



Title: The impact of triadic strategic alignment on organisational performance in Yemen

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# The Impact of Triadic Strategic Alignment on Organisational Performance in Yemen

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BSc with Hons, MBA

A thesis submitted to the University of Bedfordshire, in fulfilment of the requirements  
for the degree of Doctor of Philosophy in Business Management

University of Bedfordshire  
Business and Management Research Institute

**September 2016**

## DECLARATION

I, the undersigned, declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

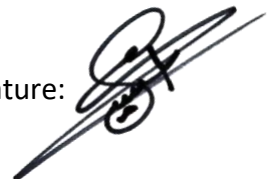
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## **ABSTRACT**

To survive and succeed in the very competitive business environment, firms should have a clear business strategy supported by appropriate information technology (IT) and marketing strategies. Whilst many prior studies argue that strategic alignment between, for example, business strategy and IT strategy generally enhances organisational performance, strategic alignment including multiple factors has received little attention and strategic orientation of firms is rarely considered. This research, drawing on configurational theory and strategic management literature, aims to understand the performance impact of triadic strategic alignment between business, IT, and marketing strategies based on strategic orientation of firms. A number of hypotheses are proposed to examine the relationship between triadic strategic alignment and organisational performance through the use of structural equation modelling, and to identify generic types of triadic strategic alignment. The hypotheses are tested through MANOVA using data collected in a questionnaire survey of 242 managers in Yemen. The findings indicate that (1) there is an ideal triadic strategic alignment for prospectors and defenders; (2) triadic strategic alignment has a positive impact on organisational performance; and (3) triadic strategic alignment provides a better indication of the nature and performance impact of strategic alignment. Follow-up interviews were also conducted to support the arguments and to clarify how strategies should be aligned. This research also contributes to managers' knowledge and understanding by suggesting how a firm should coherently align its strategies to improve organisational performance.

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## CHAPTER 1: INTRODUCTION

### 1.1 Background to the Research

In today's competitive environment, an organisation must have a clearly defined objectives and fully developed strategy for achieving them (Papulova and Papulova, 2006). Organisational strategy is the fundamental to the success and sustainability of any firm. According to Chandler (1962), strategy is the determination of the long-run goals and objectives of an enterprise and the adoption of courses of action and the allocation of resources necessary for carrying out these goals. It allows a firm to develop understanding of their own firm by deciding the nature, domain and scope of its activities and utilise them to compete in the market. In addition, strategy is not only limited to business but also can be developed for other organisational departments and functions such as marketing and information technology (IT). The role of marketing in an organisation is important in establishing relationships between customers and learning more about competitors (Varadarajan, 2010). Similarly, the IT department has become a vital part of an organisation in which it supports an organisation's IT infrastructure (Chan and Reich, 2007). Hence, it is indeed crucial to develop marketing and IT strategies that represent the generic direction to be followed in order to accomplish a specific business objective.

Furthermore, a strategy is oriented by a firm towards achieving business objectives called strategic orientation. It is concerned with the decisions that businesses make to achieve superior performance (Slater *et al.*, 2006). Miles *et al.* (1978) proposed three

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successful business strategic orientations: Prospector, Defender, and Analyser. Recent studies have also proposed IT and marketing strategic orientations that effectively allocate and coordinate IT and marketing resources to accomplish a firm's objectives (Cadogan, 2012). As today's dynamic environment has become more challenging, it is not sufficient for a firm to progress in its competitive market without integrating its business, IT, and marketing strategic orientations. This mechanism of integrating such strategies together is referred as strategic alignment and this is the essence of this thesis.

Strategic alignment has been a top managerial concern (Nadali *et al.*, 2011), for its positive impacts on firm performance (Chan *et al.*, 2006). It is deemed crucial in understanding how organisational performance can be improved through supporting business strategy with other organisational strategies. In order to understand whether strategic alignment results in superior organisational performance, much effort has been put on the definition, measurement, backgrounds and consequences of the alignment between business and IT strategies, that is, the strategic IT alignment (e.g. Kearns and Sabherwal, 2006; Sabherwal and Chan, 2001).

Strategic alignment has been suggested by contingency theory as the fit relationship between certain contextual and organisational factors (Chan and Reich, 2007). Although contingency theory would argue for single state of fit for each variable (Donaldson, 2001), configurational theory focuses on how unique patterns or configurations of multiple independent variables are related to the dependent variables, by aiming to identify multiple states of fit (Delery and Doty, 1996). That is to say that each strategy relates to a specific set of ideal organisational factors that would result in higher

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performance (Drazin and Van De Ven, 1985; Vorhies and Morgan, 2003). Drawing on configurational theory, research on strategic alignment suggests that the fit between a firm's strategy and its internal and external factors leads to superior firm performance and misalignment results in performance erosion (e.g. Drazin and Van De Ven, 1985; Oh and Pinsonneault, 2007; Wu *et al.*, 2015). Three different streams of research on strategic alignment may be differentiated as follows.

First, whilst IT has become "*a ubiquitous and increasingly significant part of the fabric of most organisations*" (Doherty *et al.*, 2010, p.116) and IT investments have been increasing (Cha *et al.*, 2009), the alignment between IT strategy and business strategy, or strategic IT alignment has been extensively examined because of its significant impact on organisational performance (Chan, 2000; Chan *et al.*, 1997). Generally, research suggests that strategic IT alignment enhances a firm's performance in the long term and the lack of strategic IT alignment is believed to be risky and could possibly lead into a steady decline in competitive ability.

Second, in order for a firm to sustain its growth (Akpan and Carter, 2007), it must realise alignment between its business strategy and competitive environment (Khosrow-Pour, 2005) or marketing strategy (Hooper *et al.*, 2010) as the latter is typically developed based on the evaluation of dramatic changes in the overall business environment (Borges *et al.*, 2009). Whilst there is limited research on the alignment between business strategy and marketing strategy, marketing managers believe this alignment facilitates the achievement of business objectives (Valos and Bednall, 2010) and positively affects a firm's performance (Bergeron, 2002). On the contrary, Strahle *et al.* (1996)

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demonstrate that misalignment between business strategy and marketing strategy leads to confusion amongst business and marketing managers.

Third, a few studies (Blotnicky, 2009; Jaworski and Kohli, 1993; Min *et al.*, 2002) suggest that alignment between IT and marketing strategies ensures that IT provides marketing with the information systems needed to accomplish its goals or that IT strategy supports marketing through the development of products and services (Henderson and Venkatraman, 1989).

Whilst prior research has provided useful insights into understanding different types of strategic alignment and its impact on organisational performance, it has explored strategic alignment mainly in terms of dyadic relationships (Cataldo *et al.*, 2012; Fink and Neumann, 2009; Oh and Pinsonneault, 2007). Such pairwise alignment is seen to have limited capacity to capture the complex nature and performance impact of strategic alignment (Cao, 2010; Kearns and Sabherwal, 2006) and could lead to possible inconsistencies since strategic alignment often involve multiple organisational factors (Drazin and Van De Ven, 1985). Researchers typically adopt a simple and convenient approach to test their proposed theories (Venkatraman, 1990), and mixed results are common because of imprecise specification of the functional form of fit (Drazin and Van De Ven, 1985).

Besides, prior research on strategic alignment has often assumed that strategic alignment is generally applicable to all types of firms without taking into account the specific strategies of firms (Chan *et al.*, 2006). When strategic alignment is understood by considering the strategic orientation of firms, this could mean that there are different

antecedents to strategic alignment and consequently the link from strategic alignment to organisational performance could be different.

### **1.2 Rationale for this Thesis**

In this thesis, the study of strategic alignment is within the Yemeni context. Yemen is known one of the least developed countries amongst the other Middle East countries (BBC, 2017). Due to some constrains such as economic sanctions, political disturbance, and high illiteracy amongst citizens resulting in a slow knowledge enhancement of organisational strategies when compared with neighbouring countries and the west.

Recently, many countries worldwide invested IT in their organisations, in both developed and developing countries, as a result of the changes in the different economic, social, political and security sectors (Nasr *et al.*, 2015). Meanwhile, companies having difficulties in developing marketing strategy influenced by these external environmental forces (Doole and Lowe, 2008). It is acknowledged that companies regardless of their size play a significant role in the economics, especially in spurring economic growth (Alyahya and Suhaimi, 2013; Sharma, 2011). Just as other countries, companies in Yemen contribute to economic growth, however only 16 percent of gross domestic product (GDP) was reported in 2011 accounted from small-medium enterprises only (Lackner, 2014). However, there are large organisations not included in the report that utilise IT and marketing as strategies within a business, such as banks, telecommunications, hospitals, and universities (MoIT, 2010). The use of IT and marketing strategically has become necessary for any organisation to facilitate the work procedure and improve efficiency and productivity and improve performance in general



(Narver and Slater, 1990; Chan *et al.*, 1997). This led to a decision to undertake further research to conceptualise an effective strategic alignment model that increases the companies' potential in the growth of the Yemeni economy through improving their business performance.

Furthermore, it has been noted from the past decade that most companies especially banking and telecommunications in Yemen are focusing on integrating IT strategy with the business strategy ensuring the companies can be more competitive (Al-Mamary *et al.*, 2015). This is because it is believed that IT plays vital roles regardless of other strategies and functions that could equally be as important as the IT. However, some companies in Yemen are recognising the importance role of other organisation's functions such as the marketing strategy of which are able to see the need to improve the alignment (Howard, 2013) between two strategies into a more sophisticated alignment. Thus, there is increasing need to provide a theoretical understanding of providing information to support short-term and long-term decision making effectively and timely through the use of improved strategic alignment.

### **1.3 Purpose of the Study**

In today's competitive environment, more than ever management need to formulate corporate strategic orientation that specify the kind of competitive advantage they seek, which in turn adds value to their firm (Brown *et al.*, 2013). This is done through arranging all elements of a business, including market strategy and IT strategy, in such a way as to best support the fulfilment of firm's goals. Whilst a firm's goals generally do not change,

strategies do change which can be aligned with corporate strategic orientation achieving strategic alignment.

In the existing literature a little is known about aligning multiple organisational strategies (Schniederjans and Cao, 2009) which contributes to performance. Xu *et al.* (2006) describe the rationale behind alignment as the organisation's ability to identify the key components of strategy and reconcile competing or conflicting ideas and forces more coherently than ineffective organisations.

### **1.3.1 Research Aim**

The overarching aim of this study is to investigate how and why a firm should support its business strategic orientation by formulating IT and marketing strategies that contributes in enhancing the firm's organisational performance – or rather the triadic strategic alignment amongst business, IT, and marketing strategies and its performance impact. Business and IT strategic alignment have shown for almost a quarter century the positive effects of alignments on business performance (Coltman *et al.*, 2015). Whereas strategic alignment studies in marketing is limited, however, the findings strongly indicate that alignment has a significant impact on organisational performance (e.g. Blotnicky, 2009; Min *et al.*, 2002; Rhee and Mehra, 2006; Roberts *et al.*, 2005; Wehmeyer, 2005).

Despite the fact that previous research studies have been conducted to understand the relationship between either business and IT, business and marketing, or marketing and IT strategies, there are still gaps relating to the acceptance of outcomes and the results

of investigating the relationship of all three strategies at one. Thus, this research is motivated by the need to understand the benefits of aligning business strategy, IT strategy that is an integral part of all organising, and marketing strategy that considers dramatic changes in the business environment. The absence of such an understanding may constrain companies' abilities to consistently align key organisational strategies and to coherently support its business strategic orientation for better performance.

### **1.3.2 Research Questions**

In order to reduce the abovementioned research gaps, research questions are introduced which are more specific to operationalise and achieve research aim. This study addresses the following research questions:

**Research Question 1:** *How and why should a firm seek to achieve triadic strategic alignment amongst its business, IT, and marketing strategies?*

Furthermore, the second question to be answered in this research is:

**Research Question 2:** *How and to what extent does triadic strategic alignment relate to firm strategic performance?*

In answering the above research questions this study will contribute to the knowledge about why triadic strategic alignment should be achieved in organisations and the extent of its use. Also, this research will contribute to the understanding of the conceptualisation of triadic strategic alignment that would influence organisational performance.

