, management pressures on employees to work for more hours or to produce more units result in employees stress and frustration, which negatively influence their commitment. In this context, Benkhoff (1997b) argued that putting employees under more work pressure is likely to have a negative impact on their commitment. She asserted:

If managers are concerned about keeping their valued employees, they should ensure that workers have competent and trustworthy superiors and feel treated fairly and with respect, and they should not put employees under too much work pressure. ... There is no reason to fear that people work less hard as they become more familiar with their task over the years (pp. 128-129, researcher's emphasis added).

Since pressure to produce is assumed to be negatively associated with employee's commitment and production, some organisation have tended to adopt flexitime policies. Lake (1997) argued that management pressure on employees to produce increases an employee's stress and reduces his/her commitment. Therefore he suggested that

flexitime may “reduce employee stress and build commitment. At the core of the company's flexitime program is a recognition that employees are better workers when they have more choice over how they schedule their work and personal time” (p. 3).

Perceived work environment as a global concept was also regressed on the *affective* and *continuance commitment* dimensions. When regressed against affective commitment, it significantly explained 46% of the variance in this variable. Apart from the *distributive justice* factor, all factors of the work environment which significantly predicted organisational commitment were also found to be significant in predicting affective commitment. However, the regression and correlation tests results revealed that the overall work environment did not account for significant variance in continuance commitment. Using the stepwise method to predict the importance of PWE factors in influencing continuance commitment, the results showed that all PWE dimensions are not significant. However, the *task characteristics* factor showed a weak, yet significant relationship with continuance commitment. The employees who positively perceived their task characteristics tended to show lower levels of continuance commitment, and vice versa. Since employees “... expect their skills to be “used well” in the present jobs, and to be trained in new skills in order to enhance future careers” (Al-Faleh, 1989, p. 23), they may be more prepared to show lower levels of continuance commitment and higher levels of affective commitment. The results obtained from examining the work environment and its factors' relationships with affective and continuance commitments indicate that it is the affective commitment dimension that is more related to work environment and its factors. Thus, the variance explained in organisational commitment by work environment and its factors is mainly related to affective commitment's role, rather than continuance commitment's role.

The question that remains unanswered is: *Why is the perceived work environment more related to affective commitment than to continuance commitment?* As defined earlier, affective commitment is the identification with, involvement in, and emotional attachment to the organisation. Since the employee is a human being, the affective relationship between him/her and the organisation is likely to be affected either negatively or positively when management attempts to alter this relationship through changing the work environment conditions. On the other hand, continuance commitment refers to the employee's intention to remain with the organisation because of the costs associated with terminating membership. Thus, this cost-profit relationship is less likely to be affected by the change of working conditions, because the ultimate goal is to reduce costs.

Implications

Considering the results of the perceived work environment-organisational commitment relationship, as well as the previous discussion, some managerial and theoretical implications can be discussed. Firstly, organisations should pay special attention to employees' work environment, because "working conditions affect how people perceive whether top-level managers really care about them ... Conditions that communicate a lack of caring create a feeling of distrust" (Rogers, 1994, p. 5). Moreover, the study results supported the argument that "to be a "good manager" in the Arab culture, you have to satisfy ... [the] expectations held by the employees" (Al-Faleh, 1989, p. 23). Thus, organisations, in general, need to understand employees' expectations, intentions, attitudes and values to communicate clearly. This will help gaining employees' loyalty and building a competitive environment that leads to success and increase profitability.

The simple lesson that organisations can learn from the results of the PWE-OC relationship is to make a balance between organisational needs and employees' needs. Moreover, organisations should ensure building positive co-worker relations, and understand that some organisational practices and procedures may affect this relationship. For example, organisations should always justify their decisions and communicate clearly to employees or to team members why a certain decision has been taken or why a certain employee is rewarded, promoted, praised, ... etc. In addition, organisations need to understand that putting pressure on employees to produce more is more likely to result in low production, morale and commitment rather than high production. To improve productivity, especially in the industrial sector, organisations can adopt a flexitime policy. Flexitime policies may improve scheduling, productivity, quality of workforce and reduce paid absence and tardiness, as well as reducing employee stress and building organisational commitment (Suliman, 1995). In a recent survey, Leonard (1999) found that more than half of managers feel that their flexitime employees are more productive per hour than those employed on a conventional schedule. He concluded:

The parallel survey of managers found that 56 percent of the respondents felt that flexible employees were "more productive per hour" than comparable staff working a full-time conventional schedule, and 100 percent of the managers said that flexible employees were the same as or more experienced, focused and motivated when compared to other workers (p. 28).

Secondly, the linkage between work environment and commitment found in this study supports the argument that work climate is more likely to be associated with the human system (e.g., employee commitment and stress) of the organisation rather than financial system (e.g., sales growth and profitability ratio).

Moreover, the results provided no support for the relationship between work environment and continuance commitment. However, affective commitment was found to be significantly and strongly related to work environment. Since the variance explained in affective commitment by work environment was 46%, researchers, especially in the Middle Eastern context, need to find out what other organisational factors are likely to explain the remaining 54% of variance in affective commitment. For example, organisational conflict, especially intra-individual conflict that was not included in this study, can be incorporated with work environment to predict commitment. Suliman (1995) found that role conflict (family role, society role and organisational role), which is one of the main intra-individual conflict factors, explained 45.8% of the variance in affective commitment. Furthermore, the work environment scale used in this study can be revised to include new factors that are suggested in the literature, e.g. job responsibility and people-equipment arrangements.

7.11 THE PWE AND SELF PERFORMANCE RATINGS

The results of the regression, correlation and curve estimation tests revealed that the overall perceived work environment and overall self-rated performance are significantly and positively related to each other. Work environment explained 12% of the variance in self-rated performance. Study subjects who tended to show positive perceptions of work environment reported higher levels of performance, as rated by them. However, when the thirteen factors of work environment were regressed against overall self-rated performance, only four dimensions were found to be significant.

As revealed by the stepwise method, these four factors explained 21% of the variance in performance. The *employees work motivation* loaded as the first factor, and it was found to be positively and significantly related ($r = .39$, $p < .001$) to performance. The employees who reported positive perceptions of work motivation showed higher performance. This result supports the argument that well motivated employees are

generally good performers (Mowday *et al.*, 1982; Katz, 1964). The relationship between motivation and performance is consistent with the classic motivational framework offered by some scholars. Katz (1964), for example, asserted that organisations need to motivate their members to (1) join and remain in the organisation, (2) perform their assigned duties dependably, and (3) exhibit “innovative and spontaneous behaviours” (p. 132). Pollock (1999) argued that lack of motivation might negatively influence employee’s performance. Likewise, Speen (1998) suggested that employees’ performance could be optimised by using motivational programs. He asserted:

People work better and get more done in an environment where they are appreciated, and incentive programs help create that atmosphere. In fact, when an employer uses motivational programs, employees feel that the company is concerned for their welfare and wants to recognise their accomplishments. Companies can optimise employee performance by engaging in a continuing, organised program of [promotion, motivation, communication and recognition] ...With an incentive or motivation program, we attempt to obtain some level of additional performance in exchange for some extra compensation (reward). The difference is that you usually get more for your money from the extra level of performance (p. 2).

In addition, a few studies (e.g., Orpen, 1997 and Jackofsky and Slocum, 1988) have reported that motivation and performance are not significantly related. Employees who are satisfied with their motivation climate are likely to rate their performance highly, because they feel that, following the creation of a positive motivation environment, the organisation will expect them to be good performers.

The second work environment factor that was found to be important in predicting the variance in performance is *employee competence*. Employees who perceived themselves as competent tended to rate their performance more positively, and vice versa. The efforts of the organisation to develop employees’ performance by means of training, courses, coaching, ... etc, is likely to result in higher levels of performance. Sometimes, even if the performance is weak, the trained employee may not wish to show that his/her performance is weak, because he/she wants to show that he/she values the organisation’s efforts to train him/her, and that his/her performance has been developed. Nevertheless, the debate on the cultural background’s effect on employees’ accuracy in rating his/her performance is far from over. Jackofsky and Slocum (1988) reported a weak relationship between employee competence and performance. In general, the competent employee is expected to show a higher level of performance than the less competent employee.

The third work environment factor that was found to be positively and significantly related to performance is the *employee-immediate supervisor relationship*. The employee who positively perceives his/her relationships with the immediate supervisor tended to rate his/her performance more positively than one who showed less satisfaction with his/her supervisor. As mentioned earlier, the relationship between the employee and his/her supervisor influences his/her behaviour and work outcomes. For example, the employee who is not happy with his/her supervisor may negatively rate his/her performance, because he/she might be frustrated, and normally frustration leads to lower performance (Suliman, 1995). The last work environment factor that loaded on the stepwise regression is *supervisory style*. It was significantly and positively related to performance, indicating that the more positive the perception of supervisory style, the higher the performance, and vice versa. There is a general agreement among researchers (e.g., Roberts and Reed, 1996 and Smith, 1994) that supervisory style influences employee's behaviour and work outcomes, including performance. For example, if the employee is given the authority to handle all decisions that are related to his/her work, he/she might be more motivated to show a higher level of performance. Myers (1990) argues that organisations need to develop good supervisory styles, because they have a direct effect on employees' productivity. He suggested five guidelines for enhancing a supervisory style, namely: creating an atmosphere in which individuals in the group feel free to speak out; treating people well; being a good listener; involving those who will be doing the work in the planning of that work; and building trust or credibility with employees. He concluded:

These [five] guidelines are the most practical way for supervisors to develop loyalty, quality, and production. They require supervisors to be less aloof and more communicative with employees. One of the [two] most difficult guidelines to follow is involving employees in planning work because some supervisors fear it weakens their authority. The [second] is building credibility. Supervisors should promise only what they know they can do for employees, and they should refuse to discuss some matters in order to avoid telling lies (p. 12).

The dimensions of the perceived work environment were also regressed against the five factors of the self-performance ratings. When regressed against the *work skills* factor, only three work environment factors were found to be significant in influencing employees' work skills, namely: *motivation*, *competence* and *supervisory style*. The results revealed that the more positive the perception of these factors, the higher is the rating of work skills, and vice versa. With respect to the *work enthusiasm* component, the results confirmed that three work environment factors were significant in explaining

the variance in this performance factor, namely: *motivation, competence* and *innovation climate*. Employees who positively perceived these three factors tended to rate their work enthusiasm more highly than those who showed negative perceptions. Moreover, the *job performance* dimension was found to be significantly and positively related to three work environment factors, i.e. *competence, motivation* and *psychological contract*. Similarly, the positive perceptions of these three factors positively influenced employees' self-rated job performance. In addition, *understanding work duties* as a fourth factor of performance was significantly and positively predicted by four work environment components, namely: *motivation, fairness, supervisory style* and *employee competence*. The co-opted subjects who positively perceived these work environment factors tended to rate their 'understanding of work duties' more positively than those who showed less positive perceptions. However, only two work environment factors were found to be significant in influencing employees' *readiness to innovate*. The positive perceptions of *Performance-reward relationship* and *employee work motivation* factors resulted in higher ratings of 'readiness to innovate'. As can be seen from these results, different dimensions of work environment affect different factors of performance.

Implications

To conclude, the results obtained from testing perceived work environment and self-performance ratings relationship suggest several implications for both managers and researchers. From a managerial perspective, managers need to understand that work environment is a key factor in influencing employees' behaviour and work outcomes. So what can supervisors do to cultivate a work environment that optimises employee performance? Drawing on the well-known concept of the marketing-mix (product, place, promotion and price), it can be suggested that the right mix of the work environment's factors (3P's) is likely to enhance employee performance. These 3P's are people, place, and product. Organisations must care for the people, the place they work in and the product they produce. Promoting positive work environments not only includes practices and procedures, but also some important aspects that organisations, especially Third World organisations, tend to ignore, such as lighting, decoration, layout, ... etc. If the employee feels that he/she and the workplace are well looked after, then he/she is more likely to meet organisational expectations regarding his/her performance. Organisations must strive to provide the right conditions that may improve employee's *motivation, competence, employee-supervisor relationship, and innovation*, because they are closely related to employee performance. Moreover,

understanding the unwritten expectations operating among employees, and balancing it with the expectations of the organisation, as well as improving the fairness climate are also important.

On the other hand, some theoretical implications can also be suggested. The idea that work environment can be more related to employees' performance than organisational performance that is measured by some financial indicators is supported by the findings of this study. The work environment effect on organisational performance is actually a result of the work environment-employee performance relationship. The overall organisational performance is expected to be high if there is a positive work environment that is capable of enhancing employees' performance. Hence, researchers need to select the right unit of analysis when examining the different organisational concepts including perceived work environment. Furthermore, the stepwise regression results revealed that out of the 13 dimensions of work environment, only four were found to be significant in influencing self rated performance. Since these variables have explained only 21% of the variance in performance, there is a need to understand and define the factor (s) that explains the remaining 79%. However, as is proposed in this study, looking for factors that may mediate the work environment-self performance ratings relationship is also important. For example, job satisfaction can be hypothesised to mediate these two variables' relationship, because work environment may influence an employee's satisfaction with his/her job, and job satisfaction in turn may affect performance. However, researchers should be aware that to design such models they need to take into account not only work environment factors, but also organisational environment dimensions. The model that can effectively predict employees' self rated performance in Jordan, for example, may not be of value in predicting self rated performance in other different settings, e.g. Britain or Japan, because of some societal and cultural differences. Nevertheless, the statistical analysis revealed that the hierarchical levels of respondents contributed significantly to the variation in the overall work environment, as well as the 13 facets of this construct. These results thus provide evidence to suggest the existence of multiple environments within the surveyed organisations, which has been also found in some recent studies (e.g., Al-Shammari, 1990, Sparrow and Gaston, 1996 and Jackofsky and Slocum, 1988).

7.12 THE PWE AND IMMEDIATE SUPERVISOR PERFORMANCE RATINGS

The overall work environment variable was regressed against the overall immediate supervisor performance ratings variable. The results revealed that work environment

explained 43% of the variance in performance. However, when the dimensions were included in the regression analysis, only eight work environment factors were found to be significant. These components are: *employee-immediate supervisor relationship*, *performance-reward relationship*, *supervisory style*, *innovation climate*, *co-workers relations*, *employee competence*, *employee work motivation and pressure to produce*. As mentioned earlier, an employee's relationship with his/her immediate supervisor plays an important role in influencing his/her behaviour and work outcomes. Employees who perceived their relationships with their immediate supervisors as positive tended to show higher immediate supervisor rated performance, and vice versa. Two suggestions can be given for the positive linkage between these two constructs. Firstly, when the employee is satisfied with his/her relationship with the immediate supervisor, he/she is more likely to be committed to his/her organisation, as found earlier. Therefore, he/she tends to accept and believe in organisational goals, and exert the best of his/her efforts to achieve them.

Secondly, the immediate supervisor may tend to rate the performance of some employees more positively than others, because he/she is satisfied with his/her personal relationships with them. Unfortunately, the influence of favouritism and nepotism in rating employees' performance is very common in work organisations, especially in the Third World, including Jordan.