### 1.3.3 Research Objectives

In an effort to advance our knowledge of strategic alignment this research set out the scope as per the literature review to be limited to the following objectives:

- To understand and describe the role of alignment between business, IT, and marketing strategic orientations and organisational performance.
- To explore the generic types of triadic strategic alignment for each business strategic orientation.

To answer the above research objectives, this study's conceptual development builds upon configurational theory, strategic alignment, strategic management studies (e.g. Oh and Pinsonneault, 2007; Olson *et al.*, 2005), and the generic types of business strategy (Bamford and West, 2010; Miles *et al.*, 1978; Sabherwal and Chan, 2001). Firstly, as mentioned above, whilst contingency theory provided the theoretical underpinning, research on strategic alignment has been limited to dyadic alignment. According to Venkatraman and Camillus (1984), strategic alignment is achievable amongst two or more factors, not limited to two factors. By including multiple organisational strategies, triadic strategic alignment is likely to give a richer and more realistic view of strategic alignment, as pointed out by Venkatraman and Prescott (1990) that strategic alignment including multiple factors has greater explanatory power because of its ability to retain the complex and interrelated nature of the relationships between multiple factors. A few studies have empirically tested that alignment including multiple factors allows a firm to enhance its performance (e.g. Bergeron *et al.*, 2004; Chatzoglou *et al.*, 2011; Schniederjans and Cao, 2009; Zheng *et al.*, 2010).

Secondly, according to Miles *et al.* (1978), three main business strategic types can be differentiated based on their degree of market aggressiveness: prospector, defender, and analyser. Based on the generic types of business strategy, prior studies have developed ideal alignment to suggest that a firm with a specific strategic orientation should develop appropriate IT or marketing strategies to support the firm's strategic orientation. However, no study has empirically tested these generic types for both IT and marketing strategies yet. Furthermore, no studies have suggested conceptually that there is an ideal alignment amongst business, IT and marketing strategies. The need to discover the generic types of alignment that exist amongst important strategies would help organisations to survive. Thus, it is conceivable to generally assume that a firm is likely to improve its performance when it can achieve triadic alignment between business, IT, and marketing strategies.

### **1.4 Research Methodology**

A research design is the general plan of how the researcher will go about answering the research questions (Saunders, 2015). This research aimed to develop a conceptual framework and provide empirical illustration of the impact of triadic strategic alignment on organisational performance. Thus, the study's methodology chapter briefly discusses a variety of research philosophies and paradigms and concludes that the positivist paradigm is most suitable to the research questions and the context.

The key philosophical assumptions underlying the research traditions were outlined arguing the positivist choice of methods that are driven by the research questions rather than philosophical debates. For guiding the research in a particular direction, the

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positivist paradigm has been adopted. In order to fulfil the research objectives, this thesis is deductive and quantitative in nature due to the fact that this research proceeds from a hypothesised relationship towards investigation, from which the researcher verified the actual existence of the anticipated relationship. Thus, the deductive approach was used to collect quantitative data in the context of private companies in Yemen.

This research gathers empirical evidence by conducting both questionnaires and interviews. Collecting data using both instruments make a useful contribution to the research as well as they can be very productive in answering the research questions. The research predominantly employs a questionnaire survey to investigate the antecedents and consequences of strategic alignment. It is used to provide empirical results to answer the developed hypotheses through performing statistical tests, whilst the follow-up interviews are primarily used to gain in-depth understanding on why and how triadic strategic alignment enhances organisational performance. In addition, the findings of the semi-structured interviews support the statistical findings by verifying the results as well as to capture information relevant in answering the research questions.

The study proceeds with the description for conducting questionnaire survey. Random sampling technique was selected as it involves any procedure that uses a small number of items or portion of a population to make a conclusion regarding the whole population. The population for this study is defined as senior management consisting of business, IT, and marketing executives, directors, and managers. This study uses primary source data

collected using the questionnaire instrument. In total 242 cases were usable for analysis. Then, the semi-structured interviews were conducted with 11 managers from different organisations adding quality to the results, which are then integrated with the questionnaire results during the discussion and conclusion chapter.

### **1.5 Contribution of the Research**

The gap between practitioners and researchers is widely discussed in the strategic alignment literature. The literature shows that studies have generally explored the concept of fit in terms of bivariate relationships (Drazin and Van De Ven, 1985) to investigate alignment amongst pairs of organisational factors affecting performance (Cataldo *et al.*, 2012; Chan *et al.*, 1997; Dale Stoel and Muhanna, 2009; Fink and Neumann, 2009; Kearns and Lederer, 2004; Oh and Pinsonneault, 2007; Teo and King, 1997). However, dyadic alignment is seriously limited as the bivariate model is concentrated on measuring the alignment between two variables ignoring the considerations of other crucial relationships. For example, Kearns and Sabherwal (2006) stated that marketing strategies might be potential antecedents to strategic IT alignment and thus should be considered. On the other hand, Henderson and Venkatraman (1989, p.16) stated dyadic alignment can lead to *“possible inconsistencies amongst multiple forms of interrelated bivariate”*.

Unlike the bivariate, a multivariate relationship includes multiple variables to give a richer and realistic view of strategic alignment (Sabherwal and Chan, 2001). Venkatraman and Prescott (1990) pointed out that a multivariate has greater explanatory power because of its ability to retain the complex and interrelated nature

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of the relationships between constructs. Additionally, Venkatraman and Camillus (1984) argued that alignment is achievable amongst three or more factors. For example, Chen (2010) believed that aligning marketing strategies with business and IT strategies in a firm may enable it to achieve higher levels of alignment and better performance. Bergeron *et al.* (2004), Schniederjans and Cao (2009), and Zheng *et al.* (2010) have empirically tested that the alignment of more than two constructs creates a competitive advantage by enhancing business performance. Also, Chatzoglou *et al.* (2011) investigated the alignment of IT, strategic orientation, and organisational structure and reported that this alignment have positive effects on performance factors. It is quite clear that aligning strategies together enables a firm to act as a whole in achieving the firm's goal (Schniederjans and Cao, 2009), and that the alignment amongst three or more factors and its impact on organisational performance should be the focus of strategic alignment research.

It is possible to align appropriate IT and marketing strategies with business strategic orientation, thereby to achieve better performance. Yet recent studies supporting generic types of alignment have not examined the relationship amongst three strategies (Olson *et al.*, 2005; Sabherwal and Chan, 2001). To my knowledge, such generic type of business strategic orientation (Miles *et al.*, 1978), IT strategy type (Sabherwal and Chan, 2001), and marketing strategy type (Bamford and West, 2010) has not been done previously. Thus, this research follows the view of Drazin and Van De Ven (1985) to emphasise the need to adopt multivariate analysis to examine the alignment amongst business, IT and marketing strategies and its impact on performance.



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As noted, a number of research studies have also attempted to extend the perception of strategic alignment processes and to identify practical implications by conducting case studies and interviews with a variety of organisations (Cater-Steel, 2008). Having clarified that, this research identified some key managerial practices developed from the triadic strategic alignment model allowing academics and practitioners to better understand what strategies to follow and which generic type of strategic alignment relationship to adopt.

One of the most important contributions of this study is the development of a definition of triadic strategic alignment that is robust enough to be applied to a wide variety of situations. The literature on the relationships between business, IT, and marketing strategic alignment and organisational performance is ambiguous. Various publications report dyadic alignment of these strategies using the moderating and mediating effect. Other publications examine the generic types of alignment amongst two strategies showing that ideal alignment enhances organisational performance. The present study is based on the assumption that since generic types of alignment evidently exist between dyadic relationships, hence a generic-type method can be applied on a triadic relationship to enhance performance even better. This is investigated through the application of two forms of fit: covariation and profile deviation. By doing so, this study would reinforce the previous call for adopting multiple forms of fit to test the hypothesised theories (Venkatraman, 1989a).

This research has extended the existing research relating to the types of IT (Oh and Pinsonneault, 2007; Sabherwal and Chan, 2001) and marketing strategies (Bamford and

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West, 2010; Olson *et al.*, 2005) that certain triadic strategic alignments of strategic orientations (Bamford and West, 2010; Miles *et al.*, 1978; Oh and Pinsonneault, 2007; Olson *et al.*, 2005; Sabherwal and Chan, 2001) would outperform others in terms of performance components. These studies have found a significant relation between dyadic strategic alignment and performance, whilst other study have suggested that the relation of multiple strategic alignment and performance is achieved through the application of bivariate analysis (Bergeron *et al.*, 2004). Unlike the bivariate analysis, the findings show that the application of multivariate analysis in this research for testing the hypotheses, which involves several factors, has provided great explanation power in a logical and rigorous way that facilitated achieving the desired results.

The overall findings reveal that perceived potentials of triadic strategic alignment have a significant impact on the perceived organisational performance. The findings contribute to the understanding of alternative strategic orientations showing that there is a significant presence of all different alignment levels of strategic orientation. Thus, the role of multivariate approach on generic types of triadic strategic alignment in the strategic alignment theory has been broadened.

Although many studies investigated the linkage between strategic alignment and performance, there is a frequent lack of an appropriate linkage between concept and empirical testing techniques (Xu *et al.*, 2006). Added to that, researchers recommend the use of multiple empirical approaches (Drazin and Van De Ven, 1985; Venkatraman, 1990) to aid strategic alignment efforts (Avison *et al.*, 2004). Thus, this research makes another important contribution by using two empirical approaches to forming an

integrative vision that triadic strategic alignment enhances the relation between business, IT, and marketing strategies and business performance suggesting that firms with high degree of strategic alignment are more likely to influence performance positively. This study provides fresh insights into the relationship between triadic strategic alignment and business performance. It presents an empirical support for hypotheses 1, 1.1, and 1.2 lending further support to the antecedent's strategic alignment that triadic strategic alignment improves business performance.

Given the present state of empirical knowledge in this regard, this research has contributed to a better understanding of the triadic strategic alignment model. This gives academics and practitioners insight in evaluating the appropriateness of determining whether the business objectives are appropriately linked with the firm's IT and marketing strategies to create competitive advantage. Management can usefully draw on covariation and profile deviation approaches to optimise their strategic decisions. This research provides specific guidelines to help top management to derive their marketing and IT strategic orientation towards their firm's strategic orientation.

### **1.6 Thesis Structure**

The remainder of this research is organised as follows. Chapter one serves as an introduction to the study by outlining the research gaps identified as an outcome of the literature review. The study consists of five further chapters whereby the second chapter provides an overview of the related literature, followed by the theoretical development of the conceptual framework. Research methods and the results of the quantitative research are in chapters four and five. Finally, this thesis ends with a

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discussion and conclusion chapter including recommendations. The structure of the remainder of the study is as follows:

- **Chapter two – Literature review:** a comprehensive review of the literature on the key types of organisational strategies and the two-way strategic alignment between business and IT, business and marketing, and marketing and IT. The chapter outlines the analysis of the existing gaps in the literature.
- **Chapter three – Theoretical development:** drawing upon the reviewed literature, a research model (or conceptual framework) is developed to clearly describe the concept of triadic strategic alignment, together with a set of specific hypotheses.
- **Chapter four – Proposed methodology:** the research methodology chapter provides a description of the research philosophy, methods, and the deductive approach adopted in this research. A further clarification of the adoption of quantitative approach is explained in detail in this chapter. It also describes the instrument development and the data collection processes.
- **Chapter five – Findings:** this chapter provides a detailed explanation of the analysed data. The empirical data was tested by three data analysis techniques using structural equation modelling and multivariate analysis of variance to test the conceptual framework and the hypotheses. It presents the results of the questionnaire survey and follow-up interviews.
- **Chapter six – Discussion and conclusion:** evaluates the interpretation and discussion of the results. The research questions and hypotheses are examined

against the findings. This chapter also presents contributions to research and implications for practice on how they could use the obtained findings to improve the way firms align their strategies to their corporate objectives. The limitations of the research have also been identified as well as recommendations for future research.

### 1.7 Definitions of Terms

There are several specific terminologies used in this study repeatedly; the literature definitions are enumerated in this section, to establish the exact context and meanings.

The terms involved in this research are set out below:

- **Strategy:** refers to the determination of the basic long-term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources for carrying out these goals (Chandler, 1962, p.13). Also, it can be viewed as the process of aligning functional strategies to each other and to corporate strategy, as well as corporate strategy to the demands, opportunities, and risks created by a firm's external environment (Acur *et al.*, 2012; Lukas *et al.*, 2001; Miles *et al.*, 1978).
- **Alignment (or fit):** can be defined as the degree to which the needs, demands, goals, objectives, and/or structures of one component are consistent with the needs, demands, goals, objectives, and/or structures of another component (Nadler and Tushman, 1980, p.45).

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- **Strategic alignment:** is the degree to which the IT mission, objective and plans support and are supported by the business mission, objectives and plans (Reich and Benbasat, 1996, p.56).
- **Strategic orientation:** reflects the strategic directions implemented by an organisation to create the proper behaviours for the continuous superior performance of the business (Gatignon and Xuereb, 1997, p.3).
- **Contingency theory:** supposes that under different circumstances different solutions may prove effective (Matyusz, 2010, p.13)
- **Configurational theory:** supposes that for every given context, there exist a small number of organisational configurations that fit better than others and thus yield superior performance (Zaefarian, 2011, p.65).
- **Bivariate analysis:** evaluates the degree of relationship between two quantitative variables (Mertler, 2013, p.13).
- **Multivariate analysis:** is a form of quantitative analysis which examines three or more variables at the same time, in order to understand the relationships amongst them (Mertler, 2013, p.15).

### 1.8 Summary

Chapter one serves as an introduction to the study by outlining the problem identified as an outcome of the literature review. The motivation for conducting the research, the research objectives and overall research methodology of the study are discussed. In addition, a list of definitions and the structure of the remainder of the study are provided. In chapter two the study focuses on defining the strategic alignment concept,

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discusses the generic types of strategic alignment and provides different approaches measuring the impact of strategic alignment on organisational performance.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter presents a review of the existing body of work on conceptions, definitions and vocabulary for describing strategy. It identifies and explains the different types of business, IT, and marketing strategic orientations adapted by organisations. Following from that, reviewing a large body of literature is discussed describing the evolving view on strategic alignment. Much of this work appears in the literature of strategic alignment and strategic management literature, addressing issues such as the definitions and alternative conceptions of strategy, strategic alignment, and strategic orientation. Some of this work also appears in the literature of information systems and technology as well as in the marketing literature, addressing questions such as business-IT alignment and marketing information systems.

The objectives of this chapter are, firstly, to review and understand the definition of strategy in literature relating to strategic alignment and strategic management contexts. Secondly, to provide the reader with a rigorous review of the existing literature on strategic alignment and its elements. Then to highlight a significant gap in the literature, through the extensive revision of the strategic alignment studies. Therefore, the purpose of this chapter is to critically review prior studies and evaluate the strategic alignment literature in order to give a theoretical basis for the research.



## 2.2 Strategic Orientation

*Strategy* is a word with many meanings and all of them are relevant and useful to those who are charged with setting strategy for their organisations. The most two common definitions of strategy in the strategic management literature offered by various researchers are briefly reviewed below.

Chandler (1962, p.13) defined strategy as *“the determination of the basic long-term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources for carrying out these goals”*. This definition argues that strategy should take precedence over the organisation as it stands, and be able to modify or generate the structure of an organisation. Another much narrower definition of strategy from a different perspective by Porter (1980, p.xvi) focusing as it does on the basis of competition, defined strategy as *“a board formula for how a business is going to compete, what its goals should be, and what policies will be needed to carry out those goals”*. This definition refers to balancing internal and external factors in the market based on internal strategic capabilities, and seeks to create a strategic ‘fit’. At the most basic level, Henry (2011) notes that strategy simply outlines how a business strives to achieve its business goals. Strategy can be viewed as the process of aligning functional strategies to each other and to corporate strategy, as well as corporate strategy to the demands, opportunities, and risks created by a firm’s external environment.

*Strategic orientation* is a concept widely used in the research field of strategic management and strategic alignment literature. It refers to the broad outlines for the

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organisations strategy whilst leaving the details of strategy content and strategy implementation to be completed (Slater *et al.*, 2007). Strategic orientation can also reflect the strategic directions implemented by an organisation to create the proper behaviours for the continuous superior performance of the business (Narver and Slater, 1990). Thus, strategic orientation (Venkatraman, 1989b) and strategic type (Miles *et al.*, 1978) of a firm are closely related concepts, referring to the general pattern of various means employed to achieve the business goals.

Studies have generally concentrated on the role of a particular orientation, where only a limited number of studies have analysed the interactions between strategic orientations (Hakala, 2011). According to Lukas *et al.* (2001), strategy is best specified as a multifaceted construct consisting of different orientations. This way, business strategy is viewed in terms of relative emphasis placed by the organisation, along each underlying dimension or subset dimensions of the strategic orientation (Chatzoglou *et al.*, 2011). Strategy scholars identified several ways determining how a firm adapts to its environment through the relationship between strategic content, strategic process, organisational performance, organisational environment, and many other factors (Gnjidić, 2014). In order to understand what strategic orientation is, and how the generic types are likely to influence firm performance, the next sub-sections discuss and analyse business strategic orientation, IT strategic orientation, and marketing strategic orientation.

### 2.2.1 Business Strategic Orientations

*Business strategy* is the general direction in which a firm chooses to move in order to achieve its goals and objectives (King, 1978). It simply clarifies to the firm how all the individual activities are coordinated to a desired end result. This direction allows the business to understand what is happening within, and beyond its competitive environment to adapt the environmental changes in order to align the capabilities with its strategic goals.

There are numerous studies which have used different approaches to classify business strategy (e.g. Caves and Porter, 1977; Harrigan, 1983; Murray *et al.*, 2002; Venkatraman, 1989b). Most studies use Porter's (1980) conceptualisation of business strategy based on cost efficiency, Child's (1972) business strategy classification based on organisational configuration, or Miles *et al.*'s (1978) generic types of business strategy based on the decision-making process by organisations. Compared with other business strategy conceptualisations, Miles *et al.*'s (1978) generic types of business strategy has been widely supported on account of its strong theoretical orientation and generalisability (Tan, 2006).

Miles *et al.* (1978) suggest that there are four generic types of business strategy that may be found within any industry: Prospector, Defender, Analyser, and Reactor. These strategic orientations are operationalised and measured using six dimensions, namely aggressiveness, analysis, defensiveness, futurity, proactiveness, and riskiness (Venkatraman, 1989b). They are used for examining organisational strategic orientation based on their degree of market aggressiveness. Therefore, the key to success for the

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*prospector* is the development of innovative new products and entry into new markets (Slater and Olson, 2001). Emphasising innovativeness, the prospector invests heavily in product R&D and environmental scanning (Miles *et al.*, 1978).

As for the *defender*, which is considered a stable strategic orientation, the key to success is focusing more narrowly on maintaining a secure position in existing market and by offering high quality products or services at low price (Camillus and Lederer, 1985). Stressing operational efficiency and economies of scale, it employs a mechanistic organisation structure (Miles *et al.*, 1978). The defender firms do not tend to search outside their domain for new opportunities, and rarely make major adjustments in their structure or technology (Sabherwal and Chan, 2001).

As discussed by Vorhies and Morgan (2003), the *analyser* firm shares some characteristics with each of the other two strategic orientations representing the midpoint between prospector and defender strategies. This strategic orientation combines the strengths of the other two types by maintaining a stable domain of core products and seeking new product/market opportunities (Miles *et al.*, 1978). It does not usually initiate new products but often follows the prospector by very quickly introducing competitive products (Sabherwal and Chan, 2001).

These strategic orientations have been mainly used to assess both the strategy of an organisation and strategic alignment (Taipala, 2008) and have been subjected to extensive discussion and empirical investigation (Segev, 1989). Unlike these three successful business strategic orientations, the *reactor* is considered a form of strategic 'failure' (Conant *et al.*, 1990; McLaren *et al.*, 2011; Miles *et al.*, 1978; Segev, 1987) and

has thus been excluded by most empirical studies based on Miles and Snow's strategic orientations (e.g. Delery and Doty, 1996; Hambrick, 1981; McDaniel and Kolari, 1987; Sabherwal and Chan, 2001; Vorhies and Morgan, 2003). Similarly, reactor is not included in this research.

These strategic orientations are categorised based on the organisations' perception of their environments causing them to adopt different strategic orientations. These adaptive strategic orientations allow some organisations to be more adaptive or more sensitive to their environments than others, and the different organisation types represent a range of adaptive firms. Because of their adaptive strategic orientations, prospector firms are the most adaptive type of organisations. In contrast, reactor organisations are the least adaptive type and also considered to be failure strategic orientation, therefore has been excluded from this study. Analysers are the second most adaptive organisations, followed by defenders (Helms, 2009).

### **2.2.2 IT Strategic Orientations**

Beside business strategy, IT is deemed to be very effective for adding value to the firm (Cao, 2010) and enhances the ability of enterprises to survive in the highly competitive global marketplace of the twenty-first century (Wu *et al.*, 2015). IT was described by Chaffey and Wood (2005, p.25) as "*technology resources used for business information management*". These resources include software, hardware and telecommunication networks used for managing information (Olugbode *et al.*, 2007) or the collection of computer systems used by an organisation (Cao, 2010). An extensive literature has examined many IT management issues. These issues include the business roles of IT

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managers (Fonstad and Subramani, 2009), the cost-efficient use of IT (Earl and Feeny, 1995), the business value of IT (Masli *et al.*, 2011), and so forth.

However, *IT strategy* is defined as how IT will be used to facilitate electronic communication to support business processes and needs (Broadbent and Weill, 1993; Henderson and Venkatraman, 1993). It is a comprehensive plan that utilises IT to enhance organisational capacity (Hackler and Saxton, 2007). Porter and Millar (1985) discussed that IT strategy was altering the rules, changing the structure of industries and allowing organisations to create competitive advantage. Clearly the importance of IT strategy to a firm is potentially increasing. It has become a key element in competitive positioning making IT an important aspect of everyday business (Gartlan and Shanks, 2007). Although the focus is specifically on technology, it remains as a part of the overall business strategy. Thus, IT strategic orientation is developed based on the firm's strategic orientation developed by Miles *et al.* (1978).

IT strategy has been classified into three generic types: flexibility, efficiency, and comprehensiveness (Sabherwal and Chan, 2001). These IT strategic orientations were developed on the basis of four IT strategy dimensions: operational support systems, interorganisational systems, strategic decision support systems, and market information systems (Camillus and Lederer, 1985).

*Operational support systems* represent the use of IT for monitoring and controlling the day-to-day operations (Sabherwal and Chan, 2001). Increased use of IT for operational support would generally be expected to facilitate operational efficiency (Segev, 1989). The second dimension, *interorganisational systems*, is the movement of information

across organisational boundaries to link a firm to its suppliers, distributors, or customers (Wilson and Vlosky, 1998; Johnston and Vitale, 1988). As discussed by Belardo *et al.* (1994), *strategic decision support systems* are primarily used to perform information access, monitoring, control functions of executives and provide comparable functionality, such as business modelling and sensitivity analyses. The fourth system, *market information system*, is related to management information system but with a greater focus on the firm's product and market scales (Sabherwal and Chan, 2001). A further explanation of the firm's market strategy is discussed in the next subsection.