Employees who perceived the *performance-reward relationship* positively showed higher levels of performance, as rated by their immediate supervisors. Individuals join work organisations mainly to gain some economic reward (e.g., wages/salary) as well as some degree of future economic security (e.g., pension). When the employee feels that the rewards he/she receives from the organisations is in line with the efforts that he/she puts in the job, he/she tends to show higher performance. Since "the more the employee invests of himself or herself in the organisation, the more potential there is for greater rewards— both economic and psychological— from the organisation" (Mowday, *et al.*, 1982, p. 3), he/she is likely to show high performance levels. In addition, the employees who were satisfied with the *supervisory style* in their organisations tended to show higher levels of performance than those who were less satisfied. Since supervisory style shapes all aspects of the employee's performance, his/her happiness with the supervision system is a key to high performance. Oldham and Cummings (1996) reported a significant positive relationship between supervisory style and performance. They argued that supervisory style plays a significant role in influencing employee's creativity. It may worth to look at the following quotation in which Oldham and

Cummings explained the role of supervisory style in influencing employees' performance:

Supervisory style [is] a second salient characteristic of the organisational context that is often considered a potent determinant of employee creativity at work is style of supervision. In particular, supervision that is supportive of employees is expected to enhance creative achievement; supervision that is controlling or limiting is expected to diminish creative performance ... When supervisors are supportive, they show concern for employees' feelings and needs, encourage them to voice their own concerns, provide positive, chiefly informational feedback, and facilitate employee skill development ... These actions on the part of a supervisor are expected to promote employees' feelings of self determination and personal initiative at work, which should then boost levels of interest in work activities and enhance creative achievement.

In contrast, when supervisors are controlling and closely monitor employee behaviour, make decisions without employee involvement, provide feedback in a controlling manner, and generally pressure employees to think, feel, or behave in certain ways ... Supervision that is experienced as controlling undermines intrinsic motivation and shifts an employee's focus of attention away from work activities and toward external concerns ... This reduction in intrinsic motivation is then expected to lower creative performance (p. 611).

Furthermore, the study subjects who perceived the *innovation climate* positively in their organisations showed higher levels of supervisor rated performance. Since “the growing competition, internationalism and changing circumstances make innovation an inevitable prerequisite for growth, success and survival of any private or public organisation” (Awamleh, 1994, p. 52), employees who are in a positive innovation climate are likely to innovate. Therefore, their performance tends to be more highly rated by their immediate supervisors than those who are less innovative. This result supports most researchers' (e.g., Oldham and Cummings, 1996 and Tabak, 1997) argument that “... increased job complexity and supportive, non-controlling supervision enhance overall work performance” (Tabak, 1997, p. 120).

Moreover, a positive innovation climate provides an opportunity to do important and challenging work, to learn new skills through trial and error practices, and to develop as a person. Meyer and Allen (1997) suggested that such a climate leads to the development of commitment, and consequently to higher performance. In addition, the respondents who positively perceived their relationships with their *co-workers* reported higher levels of performance, as rated by their immediate supervisors. Since most organisational tasks are performed in-groups, and there is some sort of interdependency between tasks, employees need to build good relationships between themselves in order to provide a positive work environment in which each employee can properly perform

his/her duties. Thus, satisfaction with co-workers' relations is likely to be related to high performance. Dissatisfaction may create a conflicting environment that negatively influences employee's performance. Similarly, the employee who positively perceives the organisation's efforts to develop his/her performance is likely to have the necessary skills and capabilities to carry out the work. Accordingly, the immediate supervisor tends to rate his/her performance more positively than are those who show negative feelings towards the *employee competence* environment. As discussed earlier, employees who are motivated to do their jobs are more likely to show higher levels of performance than those who are less motivated. On the contrary, co-opted employees who positively perceived the *pressure to produce* climate in their organisations reported lower levels of performance, and vice versa.

On the other hand, the 13 dimensions of work environment were also regressed against each performance dimension. The *readiness to innovate* factor was predicted by five work environment components, namely: *employee-immediate supervisor relationship*, *supervisory style*, *co-workers relations*, *performance-reward relationship* and *pressure to produce*. Apart from pressure to produce, all these factors were positively related to the *readiness to innovate*. The same variables, excluding *pressure to produce* and including *employee competence* and *innovation climate*, were found to be significant and positively related to the *understanding work duties* factor of performance. Similarly, the same variables, excluding *motivation*, were found to be significant in explaining the variance in the *job performance* factor. Likewise, the same variables, excluding *supervisory style* and including *motivation*, were found to be positively and significantly related to the last performance dimension, i.e. *work skills*. Hence, these results which obtained from work environment factors' relationships with supervisor rated performance dimensions suggest that different work environment components are related to different performance facets. Nonetheless, overall work environment was also related to overall performance.

Implications

The findings presented and discussed above suggest several implications for both organisations and researchers. Firstly, in order to enhance employee' performance, organisations need to maintain good relationships between the employee and his/her immediate supervisor, because it is the most important factor in influencing an employee's performance, as rated by his/her supervisor. Moreover, balancing organisational rewards with the efforts that an employee puts in the job is likely to result in higher performance. Organisations, especially in Third World countries, must avoid

the direct link between seniority and reward. Senior employees can be rewarded for the years they have invested in the organisation. However, this reward shouldn't be more than the reward they receive because of good performance. The complete link of rewards with seniority may upset and frustrate less senior employees, and negatively influence their performance. On the other hand, when employees feel that they are rewarded mainly because of their performance, they are likely to sustain the same line of activity, and show more efforts to get more rewards. In this context, Slocombe and Dougherty (1998) found a strong, positive and significant relationship ($r = 0.50, p < .01$) between 'willingness to exert considerable efforts' and performance, which was higher than the commitment-performance relationship ($r = .38, p < .01$). They concluded, "effort is likely to increase when the rewards for effort are increased. Our results underscored this familiar principle" (p. 490). In addition, having an effective supervisory style that considers the needs and wants of employees, as well as those of the organisation, is also essential. Having clear goals and effective employees are valueless if the supervisory style is not open, supportive and considerate. Furthermore, organisations need to establish a positive innovation climate, because it affects most aspects of employees' performance. Such behaviours as trying out new methods of doing work should be rewarded rather than punished. Organisations should understand that "... innovation, whether in management or any other fields, is vital for the continuous and progressive well-being of individuals and societies in general (Awamleh, 1994, p. 52). According to (Prather, 1999, www.novatrain.com, p. 1):

What dimensions of the environment do you think were most important? If you wanted to improve the environment for innovation, what would you do? Leaders struggle with these questions. In working with organisations, we find that the climate for innovation is crucial, poorly understood, and all but ignored when thoughts turn to improving the level of innovation. When leaders wish to improve the climate, many times they will just 'shotgun' it, doing something that is poorly thought out, or may even worsen the situation. There is a better way: first understand the system and get the data, then decide what to do.

Moreover, developing employees' competence and their relationships with each other is also essential. Furthermore, the results of this study confirmed the arguments of previous motivation theories that motivated employees are likely to be good performers. Therefore, organisations need to understand the values, attitudes, norms, needs and wants of their employees in order to establish an effective motivation policy that can induce desired behaviour and work outcomes. According to Benkhoff (1997b, p. 720):

The theory surrounding ... motivation assumes that success causes extra effort and performance ... If employees are getting recognition through

tangible or intangible rewards associated with their financial success, they are likely to respond by behaving the way the organisation finds desirable.

As mentioned earlier, organisations, especially in the Third World, need to not put pressure on employees to produce more, because this is likely to result in low production. If well motivated, rewarded and looked after, employees are likely to show the desired behaviour and to produce up to the required level without management pressure.

Secondly, from theoretical perspective the study findings support the argument that the factors of performance may be differently related to organisational variables. Thus, it can be suggested that it is the nature of performance that counts. Accordingly, researchers need to ignore the global measurement of performance and consider its different facets when examining its relationships with other organisational variables. This may provide more precise and reliable results, which will help in the development of the management literature as well as the work organisations. Furthermore, the results obtained from work environment-performance relationships confirm the arguments that work environment is likely to be related to employee's performance, rather than financial performance. For the past four decades, most management studies, both Western and non-western, have failed to establish a relationship between work environment and performance. The main reason behind this failure, as suggested by some researchers (e.g., Schneider, 1990 and Sparrow and Gaston, 1996) is the financial measures which were used to examine performance variable. For example, Al-Shammari (1990, 1994) examined the work environment role in influencing organisational performance, as measured by sales growth and profitability. In both studies, the researcher failed to establish a link between work environment and performance in some Jordanian companies. However, a weak, yet significant relationship between two work environment factors and the sales growth factor was reported in both studies. The studies concluded that the concept of work environment is not positively linked to financial measures of organisational performance in the Jordanian context. Thus, researchers need to use employee performance measures rather than organisational performance measures to establish the missing link between work environment and performance. Nonetheless, the results have also shown that work environment (eight factors were significant) has significantly explained 43% of the variance in immediate supervisor rated performance. Hence, researchers need to understand what other work environment or organisational factors are likely to explain the remaining 57% of variance in performance, as rated by the immediate supervisor.

7.13 THE ROLE OF OC IN MEDIATING THE RELATIONSHIP BETWEEN THE PWE-PERFORMANCE

The three-step-process and partial correlation tests were used to examine the organisational, affective and continuance commitment roles in mediating work environment-performance relationships. The results revealed that organisational commitment did not fully mediate the relationship between work environment and self-rated performance. However, partial mediation was reported. The respondents who positively perceived their work environment showed higher levels of self-rated performance. Nevertheless, those found to be committed rated their performance more positively than those who were less committed, because being committed may cause employees' motivation to rate their performance more positively. According to Cheng and Kalleberg (1996) "organisational commitment contributes to better performance, as more committed employees should be more motivated to work hard on their organisation's behalf" (p. 115).

On the other hand, those less positively perceiving their work climate are likely to be less committed, and accordingly may rate their performance less positively. Regrettably, very few studies, if any, have examined commitment's role in mediating the work environment and self-rated performance relationship, because the focus, as mentioned earlier, has been on the relationship between work environment and organisational performance. However, many studies have explored commitment's role in mediating the relationships between some other organisational variables, including performance. For example, Ferris (1981) examined organisational commitment's role in mediating personal and work-related characteristics' relationships with employee performance. The study results revealed that commitment plays a partial role in mediating the relationship between these variables. Likewise, Iverson *et al.* (1996) tested commitment's role in mediating the distributive justice-benevolence relationship. The researchers reported that commitment partially mediates this relationship. Davy *et al.* (1997) studied the relationships between commitment, job security and withdrawal cognitions. They found that commitment fully mediates the relationship between job security and withdrawal cognitions.

Furthermore, the roles of affective and continuance commitment in mediating the work environment-self performance ratings relationship were also separately examined, using the same measures mentioned earlier. Affective commitment was found to have only a partial mediating role in this relationship. Subjects who positively perceived their work environment and showed higher levels of affective commitment tended to rate their performance more highly than those who perceived their work environment

less positively, and showed less affective commitment. In other words, affective commitment positively influences the relationship between work environment and performance. Nonetheless, the partial mediating role of the affective commitment dimension was found to be stronger than global commitment. When controlling for organisational commitment, the relationship between work environment and self-rated performance decreased from .56 ($p < .001$) to .24 ($p < .05$). However it reduced from .68 ($p < .001$) to .21 ($p < .05$) in the case of affective commitment. This means that affective commitment is more important in mediating this relationship than organisational commitment. The reason for this difference is that the organisational commitment scale includes items of both affective and continuance commitment; and this appears to be negatively affecting overall commitment's mediating role. Considering continuance commitment mediation role can support this argument. Continuance commitment was found to neither fully nor partially mediating the relationship between work environment and performance. However, when continuance commitment was controlled, the relationship between these two constructs tended to increase from .34 ($p < .001$) to .35 ($p < .001$). This means that the relationship between these two variables tends to slightly diminish in the presence of continuance commitment. Thus, it can be suggested that the relationship between perceived work environment and self-rated performance is not significantly affected by continuance commitment. Accordingly, it can be confirmed that the continuance commitment factor has negatively affected the significance of organisational commitment in mediating the work environment-self performance ratings relationship.

On the other hand, organisational commitment was also found to be playing only a partial role in mediating the perceived work environment and immediate supervisor rated performance relationship. The results revealed that the employees who positively perceived their work environment tended to show higher levels of performance, because they were highly committed. On the contrary, employees who reported less positive perception of the work environment were found to be less committed, and as a result they reported lower levels of performance. In addition, affective commitment was also found to be more important than organisational commitment in partially mediating the work environment-performance relationship. Employees who were affectively committed tended to show higher levels of supervisor rated performance when they positively perceive their work environment. However, continuance commitment neither fully nor partially mediated this relationship.

Implications

Considering the findings presented and discussed above, some managerial and theoretical implications can be highlighted. Firstly, organisations may need to pay special concern to employees' affective commitment, because it appears to be playing a positive role in mediating the perceived work environment-performance (self and immediate supervisor rated) relationship. Employees' satisfaction with their work environment may positively influence their performance, but if they are also affectively committed, they will be prepared to show higher levels of performance.

Secondly, the results obtained from examining the mediating role of commitment suggest some important theoretical implications. The argument (e.g., Davy *et al.*, 1997; Ferris, 1981; Iverson *et al.*, 1996 and Morgan and Hunt, 1994) that commitment's importance stems from its key role in mediating the relationships between organisational variables is partially supported by the findings of this study. For example, Iverson *et al.* (1996, p. 36) suggested that "the importance of commitment stems from its impact as a key mediation variable in determining organisational outcomes". Moreover, the results have shown that the affective commitment factor tends to play the most important role in mediating the work environment and performance (self and supervisor rated) relationship. However, continuance commitment did not play any significant role in mediating this relationship. There is a need for some cross-cultural researches in this field to compare the results obtained from this study with other studies in different contexts. Examining the mediation role of commitment may explain the missing link between commitment and performance that has remained unclear for decades. The results of this study suggest that commitment may only play a partial mediation role between performance and other organisational concepts, rather than a direct relationship. Unfortunately, only one study (Ferris, 1981) has previously conceptualised commitment as a mediating variable in its relationship with performance. However, Ferris (1981) conceptualised commitment and performance as unidimensional concepts, rather than multidimensional constructs, and this may have influenced the study results. In examining the mediation role of commitment, researchers should consider the multifaceted nature of commitment, work environment and performance.

7.14 THE RELATIONSHIP BETWEEN OC AND SPR

The regression and correlation tests results revealed that overall organisational commitment explained 8% of the variance in employees' self-rated performance.

Subjects who were committed to their organisation tended to rate their performance more positively than those who were less committed. This result supports the widely accepted argument in the management literature that committed employees are loyal and productive members of work organisations (Porter *et al.*, 1974) who identify with organisational goals and values (Buchanan, 1974). As was suggested earlier, a committed employee is likely to be motivated to exert more efforts in his/her job to achieve organisational goals. Therefore, he/she tends to perform better than the less committed employee. According to Angle and Perry (1981, pp. 2-3) “organisations whose members are strongly committed would have both high participation and high production”.

This result mirrors some findings in this field. For example, Al-Qattan (1987) found a positive relationship between employees’ organisational commitment and the performance they show in the work place. Tziner and Falbe (1990) reported a positive significant correlation ($r = .43$, $P < .05$) between commitment and performance. Likewise, Slocombe and Dougherty (1997) found that employees who were committed to their organisation showed higher levels of performance than those who were less committed ($r = .38$, $p < .01$). Mannaheim, Baruch and Tal (1997) also reported a positive, significant, though weak relationship ($r = .108$, $p < .05$) between commitment and performance. Moreover, Caruana, Ewing and Ramaseshan (1997) examined commitment and performance in the Australian public sector. The stepwise regression of commitment against performance revealed that about 18% of the variance ($R^2 = .183$, adjusted $R^2 = .176$) in performance was explained by commitment. In addition, Levy and Williams (1998) conducted two studies to examine the commitment-performance relationship. In the first study, they found that more committed employees rated their performance more positively than less committed employees. The relationship between commitment and performance was found to be .30, which was significant at $p < .05$. Wasson (1997) and Benkhoff (1997a) also reported similar results. On the other hand, some researchers have reported no relationship between organisational commitment and self-rated performance. For example, Leong *et al.* (1994) examined organisational commitment-performance linkages in a life insurance company. They concluded:

... Commitment did not explain a significant percentage of the variance in performance ($R^2 = .004$, $t = .885$). These results support the possibility that the relationship between organisational commitment and performance can be explained by the mediating effects of working hard and working smart [both included as mediating variables in the study].