### **2.2.3 Marketing Strategic Orientation**

The marketing literature has been well researched for many years to demonstrate marketing's contribution to the business as a whole (Gaskill and Winzar, 2013) and to business strategy formation in particular (Hunt and Lambe, 2000) in order to achieve a better performance (Cavusgil and Zou, 1994). *Marketing strategy* refers to the marketing activities and decisions related to generating and sustaining competitive advantage for the business (Varadarajan *et al.*, 2001). Marketing activities are numerous and varied such as research and development, product design, promoting product, setting price, etc. (Narver and Slater, 1990; Slater and Olson, 2001; Varadarajan *et al.*, 2001). These activities are very important in scanning environmental variables (customers and competitors) as to pay strong attention to the threats (so as to avoid) and opportunities (so as to seize) in the environment to best position the organisation in the market place (Babatunde and Adebisi, 2012). Because of the innovations that are brought to market through the role of the firm's strategic orientation, marketing

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strategy has the ability to develop successful new products (Gatignon and Xuereb, 1997), and to develop and retain competitive advantage through excellent services marketing (Giannakis and Harker, 2014). In other words, marketing strategy focuses on ways in which the firm can differentiate itself effectively from its competitors, capitalising on its distinctive strengths to deliver better value to its customers within a given environment (Jain, 2000). Therefore, marketing strategic orientation is developed based on the firm's strategic orientation developed by Miles *et al.* (1978).

Based on Narver and Slater's (1990) classification, there are three generic types of marketing strategy: customer-focused, competitor-focused, and interfunctional coordination. Customers and competitors are two of the domains of marketing strategy (Varadarajan, 2010), which include all of the activities involved in acquiring information about the buyers and competitors (Narver and Slater, 1990). Market strategic orientation includes not only the concept of customer-focused, but also the concept of competitive-focused (Day, 1991). The third marketing strategy, interfunctional coordination, is defined by Narver and Slater (1990, p.22) as "*coordinated utilisation of company resources*". It refers to the specific aspects of the structure of an organisation that facilitate the communication amongst the organisation's different functions (Gatignon and Xuereb, 1997). It is detached from marketing strategy to define market competency as the gathering and dissemination of information about customer-focused and competitor-focused needs and intents. Therefore, the third strategy type is excluded from this research as some other studies did (e.g. Bamford and West, 2010; Slater *et al.*, 2010b; Zheng Zhou *et al.*, 2007).



Briefly, strategic types or strategic orientation of firms regarding business, marketing, and IT reflect the strategic directions of firms to create the proper behaviours for superior business performance (Narver and Slater, 1990) and clarify how organisational activities should be coordinated to achieve business goals. Although many studies in the strategic management literature incorporated strategic orientation, the effect on organisational performance and the relationship between strategic orientations remain unclear. Some found positive connections between strategic orientations and organisational performance (e.g. Al-Ansaari *et al.*, 2015; Morgan and Strong, 2003). However, the majority of the studies only researched the direct relationship between a specific orientation and performance (Reulink, 2012) based on the alignment of strategic orientation with the environment (Hoque, 2004; Luo and Park, 2001). The alignment approach is further investigated in the next sections.

### **2.3 Strategic Alignment**

The strategic alignment literature has become well recognised in the last few decades. It has attracted a great deal of scholarly interest to express strategic fit or alignment between organisational strategies (Chan *et al.*, 1997; Kearns and Lederer, 2003). Alignment literally means an arrangement of groups or forces in relation to one another (Joia, 2002). However, strategic alignment as defined by Nadler and Tushman (1980, p.45) refers to “*the degree to which the needs, demands, goals, and/or structures of one component are consistent with the needs, demands, goals, objectives, and/or structures of another component*”. It assumes that the environment or the internal and external context of a system or an organisation has a strong impact on the performance and

efficiency of the system (Rao and Krishna, 2009). For the most part, there has to be at least a minimum of two factors to investigate strategic alignment effect on firm performance. According to Drazin and Van De Ven (1985), organisational performance is a consequence of fit between two or more factors. This suggests that firms can maximise their performance by aligning their strategies together.

Despite differences in approaches and conceptualisations, the evidence indicates, with few exceptions, a strong positive association between strategic alignment and firm performance in general (e.g. Bergeron *et al.*, 2001; Chan *et al.*, 1997; Croteau and Bergeron, 2001; Kearns and Sabherwal, 2006; Oh and Pinsonneault, 2007; Tallon and Pinsonneault, 2011) and in critical areas such as market growth, financial performance, innovation, and reputation (Chan *et al.*, 1997), growth and income (Croteau and Bergeron, 2001), and cost control (Oh and Pinsonneault, 2007). In contrast, strategic alignment is an indirect result of the different strategic orientations alignment (Marion, 2006). It is mainly about the congruence between strategies and strategic orientations. This suggests that strategic alignment enables an organisation to maximise its utilisation of IT (Baïna *et al.*, 2008) and interact comprehensively with the competitive environment (Valos and Bednall, 2010). Consequently, three different streams of research on strategic alignment may be differentiated as follows.

### **2.3.1 Strategic Alignment of Business-IT**

Whilst IT has become “*a ubiquitous and increasingly significant part of the fabric of most organisations*” (Doherty *et al.*, 2010, p.116) and IT investments have been increasing (Cha *et al.*, 2009), the alignment between IT strategy and business strategy, or strategic

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IT alignment, has been extensively examined because of its significant impact on organisational performance (e.g. Chan, 2000; Chan *et al.*, 1997; Kearns and Lederer, 2000; Reich and Benbasat, 2000; Sabherwal and Chan, 2001). For instance, Delery and Doty (1996) found that strategic IT alignment can enable firms to use IT to facilitate a business strategy and obtain a better performance. Therefore, strategic IT alignment has remained amongst the top concerns of researchers over the last three decades (Coltman *et al.*, 2015).

The importance of strategic alignment has been stated frequently (Earl, 1989; Henderson and Venkatraman, 1993; Reich and Benbasat, 1996), indeed, leading to greater business profitability (Luftman, 1996). Through the continuous study of alignment within organisational factors, especially with the integration of business and information technology strategies, the definition of strategic models and the variety of approaches were developed. To overcome problems such as using IT only to support the back office, the idea of alignment was discussed from different perspectives (Ullah and Lai, 2013). Although strategic alignment would mostly refer to the integration of strategies, there are those researchers who dig deeper into the antecedents, composition, and consequences of strategic alignment to understand what alignment actually is, why it is needed, and how firms may go about the task of becoming aligned.

One of the first models proposed is the Strategic Alignment Model (SAM) developed by Henderson and Venkatraman (1993). It has attracted a great deal of interest in the literature and remains one of the most widespread and accepted frameworks of alignment (Wang *et al.*, 2008). The notion of SAM is that alignment emerges from some

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form of fit between business strategy, IT strategy, organisational infrastructure and processes, and IT infrastructure and processes. The model emphasises strategic fit between so-called external and internal domains for business and IT and also the functional integration between business and IT on the strategic (strategic integration) and operational (operational integration) levels (Wagner, 2012). However, some limitations to that model have been identified such as underlining that the SAM is very conceptual and remains therefore difficult to apply in practice. Also, Praeg (2010) stated that depending on how IT intensive an industry is, the usefulness of the model may vary and the assumptions of the SAM model may not hold.

Even though the concept of strategic alignment of Henderson and Venkatraman (1993) turned out to be an interesting concept as well as a key research subject to business and IT managers and researchers, there has been a debate by Ciborra (1997) that this model is too theoretical to be practical in the real world. The SAM model posits that there is a complex relationship amongst the components of business strategy, functional operations, and the deployment and uses of computing (Avison *et al.*, 2004; Henderson and Venkatraman, 1993). Strategic alignment is a dynamic, top-down approach, where organisational leaders seek to match strategic intent with the proper development and deployment of an IT infrastructure and processes (Garson, 2006). However, Ciborra (1997) points to its complexity and see it as a static or notional view. According to Ciborra (2000), the strategic alignment literature proposes abstract models that are not rooted in the empirically observable everyday practice of managers and organisations. Instead, he suggests an approach to strategic alignment that is related to reflections upon our everyday experiences and rests upon such concepts as care, cultivation, and

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hospitality disregarding the notion of 'illusionary models' to practice and measure alignment. On the contrary, Luftman (2004) not only supports the use of models but also provides an assessment tool that evaluates strategic alignment maturity which is based on the Capability Maturity Model (CMM) of Software Engineering Institute (SEI) (Sigala and Christou, 2006).

Recognising this, strategic alignment meant different things for different researchers such as the earliest research which sees IT planning as but one mechanism to achieve alignment (Reich and Benbasat, 1996). On the one hand, they argue that the intellectual dimensions of alignment require that business and IT plans are internally consistent with stated business mission, and that they are externally valid (Avison *et al.*, 2004). On the other hand, they believe that social dimension emphasises that both IT and business should understand each other's objective and plans (Wagner, 2012). However, their approach is strictly concentrated on signifying IT management's understanding of business strategy ensuring the business plan reflects the experience and knowledge of the organisation utilising IT based resources (Kurti *et al.*, 2013). Models of strategic alignment and its components have been proposed and extended over time as a way to provide managers with more practical ways to achieve alignment (Coltman *et al.*, 2015). Further, Reich and Benbasat (1996) approach was later improved to include the shared skills between business managers and IT managers to help them share the specific knowledge so better alignment is achieved (Reich and Benbasat, 2000). Nevertheless, there is still that question of what other variables might prevent or facilitate the pursuit of IT alignment.

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The continuous research on this topic led to the identification of three dimensions that best describe the integration of business and IT: strategies, infrastructures, and strategies and infrastructures (Henderson and Venkatraman, 1999): these are regarded as intellectual alignment, operational alignment, and cross-domain alignment, respectively (e.g. Chan and Reich, 2007; Gerow *et al.*, 2014; Henderson and Venkatraman, 1999). Thus, the focus of this research is on the intellectual alignment which best defined by Chan and Reich (2007, p.300) as *“the degree to which the mission, objectives, and plans contained in the business strategy are shared and supported by the IT strategy”*. Whilst many studies investigated the impact of strategic IT alignment on organisational performance, only a small number of the studies empirically examined the impact of the fit between the intellectual strategic IT alignment and organisational performance. According to this perspective, 18 relevant studies were identified and are summarised in Table 2.1.

Table 2.1: Strategic Alignment of Business-IT Studies (Intellectual Alignment)

Source	Concepts	Findings	Implications	Limitations
Bergeron (2002)	Drazin and Van De Ven (1985) relationship between the organisational context and structure.	Coalignment between IT strategy and strategic orientation has positive impact on business performance.	Achieving value from ever-increasing IT investments.	The range of constructs developed to represent strategic alignment captures some complex aspects.
Bergeron et al. (2001)	Venkatraman (1989a) six different alignment perspectives.	Examined strategic alignment using six perspectives and found systems approach provides richer explanation.	The six different perspectives of fit will lead to different results in empirical strategic IT management research.	Low response rate limits the generalisability.
Bergeron et al. (2004)	Venkatraman and Prescott (1990) holistic conceptualization of fit has greater explanatory power.	Low-performance firms exhibited a conflictual coalignment pattern of business strategy, business structure, IT strategy, and IT structure.	Coalignment approach transcends both strategic and operational integrations and increase performance.	Other alignment domains not present such as environmental uncertainty.
Byrd et al. (2006)	Lim et al. (2004) contextual factors moderated relationship.	There is a synergic coupling between strategic alignment and IT investment with firm performance.	The real value of strategic alignment is in leveraging the firm's IT investment.	The data represented a snapshot in time.
Cataldo et al. (2012)	Henderson and Venkatraman (1993) SAM model.	Strategic alignment better explains IT success.	Process-level alignment and IT success are driven by strategic alignment.	No significant differences between process-level alignment and strategic alignment to predict IT success.

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Chan <i>et al.</i> (1997)	Venkatraman (1989b) STROBE model.	IT strategic alignment as a predictor of business performance.	The formulation of appropriate IT strategy should have the attention and participation of senior executives.	The process involved in formulating strategy and achieving alignment.
Chan <i>et al.</i> (2006)	Extended Sabherwal and Chan (2001) approach.	Alignment depends on shared domain knowledge and prior IT success, and also support the expected positive impact of alignment on performance.	Strategic planning processes influence shared knowledge between IT executives and top managers.	Prior IT success affects alignment in defenders but not in analysers.
Chen (2010)	Luftman (1996) SAM model.	Provided confidence in investigating strategic alignment using the cross-validation instrument, and also support the relationship between strategic alignment and maturity construct.	The instrument can be used to measure a firm's alignment maturity allowing the firm to understand the challenges they face in improving IT planning and management.	Excluding environmental factors might affect the alignment maturity.
Croteau and Raymond (2004)	Henderson and Venkatraman (1993) SAM model.	Findings confirm that strategic and IT competencies alignment significantly enhances perceived business performance.	Shifts in the business environment require strategic choices or provide strategic opportunities, resulting changes in strategic and IT competencies must be interlinked.	Business environment shifts affect strategic competencies and IT competencies, and also a possible response bias for using a single organisational informant.



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Johnson and Lederer (2010)	Venkatraman (1989b) STROBE model.	Mutual understanding between CEOs and CIOs impact on strategic alignment.	Informal opportunities abound and the presence of both executives on business and IT strategy committees is important.	The study consisted of CEOs and CIOs.
Kearns and Lederer (2000)	Reich and Benbasat (1996) approach.	Findings suggest that sharing an understanding between the business plan and the IT plan creates competitive advantage.	IT executives and other senior business executives should accept joint responsibility.	The use of a single informant.
Kearns and Lederer (2003)	Reich and Benbasat (1996) approach.	Alignment between the IT plan and the business plan is significantly related to the use of IT for competitive advantage.	CEO participation on IT steering committees will lead to more collaborative sharing of knowledge between other members of management and CIO.	The use of IT competitive advantage is not strictly equivalent to improved financial performance.
Kearns and Sabherwal (2006)	Reich and Benbasat (1996) approach	Organisational emphasis on knowledge management and centralization of IT decisions affect top managers' knowledge of IT, which facilitates business managers' participation in strategic IT planning and IT managers' participation in business planning.	Regular meetings with the CIO and other IT managers would provide insight into the technical perspectives and meetings with business managers would assist in leveraging IT as a core competency.	Excluding environmental factors might be potential antecedents to IT planning sophistication.

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Rivard <i>et al.</i> (2006)	Henderson and Venkatraman (1993) SAM model	The effect of IT support for business strategy and IT support for firm assets on firm performance found positive.	An important criterion for either purchasing or developing a system should be the degree to which it supports and enhances firm's valued resources.	Small sample size. Common method or mono-method bias may exist.
Sabherwal and Chan (2001)	Drazin and Van De Ven (1985) approach	Business and IT strategies' alignment affects performance for prospectors and analysers.	The necessity to understand and monitor the nature of IT investment within an organization.	The ideal business strategies are really archetypes that firms may combine flexibly in practice.
Tallon and Pinsonneault (2011)	Venkatraman (1989a) approach	Uncovered positive and significant link between strategic IT alignment and agility and between agility and firm performance.	IT flexibility provides added boost to agility in volatile settings in an uncertain market.	Large firms with complex strategies could pose special challenges for alignment.
Teo and King (1997)	Drazin and Van De Ven (1985) approach	Fit has a significant positive relationship on organisational performance.	The contingency variables influence the evolution of the firm through various types of business planning-IT planning integration.	The questions pertaining to the evolutionary paths may be somewhat leading in their nature.
Wu <i>et al.</i> (2015)	Chan <i>et al.</i> (1997) approach	Uncovered significant linkage between IT governance mechanisms and strategic alignment and, further, between strategic alignment and organisational performance.	Communication mechanisms can strengthen IT support of business strategies.	Should investigate and measure the social alignment dimension.

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Examining the summarised table reveals that all empirically found that strategic IT alignment has a positive and significant impact on business performance. Some argue that a mutual understanding between IT and business executives enables more effective resource allocation to respond to environmental threats and opportunities (Tallon and Pinsonneault, 2011; Kearns and Lederer, 2000; Johnson and Lederer, 2010), e.g. innovation (Chan *et al.*, 1997). Whilst others emphasise the importance of planning and knowledge sharing amongst business and IT managers is impactful on business performance (Chan *et al.*, 2006; Kearns and Sabherwal, 2006).

Recognising this, the earliest research sought to examine the relationship between strategic IT alignment and organisational agility (Tallon and Pinsonneault, 2011), and strategic IT alignment and IT governance (Wu *et al.*, 2015) taking to account that these relationships would impact significantly on firm performance. This conceptualisation formed the basis for subsequent studies where different types of alignment were investigated. Specifically, researchers began to distinguish between alignment in terms of strategic plans (what firms intend to do) and alignment in terms of realised strategy (what firms actually do) (Coltman *et al.*, 2015). As such, the work of Sabherwal and Chan (2001) argues that their conceptualisation of alignment focuses on realised rather than intended strategies, whilst Kearns and Lederer (2003) focus on business and IT plans to investigate intended IT alignment. Both types of strategic IT alignment spurred a substantial stream of research focusing on this construct's definition, measurement, backgrounds and consequences. The vast majority of the studies investigate strategic alignment influence on organisational performance.

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Furthermore, strategic IT alignment can better direct organisational attention by allocating IT resources to support business activities and thus improve organisational performance (Cui *et al.*, 2015). These studies examined the necessity and benefits of aligning IT with the rest of the business (e.g. Byrd *et al.*, 2006; Chen, 2010; Kearns and Lederer, 2004; Mikalef *et al.*, 2015; Wang *et al.*, 2012). Although supporting the alignment between business and IT strategies increases profitability and generates a sustainable competitive advantage (Gerow *et al.*, 2015), achieving and sustaining it can be difficult (Leelien Ken, 2012). On the contrary, lack of strategic alignment between business and IT strategies is believed to be risky and could possibly lead into a steady decline in competitive ability (Rathnam *et al.*, 2004), and result in wasted resources and failed IT initiatives leading to adverse financial and organisational outcomes (Chen *et al.*, 2010; Gerow *et al.*, 2015). Besides, Kearns and Sabherwal (2006) examined the linkage of both strategies asserting that the importance of strategic IT alignment is the key success factor for a successful firm. Also, De Haes and Van Grembergen (2009) stressed being attentive to various business areas such as business vision, strategy, and communication that they remarked as having great potential for improving the alignment of business and IT strategies. For the most part, aligning business and IT strategies proved to enhance firm's performance in the long term, yet there is a possibility of misalignment of which the degree varies from one organisation to another. As such, Bergeron (2002) found that it is difficult to capture all aspects of strategic alignment, which could lead to ineffective impact on performance. Meanwhile, it was noted that failing to address environmental factors may, perhaps, cause insubstantial alignment between business and IT (Bergeron *et al.*, 2004; Chen, 2010; Croteau and

Raymond, 2004; Kearns and Sabherwal, 2006). The relationship between environmental factors (e.g. marketing) with organisational strategies is covered in the next sub-sections.

### **2.3.2 Strategic Alignment of Business-Marketing**

Strategic IT alignment has raised special interest amongst researchers because, according to contingency theory, the performance of firms is the result of the alignment between contingency factors such as environmental factors, strategy, and technology (Cataldo *et al.*, 2012). Simultaneously, the contingency perspective, marketing concepts, and factors may be systematically related in both theory and research (Zeithaml *et al.*, 1988). Thus, strategic alignment is not only limited to strategic IT alignment. In order for a firm to sustain its growth (Hunt and Lambe, 2000; Walker Jr and Ruekert, 1987), it must realise alignment between its business strategy and competitive environment (Iivari, 1992; Rogers *et al.*, 1999) or marketing strategy (Zeithaml *et al.*, 1988) as the latter is typically developed based on the evaluation of dramatic changes in the overall business environment (McDaniel and Kolari, 1987). Subsequently, the marketing strategy literature has been researched for many years to keep marketing strategically aligned with firm's strategic goals (Baker, 2008) in order to achieve a better performance (Cavusgil and Zou, 1994).

Whilst there is limited research on the alignment between business strategy and marketing strategy (see Table 2.2), marketing managers believe this alignment facilitates the achievement of business objectives (Valos and Bednall, 2010) and positively affects a firm's market share (Pleshko *et al.*, 2014), and financial performance (Bergeron, 2002). Thus, successful alignment of marketing strategy and business

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strategy will result in a successful organisation as a whole (Giannakis and Harker, 2014).

The strategic alignment between marketing and business strategies is the outcome of identifying and analysing the current and future needs of the firm's target markets and to integrate market information to continuously create greater customer value and competitive advantage (Acur *et al.*, 2012).

*Table 2.2: Strategic Alignment of Business-Marketing Studies*

<b>Source</b>	<b>Concepts</b>	<b>Findings</b>	<b>Implications</b>	<b>Limitation</b>
Grinstein (2008)	Narver and Slater (1990) approach.	Relationship between market orientation and strategic orientation was found strongly correlated.	Firms should be able to successfully adopt multiple strategic orientations developing a more complex corporate culture.	The need to examine the relationship between market orientation and other strategic orientations.
Hughes and Morgan (2008)	Venkatraman (1989a) approach.	Fitting strategic resources and market strategy for performance implications.	The strategic resources of learning, information distribution, strategy support, commitment, and implementation, leverage the ability of product-market strategies effectively.	This study is limited by the fact that it does not examine for the influence of the environment and no significant relationship is found for fit amongst prospectors.

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Olson <i>et al.</i> (2005)	Venkatraman (1989a) approach.	The study provide support for the relationship that each business strategy type requires a different combination of marketing strategic orientations.	Behavioral orientations are considered in addition to marketing organizational structural elements, the explanatory power of the model increases significantly across all strategy types.	The use of a single respondent from each organisation.
Slater <i>et al.</i> (2007)	Miles <i>et al.</i> (1978) approach.	The study found that each marketing strategic orientation fits best with a different business strategy enhancing firm performance.	Placing a high priority on developing customer sensing and relating capabilities.	The cross-sectional study is difficult for market dynamics.
Theodosiou <i>et al.</i> (2012)	Kohli and Jaworski (1990) approach.	The mediation of marketing orientation between business strategy and firm performance was found to be rather strong.	Managers should continuously monitor and assess environmental conditions to pursue appropriate strategic directions.	Organisational capabilities should be examined in the relationship between strategic orientations and performance.

In the marketing literature, strategic alignment is usually known by different terminologies such as mediation, balance, or interaction. The notion that marketing strategic orientation has a positive impact on business performance is well documented in scholarly work (Rodriguez Cano *et al.*, 2004), however, the interference of alignment has overwhelming evidence showing a significant positive relationship between a firm's strategic orientation and marketing strategic orientation. The outcome of marketing strategy mediation on a firm's strategic orientation was found to be more successful in

responding to the environment and developing new capabilities that lead to competitive advantage and superior performance (Theodosiou *et al.*, 2012). Moreover, according to Grinstein (2008), an appropriate balance between marketing strategic orientation and a firm's strategic orientation is a primary factor in the firm's performance and survival. This argument was supported by Olson *et al.* (2005) where they found through the use of alignment that each business strategy integrates best with a specific marketing strategy.

On the contrary, Strahle *et al.* (1996) demonstrate that strategic misalignment between business strategy and marketing strategy leads to confusion amongst business and marketing managers that could be caused by various reasons at different organisational levels, such as a miscommunication between departments. In summary, empirical research on the relationship between business and marketing strategies has evidently provided support that firms who adopt strategic alignment of business and marketing will outperform firms who do not regardless of industry conditions (Hunt and Lambe, 2000).