The main problem with Leong *et al.*'s study is the way they conceptualise both commitment and performance. Both variables were measured using unidimensional scales. Shore, Barksdale and Shore (1995) found no relationship between commitment and performance. The major problem with Shore *et al.*'s study is that they asked the managers to rate employees' commitment (affective and continuance). Since commitment is something related to employee's personal feelings and attitudes toward the organisation, it may be unwise to ask the supervisor to rate it.

On the other hand, the commitment factors' relationships with performance were also examined. The results revealed that affective commitment was significantly and positively related ($r = .29, p < .01$) to performance. However, continuance commitment was not related. This means that the variance that overall commitment has explained in performance was actually indicated by the affective dimension of commitment, rather than the continuance factor. Employees who were affectively committed to their organisations showed higher levels of performance than those who were less committed. Since "affective commitment denotes a correspondence between a person's and an organisation's values, which would motivate one to seek to advance the organisation's (and hence one's own) interests" (Kalleberg and Marsden, 1995, p. 239), affectively committed employees are likely to show high performance. The results obtained from the commitment factors' relationships with performance tend to agree with most researchers' (e.g., Angle and Perry, 1981; Kalleberg and Marsden, 1995 and Iles *et al.*, 1996) argument that the affective component of commitment is more strongly related to employees' performance than the continuance factor. Similar findings were also reported in the management literature. For example, Caruana *et al.* (1997) found that performance was significantly related to affective commitment. They conclude that the employees:

... Who are emotionally attached and identify strongly with their department are able to attain higher levels of organisational performance. Not surprisingly continuance and normative commitment which are a more calculative forms of commitment have no effect on performance. The identification of ... [employees] with high levels of affective commitment should be an important criteria in identifying individuals to head public service organisations (p. 10).

Before leaving Caruana *et al.*'s comments on the commitment factors' relationships with performance, it may worth mentioning that normative commitment is not a calculative form of commitment. However, it is the most positive form of commitment; it is even more positive than the affective commitment dimension. In addition, non-significant relationships between the two factors of commitment and performance have

also been reported in the literature. For example, Angle and Perry (1981) found that neither affective commitment nor continuance commitment were significantly related to performance. However, performance was more strongly related to value (affective) commitment than to intention to stay (continuance commitment). Likewise, Kalleberg and Marsden (1995) found that affective commitment was more strongly related to performance than continuance commitment, though performance was not significantly ($p < .05$) related to either dimension of commitment. Similarly, Shore *et al.* (1995) found no significant relationships between both commitment dimensions and performance.

Nevertheless, both commitment dimensions were also regressed against the five performance facets. When regressed against the *work skills* factor, affective and continuance commitments explained 6% of the variance in this variable. However, continuance commitment was not significant ($r = .05$, $p > .05$). In the same way, both dimensions of commitment explained 5% of the variance in the *work enthusiasm* dimension. However, continuance commitment was not significant ($r = .04$, $p > .05$). Moreover, 4% of the variance in the *job performance* variable was explained by both factors of commitment, but continuance commitment remained non-significant ($r = -.02$, $p > .05$). In addition, both dimensions of commitment explained 4% of the variance in the *understanding work duties* factor of performance. However, continuance commitment was not significant. Likewise, 3% of the variance in the *readiness to innovate* component of performance was mainly indicated by the affective commitment; however, continuance commitment was also non-significant. Employees who showed higher levels of affective commitment tended to rate the five dimensions of performance more highly than those who were less committed.

Implications

The results obtained from commitment, and its dimensions' relationships with performance, and its factors, suggest some useful implications for practitioners and academics alike. Firstly, from a practical perspective, managers need to understand that employees' affective commitment is positively related to their performance. Therefore, organisations must identify and nurture commitment in all employees, because it is directly related to organisational performance and success. Although it was not found to be significantly related to self-rated performance, organisations may also need to pay special attention to the continuance commitment factor, simply because it was not negatively related to performance. By developing the continuance commitment levels, the organisation may at least benefit from reducing the cost of turnover, since it may not

be able to win the affective commitment of all employees. In this context, Bhuiyan and Shahidulislam (1996) studied continuance commitment in Saudi Arabia. They called for developing hiring, training, and incentive programs to increase the level of employees' continuance commitment. They concluded:

... [When] employees perceive higher job security and greater satisfaction with jobs in general, the level of their continuance commitment will be higher. This can be useful because enhancing job security and creating a positive work environment could be economical decisions of firms in terms of reducing costs associated with losing employees (p. 7).

Organisations, especially in the Third World, must understand that commitment is a two-way street. If the organisation is not fair to its employees, the employees will not be committed to the organisation. Thus, organisations should understand that employees' perceptions of respect and consideration have critical impacts on their commitment, and consequently on their performance. To develop a high level of organisational commitment (affective and continuance) and motivation, employees should feel that they are being treated with respect and consideration, and that they are valued and appreciated by their supervisors and the organisation. In short, creating a climate of respect and consideration through adopting some effective techniques, such as the 360° feedback, is essential for developing organisational commitment. According to McKinley (1999, www.novatrain.com, p. 1):

That model of "profit-product-people" is obsolete in today's fast-changing world. Competitive businesses are focusing on maximising the personal performance of their people first, then their product. Once the people and product are in place, the profit will be there. So how do you get your people in place? Employees grow when they are respected as human beings, when they feel that they MATTER. They also grow through life-long learning. ... Maximising personal performance starts with your people. Treat them right and the result will be higher quality products and services, improved productivity, and increased profitability.

Secondly, from an academic perspective, the results have confirmed that commitment has a positive impact on employee performance, and that the affective commitment factor plays the most important role in explaining this influence. Moreover, continuance commitment was not significantly related to overall performance, or to any of its five dimensions. However, affective commitment was not only related to overall self-rated performance, but it was also significantly and positively related to all components of performance. Thus, it can be suggested that the nature of commitment counts, and that "... different types of commitment have different relationships to organisational behaviour" (Iles *et al.*, 1990). However, the results did not provide much support for

the recent argument that the nature of performance (e.g., Angle and Lawson, 1994) also counts. While it explained 6% of the variance in the work skills factor, affective commitment explained only 3% of the variance in the readiness to innovate dimension. Affective commitment was positively related to all self-rated performance dimensions, and continuance commitment showed non-significant relationship with all performance dimensions. Hence, in the commitment-performance (self-rated) relationship, it is the nature of commitment that counts more than the nature of performance. Since few studies (only four were found) have examined the nature of commitment and performance and their relationship with each other, there is a need for further investigation to reach more generalisable conclusions in this field. Therefore, it can be suggested that it is no longer accurate to use global measures to examine the commitment-performance relationship.

Using multifaceted scales to measure both variables will not only clarify the relationship between them, but it may also put an end to the inconsistent findings of commitment research that have dominated management literature for more than three decades. It is also felt that the understanding of the influence that commitment might have on employees' performance in a non-western context will add much to the improvement of academics' understanding of the commitment-performance relationship across cultures. Unfortunately, only one study (Al-Qattan, 1987) has investigated the relationship between these two concepts in the Arabic context. Since affective commitment explained 9% of the variance in self-rated performance and four of the work environment factors explained 20%, consideration needs to be given to other variables that have direct effect on performance, and are likely to explain the remaining 71%. Nonetheless, the use of an indirect measure of performance has limitations, in that it may not reflect the actual performance that is desired. This matter will be discussed in detail when looking at the results of self and supervisor performance ratings' relationships.

7.15 THE RELATIONSHIPS BETWEEN OC AND ISPR.

Organisational commitment was found to be significantly and positively related ($r = 0.46$, $p < .001$) to immediate supervisor rated performance. Overall commitment explained 21% of the variance in overall performance. Highly committed employees showed higher levels of work performance than less committed employees. This result mirrors previous analyses conducted by some researchers. For example, Mathieu and Zajac (1990) reported a positive, but weak and significant relationship, between

commitment and performance. They concluded, "... commitment has relatively little direct influence on performance in most instances" (p. 184). Allen and Rush (1998) and Gupta, Prinzing and Messerschmidt (1998) also reported similar results. Nonetheless, the majority of researchers have found that commitment and performance are not significantly related. For example, Becker *et al.* (1996) and Keller (1997) found no significant relationship between these two constructs.

On the other hand, the relationship of the two commitment facets with overall performance was also examined. The results revealed that affective commitment was positively and significantly related ($r = 0.54, p < .001$) to performance, explaining 29% of the variance in this variable. On the contrast, continuance commitment showed a non-significant relationship ($r = 0.01, p > .05$) with performance. Continuance committed employees are not normally well motivated to the level that they can exert more effort in their work to achieve organisational goals. As suggested earlier, they are more likely to perform to the level that is just enough to maintain their organisational memberships, i.e., to participate, not to produce. This finding supports the results of some Western studies in this field. For example, Meyer *et al.* (1989) found that affective commitment had a correlation of 0.15 with a composite measure of performance. However, continuance commitment had a correlation of -0.25 with performance. Meyer and Schoorman (1992) found that performance and affective commitment were positively and significantly related ($r = 0.17, p < .01$), whereas continuance commitment showed a negative, yet non-significant relationship ($r = -0.11, p < .05$) with performance.

Likewise, in Shore *et al.*'s (1995) study, the affective commitment-performance relationship ($r = 0.39, p < .01$) was found to be positive and significant, and the continuance commitment-performance relationship ($r = -0.27, p < .01$) was found to be negative, yet significant. In the same way, Randall and O'Driscoll (1997) reported a positive and significant relationship ($r = 0.34, p < .01$) between affective commitment and performance. However, no significant relationship ($r = 0.03, p > .05$) was reported between performance and continuance commitment. They concluded, "... the affectively committed individual will receive greater organisational support in the work environment and greater agreement with organisational policies and procedures than the calculatively committed employee will" (p. 605). Similarly, Randall *et al.* (1999) found that affective commitment was significantly and positively related ($r = 0.20, p < .05$) to performance; however, continuance commitment was not significantly related. Suliman and Iles (1998b) reported for the first time in the management literature positive and

significant relationships between affective and continuance commitments on one hand, and performance on the other hand. Continuance commitment, which is commonly viewed as a negative organisational concept, was found to be significantly and positively related ($r = 0.42, p < .001$) to performance, explaining 18% of the variance in this variable. To explain this unique finding in the management literature, Suliman and Iles (1998b) suggested:

Employees may need to develop their performance to guarantee the continuance of their membership, and consequently to benefit from their organisational investments and keep them. This may be the case especially when there is no labour union, its power is weak, and/or it is heavily controlled by management, as is the case in Jordan and most other Third World countries. Employees must work hard to guarantee continuity of membership. According to this view, the higher the perceived cost of leaving the organisation, the higher the expected performance. Thus, organisations can increase employees' commitment and subsequently their performance by increasing intrinsic and extrinsic rewards and fringe benefits that attract their attention and induce them to evaluate correctly the cost of terminating membership (p. 15).

Nevertheless, some other studies (e.g., Hackett *et al.*, 1994 and Somers and Birnbaum, 1998) have failed to establish any significant link, either positive or negative, between the two factors of commitment and performance.

Furthermore, commitment factors' relationships with the five facets of performance were also examined. When regressed against the *readiness to innovate* factor, affective commitment showed a significant and positive relationship ($r = 0.45, p < 0.001$) and explained 20% of the variance in this performance construct. However, continuance commitment was found to be non-significant ($r = -0.01, p > .05$). Affective commitment was found to be positively and significantly related ($r = 0.48, p < .001$) to the *understanding work duties* factor, and explained 23% of its variance, whereas continuance commitment was found to be non-significant ($r = -0.05, p > .05$). Moreover, affective commitment explained 21% of the variance in the *job performance*, and showed a significant and positive relationship ($r = 0.45, p < .001$), with this performance dimension. However, continuance commitment remained non-significant ($r = 0.03, p > .05$). Likewise, the *work enthusiasm* was found to be positively and significantly related ($r = 0.47, p < .001$) to affective commitment, which explained 22% of the variance in this performance facet. Continuance commitment, however, was found to be non-significant ($r = -0.02, p > .05$). With respect to the *work skills* factor, affective commitment was found to be significant ($r = 0.41, p < .001$) and explained

17% of its variance. On the other hand, affective commitment was found to be non-significant ($r = -0.03, p > .05$).

To summarise, affective commitment has shown positive and significant relationships with all performance facets. However, continuance commitment was unrelated to performance regardless of the dimension under consideration. Employees who showed higher levels of affective commitment tended to show higher levels of overall performance, and its five factors than those who showed lower levels of affective commitment. Regrettably, very few studies have examined the relationships between the facets of commitment and the factors of performance (supervisor-rated). Motivated by Meyer *et al.*'s (1989) study results, Angle and Lawson (1994) examined the commitment-performance relationship. They found that "neither affective commitment nor continuance commitment was related to either of the global performance measures" (p. 1544). However, affective commitment was found to be related to two of the performance facets, namely dependability ($r = 0.23, p < .05$) and initiative ($r = 0.24, p < .05$). They suggested that "high affective commitment would perhaps make an employee *want* to be a better problem solver on the job" (p. 1584, Angle and Lawson's emphasis). Arguing that "studying the commitment-performance relationship using multiple dimensions of job performance offers the possibility of new insights into commitment process" (p. 525), Somers and Birbaum (1998) found no significant relationship between the two facets of commitment and overall performance, or any of its factors.

Implications

The above results and discussion about commitment-performance linkages suggest several implications for both practitioners and academics. Firstly, from a practical perspective, managers need to understand that affective commitment is directly related to employees' performance, and that the higher the commitment, the higher the performance, and vice versa. Thus, developing employees' affective attachment to the organisation is a strong competitive weapon that the modern organisation should obtain in today's global era of diverse work teams and environments. According to ADL Associates (1998) one of the most critical issues for the 21st century is building employees' commitment in diverse work teams and environments. In their recent book entitled 'Commitment: if you build it ... RESULTS will come', ADL Associates argue that:

Today's workplace is enveloped by the fear of downsizing, loss of job security, overwhelming change in technology and the stress of having to do more with less ... [Therefore] managers [should] establish the type of

caring, spirited workplace that will ignite employee commitment (1998, p. 6).

Thus, creating high levels of affective commitment among organisational members in such unstable environment is even more important than before. Moreover, organisations also need not to discourage the growth of continuance commitment among its employees, because it is not negatively related to their performance. Rather, continuance commitment is negatively related to quitting (Meyer and Schoorman, 1992). As mentioned earlier, developing continuance commitment among employees reduces the cost of turnover. Suliman and Iles (2000) suggested that both factors of commitment should be encouraged in work organisations. They asserted:

... Affectively committed employees are more likely to maintain organisational membership and contribute to the success of the organisation than continuance committed employees. However, both types of employees and both dimensions of commitment should be encouraged in organisations. By giving more attention and recognition to the continuance committed employee we can improve his/her morale and dedication to the level that binds him/her to be emotionally attached to the organisation (p. 79).