### **2.3.3 Strategic Alignment of IT-Marketing**

Research on strategic alignment enablers and inhibitors reveals results which give general insights but appears not to be sufficient to describe the specific challenge of IT strategic alignment in marketing and to examine the impact of different marketing concepts on IT usage (Wehmeyer, 2005). Yet, the need for a thorough alignment of IT and marketing activities is a well-accepted dictum (Lewington *et al.*, 1996). As marketing alignment allows for communicating and exchanging information about technological



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and market development, it enables technological and market alignment to work jointly and thus enhances the potential of strategic alignment (Gatignon and Xuereb, 1997). Whilst IT and marketing alignment are important for formulating a firm’s strategy, strategic alignment can be conceptualised as a multidimensional construct to work jointly and enhance the potential of strategic alignment (Acur *et al.*, 2012). A few studies (see Table 2.3) suggest that alignment between IT and marketing strategies ensures that IT provides marketing with the information systems needed to accomplish its goals or that IT strategy supports marketing through the development of products and services.

Table 2.3: Strategic Alignment of IT-Marketing Studies

Source	Concepts	Findings	Implications	Limitations
Blotnicky (2009)	Jaworski and Kohli (1993) approach.	Findings revealed that marketing orientation was positively correlated with internet-based IT adoption.	Elements of business environment influence the internet-based IT adoption such as market volatility, intensity of competition, and technological change.	The use of telephone survey instrument.
Borges <i>et al.</i> (2009)	Kohli and Jaworski (1990) and Venkatraman (1989a) approaches.	It was found that investment in interorganisational systems strongly supports the development of marketing orientation capabilities.	Managers should focus IT use on simulating activities related to the market intelligence generation and dissemination through the company.	The use of IT to support the components of marketing orientation is an antecedent of the critical success factor in e-business that could be investigated.

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Celuch and Murphy (2010)	Narver and Slater (1990) approach.	Relationship between IT-marketing orientation alignment and strategic flexibility improve competitive advantage.	Businesses can improve strategic flexibility through aligning IT capabilities to a market orientation.	Explore alignment and flexibility constructs relate to different domains beyond IT. The integration of additional strategy constructs could improve fruitful.
Hooper <i>et al.</i> (2010)	Chan <i>et al.</i> (1997) approach.	The study found that IT and marketing alignment had a positive impact on business and marketing performance.	Boundary-spanning role between IT and marketing have a shared interest in effectively managing customer database.	The possible split between customer-related measures and those which focus on marketing efficiency could be further explored.
Min <i>et al.</i> (2002)	Jaworski and Kohli (1993) approach.	The use of IT in terms of internet functions integrated with marketing strategic orientation sustains competitive advantage.	Managers should perceive an internet marketing orientation as a new way of implementing marketing orientation for efficiency and effectiveness reasons.	The need to refine the theory through the use of qualitative methodology.
Wehmeyer (2005)	Henderson and Venkatraman (1993) SAM model.	Conceptually discussed the alignment between IT and marketing and developed an alignment model.	The model is valuable for displaying the role of IT and IT executives in diverse CRM and database marketing initiatives.	Strategic IT-marketing alignment model can be used for pattern matching or theory building purposes.
Wei and Wang (2011)	Varadarajan <i>et al.</i> (2001) approach.	The study suggest that the firm can use market information system as strategic resources in gaining competitive marketing advantage.	Managers may want to acknowledge the potential interactions between and amongst certain strategic actions before implementing them.	The need to investigate other strategic resource such as interorganisational systems.

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Zhu and Nakata (2007)	Narver and Slater (1990) approach.	The relationship between single market orientation (customer-focused) and IT was found that it influences business performance.	IT capability is an effective means of supporting a firm's customer orientation efforts and should be continuously improved.	The inclusion of other mediators in the model.
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The positive impact of IT and marketing alignment on business performance has been reported in the literature; for example, Wehmeyer (2005) suggests aligning marketing needs (e.g. database marketing and customer relationship management) and IT solutions strategically. Meanwhile, a different approach for assessing alignment between marketing and IT has been reported, such as internet-mediated marketing improves business performance (Blotnicky, 2009; Min *et al.*, 2002). However, not many studies have addressed the strategic alignment between marketing and IT strategic orientations.

The strategic use of IT can be assessed by the way firms utilise market information systems (e.g. collecting customer and competitor information) to support its business strategy and marketing activities (Sabherwal and Chan, 2001; Venkatraman, 1989a). Prior literature investigated the strategic orientations of marketing and IT through the use of single orientation, e.g. alignment of marketing customer-focused strategy with IT strategic orientation (Zhu and Nakata, 2007), or alignment of IT flexibility strategy with marketing strategic orientation (Celuch and Murphy, 2010). Meanwhile, Hooper *et al.* (2010) investigate the alignment of marketing and IT strategic orientations in terms of their perception of the firm's strategic orientation. In practical terms, alignment of these

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strategies ensures that IT provides marketing with the systems that marketing needs to accomplish its goals and as a result it affects the firm's performance.

Overall, prior literature has provided useful insights into understanding different types of strategic alignment and their impact on organisational performance; it has explored strategic alignment mainly in terms of dyadic (pairwise) relationships (e.g. Cataldo *et al.*, 2012; Fink and Neumann, 2009; Oh and Pinsonneault, 2007). Such dyadic alignment is seen to have limited capacity to capture the complex nature and performance impact of strategic alignment (Cao, 2010; Kearns and Sabherwal, 2006) and could lead to possible inconsistencies since strategic alignment often involves multiple organisational factors (Drazin and Van De Ven, 1985). Besides, prior research on strategic alignment has often assumed that strategic alignment is generally applicable to all types of firms without taking into account the specific strategies of firms (Chan *et al.*, 2006). When strategic alignment is understood by considering the strategic orientation of firms, this could mean that there are different antecedents to strategic alignment and consequently the link from strategic alignment to organisational performance could be different. For this purpose, a firm's overall strategic orientation could be formed by a combination of particular types of strategic orientation. This suggest that firms with different types of strategic orientations could possibly have different antecedents to achieving strategic alignment, different patterns of strategic alignment, and consequently different links from strategic alignment to organisational performance as well, which are further discussed in the next section.

## 2.4 Generic Types of Strategic Alignment

The principal aim of strategic alignment was to identify congruent pattern (or generic types) of strategic orientations. Generic types of strategic alignment were developed on the basis of Miles *et al.* (1978) business strategic orientations through the use of dyadic relationship. Correspondingly, two different streams of research on generic types of marketing and IT strategies may be differentiated. First, generic types of IT strategy aligned with business strategic orientations was first introduced by Sabherwal and Chan (2001). Second, alignment of firm's strategic orientations with the generic types of marketing strategies reported by Narver and Slater (1990).

In the first stream, different IT strategic orientations is believed to be appropriate for the three business strategic orientations (Sabherwal and Chan, 2001). In the first place, the *flexibility* IT strategy refers to the use of IT for observing marketing information and changes of market, and providing a basis for decision making. Thus, flexibility strategy is rated highly important in market information systems and in strategic decision support systems (Sabherwal and Chan, 2001). This is consistent with firms adopting prospector strategy because prospector firms seek flexibility in technology and use an organic organisation structure (Doty *et al.*, 1993). However, the concern with flexibility and innovativeness often leads to a lack of controls and low operational efficiency.

In the same way, the *efficiency* IT strategy refers to the use of IT for monitoring and controlling daily operations, facilitating operational efficiency, supporting the functions of information sharing and communication to link with customers and suppliers, and providing a basis for decision making. A defender firm has greater fixed-asset intensity

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than the other strategies, with investments in highly cost-efficient but few core technologies (Doty *et al.*, 1993). This is ideally relevant to defender firms due to the efficiency strategy being rated highly important in operational support systems, interorganisational systems, and in strategic decision support systems (Sabherwal and Chan, 2001).

Lastly, the *comprehensiveness* IT strategy refers to employing IT for observing marketing information and market changes, supporting the functions of information sharing and communication to link with customers and suppliers, and providing a basis for decision making. To address conflicting demands of efficiency and innovation, the analyser firm uses a matrix organisation structure, and a dual technological core, with stable flexible components (Doty *et al.*, 1993). Also, this is the ideal IT strategy for analyser firms because they are rated highly important in all attributes except the operational support systems attribute (Belardo *et al.*, 1994; Hambrick, 1981; Miles *et al.*, 1978; Sabherwal and Chan, 2001; Segev, 1989).

In the second stream, the generic types of marketing strategic orientations were also believed to fit well with each business strategic orientation (Narver and Slater, 1990). Based on the summary of Walker Jr and Ruekert (1987), the strategic fit between strategy and environmental variables may be significant in determining the ultimate success of that strategy. Bamford and West (2010) discussed the vision of the business strategic orientations assuring that prospector tends to view the industry from its own internal perspective and its *customer* base rather than being concerned with the competition. Customer-focused strategy is the firm's sufficient understanding of its

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target buyers in order to be able to create superior value for them continuously (Narver and Slater, 1990). Gatignon and Xuereb (1997, p.78) define customer-focused as “*the set of beliefs that puts the customer interest first*”. Therefore, a customer-focused firm can be defined as a firm with the ability to identify, analyse, understand, and answer customer needs.

Unlike the prospector, defender firms take their *competitors* seriously and cautiously. They attempt to react swiftly and with an intensive attack to any move by a competitor that it deems threatening (Bamford and West, 2010). A competitor-focused firm can be defined as “*the ability to identify, analyse, and respond to competitors’ action*” (Gatignon and Xuereb, 1997, p.4). This includes the identification and construction of competitive advantages in terms of quality or specific functionalities and enables firm to position the new product well (Gatignon and Xuereb, 1997). Somewhere in between these two more extreme forms of organisations are analysers (Bamford and West, 2010; Shortell and Zajac, 1990; Slater *et al.*, 2010b).

In the light of these generic types, it is deemed that flexibility, efficiency, and comprehensiveness IT strategic orientations are positively associated with prospector, defender, and analyser business strategic orientations, respectively. In other words, flexibility is considered to be the best IT strategic orientation for an organisation followed by comprehensiveness and efficiency IT strategic orientations. However, as mentioned earlier, these strategic orientations would not do any better for business performance if aligned with any other than the associated business strategic orientation (Bergeron *et al.*, 2004). The basic premise is that an ideal form of alignment exists and

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deviations from this form would result in lower performance (Venkatraman, 1989a; Venkatraman, 1989b). This also applies to marketing strategy (Olson *et al.*, 2005). In the meantime, there is insufficient research on the alignment of IT strategy generic types with the generic types of marketing strategy. Although strategic alignment between IT and marketing based on strategies' functions, process, and capabilities (e.g. studies listed in Table 2.3) has been subjected to extensive discussion, alignment of Sabherwal and Chan's (2001) generic types of IT strategy with Narver and Slater (1990) generic types of marketing strategy has not been addressed previously. However, because it was suggested to 1) examine the strategic alignment between IT and marketing using the pattern matching or the generic types of strategic orientation (Wehmeyer, 2005); 2) integrate additional strategy (Celuch and Murphy, 2010) to the model of strategic alignment of IT and marketing as a mediator (Zhu and Nakata, 2007); 3) examine the interaction of other strategic orientations such as IT on business and marketing strategic alignment (Grinstein, 2008); 4) investigate the influence of environmental factors with the strategic alignment between business and IT (Bergeron *et al.*, 2004; Chen, 2010; Croteau and Raymond, 2004; Kearns and Sabherwal, 2006); and 5) align multiple factors to achieve superior organisational performance (Drazin and Van De Ven, 1985), this study has responded to these calls. It makes a clear advance on the extant literature by integrating the generic types of marketing and IT strategic orientations with business strategic orientations which may exert better firm performance. The point of this research is to provide a holistic view of firm performance linked with the triadic strategic alignment (alignment of three strategies: business, IT, and marketing). These identified



research gaps provide the theoretical basis for developing the conceptual framework which is discussed further in the next chapter.