Secondly, from an academic perspective, the different pattern of results for affective commitment and continuance commitment adds to the growing body of evidences that *it is the nature of the commitment that counts*. Only affective dimension was found to be related to overall performance, both self and supervisor rated, as well as its five facets. However, the current findings did not provide much support for the suggestion proposed first by Angle and Lawson (1994) that “the nature of the performance that counts” (p. 1549). Although there were some differences in the magnitude of the relationships between affective commitment and self-rated performance facets, no significant differences in the magnitude of the relationships with supervisor-rated performance factors was reported. Furthermore, the findings also provide strong support for the suggestion, first proposed by Meyer *et al.* (1989), that whatever, the relationship between performance and affective commitment, there is no equivalent relationship for continuance commitment.

On the other hand, the results provided no support for the arguments and findings of some studies that continuance commitment is negatively related to employees' performance. For example, Iles *et al.* (1996, p. 21) argued that “HRM practitioners should attempt to encourage affective and normative commitment while at the same time discouraging continuance commitment”. Furthermore, some researchers (e.g. Baruch, 1998; Carson *et al.*, 1999) have started doubting the viability and suitability of

organisational commitment (OC) to today's fast changing environment in the West. They contend that employees can no longer afford to be committed to their organisation in this era of re-engineering, corporate restructuring and downsizing. The findings of the current study provided no support for this argument. Rather, it suggests that in this era of re-engineering, corporate restructuring and downsizing, the issue of commitment has become more important than before. In addition, the factors proposed by these researchers as more important than commitment in predicting performance were found to be much less important than commitment in the Jordanian context. For example, psychological contract, procedural justice and distributive justice variables showed a weak relationship with performance as compared with commitment. Hence, it can be suggested that a committed employee is a happy worker, and the happy worker is a producer. Moreover, the results also imply that commitment plays a direct role in predicting employees' performance, rather than mediating performance's relationship with other variables. The relationship ($r = .54$, $p < .001$) between commitment and performance found in this study is one of the highest values reported in the management literature. It may be worth mentioning that this relationship is satisfactory, and that one may not expect any relationship between two separate variables to be higher than this. According to Sekaran (1992, p. 293):

It is important to note that no correlation exceeded .59. If correlations were higher (say, .75 and above), we might have wondered whether or not the correlated variables are two different and distinct variables and would have doubted the validity of the measures.

The results of this study thus suggest that commitment is an important issue for both managers and researchers, though not much is known and understood about its relationships with other organisational concepts. Researchers may need to redo past work done on the commitment-performance relationship, as well as on commitment's relationships with other organisational concepts in the light of the multidimensional nature of commitment and the multifaceted nature of performance. As discussed earlier, one of the major reasons behind the inconsistent findings in commitment research is the unidimensional scale (s) used to measure it. The current results have shown that organisational commitment's relationship with performance is negatively affected by the inclusion of the continuance component. On the contrary, affective commitment scales tended to maximise this relationship.

On the other hand, commitment's relationships with both self and supervisor rated performance revealed that objective performance ratings tended to be more highly related to commitment than subjective performance ratings. As was suggested earlier,

the reason for this difference is the limitation associated with the indirect measure of performance (self-rating). It is generally agreed that self-ratings may not reflect actual performance to the level of the reality that is desired. Most employees, especially in the Third World organisations, where self-rating is not common, tend to rate their performance more positively than they are actually doing. Hence, when both affectively and continuancely committed employees similarly rate their performance the relationship between commitment and self-rated performance may be negatively affected. On the contrary, when the immediate supervisor rates the employee's performance, the appraisal outcomes tend to match the actual performance of the employee, which in turn maximises commitment's relationship with performance.

The relationship between self and supervisor ratings will be discussed in more detail in the next section. However, it can be suggested that the use of immediate supervisor performance ratings, especially in the Third World context, may remove the problem associated with the commitment-self-rated performance relationship. Since affective commitment has explained 29% of the variance in performance and perceived work environment has explained 41%, consideration needs to be given to further variables that have an effect on performance, and are likely to explain the remaining 30%, e.g. job satisfaction and role states (overload, ambiguity and role conflict).

7.16 THE RELATIONSHIPS BETWEEN SPR AND ISPR.

The t-test and correlation test results revealed that there is a significant gap between the ratings obtained from immediate supervisors and those obtained from employees in Jordanian industries. The relationship between the two ratings was found to be 0.34 ($p < .001$), explaining the variance in one another to the extent of 12%. The findings have also shown that Jordanian employees tend to rate their performance more highly than their immediate supervisors. Two reasons can be given for employees' tendency to evaluate themselves more favourably than do their immediate supervisors in the Arabic context. Firstly, employees believe that higher performance is related to higher organisational rewards. Therefore, the employee tends to over rate his/her performance, even if he/she is a weak performer. Secondly, Jordanian culture plays a critical role in shaping employees' perceptions of their own work performance. As was discussed earlier in chapter four, the Arab employee tends to attribute all success to him/herself and failure to others. Bailey, Chen and Dou (1997) examined employees' performance in individualist and collectivist cultures. They found that individualist culture

employees tend to rate their performance more favourably than collectivist culture employees. They concluded:

Collectivist cultures [e.g., Japanese culture] foster an interdependent, allocentric conception of self that encourages people to prefer failure feedback and discourages them from showing initiative or perceiving that their job environment provides individual-oriented feedback. In contrast, individualist cultures [e.g., Arabic culture] foster an independent, idiocentric conception of self that encourages people to prefer success feedback, show initiative and perceive that feedback is provided in the job environment (p. 618, Researcher's emphasis added).

Moreover, the individual motivation system, rather than group motivation, which is one of the basic pillars of Arabic management, induces the Jordanian employee to rate his/her performance more positively than he/she is actually doing. The employee is aware that he/she will not be rewarded as a member of a work team who made a good performance, but as an individual. Hence, "employees are motivated to view themselves as positively as possible, even if this means systematically inflating self-ratings" (Farh *et al.*, 1991, p. 130-131).

The results obtained from the self and supervisor ratings relationship tend to coincide with some Western and Asian studies, and contradict others in the management literature. Harris and Schaubroeck (1988), for example, conducted a meta-analysis on 36 sets of independent Western samples of self and supervisor ratings. They found that self-ratings were moderately related ($r = 0.35$) to supervisor-ratings. Harris and Schaubroeck concluded, "... self-ratings will generally show only moderate correlations with ratings by others" (p. 57). Moreover, to determine whether the received doctrine of leniency in self-ratings is supported outside the bounds of the Western culture, Farh *et al.* (1991) examined self and supervisor ratings in China and USA. The results revealed that:

In comparison with U.S. supervisors, Chinese supervisors rated their subordinate significantly higher on completing work on time, significantly lower on most productive employee, and about the same on quality of performance. These findings suggest that Chinese supervisors did not evaluate behaviour more leniently than did their U.S. counterparts (pp. 139-140).

Thus, Chinese employees rated their performance less favourably than did their supervisors. These results thus are contrary to what is typically reported in U.S. finding, i.e., self-ratings of performance are more lenient than that of supervisory ratings (e.g., Shore and Thornton, 1986 and Steel and Ovalle, 1984). Farh *et al.* concluded that the findings they reported were inconsistent with the received doctrine that self-ratings

would be higher than supervisor ratings, and support the collectivist culture hypothesis (group oriented). They suggested that “the pattern of findings demonstrates the importance of considering culture when proposing major principles of human resource management” (p. 141).

Yu and Murphy (1993) attempted to replicate Farh *et al.*'s (1991) findings mentioned above by examining the relationship between self and supervisor ratings in three Chinese industries. Unlike Farh *et al.*, and in line with most Western research findings, Yu and Murphy (1993) found that self-ratings were significantly higher than supervisor ratings. The relationship between the two ratings was found to be 0.60, which was significant at the 0.01. Yu and Murphy concluded:

The results of the present study suggest that the cultural relativity hypothesis, in its broadest form, is not an adequate explanation of the consistent modesty bias reported in that study [i.e., Farh et al., 1991]. Although there are some generalisable differences between Eastern and Western cultures that are likely to be relevant for understanding performance ratings, it also seems clear that one cannot assure that self-ratings obtained from Chinese or other Eastern samples will necessarily show modesty bias (p. 362).

Moreover, Cheng and Kalleberg (1996) examined employees' quantity and quality of work in Britain and United States. They found that American employees were more likely to report that their quality and quantity of work was higher than British employees. In addition, Liden *et al.* (1996) surveyed a sample of sales representatives and their immediate supervisors in United States in order to examine the relationship between self and supervisor ratings of performance. They found that the relationship between these two ratings was 0.61, which was significant at the 0.01 level. Moreover, Baruch (1996) examined self and direct-manager performance appraisal using two studies. In the first study, which included a sample 846 employees from 41 high-tech organisations (39 in Israel and two in the UK) he found that both ratings were highly related ($r = 0.73$, $p < .001$). In the second study of 114 employees (from various UK companies) analysis revealed a higher correlation ($r = 0.81$, $p < .001$) than that reported in the first study. Baruch argued that these correlations are overwhelmingly high, “... especially when we take into account that no one can expect perfect correlation, which means full agreement” (p. 62). To explain the reason behind these high correlations reported for the first time in the management literature, Baruch asserted:

The results were significantly higher than have been previously found. The reason may be that employees under study knew in advance their DMPA [direct-manager performance appraisal], the population and organisations under study, and the similarity of the wording in the PA [performance

appraisal] measure. A high level of education as well as seniority in the organisation can increase the validity of SPA [self-performance appraisal] (p. 61).

Bailey *et al.* (1997) surveyed 216 individuals (77 from the U.S., 57 from Japan and 82 from the People's Republic of China) to study performance ratings in United States, Japan and China. The results revealed that US respondents desire success feedback, show more initiative and perceive more direct workplace feedback than do either Japanese or Chinese respondents. Strong support was found for comparisons between the US and Japan, but the Chinese consistently departed from predictions. Chinese employees depart from collectivist values in ways that resemble Americans more than Japanese. Hence, Bailey *et al.*'s findings with respect to Chinese self-ratings support Yu and Murphy's (1993) argument that broad cultural factors do not explain the modest bias in Chinese self-ratings. Furthermore, Furnham and Stringfield (1998) supported the presence of a leniency or self-favouritism effect in employees' self-rated performance. They found that self-ratings were higher than others (managers, peers and consultants), and that "there was evidence of a leniency effect, with subjects rating themselves higher than (all) others; and that correlations between observers/others were higher than correlations between self (actor) and observers" (p. 525).

Unfortunately, apart from the current research, no study has examined the self-supervisor ratings relationship in the Arabic context, which would have been useful for cross-cultural comparisons. However, from the findings of this study, it can be suggested that Jordanian employees, and most Arab employees generally, tend to agree with Western employees in rating their performance more positively than their immediate supervisors. Since both Western and Arab cultures are individualist cultures, the findings support Hofstede's (1982) argument about the features of collectivist and individualist cultures discussed earlier. Research findings on self and supervisor ratings in the Western (mainly US and UK) and Asian (mainly China and Japan) contexts can be summarised in three points:

- (1) Self-ratings are usually higher, or more lenient than ratings obtained from supervisors in Western context (individualist) and lower in some Asian (collectivist) contexts.
- (2) Self-ratings show low to moderate correlations with ratings obtained from supervisors.
- (3) Apart from Baruch's (1996) study, no study has reported a correlation over 0.75 between self and supervisor ratings.

Implications

The results obtained from examining the relationship between self and immediate supervisor ratings suggest several implications for both managers and researchers. From a practical perspective, managers should understand why such a clear gap exists, because it is directly related to employees' behaviour and work outcomes. For example, if an employee rated his/her performance as excellent, then he/she may expect the highest rewards. However, if his/her immediate supervisor rated his/her performance as poor, for example, and rewarded him/her according to this evaluation rather than on the employee's self-appraisal, then the employee may feel frustrated and de-motivated. Thus, reducing this performance appraisal gap is a very critical issue for work organisations, especially in this global era. The accurate evaluation of the gap, in order to reduce or bridge it, will not only be beneficial for the performance-reward relationship environment, but it will also help in improving communication, trust, psychological contract, distributive justice and all other work environment factors. Moreover, it is clear that the use of self-ratings by multinational organisations employing Arab employees or working in Arabic context may negatively influence the work environment. Irrespective of their actual performance, Arab employees tend to rate their performance more favourably than their immediate supervisors. Thus, a clear gap in performance appraisal is likely to exist, and the expectations of the two parties (the employee and the organisation) are more likely to mismatch, and this may negatively influence the work environment, employees' commitment and performance.

From a theoretical perspective, the findings show that Jordanian employees tend to evaluate themselves more favourably than do their immediate supervisors. This result thus suggests that the received doctrine of leniency in self-ratings is supported outside the bounds of Western culture. In other words, both Middle Eastern employees and Western employees tend to rate their performance more positively than their supervisors. In line with most Western studies (e.g., Harris and Schaubroeck, 1988), a moderate yet positive and significant correlation ($r = 0.34$, $p < .001$) was found between self and supervisor ratings. Although both of them are viewed as individualist cultures, the differences between the Western and Arabic cultures are more than the similarities. Hence, it can be suggested that broad cultural factors (proposed by Farh *et al.*, 1991) do not adequately explain the modesty bias reported in this study and in most Western studies. Since the role of cultural factors in explaining the modest bias was not empirically investigated,

researchers in this field can examine this matter across-cultures, as well as exploring other factors, which are more likely to be important than cultural factors in predicting the differences in ratings. For example, it can be suggested that the employee as a human being, both in the West and East, by nature likes to be better than others, and always strives to have as much rewards and benefits as he/she can. Therefore, he/she tends to positively view his/her performance, irrespective of how he/she is actually performing. On the other hand, more studies should be conducted in this field in the Arabic context, so that a more generalisable conclusion about self-supervisor ratings relationship can be reached.

7.17 CONCLUDING REMARKS

This chapter aimed at presenting and discussing the findings that were generated from analysing the primary data in chapter six. The implications of the results for both managers and researchers were also discussed. The chapter commenced by discussing the results of the factor analysis that are related to the multidimensionality of the work environment, commitment, self-rated and supervisor-rated performance. It concluded that these variables are multifaceted constructs, and that researchers should conceptualise them in this way in order to produce more reliable and consistent findings across cultures. The relationships of the demographic variables with the main study variables were also discussed. Three biographical variables were found to be important in explaining the variance in the main variables, namely: organisational tenure, job tenure and job level. It was argued that considering the role of demographic variables in influencing organisational concepts is important, and that researchers must include them in each investigation, instead of just using them to describe the study sample.

In addition, the role of perceived work environment and its factors in predicting organisational commitment and its two facets was also examined. Perceived work environment and its factors have significantly explained the variance in organisational and affective commitments, but they were not significant in predicting continuance commitment. Since work environment has a direct effect on employees' affective commitment, it was argued that creating a healthy and positive work environment is a very critical issue for modern organisations.

Furthermore, the impact of work environment on self-rated performance was also discussed. Significant, moderate and positive correlations between these two factors were reported. Employees who positively perceived their work environment tended to rate their performance more favourably than those who showed less positive

perceptions. Four work environment factors were found to be important in predicting self-rated performance and its five facets.