### **2.5 Summary**

Chapter two presented a review of the literature that relates to strategic alignment which is the essence of the study. The first section starts by defining strategy and the classification of business, IT, and marketing strategic orientations. Following that, the term strategic alignment is briefly described from the early 1980s until present, covering the three types of strategic alignment. The last section covered the relationship of strategic orientations and strategic alignment and how this contributes to business performance. Through reviewing the literature four gaps were identified and are summarised into two points. First, alignment between IT and marketing strategic orientations is insufficient. Second, academic researchers urge the need to investigate the integration of additional factor between strategic alignment and business performance.

Towards contributing to filling the identified research gaps, it is important to review existing literature, and thereby pinpoint theoretical foundations upon which this study is based. Hence, this study conceptually proposes the use of triadic strategic alignment, which is deemed impactful on organisational performance. The following chapter presents the theoretical framework developed to guide the research and the proposed hypotheses within the research context.

## CHAPTER 3: THEORETICAL DEVELOPMENT

### 3.1 Introduction

This chapter describes the theoretical base for this research. In order to advance our understanding of strategic alignment, relevant research gaps are restated briefly as follows. First, many prior studies examine strategic alignment using a dyadic approach such as alignment between business strategy and IT strategy, business strategy and marketing strategy, or IT strategy and marketing strategy, which can only partially capture the nature of strategic alignment as strategic alignment includes multiple factors (Drazin and Van De Ven, 1985). Second, it has been suggested by prior research to integrate additional strategy to the strategic alignment model (Celuch and Murphy, 2010). Third, except for a few studies, strategic orientation of firms is rarely taken into consideration by research on strategic alignment (Chan *et al.*, 2006).

The chapter is organised as follows. Firstly, it makes use of the gained insights from the reviewed literature into developing the main theoretical framework that is generally drawn upon configurational theory and strategic alignment literature. Then a brief explanation of fit and its conceptualisation are discussed. This allows solid development of a theoretical framework through the use of multiple fit approaches. Finally, testable hypotheses are deduced by reviewing relevant literature and identifying the chosen approaches, which provides a foundation for the empirical research.

## **3.2 Strategic Alignment Theories**

Innovative theorising comes in different forms and needs to be formulated and assessed differently in different contexts (Guillemette and Paré, 2012). In an attempt to understand the relationship between intellectual strategic alignment and organisational performance, two of the most renowned theories that have been proposed are those of Drazin and Van De Ven (1985) and Venkatraman and Camillus (1984). Prior literature has focused on two competing theories as discussed by many academic researchers: contingency and configurational theories.

### **3.2.1 Contingency Theory**

Contingency theory, also called strategic alignment or strategic fit, is a class of behavioural theory that has roots in strategy literature (Donaldson, 2001). It is one of the modern theories in management disciplines, specifically, in the strategic alignment field where it has occupied a central role amongst various theories (Acur *et al.*, 2012; Bergeron *et al.*, 2004; Donaldson, 2006; Drazin and Van De Ven, 1985; Henderson and Venkatraman, 1991; Miller *et al.*, 1984).

Contingency theory contends that there is no best way of organising and that an organisational style that is effective in some situations may not be successful in others (Fiedler, 1964). In other words, the optimal organisation style is contingent upon various internal and external constraints and there is no universal or best way to manage (Trkman, 2010). That is, organisations must effectively align their strategies with the competitive environment if they are to perform effectively (Rogers *et al.*, 1999).

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Moreover, the contingency theorist Chandler (1962) argues that for an organisation (or its sub-units) to be effective, there has to be goodness of fit between organisational strategies and environment. Thus, it suggests that alignment between the “*patterns of relevant contextual, structural, and strategic factors*” (Doty *et al.*, 1993, p.1196) leads to superior firm performance and misalignment or misfit results in performance erosion (Oh and Pinsonneault, 2007).

The importance of contingency theory stems from an ability to predict performance based on the “fit” between factors. In particular, contingency theory proposes that organisations that achieve the best fit between internal needs and environmental demands will achieve the best adaption (Venkatraman, 1989b). The concept of fit has been well developed in the literature that integrates contingency thinking and found that strategic fit is connected to firm performance (Ginsberg and Venkatraman, 1985; Glaister *et al.*, 2008; Miles *et al.*, 1978). According to Drazin and Van De Ven (1985), organisational performance is a consequence of fit between two or more factors. Thus, the basic premise of contingency theory is that decision makers strive to align their organisational goals with the conditions in their external environments to achieve strategic fit and congruency (Lawrence and Lorsch, 1968). The advantage of contingency theory is that it embraces all of the aforementioned variety of strategic relationships, which consider internal and external resources and strategies in varying degrees (Cui *et al.*, 2014).

Although it has been known for many years that contingency theorists have asserted a connection between strategic alignment and organisational performance (Chan, 2002;

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Iman and Hartono, 2007; Powell, 1992), the perspective argues that lack of fit (or misfit) affects the performance of the entire organisation. According to the contingency theorist Donaldson (2001), misfit is a discrepancy score between the level of an organisational factor required by the contingency and the actual level of the organisational factor. It is described as a misalignment of the organisation with its strategies, environment, technology, or management style (Obel *et al.*, 2000). For example, a highly uncertain environment calls for a strategy that can adapt to the environment in a timely manner, whether or not a firm would have to plan, meet the competition, and realise efficiencies. If the developed strategy adapts to the environment, it will yield better results because strategic fit is achieved, otherwise it is misfit.

Because fit is the central to contingency theory, it explains variations in organisational performance and associations between contingencies (Donaldson, 2001; Drazin and Van De Ven, 1985). According to Venkatraman and Camillus (1984), strategic alignment is the fit between a firm's strategy and its internal and external factors suggesting that strategy is not a universal concept, but a contingent factor (Donaldson, 2006), which must be fitted into its context in order to enhance firm performance (Bergeron *et al.*, 2004). Although there has been a fairly steady stream of research on the relationship between strategy and a variety of factors, it still is not at all clear whether contingency theories of strategy are indeed generalisable (Ginsberg and Venkatraman, 1985).

Furthermore, contingency theorists Drazin and Van De Ven (1985) indicated that in the development of contingency theory, at least three different conceptual approaches to

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fit have emerged: selection, interaction, and system conceptualisations. Selecting an appropriate conceptualisation of fit is important in the development process of theoretical framework. According to Lindow (2012), multiple fit concepts have emerged, each proposing different relationships between the variables of interest, and hence, model specification. As a result, strategic management scholars have specified different conceptualisations of alternative definitions of fit and have developed guidelines for selecting the approaches that are most appropriate in studying different kinds of research questions.

Umanath (2003) provides a guideline on how these conceptualisations of fit can be operationalised based on three classifications: congruence, contingency, and holistic configuration. According to Cao *et al.* (2011), in IT-related studies, fit as congruence simply hypothesises that IT is related to organisational factors without examining whether this relationship affects performance. Fit as contingency assesses the performance impact of fit between IT and one type of organisational factor. In this respect, the basic premise of contingency theory is that strategic alignment can be understood through bivariate (dyadic) relationships amongst the individual factors (e.g. business strategy and IT strategy). Therefore, this approach cannot answer questions such as *“what combinations or configuration of strategic and organisational factors defines organisational classifications?”* (Reeves *et al.*, 2003, p.32). For this purpose, fit as configuration enables studies to examine the performance impact of holistic patterns of organisational factors (e.g. Bergeron *et al.*, 2001; Bergeron *et al.*, 2004; Xu *et al.*, 2006). According to Meyer *et al.* (1993), incorporating multivariate into contingency theory’s fragmented concepts gives rise to configurational theory. In this sense, configurational

theory is developed on the basis of contingency theory (Zaefarian, 2011), which is further discussed in the next sub-section.

### **3.2.2 Configurational Theory**

Configurational theory has been used in several studies over the last decade to assess complex, multidimensional phenomena implied in fit relationships (Mavondo *et al.*, 2007). As noted, configurational theory is defined as “*any multidimensional constellation of conceptually distinct characteristics that commonly occur together*” (Meyer *et al.*, 1993, p.1175). Although contingency theory would argue for single state of fit for each variable (Donaldson, 2001), configurational theory focuses on how unique patterns or configurations of multiple independent variables are related to the dependent variables, by aiming to identify multiple states of fit (Delery and Doty, 1996). That is to say that each strategy relates to a specific set of ideal organisational factors that would result in higher performance (Drazin and Van De Ven, 1985; Vorhies and Morgan, 2003). However, as noted from previous research (e.g. Bergeron *et al.*, 2004; Celuch and Murphy, 2010; Chen, 2010; Grinstein, 2008; Kearns and Sabherwal, 2006; Zhu and Nakata, 2007), the contingency approach is limited by assessing alignment through the use of bivariate relationships amongst two domains. As a result, these relationships are assumed to be linear, which does not take into account the nature of the organisation (Miller *et al.*, 1984). Therefore, assessing alignment through the use of multivariate relationships accommodates the concept of ideal configurations and incorporates a holistic approach, which can produce superior results. In short, Delery and Doty (1996) argued that the significant difference between the contingency and

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configurational approaches is that these configurations represent non-linear effects and high-order interactions that can result in maximum performance.

Furthermore, configurational theory is further classified into six mutually distinctive methods of fit conceptualisations. These are labelled: matching, moderation, mediation, covariation, profile deviation, and gestalt (Venkatraman, 1989a). However, the descriptions of these six approaches are categorised into three groups based on the number of domains they accommodate and how they are related to the criterion.

First, the *match* approach is defined as “*match between two related variables*” (Venkatraman, 1989a, p.430). In this perspective, fit is a theoretically-defined match between two related variables without necessarily considering a criterion variable (Chen and Huang, 2012). For example, Chen and Huang (2010) investigated the relationship between IT strategies by matching them to knowledge management strategies in order to achieve firm value. This approach was used in their study to specify the various functional forms between any two related variables. In other words, this perspective states that fit exists when IT strategies match knowledge management strategies, and whether the match improves firm performance would then be tested. Hence, this approach is dropped from this study as it is not capable of testing the relationship between more than two variables and is focused on finding patterns of similarity rather than performance implications (Venkatraman, 1989a).

Second, in the *interaction* approach or bivariate interaction, fit is the interaction of pairs of organisational context and/or structure factors that affects performance (Maelah, 2010). The interaction approach can further be broken down into fit as moderation and



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fit as mediation where the basic difference lies in the possible number of variables in the fit conceptualisation (Lindow, 2012). The literature shows that studies have generally explored the concept of fit in terms of bivariate relationships (Drazin and Van De Ven, 1985) to investigate alignment amongst pairs of organisational factors affecting performance (e.g. Cataldo *et al.*, 2012; Chan *et al.*, 1997; Dale Stoel and Muhanna, 2009; Fink and Neumann, 2009; Kearns and Lederer, 2004; Oh and Pinsonneault, 2007; Teo and King, 1997). However, dyadic alignment is seriously limited as the bivariate model is concentrated on measuring the alignment between two variables, ignoring the considerations of other crucial relationships. For example, Kearns and Sabherwal (2006) stated that marketing strategies might be potential antecedents to strategic alignment between business and IT and thus should not be excluded from strategic IT alignment. On the other hand, Henderson and Venkatraman (1989, p.16) stated dyadic alignment can lead to *“possible inconsistencies amongst multiple forms of interrelated bivariate”*.