Moreover, work environment and eight of its factors were found to be highly significant in explaining the variance in supervisor-rated performance and its dimensions. It was suggested that both the nature of work environment and the nature of performance are important in the work environment-performance relationship.

On the other hand, the roles of organisational commitment and its two components in mediating the relationship between work environment and performance were also examined. Organisational and affective commitments were found to partially mediate this relationship. However, continuance commitment did not play any significant role in mediating this relationship. It was found that employees who positively perceive their work environment are likely to show higher levels of affective commitment, and consequently higher levels of performance.

In addition, organisational commitment and its two components' roles in influencing employee self-rated performance were also investigated. Both organisational and affective commitments were found to significantly predict overall performance and its five facets. However, continuance commitment was found to be non-significant. Similarly, both organisational and affective commitment were found to be positively and significantly related to supervisor-rated performance and its factors, whereas continuance commitment was also non-significant. It was proposed that the nature of commitment is more important than the nature of performance in the commitment-performance relationship.

The chapter concluded by addressing the nature of the relationship between self and immediate supervisor-rated performance. As is typically found in Western research, Jordanian employees showed leniency in self-ratings. A moderate, positive and significant correlation was found between these two concepts. It was suggested that the broad cultural factors proposed by Farh *et al.* (1991) do not adequately explain the gap found between self-ratings and supervisor-ratings. All in all, the results for the relationships of work environment, commitment and performance were somewhat consistent with patterns found in most Western studies.

After presenting, discussing and understanding the implications of the findings in this chapter, the next chapter will provide some recommendations for work organisations and researchers, summarise the chapters of the study, and present a conclusion for the whole study.

Chapter Eight

The Study Conclusions and Recommendations

THE STUDY CONCLUSIONS AND RECOMMENDATIONS

8.1 INTRODUCTION

The previous chapter has presented and discussed the findings of the study, as well as the implications of the results for both managers and researchers. On the grounds of these empirical findings, this chapter aims at providing some recommendations for work organisations, especially in the Jordanian and other Arabic contexts in the areas of work environment, commitment and performance. The contents of this chapter are split into four main parts. The first part provides a summary for the study chapters. The major points discussed in each chapter of the study, as well as the overall conclusion of these chapters are summarised in this section. The second part provides some suggested recommendations for managing work environment, commitment and performance in today's diverse work teams and environments. Drawing on the outcomes of the study, the third part discusses some guidelines for future research in this field of the study. The last part provides a conclusion to the whole study.

8.2 SUMMARY OF THE STUDY CHAPTERS

This study has examined the nature, strength and significance of the relationships between three important variables in the context of work organisations, namely work environment, commitment and performance. Apart from this concluding chapter, seven chapters were developed to introduce the study, review the literature and the theoretical framework, highlight the Jordanian context, discuss the research methodology, present the survey results and discuss the findings and implications.

8.2.1 CHAPTER ONE

The aim of this chapter was to introduce the study and the importance of work environment, commitment and performance for work organisations and researchers. The chapter started by stressing the importance of work environment in influencing employees' behaviour and work outcomes, including both commitment and performance. It argued that organisations are under pressure to cope with their fast changing environments, but they cannot forsake employees' commitment and performance. Accordingly, the chapter suggested that the understanding of the nature of the inter-relationships between work environment, commitment and performance is one of the major issues of the twenty-first century. The issue of mismanagement in Third World organisations was also discussed in this chapter. It has suggested that despite the high levels of capital and technological investments, Third World organisations have

reported weak productivity, mainly because of lack of a scientific approach to management. The chapter has argued that most Third World organisations have failed in managing employees- the most important factor of production- and have tended to treat them as biological machines. This negatively influences employees' moral, commitment and productivity. It was also argued that the recent process of globalisation has awakened the attention of developing countries' organisations to the importance of productivity, quality, creativity and innovation for gaining global levels of efficiency.

In addition, the chapter argued that most developing countries have started importing the western management theories and practices in packaged form as an attempt to improve performance. However, these imported ideas and theories have done little or nothing for Third World organisations, as the chapter argued. It suggested that for the imported ideas and policies to work, Third World organisations should learn how to adapt them to their own situation instead of applying them as a complete package, because the local management practice is part of the cultural infrastructure, which cannot be imported in packaged form. According to this view, the chapter has argued that this study is an attempt towards adapting the western concepts of work environment, commitment and performance to the Middle Eastern context. It argued that the study tries to provide managers in the Jordanian context and other related contexts with some guidelines for managing three important factors, which are directly related to the failure or success of work organisations, namely work environment, commitment and performance.

The chapter also presented the problem of the study in a form of questions. Four general questions were used to describe the problem of the study. It was also argued that the study could be useful for academic and practitioners alike. From an academic perspective, the chapter suggested that the study would improve academics' understanding of the relationships between the previously mentioned concepts. It was argued that previous studies have contributed little to the understanding of the nature, level and importance of these relationships, mainly because they have used inappropriate measures and conceptualisations to examine work environment, commitment and performance relationships. Accordingly, these relationships remain unclear. The chapter also argued that no study has attempted to investigate the nature of these relationships using the multidimensional approaches and scales to conceptualise and measure commitment and performance, as well as a work environment scale that takes into account the recent developments and changes in the workplace. It further argued that the three variables under scrutiny in this study are not well addressed in the

Arabic management literature, and that little is known about the nature of the inter-relationships between them. This study, therefore, will help Arab scholars to understand the nature of these relationships, as well as providing them with a base knowledge for future studies in these fields (environment, commitment and performance).

Moreover, the chapter shed light on the importance of making cross-cultural comparisons between western and non-western study outcomes in order to reach more generalisable conclusions about management concepts. From a practical perspective, the chapter has argued that the study will provide managers with valuable information about managing work environment, commitment and performance in more effective and successful ways. It has also argued that by understanding the nature of the organisational commitment concept and its relationships with work environment and commitment, organisations, especially in the Third World, will be able to prevent the development of employee theft in work organisations. The chapter argued that theft by employees is one of the major reasons behind the weak performance of Third World organisations, and that by committing employees, organisations can overcome this negative organisational phenomenon. In addition, the chapter also discussed the layout of the thesis, and provided a summary for each chapter of the study, and concluded by presenting the published work derived from the study.

8.2.2 CHAPTER TWO

This chapter aimed at introducing and defining the concepts of work environment commitment and performance, as well as reviewing the previous literature. The chapter commenced by discussing the development and definitions of the work environment concept. It argued that the early ideas of this concept were rooted in Lewin's studies (Lewin *et al.*, 1939 and Lewin, 1951), and that it has started to permeate the management literature as recently as the 1960s. The chapter presented different definitions for the environment concept, and argued that the definitions of this concept follow four main approaches. The first approach called the structural approach views work environment as a set of organisational attributes. The second approach, called the perceptual approach, considers work environment as a set of perceptual variables, but still seen as organisational main effects. The interaction approach, as a third view, suggests that the interaction between the organisation and employees produce a certain work environment. Considering the weaknesses of the previous work environment's definitions, the chapter has suggested a comprehensive definition for this construct, based on the interactional approach.

Furthermore, the chapter distinguished between the concept of work environment and organisational environment, psychological environment, executive environment and organisational culture. It argued that these commonly used concepts are independent concepts, and that they are not synonyms of the term work environment. The chapter also argued that work environment is one of the most important organisational concepts, because it has a direct effect on employee behaviour and performance. Drawing on Lewin's (1951) well-known equation of behaviour, person and environment, this chapter attempted to establish a link between employee behaviour and performance on the one hand, and the work environment on the other hand. In addition, the chapter also discussed the basic ideas and the development of the organisational commitment, as well as the differences and similarities that it shares with the job satisfaction construct. It was also argued that one of the most important characteristics of commitment is the mediating role that it plays in work organisations. The importance of commitment for work organisations, societies and individuals was also discussed in this chapter. It was argued that commitment is necessary for the development of individuals and the wellbeing of society.

On the other hand, the concept of performance was also discussed in this chapter, and distinguished from other overlapping concepts, such as effectiveness and productivity. Moreover, the relationships between work environment, commitment and performance, as reported in the previous studies, were also presented and discussed in this chapter. The chapter highlighted three major weaknesses with the previous studies which attempted to investigate the nature of these relationships. Firstly, the scales used by these studies (e.g., Litwin and Stringer, 1968) to measure work environment were mainly tailored to assess the 1960s and 1970s environments. Secondly, most of these studies have conceptualised commitment as a unidimensional concept, and have used unidimensional scales to measure it. Lastly, the performance concept was also conceptualised as a unidimensional construct, rather than a multifaceted concept. The chapter concluded by stressing the importance of using the right measures and conceptualisations to examine the relationships between work environment, commitment and performance.

8.2.3 CHAPTER THREE

The aim of this chapter was to provide a theoretical background for the study. The chapter commenced by discussing the various dimensions and measurements of work environment that have emerged in the management literature. It was argued that different sets of dimensions and different scales were used by researchers to study this

construct. It was clear that most of the previous studies have used the dimensions and measures which were suggested in the 1960s and 1970s studies. The chapter has suggested that some new factors, such as procedural justice and innovation climate, which were not included in the previous measures are more important in today's workplace than the traditional factors (e.g., task characteristics) which were used in previous studies.

The chapter also discussed the conceptual approaches of commitment, namely the attitudinal approach, behavioural approach, multidimensional approach- the most important and widely used approaches- and normative approach, which is not widely used in management studies. The developments, definitions, strengths and weaknesses of these four approaches are also discussed in the chapter. Furthermore, the chapter has also reviewed the various measures and factors of organisational commitment used in the management literature. It was argued that the commitment scale developed by Porter *et al.* (1974) is the 'market leader', and that most studies have used it to measure employees' commitment. The weaknesses of this scale and the role that it has played in affecting the progress of the commitment research were also discussed in the chapter. It was argued that Porter *et al.*'s scale of commitment is not capable of measuring employees' commitment, because it is not a homogenous scale. The chapter concluded by discussing the dimensions and measurements of performance. It argued that most previous studies have used unidimensional scales to measure the performance concept, however performance is a multifaceted construct and that few studies have used multidimensional scales to measure it. It was also argued that the performance scale used in this study differs from previous multidimensional scales in including two performance dimensions which were disregarded in the previous scales, namely: work enthusiasm and readiness to innovate. In addition, the various methods used in rating performance were also discussed in the chapter. However, the main focus was on the relationship between self and supervisor ratings of performance.

8.2.4 CHAPTER FOUR

The main aim of this chapter was to provide some information about the Jordanian context from which the primary data of the study were collected. The chapter commenced by providing some geographical, historical and political backgrounds about Jordan, which is a small developing country in the Middle East that stands at the junction of Asia, Africa and Europe. It argued that Jordan's economy is market oriented and that it is one of the strongest economies in the region. The role of different industrial sectors (industry, agriculture and service) in developing the Jordanian

economy was also discussed in the chapter. It was argued that the service sector is the most important economic sector that contributes about 65% to the GDP and employs about two-third of the labour force.

In addition, the socio-cultural environment of Jordan was also discussed. It was argued that as a Muslim state, Jordan's social life is highly influenced by the values and culture of Islam, and that two value systems regulate the Jordanian society, namely the ancient values of a sedentary population and the values of the Bedouins. The chapter emphasised the importance of the family in Jordan's social life, and how it plays an important role in influencing individuals' behaviour. The six cultural layers of the Jordanians' culture were also discussed, namely: regional, national, generational, social class, gender and organisational culture. It was argued that the regional culture plays the most important role in determining individuals' behaviour in Jordan, and that organisational culture plays the weakest role in influencing individuals' behaviour. The chapter concluded by discussing the role of culture in influencing the management system in Jordan.

8.2.5 CHAPTER FIVE

This chapter aimed at presenting and discussing the methodological issues related to the investigation of the study. The chapter started by discussing the aims of the study, and the study population and sample. It showed that the study subjects were selected from the industrial sector, and that 42 industrial companies and 26,661 employees represented the study population. The chapter explained that the industrial sector was selected because its performance is weak, and that there is a need to enhance its contribution to the GDP, which is heavily dominated by the service sector. It was argued that the research efforts in Jordan and other Arab countries are directed towards the service sector, because most researchers mistakenly believe that the industrial sector can be developed by technology and capital only, not by management research.

The selection of the study sample was also discussed in the chapter. Using systematic random sampling, 1000 employees from different demographic backgrounds were selected from 20 industrial firms. The study variables, their operational definitions and measurements were also discussed in the chapter, were the study hypotheses, the statistical measures, data collection methods and the pilot studies. The chapter argued that the measures used in the study are reliable scales. Nonetheless, some other related methodological issues were also discussed in this chapter, such as the normality test, the unit of analysis and the limitations of the study.

8.2.6 CHAPTER SIX

This chapter aimed at presenting the survey results, as well as testing the study hypotheses. The chapter commenced by testing the multidimensionality of work environment, commitment and performance (self and supervisor ratings). According to the factor analysis results, it was argued that these three variables are multidimensional concepts. The central tendency and variability of these global variables and their dimensions were also discussed. The results of testing the demographic variables' relationships with work environment, commitment and performance revealed that organisational tenure, job tenure and job level are more related to these variables than gender, marital status, education and age. Generally, the higher organisational and job tenure and job level employees showed more positive perceptions of work environment, higher commitment and higher performance.

Moreover, the perceived work environment (PWE) was found to be positively and significantly related to employee commitment, and explained 32% of the variance in the commitment concept. However, it was found to be more related to affective commitment (AC) than to continuance commitment (CC). In addition, PWE has explained 12% of the variance in self-rated performance, whereas it explained 41% of the variance in supervisor-rated performance. The results have also shown that organisational commitment as a global concept plays a partial role in mediating PWE relationships with performance (self and supervisor-rated). This partial mediation is mainly indicated by the AC factor, whereas CC played no part in mediating these relationships. Furthermore, organisational commitment explained 8% of the variance in self-rated performance, and 21% in supervisor-rated performance. These variances were mainly explained by the AC factor, rather than the CC dimension, which was not related to either performance type or to any of their facets. The relationship between the self and immediate supervisor-rated performance was found to be moderate, positive and significant.

8.2.7 CHAPTER SEVEN

This chapter aimed at highlighting the findings of the study, analysing them and discussing their implications for both managers and researchers. The chapter commenced by discussing the results of the factor analysis test which was used to examine the multidimensionality of the work environment, commitment, self-rated and supervisor-rated performance variables. It was argued that these concepts are multifaceted variables, and that both managers and researchers should understand this multidimensionality.

In addition, the relationships of the demographic variables with the main variables of the study and their facets were also discussed. It was argued that employees' career backgrounds (job level, organisational and job tenure) are the most important biographical variables in explaining the variance in the main variables of the study and their facets. The implications of these findings for both managers and researchers were also discussed.

Furthermore, the role of work environment and its factor in influencing commitment and its facets were also discussed. Since work environment and its factors play significant roles in influencing employees' overall commitment as well as their affective commitment, it was argued that creating a healthy and positive work environment is essential for work organisations. Work environment and its factors have played no role in explaining the variance in employees' continuance commitment. It was argued that researchers and managers should not discourage or perceive continuance commitment as a negative organisational aspect; rather, they should perceive it as a positive phenomenon, because it is not negatively associated with work environment and is capable of retaining organisational membership and reducing the cost of turnover.

The significant impact of work environment and its factor on the self and immediate supervisor-rated performance and their facets were also discussed. It was suggested that creating a supportive and caring work environment is essential for improving employees' performance. Work environment and its factors were found to be more related to immediate supervisor-rated performance than to self-rated performance, because most employees tend to overrate their performance, even if they are performing weakly.

The chapter concluded by discussing the moderate, positive and significant relationship that was found between self and supervisor-rated performance. It was argued that Jordanian employees tend to rate their performance more positively than their immediate supervisors, because they feel that they are going to be rewarded or punished on individual basis, not as a team. Since the Jordanian employees' tendency to over-rate their performance is in line with what has been found in the Western context, it was suggested that the broad cultural factors that were suggested by Farh *et al.* (1991) are not capable of explaining this phenomenon.

8.3 RECOMMENDATIONS OF THE STUDY

Considering the findings of this study, several recommendations can be suggested for managing the work environment, organisational commitment and performance, especially in the Arabic context.

- (1) Organisations should strive to create a positive, healthy and *familial* work environment that satisfies the needs of both the employees and the organisation. Normally, the individual is fully committed and attached to his/her family because he/she is fully involved in the family affairs. Similarly, organisations should try to bring the family climate into the workplace. Getting employees involved in all the decisions, procedures and processes of the organisation will help in creating a familial work environment that binds individuals to be committed to the organisation and strive to achieve its goals.
- (2) Creating a full and open communication system is also an essential prerequisite for a conducive, productive and positive work environment. Employees cannot afford to be committed or feel involved unless they are informed about what is going on. As was found in this study, communication and trust are two faces of the same coin, which was called in this study the *employee-immediate supervisor relationships*. It was found to be one of the most important work environment factors that affect employees' commitment and performance. Organisations, especially in the Third World, should understand that the era of one-way, up-down or top-bottom communication is gone, and that informing employees only about the bad news to force them to work hard is no longer an effective strategy. The organisation should share with its members the good news as well as the bad news so as to gain their loyalty. Employees work better and get more done in an environment where they feel informed, involved and respected.
- (3) One of the major challenges that faces organisations is how to get more than they actually pay for, instead of getting just what they pay for, which is not enough in a global business environment. The findings of this study suggest that understanding the beliefs and expectations of employees about their roles, duties and rights in the organisation and making the *right balance* between the expectations of the two parties (the organisation and the employees) is a key issue for binding employees to give more than they actually receive. Managing the *psychological contract* is a vital issue for work organisations because it has a direct impact on their commitment and performance.
- (4) As one of the major problems of organisations, especially in the Third World, the issue of theft by employees can be properly managed through building a self-control system rather than an external control system that does not seem to be effective. To build self-control, organisations should get employees to firmly believe in what the organisation is trying to achieve. Put differently, the employee should be committed to his/her organisation in order to be motivated to develop a self-control

system, to be prepared to put forth more effort and to utilise the limited resources of the organisation in a proper way. The first step to gain employees' commitment is to make him/her feel that he/she is the most important asset to the organisations. The organisation should be committed to its employees before looking for their commitment. Apart from the factors mentioned earlier, the results of the current study suggest that creating a positive *innovation, co-workers relations, distributive justice* and *motivation environments* are essential ingredients for creating a positive work atmosphere that is capable of building employees' commitment. In addition, avoiding putting *pressure* on employees to produce more is likely to increase employees' commitment and bind them to produce more than that they could produce under pressure. Organisations, especially in the Third World should change the old-fashioned model of *profit-product-people* and replace it with the new competitive model, i.e., *people-product-profit*.

- (5) It is time for work organisations, especially in the Third World, to migrate from secret and confidential performance appraisal to open appraisal. The open appraisal system allows the employee to communicate openly with his/her supervisor and discuss the results of his/her performance in a given period of time, normally against a certain set of objectives. Open appraisal helps the employee to learn where he/she stands, to seek help to improve performance, to feel that his/her job is important and that he/she is valued and listened to. Since the output of the open appraisal is a report that is normally prepared by the supervisor and agreed and signed by the employee, the employee is likely to be satisfied and committed to the outcomes of an appraisal, which will positively influence his/her commitment and performance.

8.4 FURTHER RESEARCH

Since this is the first study in the Middle East that has examined the relationships between work environment, commitment and performance there is a need for more research in order to reach more generalisable conclusions in this field. Future research could investigate the potential impact of organisational culture on employee commitment and performance. In addition, there is a need for further efforts to examine the multidimensionality of the continuance commitment concept and its relationship with affective commitment. A longitudinal study might be more suitable to capture the changing nature of the relationship of commitment and performance before and after change at work. Since 70% of variance in employees' performance has been explained by work environment and commitment, future research can consider the role of job

satisfaction in influencing multifaceted commitment, as well as employees' performance.

Furthermore, some methodological recommendations for future research can be suggested:

- (1) The reliability test is not the right measure to examine the multidimensionality of a variable. For example, the affective and normative commitments were found to be reliable concepts in some studies (e.g., Morrow, 1993 and Meyer and Allen, 1997), but they were also found to be highly correlated to the extent that they could not be conceptualised as independent variables. Factor analysis can be used instead to examine the multidimensionality.
- (2) Most researchers ignore the role of the 'alpha if item deleted' method in filtering the items of a scale in a way that increases its reliability. The 'alpha if item deleted' method provides researchers with a set of options for alpha's values, according to which they can decide to delete an item from scale or keep it. In this context, future research could investigate the role of the negatively worded items in affecting the reliability of scales using the 'alpha if item deleted' method, which is part of the reliability test.
- (3) When several variables are regressed against one variable, the use of the *enter* method only to predict the variance is not enough in identifying the most important factors that influence the dependent variable. In such case, researchers should use both the *enter* and *stepwise* methods to identify the role of all variables as one set in the first step and the most important variable (s) in explaining the variance in the second step. For example, the 13 dimensions of the work environment have explained 20% of the variance in self-rated performance; however when the stepwise method was used, four factors only were found to be significant and explained 21% of the variance. The interference between the independent factors affects the significance of these factors in explaining the variance in the dependent variable when the *enter* method is used, but in the stepwise analysis the factors are selected one-by-one according to their significance. Therefore, the stepwise method is less affected by the interference between factors than the *enter* method.

8.5 CONCLUSION

In a work environment where nothing is certain anymore building employees' commitment and increasing their performance is one of the most challenging issues that faces work organisations. This study aimed at examining the relationships between perceived work environment, organisational commitment and performance in Jordanian

industries. The results revealed that employees' perceptions of work environment are directly related to the commitment and performance that they show in the workplace, and that the more positive the perception of the work environment, the higher the commitment and performance, and vice-versa. Furthermore, employees' commitment to their organisation was found to be a significant determinant of their work performance, and that the higher the commitment, the higher the performance, and vice versa. Moreover, a significant, positive and moderate correlation was also reported between self and supervisor-rated performance, and Jordanian employees tend to rate their performance more positively than their immediate supervisors. The implications of these results for managers and work organisations as well as some suggestions for managing work environment, commitment and performance were also discussed.

This study provides evidence that popular constructs in the Western management literature should not be automatically dismissed as culture bound, as has been suggested by some researchers (e.g., Al-shammari, 1990). Western management theories and techniques may be helpful in meeting the performance challenges facing human resource management in rapidly changing and different cultural environments.

In conclusion, whereas some organisational concepts and techniques do indeed seem to be culture specific (e.g., Welsh *et al.*, 1993), a growing body of literature is demonstrating the ability to cross-culturally validate other concepts and techniques, such as organisational commitment (e.g., Sommer *et al.*, 1996). This study has contributed to this cross-cultural evidence by examining the relationships between work environment, commitment and performance in Jordanian industries.

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Appendices

Appendix 1: STUDY QUESTIONNAIRE (English version)

Dear Respondent

I am ABUBAKR SULIMAN PhD student at the Liverpool Business School, Liverpool John Moores University I am undertaking a research project to determine the relationships between work environment, organisational commitment and performance in Jordanian industrial firms.

I would like to seek your help in answering the attached questionnaire. Please answer honestly as possible and feel free to write any suggestions. All questionnaires will be anonymous and confidential. Please note that your selection has been made on the basis of statistical methods only.

Thank you for your help and co-operation.

Address in Jordan:
The Royal Palace,
The Royal Communications
Amman - Jordan
Tel. 5605 402
Fax 4627 422/1

Address in the United Kingdom
98 Mount Pleasant,
Liverpool Business School
John Moores University
Liverpool L3 5UZ
E-mail: BUSASULI@LIVJM.AC.UK

PART ONE: General Information

Please tick one box for each question:

A- Sex:

- (1) Male ()
- (2) Female ()

B- Marital Status:

- (1) Single ()
- (2) Married ()
- (3) Divorced ()
- (4) Widowed ()

C- Education:

- (1) Less than high school ()
- (2) High school ()
- (3) College degree ()
- (4) Graduate degree ()
- (5) High Diploma ()
- (6) Master or above ()

D- Age:

- (1) Less than 25 ()
- (2) 25 - 35 ()
- (3) 36 - 46 ()
- (4) 47 - 57 ()
- (5) 58 or above ()

E- Number of years worked in the company:

- (1) One year or less ()
- (2) 2 - 7 ()
- (3) 8 - 13 ()
- (4) 14 - 19 ()
- (5) 20 years or above ()

F- Number of years in the position or job:

- (1) One year or less ()
- (2) 2 - 7 ()
- (3) 8 - 13 ()
- (4) 14 - 19 ()
- (5) 20 years or above ()

G- Job status:

- (1) first level ()
- (2) middle level ()
- (3) lower level ()

PART TWO

This part is about your work environment, which refers to *the organisational and individual factors that constitute the human environment of your organisation*. Please tick one box for each question which best describes your opinion.

NO	QUESTION	strongly agree	agree	undecided	disagree	strongly disagree
1	I have a variety of tasks at my work					
2	there are opportunities to use my skills and abilities					
3	there is a chance to do challenging work					
4	there is a chance for personal growth					
5	there is a friendly atmosphere among company employees					
6	there is teamwork within the company					
7	there is a conflict among the employees					
8	employees offer to help one another					
9	I try my utmost to get ahead					
10	I try to do my best for this company					
11	I am interested and deeply involved in my work					
12	I have a proper background and training to do my job					
13	my boss gives recognition for work well done					
14	my boss is flexible when needed					
15	I am able to speak openly and honestly with my boss					
16	my boss takes a personal interest in employees					
17	Employees suggestions are asked for when making decisions that will affect them					
18	there is a chance to take part in deciding what the work methods, activities, and goals are					
19	important decisions are made by the employees closest to the action					

NO	QUESTION	strongly agree	agree	undecided	disagree	strongly disagree
20	I take part in making the decisions that affect my job					
21	pay increases are related to how well I do the job					
22	promotions and rewards are given on the basis of "who you know" rather than on how well you do your job					
23	I am rewarded on the basis of how well I do the work					
24	promotions are based on nepotism and favouritism rather than on how well the job is done					
25	I am rewarded on the basis of how much work I do					
26	there is strong pressure to please company managers or customers					
27	I expect this organisation to meet my training need					
28	I expect this organisation to satisfy my desire for challenging and worthwhile work					
29	I expect this organisation to provide opportunities for promotion					
30	I expect this organisation to satisfy my needs to belong to a group					
31	I expect this organisation to satisfy my need for a reasonable salary					
32	I expect this organisation to provide me with a recognised social status and appreciation					
33	given my education and/or training background, I feel satisfied with my organisational rewards					
34	considering my work responsibilities, I think that I am fairly rewarded					
35	I feel satisfied with my organisational rewards when I consider the amount of effort that I have put in					

NO	QUESTION	strongly agree	agree	undecided	disagree	strongly disagree
36	in general, I feel that this organisation is fair in distributing rewards, praise, and promotions among its employees					
37	my last performance appraisal was fair					
38	my performance has been accurately evaluated					
39	my supervisor was justified in his/her last rating of my performance					
40	I feel that my last performance rating was free from bias					
41	my supervisor gives me guidance about how to improve my performance					
42	my supervisor sits down and discusses with me the results of my performance evaluation					
43	my supervisor reviews with me the progress toward the goals set in previous appraisal meetings					
44	I have an opportunity to express my feelings when my performance is evaluated					
45	my supervisor is competent enough to evaluate my job					
46	my supervisor is familiar with the details and responsibilities that my job entails					
47	I have confidence and trust in my supervisor's general fairness					
48	I trust my supervisor to accurately report my performance to his/her supervisor					
49	there is a chance to generate and test new ideas in this organisation					
50	new ideas are championed and developed in this organisation					
51	people in this organisation are always searching for fresh, new ways of looking at problems					
52	this organisation provides practical support to new ideas and their application					
53	new ideas and suggestions are reached in a supportive way in this organisation					

PART THREE

This part measures your *loyalty towards your organisation*. Please tick one box for each question which best describes your opinion:

NO	QUESTION	strongly agree	Agree	Undecided	disagree	strongly disagree
1	I would be very happy to spend the rest of my career with this organisation					
2	I enjoy discussing my organisation with people outside it					
3	I really feel as if this organisation's problems are my own					
4	I do not feel like "a part of the family" at my organisation					
5	I do not feel "emotionally attached" to this organisation					
6	This organisation has a great deal of personal meaning for me					
7	I do not feel a strong sense of belonging to my organisation					
8	One of the major reasons I continue to work for this organisation is that I believe that loyalty is important					
9	I was taught to believe in the value of remaining loyal to one organisation					
10	It would be very hard for me to leave my organisation right now, even if I wanted to					
11	Too much in my life would be disrupted if I decided to leave my organisation in the near future					
12	Right now, staying with my organisation is a matter of necessity as much as desire					
13	I feel that I have too few options to consider leaving this organisation					
14	One of the few negative consequences of leaving this organisation would be the scarcity of available alternatives					
15	One of the major reasons I continue to work for this organisation is that an alternative organisation may not match the overall benefits I have here					

PART FOUR

This part is about your *work performance*. Please note that this information will be treated confidentially and for the purpose of this research only. Please answer honestly as possible. *Tick one box for each question which best describes your opinion.*

NO	QUESTION	strongly agree	Agree	undecided	disagree	strongly disagree
1	I understand on a daily basis, what I need to carry out on my job, and what equipment and tools to be-used					
2	I understand my work goals and requirements					
3	I understand my job responsibilities					
4	I have sufficient know-how to carry out my work proficiently					
5	I understand the steps, procedures, and methods required to carry out the job					
6	I am familiar with the skills required on the job to perform effectively					
7	I have a desire to carry out my job					
8	I co-operates with my supervisor (s) and peers for the benefit of the work					
9	I can concentrate on and give my best to the job					
10	My work outcomes are, free from errors and accurate					
11	I am able to complete quality work on time					
12	My work speed is satisfactory					
13	I come up with and try new ideas in my work					
14	I try to question old ways of doing things in my work					
15	I stick to old establish habits when doing my job					

PART FIVE

This part measures *employee performance* in Jordanian industrial firms.

Dear Supervisor/

Ref. SUPERVISORY RATINGS OF EMPLOYEE PERFORMANCE

I am *ABUBAKR SULIMAN* a PhD student at the Liverpool Business School, Liverpool John Moores University. I am undertaking a research project to determine the relationships between organisational climate, organisational commitment, and job performance in Jordanian industrial firms.

I would like to seek your help by answering the attached questionnaire. Please note that this information will be treated confidentially and for the purpose of this research only. Please answer honestly as possible.

Thank you for your help and co-operation.

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John Moores University
Liverpool L3 5UZ
E-mail: BUSASULI@LIVJM.AC.UK

Please rate the performance of Mr/ Mrs/ Miss -----

NO	QUESTION	strongly agree	Agree	undecided	disagree	strongly disagree
1	He/she understands on a daily basis, what he/she needs to carry out on his/her job, and what equipment and tools to be-used					
2	He/she understands his/her work goals and requirements					
3	He/she understands his/her job responsibilities					
4	He/she understands the steps, procedures, and methods required to carry out the job					
5	He/she is familiar with the skills required on the job to perform effectively					
6	He/she has a desire to carry out his/her job with enthusiasm					
7	He/she co-operates with his/her supervisor (s) and peers for the benefit of the work					
8	He/she can concentrate on and give his/her best to the job					
9	His/her work outcomes are free of errors and accurate					
10	He/she is able to complete quality work on time					
11	His/her work speed is satisfactory					
12	He/she searches for fresh new ways of resolving problems in his/her work					
13	He/she comes up with and try new ideas in his/her work					
14	He/she tries to question old ways of doing things in his/her work					
15	He/she sticks to old establish habits when doing his/her job					

Appendix 2: STUDY QUESTIONNAIRE (Arabic version)

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

الأخ الكريم... الأخت الكريمة
تحية طيبة وبعد ...

أقوم بإعداد دراسة للحصول على درجة الدكتوراه في الإدارة من جامعة ليفربول جون مورس في المملكة المتحدة.

يرجى تعاونكم في تعبئة الإستبيان المرفق لما في ذلك من أهمية بالغة في إنجاز هذه الدراسة، علماً بأن المعلومات التي ستعبأ من قبلكم سوف تعامل بسرية تامة ولن تستخدم إلا لأغراض هذا البحث العلمي البحث.

شاكراً لكم تعاونكم

الباحث

أبوبكر محي الدين طاهر سليمان

الجزء الأول: معلومات عامة

فيما يلي بعض الأسئلة يرجى وضع علامة (X) أمام الإجابة التي تراها مناسبة.

أ- الجنس:

(١) ذكر ()
(٢) أنثى ()

ب- الحالة الإجتماعية:

(١) متزوج ()
(٢) غير متزوج ()

ج- المؤهل العلمي:

(١) أقل من الثانوية ()
(٢) ثانوية ()
(٣) دبلوم متوسط ()
(٤) بكالوريوس ()
(٥) دبلوم عالي ()
(٦) ماجستير أو دكتوراه ()

د- العمر:

(١) أقل من ٢٥ سنة ()
(٢) ٢٥ - ٣٥ سنة ()
(٣) ٣٦ - ٤٦ سنة ()
(٤) ٤٧ - ٥٧ سنة ()
(٥) ٥٨ سنة فأكثر ()

هـ- سنوات العمل في هذه الشركة:

(١) سنة واحدة أو أقل ()
(٢) ٢ - ٧ سنوات ()
(٣) ٨ - ١٣ سنة ()
(٤) ١٤ - ١٩ سنة ()
(٥) ٢٠ سنة فأكثر ()

و- سنوات العمل في المهنة أو الوظيفة:

(١) سنة واحدة أو أقل ()
(٢) ٢ - ٧ سنوات ()
(٣) ٨ - ١٣ سنة ()
(٤) ١٤ - ١٩ سنة ()
(٥) ٢٠ سنة فأكثر ()

ز- المستوى الإداري:

(١) إدارة عليا ()
(٢) إدارة وسطى ()
(٣) إدارة دنيا ()

الجزء الثاني

يقيس هذا الجزء بيئة العمل في الشركة التي تعمل بها. يرجى وضع علامة (x) أمام الإجابة التي تراها مناسبة.

الرقم	الفقرة	أوافق بشدة	أوافق	محايد	لا أوافق	لا أوافق بشدة
1	يوجد لدي مهام متنوعة في عملي					
2	هناك فرص للنمو والتقدم الوظيفي					
3	هناك شعور بالصدقة بين العاملين					
4	يسود الشركة نظام الفريق الواحد في العمل					
5	هناك فرص في العمل لإبراز مقدراتي ومهاراتي					
6	هناك فرصة للقيام بتحديات لإنجاز أعمال كبيرة					
7	هناك تضارب وسوء فهم كبيرين بين العاملين					
8	هناك رغبة للمساعدة بين العاملين					
9	أنا أبذل أقصى الجهد للإرتقاء بالعمل					
10	أنا أحاول أن أقدم أفضل ما عندي لصالح العمل					
11	لدي خلفية مناسبة وتدريب جيد لأداء عملي					
12	أنا أعرف كيف أقوم بعملي					
13	للعاملين رغبة كبيرة في العمل وهم ملتفون حول عملهم بصورة كبيرة					
14	رئيسي في العمل له مرونة في التعامل عندما يتطلب الوضع ذلك					
15	لدي القدرة على التحدث بحرية وبكل أمانة أمام رئيسي أو مديري في العمل					
16	اقتراحات العاملين تؤخذ في الاعتبار عندما يتم إتخاذ قرارات تؤثر عليهم					
17	هناك فرصة للمشاركة في تحديد قواعد ونشاطات وأهداف العمل					
18	رئيسي في العمل يقدر ويعطي اعتباراً للعمل الجيد					
19	أشعر أن المدراء يولون عناية شخصية للعاملين في هذه الشركة					
20	القرارات المهمة تتخذ من العاملين القريبين من موقع الحدث					
21	لدي جانب من المشاركة في إتخاذ القرارات التي تؤثر على عملي					
22	يكافأ العاملون على اساس الأداء الجيد لأعمالهم					

الرقم	الفقرة	أوافق بشدة	أوافق	محايد	لا أوافق	لا أوافق بشدة
23	الترقيات والحوافز تعطى على اساس " من تعرف " وليس على اساس الأداء الجيد للعمل					
24	زيادة الأجر مربوط بالأداء الجيد					
25	المحسوبية والواسطة هي أساس الترقيات والحوافز في هذه الشركة					
26	الحوافز والمكافآت مشروط بكمية العمل المنجز					
27	هنالك ضغط على العاملين لإرضاء مدراء العمل					
28	أتوقع من هذه الشركة أن تلبي رغبتي في الحصول على التدريب اللازم					
29	أتوقع من هذه الشركة أن تلبي حاجتي إلى الحصول على وظيفة ذات قيمة					
30	أتوقع من هذه الشركة أن توفر لي فرص للترقية والتقدم الوظيفي					
31	أتوقع من هذه الشركة أن تلبي حوجتي في الإنتماء إلى مجموعة من الأفراد في عملي					
32	أتوقع من هذه الشركة أن تلبي حاجتي للراتب المجزي					
33	أتوقع من عملي في هذه الشركة أن يمكنني من الحصول على تقدير الآخرين					
34	أشعر بالإرتياح تجاه راتبي في هذه الشركة عندما آخذ في الحسبان مستواي التعليمي أو التدريبي					
35	أشعر أن راتبي مناسب عندما آخذ في الحسبان حجم المسؤوليات التي أقوم بها في عملي					
36	أشعر أن الراتب الذي أتقاضاه مناسب عندما أنظر إلى الجهد الذي أبذله في عملي					
37	إجمالاً، أشعر أن هذه الشركة عادلة في توزيع الرواتب والمكافآت والترقيات بين عاملها					
38	أشعر أن آخر تقييم لأدائي الوظيفي كان عادلاً					
39	يتم تقييم أدائي الوظيفي في هذه الشركة بكل دقة					
40	كان رئيسي في العمل عادلاً في آخر تقييم لأدائي الوظيفي					
41	أشعر أن آخر تقييم لأدائي الوظيفي كان خالياً من التحيز					

الرقم	الفقرة	أوافق بشدة	أوافق	محايد	لا أوافق	لا أوافق بشدة
42	مديري أو رئيسي في العمل يقوم بإعطائي إرشادات وتوجيهات لتطوير أدائي الوظيفي					
43	رئيسي في العمل يجلس معي لنتناقش سوياً نتائج التقييم لأدائي الوظيفي					
44	رئيسي في العمل يتابع عن كثب العمل الذي أقوم به لتحقيق الاهداف التي تم وضعها في إجتماعات سابقة					
45	لدي الفرصة للتعبير عن شعوري عندما يتم تقييم أدائي الوظيفي					
46	رئيسي كفو لتقييم أدائي الوظيفي					
47	رئيسي مُلمٌ بتفاصيل ومسؤوليات العمل الذي أقوم به					
48	لدي ثقة في عدالة رئيسي في العمل					
49	أنا واثق من أن رئيسي سينقل بصورة دقيقة نتائج أدائي الوظيفي إلى رئيسه في العمل					
50	هنالك فرص لخلق أو إختبار الأفكار الجديدة في هذه الشركة					
51	هذه الشركة تشجع على تبني أو تطوير الأفكار الجديدة في العمل					
52	العاملون في هذه الشركة يبحثون دائماً عن طرق حديثة لحل مشكلات العمل					
53	هذه الشركة توفر الدعم اللازم لخلق الأفكار الجديدة وتطبيقها					
54	الأفكار والإقتراحات الجديدة يتم التوصل إليها بدعم من الشركة					

الجزء الثالث

هذا الجزء يقيس درجة ولاءك تجاه الشركة التي تعمل بها. يرجى وضع علامة (×) أمام الإجابة التي تراها مناسبة.

الرقم	الفقرة	أوافق بشدة	أوافق	محايد	لا أوافق	لا أوافق بشدة
1	أكون سعيداً إذا قضيت فترة عملي كلها في هذه الشركة					
2	أشعر بمتعة عندما اتحدث إلى الناس عن هذه الشركة					
3	أشعر حقيقة بأن مشاكل الشركة هي مشاكلي					
4	لا أشعر بأنني جزء من أسرة هذه الشركة					
5	لا أشعر بإنتماء عاطفي لهذه الشركة					
6	لهذه الشركة معنى كبير في نفسي					
7	لا أشعر بإنتماء كبير لهذه الشركة					
8	أحد الأسباب الرئيسية لإستمرارى بالعمل في هذه الشركة هو اعتقادي بأن الولاء شيء مهم لذا فمن اللائق أن أبقى عاملاً بها					
9	تعلمت أن أؤمن بالبقاء منتمياً للعمل بشركة واحدة فقط					
10	سيكون من الصعب علي أن أترك العمل بهذه الشركة الآن حتى إذا رَغِبْتُ في ذلك					
11	أشياء كثيرة في حياتي ستختل إذا قررت أن أترك العمل بهذه الشركة الآن					
12	بقائي للعمل في هذه الشركة الى الآن تحكمه الضرورة والرغبة على وجه سواء					
13	أشعر بأن لدي فرص قليلة للعمل عندما أفكر بترك العمل في هذه الشركة					
14	أحد الأسباب الرئيسية لإستمرارى في العمل في هذه الشركة هو أن المزايا التي أتمتع بها هنا لن أجدها في أي شركة أخرى					
15	أحد العواقب الرئيسية إذا تركت العمل بهذه الشركة ستكون ندرة الفرص المتوفرة للعمل بالشركات الأخرى					

الجزء الرابع

هذا الجزء يقيس مستوى أدائك الوظيفي في الشركة التي تعمل بها. يرجى وضع علامة (X) أمام الإجابة التي تراها مناسبة.

الرقم	الفقرة	أوافق بشدة	أوافق	محايد	لا أوافق	لا أوافق بشدة
1	لدي معرفة تامة بما احتاج إليه لإنجاز عملي (معدات، آلات، أدوات، ... إلخ)					
2	أدرك أهداف ومتطلبات عملي بشكل واضح					
3	أدرك مسؤوليات عملي بشكل واضح					
4	لدي معرفة كافية لإنجاز عملي بكفاءة					
5	ألم بالخطوات والإجراءات والقواعد المطلوبة لإنجاز العمل					
6	لدي دراية بالمهارات المطلوبة لإنجاز العمل بفاعلية					
7	لدي رغبة في إنجاز العمل					
8	أتعاون مع رؤسائي وزملائي من أجل مصلحة العمل					
9	أركز في عملي لإعطاء أفضل ما لدي					
10	مخرجات عملي تمتاز بالجودة والدقة وخالية من الأخطاء					
11	أتميز بالسرعة في إنجاز العمل الذي أكلف به					
12	أنا قادر على إنجاز عملي بالجودة المطلوبة					
13	أقوم بخلق وتجربة الأفكار الجديدة في عملي					
14	أقوم بانتقاد الأساليب القديمة لإنجاز العمل في هذه الشركة					
15	أقوم باتباع العادات القديمة الموروثة لإنجاز العمل					

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

الأخ المشرف/المدير...الأخت المشرفة/المديرة

تحية طيبة وبعد ...

أقوم بإعداد دراسة للحصول على درجة الدكتوراه في الإدارة من جامعة ليفربول جون مورس في المملكة المتحدة.

يرجى تعاونكم في تعبئة الإستبيان المرفق والذي يقيس مستوى الأداء الوظيفي للعاملين في الشركات الصناعية الأردنية. علماً بأن المعلومات التي ستعبأ من قبلكم سوف تعامل بسرية تامة ولن تستخدم إلا لأغراض هذا البحث العلمي البحث.

شاكرآ لكم تعاونكم

الباحث

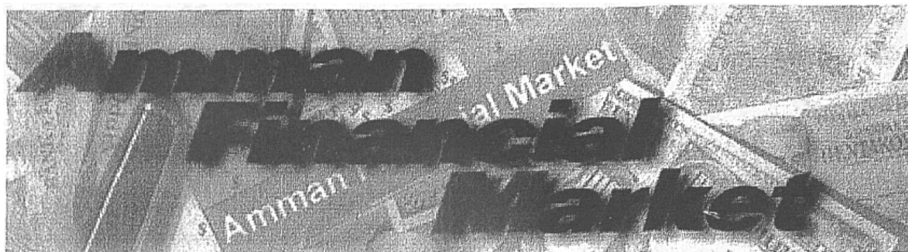
أبوبكر محي الدين طاهر سليمان

هذا الإستبيان يقيس مستوى الأداء الوظيفي للعامل

يرجى وضع علامة (×) أمام الإجابة التي تراها مناسبة.

الرقم	الفقرة	أوافق بشدة	أوافق	محايد	لا أوافق	لا أوافق بشدة
1	لديه معرفة تامة بما يحتاج إليه لإنجاز عمله (معدات، آلات، أدوات، ... إلخ)					
2	يدرك بشكل جيد أهداف ومتطلبات عمله					
3	يدرك بشكل واضح مسؤوليات عمله					
4	مُلمٌ بالخطوات والاجراءات والقواعد المطلوبة لإنجاز العمل					
5	لديه دراية بالمهارات المطلوبة لإنجاز العمل بفاعلية					
6	لديه الرغبة في إنجاز عمله					
7	يتعاون مع رؤسائه وزملائه من أجل مصلحة العمل					
8	يُرَكِّز في عمله لإعطاء أفضل ما لديه					
9	مخرجات عمله تمتاز بالجودة والدقة وخالية من الأخطاء					
10	يتميز بالسرعة في إنجاز العمل					
11	قادر على إنجاز عمله بالجودة المطلوبة					
12	يقوم بالبحث عن الأفكار الجديدة لحل مشكلات عمله					
13	يقوم بخلق وتجربة الأفكار الجديدة في عمله					
14	يقوم بانتقاد الأساليب القديمة لإنجاز العمل في هذه الشركة					
15	يقوم باتباع العادات القديمة الموروثة لإنجاز العمل					

Appendix 3: AMMAN FINANCIAL MARKET (Complete market)



All Sectors

21/02/00

Company Name		No. Shares	Volume of Trade	Open	Close
<u>JORDAN ISLAMIC BANK FOR FINANC</u>	↓	1850	2578	1.400	1.390
<u>JORDAN KUWAIT BANK</u>	↑	2202	3502	1.590	1.600
<u>JORDAN GULF BANK</u>	=	44200	29614	0.670	0.670
<u>THE HOUSING BANK</u>	↓	7468	16307	2.190	2.180
<u>ARAB JORDAN INVESTMENT BANK</u>	NT	0	0	1.720	0.000
<u>INDUSTRIAL DEVELOPMENT BANK</u>	↓	1750	1875	1.080	1.070
<u>UNION BANK FOR SAVING & INVEST</u>	NT	0	0	0.870	0.000
<u>ARAB BANKING CORPORATION \ JOR</u>	NT	0	0	1.450	0.000
<u>PHILADELPHIA INVESTMENT BANK</u>	=	28537	16551	0.580	0.580
<u>JORDAN INVESTMENT & FINANCE BA</u>	↑	850	934	1.090	1.100
<u>EXPORT & FINANCE BANK</u>	↑	15110	12997	0.850	0.870
<u>MIDDLE EAST BANK</u>	NT	0	0	0.940	0.000
<u>CAIRO AMMAN BANK</u>	↓	50	141	2.850	2.810
<u>BANK OF JORDAN</u>	NT	0	0	1.010	0.000
<u>EXPORT & FINANCE BANK /AUCTION</u>	NT	0	0	0.920	0.000
<u>BIET EL-MAL SAVING & INVESTMEN</u>	=	500	230	0.460	0.460
<u>JORDAN NATIONAL BANK</u>	↑	24600	23632	0.950	0.970
<u>ARAB BANK</u>	=	540	100440	186.000	186.000
<u>HOUSING BANK FUND. E.C</u>	NT	0	0	100.000	0.000
<u>MIDDLE EAST INSURANCE</u>	NT	0	0	4.700	0.000
<u>AL-NISR AL-ARABI INSURANCE</u>	NT	0	0	2.470	0.000
<u>JORDAN INSURANCE</u>	NT	0	0	3.300	0.000
<u>GENERAL ARABIA INSURANCE</u>	=	200	360	1.800	1.800
<u>DELTA INSURANCE</u>	NT	0	0	1.280	0.000

Amman Financial Market

NATIONAL ENGINEERING INDUS. (N	↓	223800	26856	0.130	0.120
READY MIX CONCRETE CO.	NT	0	0	0.630	0.000
JORDAN KUWAIT CO. FOR AGR. & F	NT	0	0	0.540	0.000
NAYZAK <u>DIE & MOULDS</u>	NT	0	0	0.210	0.000
JORDAN STEEL	↑	28000	25384	0.900	0.910
MIDDLE EAST PHARM. \AUCTION	NT	0	0	0.600	0.000
THE ARAB ELECTRIC INDUSTRY	NT	0	0	0.250	0.000
MIDDLE EAST PHARMACEUTICALS	=	19550	10362	0.530	0.530
UNION TOBACCO	↑	13308	50630	3.700	3.850
UNITED CLASS INDUS.	NT	0	0	1.000	0.000
AL-RAZI PHARMACEUTICAL INDUSTR	↓	3000	1690	0.580	0.560
RUM	↑	34422	12008	0.330	0.350
CERAMIC INDUSTRIES	NT	0	0	0.340	0.000
INTERNATIONAL TEXTILE MUNF.	NT	0	0	0.200	0.000
ADVANCED PHARMACEUTICAL INDU.C	↑	53000	27796	0.520	0.530
PEARL SANITARY PAPER	↓	2000	690	0.340	0.330
PEARAL SANITARY PAPERS AUCTION	NT	0	0	0.310	0.000
NATIONAL POULTRY	=	7500	5950	0.790	0.790
INTERNATIONAL CO.FOR OPTICAL A	↑	35050	17942	0.510	0.530
INTER. SILCA INDUS.	NT	0	0	1.000	0.000
NATIONAL ALUMINIUM INDUSTRY	=	3250	2568	0.790	0.790
THE ARAB INTER.,FOOD FACTORIES	NT	0	0	1.000	0.000
NUTRI DAR PLC	↓	500	440	0.900	0.880
AL ASRIAH FOR FOOD INDUSTRY	NT	0	0	0.600	0.000
MIDDLE EAST COMPLEX FOR ENG. E	↓	1100	835	0.760	0.750
ARABIAN STEEL PIPES MANUFACTUR	NT	0	0	4.210	0.000
JORDAN NEW CABLES /ACUTION	NT	0	0	0.750	0.000
JORDAN PETROLEUM REFINARY	↑	120	1425	11.850	11.870

BANKS



Amman Financial Market

<u>JORDAN PAPER AND CARDBOARD</u>	NT	0	0	1.030	0.000
<u>JORDAN PHOSPHATE MINES</u>	NT	0	0	1.860	0.000
<u>THE JORDAN PIPES MANUFACTURING</u>	NT	0	0	0.800	0.000
<u>JORDAN TANNING</u>	NT	0	0	3.600	0.000
<u>INTERNATIONAL MEDICAL</u>	=	300	138	0.460	0.460
<u>ARAB CENTER FOR PHARMACEUTICAL</u>	=	600	690	1.150	1.150
<u>NATIONAL INDUSTRIES</u>	=	800	240	0.300	0.300
<u>JORDAN CHIMICAL INDUSTRIES</u>	NT	0	0	5.380	0.000
<u>UNIVERSAL CHEMICAL INDUSTRIES</u>	↓	5250	9320	1.790	1.770
<u>ALADDIN INDUSTRIES</u>	=	300	270	0.900	0.900
<u>GENERAL INVESTMENT</u>	NT	0	0	2.500	0.000
<u>RAFIA INDUSTRIAL</u>	NT	0	0	0.440	0.000
<u>WOOLEN INDUSTRIES</u>	NT	0	0	1.010	0.000
<u>JORDAN INDUSTRIES & MATCH /JIM</u>	NT	0	0	0.760	0.000
<u>JORDAN SPINNING & WEAVING</u>	NT	0	0	1.800	0.000
<u>ATTANQEEB CONSTRUCTION MATERIA</u>	NT	0	0	1.100	0.000
<u>JORDAN WOOD INDUSTRIES</u>	NT	0	0	3.100	0.000
<u>NATIONAL CABLE & WIRE MANUFACT</u>	=	5700	2950	0.520	0.520
<u>JORDAN SULFO CHEMICALS</u>	↑	30500	15783	0.510	0.520
<u>JORDAN TOBACCO & CIGARETTES</u>	NT	0	0	3.410	0.000
<u>THE JORDAN CEMENT COMPANY</u>	↑	10313	34811	3.370	3.380
<u>THE ARAB POTASH</u>	↓	950	3933	4.150	4.130
<u>UNITED CHEMICAL INDUSTRIES</u>	↓	900	801	0.940	0.890
<u>JORDAN ROCK WOOL INDUSRIES</u>	NT	0	0	0.320	0.000
<u>JORDAN PRINTING & PACKAGING</u>	NT	0	0	3.150	0.000
<u>INTERNATIONAL SMOKES AND CIGAR</u>	=	4750	6033	1.270	1.270
<u>ARAB MEDICAL AND NUTRITIONAL S</u>	NT	0	0	0.280	0.000
<u>JOR VEG. OIL CO. LTD</u>	NT	0	0	1.000	0.000
<u>UNIVERSAL MODERN INDUSTRIES</u>	=	41950	29546	0.700	0.700
<u>KAWTHER INVESTMENT</u>	↓	29650	17070	0.590	0.580
<u>NATIONAL CLORINE INDUSTRY</u>	NT	0	0	1.030	0.000
<u>JORDAN RESOURCES INDUSTRY</u>	=	4750	2480	0.520	0.520
<u>ARAB INVESTMENT & INTER. TRADE</u>	=	1500	270	0.180	0.180
<u>LIVESTOCK AND POULTRY</u>	NT	0	0	0.350	0.000
<u>JORDAN MODERN CABLES</u>	=	5750	4715	0.820	0.820
<u>ARAB ENGINEERING INDUSTRIES</u>	NT	0	0	1.470	0.000
<u>AL-ZAI READY WEAR</u>	NT	0	0	1.110	0.000
<u>NATIONAL PLASTIC TEXTILE INDU</u>	=	9600	2688	0.280	0.280

Amman Financial Market

JERUSALEM INSURANCE	↑	5000	6350	1.240	1.270
<u>THE UNITED INSURANCE</u>	NT	0	0	2.200	0.000
JORDAN FRENCH INSURANCE	NT	0	0	2.550	0.000
<u>THE HOLY LAND INSURANCE</u>	NT	0	0	1.090	0.000
YARMOUK INSURANCE & REINSURANC	NT	0	0	1.200	0.000
GRASIA INSU.	NT	0	0	1.000	0.000
ARABIAN SEAS INSURANCE	↓	1100	815	0.760	0.740
UNIVERSAL INSURANCE	NT	0	0	1.250	0.000
JORDAN GULF INSURANCE	NT	0	0	1.550	0.000
<u>ARAB LIFE & ACCIDENT INSURANCE</u>	NT	0	0	1.650	0.000
PHILADELPHIA INSURANCE	NT	0	0	1.800	0.000
ARAB UNION INTERNATIONAL INSUR	NT	0	0	1.050	0.000
<u>THE NATIONAL AHLIA INSURANCE</u>	NT	0	0	0.860	0.000
JORDAN INTERNATIONAL INSU. CO.	NT	0	0	1.000	0.000
AMMAN INSURANCE CO.	NT	0	0	0.910	0.000
<u>ARAB GERMAN INSURANCE</u>	NT	0	0	1.000	0.000
THE ISLAMIC INSURANCE	NT	0	0	1.240	0.000
ARAB INSURANCE CO. LTD	NT	0	0	0.910	0.000
ARAIG	NT	0	0	1.000	0.000
<u>JORDAN HOTELS & TOURISM</u>	NT	0	0	4.450	0.000
JORDAN ELECTRIC POWER	=	119000	229670	1.930	1.930
<u>ARAB INTERNATIONAL HOTELS</u>	NT	0	0	3.500	0.000
IRBID DISTRICT ELECTRICITY	NT	0	0	1.920	0.000
<u>VEHICLES OWNERS FEDERATION</u>	↓	303	658	2.280	2.170
<u>JORDAN NATIONAL SHIPPING LINES</u>	NT	0	0	0.910	0.000
<u>JORDAN PRESS FOUNDATION - AL-R</u>	↑	10100	92920	9.190	9.200
JORDAN HIMEH MINERAL	NT	0	0	4.410	0.000
<u>THE UNITED MIDDLE EAST & COMMO</u>	NT	0	0	0.960	0.000
<u>JORDAN HIMEH MINERAL /NEW</u>	NT	0	0	4.030	0.000
<u>REAL ESTATE INVESTMENT \ AKARC</u>	NT	0	0	1.080	0.000
<u>NATIONAL PORTFOLIO SECURITIES</u>	NT	0	0	0.770	0.000
<u>MACHINERY EQUIPMENT RENTING</u>	NT	0	0	0.400	0.000
<u>JORDAN INTERNATIONAL TRADING C</u>	↑	850	242	0.280	0.290
<u>CENTRAL GENERAL TRADING & STOR</u>	NT	0	0	0.340	0.000
<u>JORDANIAN EXPATRIATES INVEST.</u>	NT	0	0	0.950	0.000
<u>JORDAN ENTERPRISES FOR CATERIN</u>	NT	0	0	0.790	0.000
<u>JORDAN MARKETING</u>	NT	0	0	0.400	0.000
<u>JORDAN PRESS & PUBLISHING</u>	NT	0	0	5.700	0.000

Amman Financial Market

MIDDLE EAST DEVELOPMENT AND TR	NT	0	0	0.320	0.000
<u>MEDETRANIAN TROURISM INVE.</u>	NT	0	0	0.950	0.000
<u>ZARQA FOR EDUCATION</u>	=	2000	2380	1.190	1.190
<u>ARAB INTER. CO. FOR INVEST. &</u>	=	800	1589	1.980	1.980
<u>JORDAN TRADE FACILITIES</u>	NT	0	0	0.480	0.000
<u>NATL.COMMER.CENTRERS</u>	NT	0	0	0.410	0.000
<u>UNIFIED CO.FOR ORG.LAND TRANS.</u>	↓	700	847	1.220	1.210
<u>ZARA FOR INVESTMENT</u>	NT	0	0	1.190	0.000
<u>UNION FINANCIAL INVESTMENTS</u>	NT	0	0	0.670	0.000
<u>ARAB FINANCIAL INVESTMENTS</u>	=	4350	2175	0.500	0.500
<u>UNION LAND DEVELOPMENT CORPORA</u>	NT	0	0	0.570	0.000
<u>ARAB INTER INVESTMENT MEDICAL</u>	NT	0	0	0.950	0.000
<u>AL-SHARQ INV. PROJECTS CO.</u>	NT	0	0	1.000	0.000
<u>UNITD ARABE INVESTORES</u>	NT	0	0	0.790	0.000
<u>JOR. TOURIST TRANS. CO./JEET</u>	↑	100	111	1.060	1.110
<u>ALDAWLIYAH FOR INDUSTRIAL,TRAD</u>	↓	37900	18589	0.500	0.490
<u>JORDAN SPECIALIZED INVESTMENT</u>	↓	10600	7071	0.640	0.610
<u>JORDAN SPECIALIZED INV.AUCTION</u>	NT	0	0	0.410	0.000
<u>FALCON INV.&FIN CO</u>	NT	0	0	1.090	0.000
<u>UNITED FOR FINANCIAL INV.</u>	NT	0	0	1.260	0.000
<u>JORDAN CENTRAL</u>	NT	0	0	1.000	0.000
<u>CENTURY INVESTMENT GROUP</u>	NT	0	0	1.000	0.000
<u>AL-DWLIYAH FOR HOTELS AND MALLS</u>	NT	0	0	0.770	0.000
<u>ARAB JORDAN INVESTMENTS</u>	NT	0	0	1.000	0.000
<u>AL -EKBAL FOR PACKING</u>	=	3000	2490	0.830	0.830
<u>POULTRY PROCESSING</u>	NT	0	0	1.360	0.000
<u>ARAB PAPER CONVERSION & TRADING</u>	NT	0	0	0.710	0.000
<u>JORDAN DAIRY</u>	NT	0	0	3.500	0.000
<u>THE PUBLIC MINING</u>	NT	0	0	1.850	0.000
<u>ARAB ALUMINIUM INDUSTRY - ARAL</u>	↓	3536	5656	1.610	1.600
<u>THE ARAB PHARMACEUTICAL</u>	=	26450	69908	2.650	2.650
<u>THE INDUSTRIAL,COMMERCIAL</u>	=	5300	3710	0.700	0.700
<u>THE ARAB CHEMICAL DETERGENTS</u>	NT	0	0	7.850	0.000
<u>NATIONAL STEEL INDUSTRY</u>	=	1000	500	0.500	0.500
<u>DAR AL-DAWA DEVELOPMENT&INVEST</u>	↓	10650	26746	2.540	2.510
<u>INTERMEDIATE PETROCHEMICALS</u>	=	54950	12089	0.220	0.220
<u>THE JORDAN WORSTED MILLS</u>	NT	0	0	6.190	0.000
<u>JORDAN CERAMIC INDUSTRIES</u>	↓	3250	4290	1.330	1.320