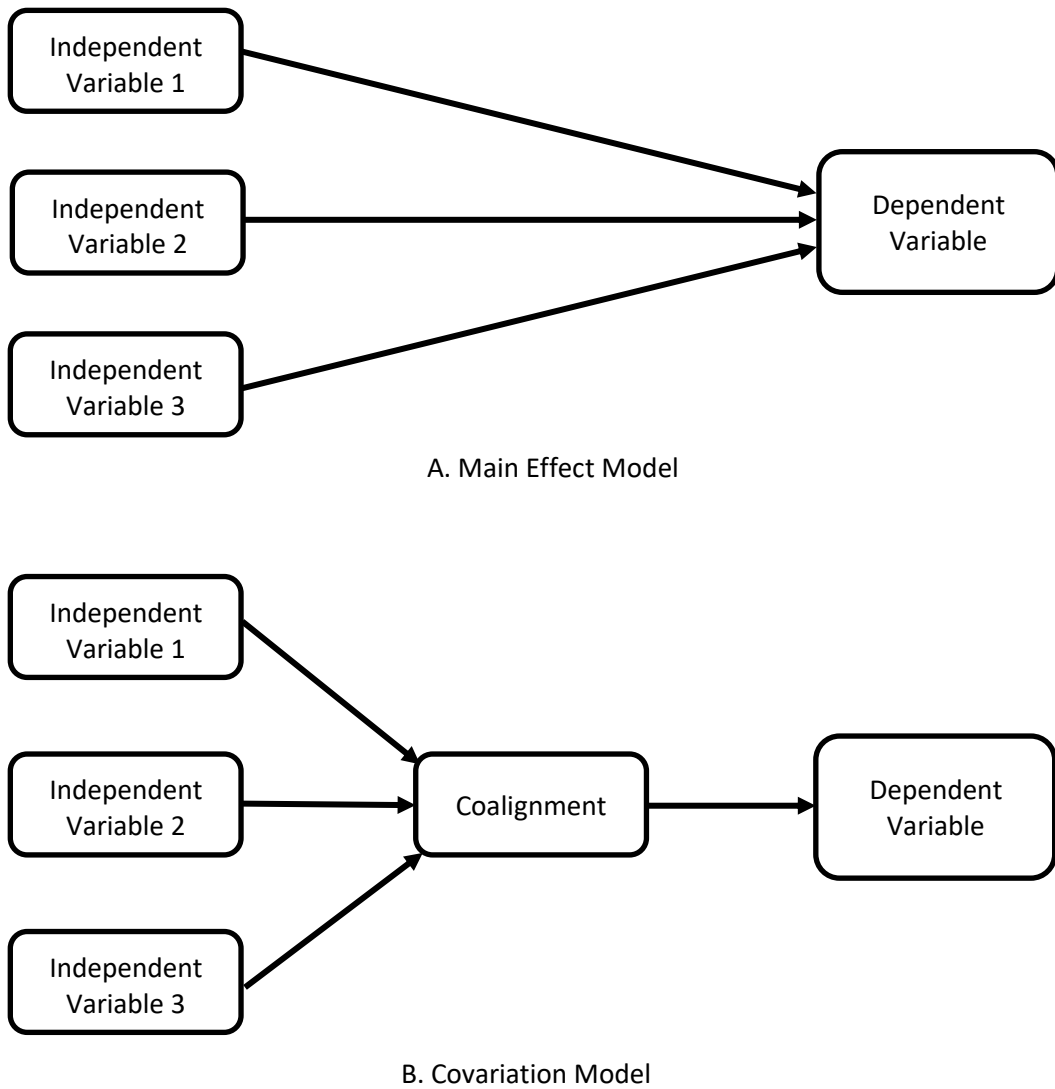
Third, whilst the matching and interaction approaches focus on how single contingencies affect single organisational factors, the *systems* conceptualisation assess interdependencies in a more holistic view (Lindow, 2012). As Drazin and Van De Ven (1985, p.520) notes, *“the systems approach emphasises the need to adopt multivariate analysis to examine patterns of consistency amongst dimensions”*. That being the case, the system approach can be further broken down into fit as profile deviation, fit as covariation, and fit as gestalts. Fit viewed as profile deviation represents the degree of adherence to a specified ideal strategic profile or pattern (Chen and Huang, 2012). This perspective assumes an ideal strategic pattern (or generic strategic type) exists and

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deviations from this ideal pattern should result in lower firm performance (Venkatraman and Camillus, 1984).

Fit as covariation is defined as “*a pattern of covariation or internal consistency amongst a set of underlying theoretically related variables*” (Venkatraman, 1989a, p.435). This concept is the process of factor analysis, the grouping of attributes based upon a set of observations (Chen and Huang, 2012). It requires to conceptualise a new construct referred as ‘coalignment’. The newly developed construct (see Figure 3.1) is then measured with the covariation perspective as a second-order (i.e. higher-order) construct derived from the first-order constructs (Croteau and Raymond, 2004). It is usually compared with the main effect model in which all independent variables are directly linked to the criterion variable.

Figure 3.1: A Schematic Representation of Fit as Covariation



Gestalts consider fit to be the product of cluster analysis, in which observations can be grouped based upon a set of attributes (Lindow, 2012). Bergeron *et al.* (2004) found that conflictual coalignment patterns of business strategy, business structure, IT strategy, and IT structure will exhibit lower levels of business performance.

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Towards enhancing knowledge on this strategic alignment realm, numerous researchers also emphasise the importance of exploring the strategic alignment using configurational theory (see Table 3.1).

*Table 3.1: Fit Classification of Identified Empirical Studies*

Authors	Variables											Forms of fit						
	Business Strategy	Business Structure	IT Strategy	IT structure	Marketing Strategy	Strategic Planning	Innovativeness	Environmental T.	Technological T.	HR Strategy	KM Strategy	Processes/Character	Matching	Mediation	Moderation	Covariation	Gestalt	Profile Deviation
Acur <i>et al.</i> (2012)						X	X	X	X						√			
Bergeron (2002)	X	X	X	X												√		
Bergeron <i>et al.</i> (2001)	X	X	X					X					√	√	√	√	√	√
Bergeron <i>et al.</i> (2004)	X	X	X	X													√	
Chan <i>et al.</i> (1997)	X		X										√		√			
Chan <i>et al.</i> (2006)	X		X			X		X										√
Chatzoglou <i>et al.</i> (2011)	X	X	X													√		
Chen (2014)			X			X					X					√		
Chen and Huang (2012)			X							X	X							√
Croteau and Raymond (2004)		X		X												√		
Croteau <i>et al.</i> (2001)		X		X												√		
Dutot <i>et al.</i> (2014)	X		X					X					√					
Jouirou and Kalika (2004)	X	X	X													√		
Oh and Pinsonneault (2007)	X		X										√		√			
Sabherwal and Chan (2001)	X		X															√
Tallon (2007)	X		X												√			√
Teo and King (1997)	X		X											√				
Verdú-Jover <i>et al.</i> (2008)								X				X	√			√		√
Vorhies and Morgan (2003)	X				X													√
Xu <i>et al.</i> (2006)		X			X							X		√	√	√		√
Zaefarian <i>et al.</i> (2013)	X											X				√		√

The table outlines earlier research on strategic alignment using Venkatraman's (1989a) classification of fit perspectives to examine the relationship between various constructs and organisational performance. Illuminating this realm would enhance the understanding of strategic alignment and captures the state of knowledge within configurational studies in different disciplines. The immediate insight that can be inferred from these studies is that not only can a study use a single form of fit but rather multiple forms of fit to offer more power for the conclusions drawn. This is the baseline for including multiple approaches, which is discussed in the next sections.

### **3.3 Theoretical Framework**

Conceptual framework or theoretical framework was defined by Maxwell (2013, p.39) as *"the concepts, assumptions, expectations, beliefs, and theories that supports and informs your research"*. It is a theory selected from conducting a literature review that specifies the research frame. Against the aforementioned discussions, the underpinning theory for this research is configurational theory, which is deemed to be more appropriate for addressing the research questions.

The configurational theorist Venkatraman (1989a) and the literature on strategic alignment emphasised the adoption of multiple approaches to fit, help in solving the confusion in configurational theory literature and yield more insightful results. Unlike the bivariate, a multivariate relationship includes multiple variables to give a richer and realistic view of strategic alignment (Sabherwal and Chan, 2001). Venkatraman and Prescott (1990) pointed out that a multivariate has greater explanatory power because of its ability to retain the complex and interrelated nature of the relationships between

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constructs. Additionally, Venkatraman and Camillus (1984) argued that alignment is achievable amongst three or more factors. For example, Chen (2010) believed that aligning marketing strategies with business and IT strategies in a firm may enable it to achieve higher levels of alignment and better performance. Bergeron *et al.* (2004), Schniederjans and Cao (2009) and Zheng *et al.* (2010) have empirically tested that the alignment of more than two constructs creates a competitive advantage by enhancing business performance. Also, Chatzoglou *et al.* (2011) investigated the alignment of IT, strategic orientation, and organisational structure and reported that this alignment has positive effects on performance factors. It is quite clear that aligning strategies together enables a firm to act as a whole in achieving the firm's goal (Schniederjans and Cao, 2009).

In brief, perspectives of fit such as matching, moderation, and mediation look at linear relationships between a few variables, whereas profile deviation, gestalt, and covariation require a larger number of variables to test multivariate relations. Given the different conceptualisations of fit, this research follows the view of Venkatraman's (1989a) covariation and profile deviation approaches to emphasise the need to adopt multivariate analysis to examine patterns of consistency amongst dimensions of organisational context, strategy, and performance. Although gestalt is classified under Drazin and Van De Ven's (1985) system approach, which covers a large number of variables, it is focused on finding patterns of similarity and not on performance implications (Singh *et al.*, 1996; Venkatraman, 1989a; Xu *et al.*, 2006). Thus, fit as gestalt is dropped from this research because it fails to anchor the concept of fit to the

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performance criterion used in this thesis, which is investigating the performance impact of the triadic strategic alignment.

It is suggested that multivariate approach to fit, such as fit as profile deviation and fit as covariation, provide complementary and significant information that may not be uncovered using a single approach (Drazin and Van De Ven, 1985; Pennings, 1987). In designing the theoretical framework, several works of literature were considered leading to the introduction of the concept of triadic strategic alignment (TSA). This section presents an evaluation of some articles and the relevance of utilising multiple approaches of strategic alignment.

One paper found to be highly relevant to this thesis's theoretical framework was developed by Xu *et al.* (2006). Xu *et al.* (2006, p.10) examined the impact of fit amongst strategy, structure and process on performance using fit as covariation and fit as profile deviation and their reasoning is:

*fit as profile deviation examines whether there are best practices against which firms can benchmark their performance. The covariation perspective explains whether an organisation needs to achieve internal consistency in its allocation of resources to benefit from a standardised strategy.*

This relationship was then operationalised to categorise ideal group separately. Then, deviation scores were obtained to represent the degree to which each firm in their study group is different from the ideal group. As for the covariation perspective, Xu *et al.* (2006, p.20) used a second-order construct composed of the coalignment stating:

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*the idea is that the coalignment of these three dimensions is captured in an unobservable theoretical construct at a higher plane than the individual functional dimensions. This conceptualisation can be translated into two structural equation models. Specifically, we specify a main effect model in which the three dimensions directly affect performance. We set up competing model so that a higher-order construct that affects performance captures the covariation amongst three first-order constructs.*

In order for them to test their model, they developed a new construct called 'coalignment' because the second factor can explain the covariation amongst the first-order factors more parsimoniously (Xu *et al.*, 2006).

Similarly, Bergeron *et al.*'s (2001) work adopts both approaches to better suit to theory testing, i.e. this perspective of fit assumes that there exists a pattern of covariation amongst business strategy, organisational structure, IT strategy, and IT structure that will be positively related to business performance. Moreover, a few studies (e.g. Verdú - Jover *et al.*, 2008; Zaefarian *et al.*, 2013) employed both fit approaches to assess the simultaneous impact of multiple variables on performance.

In line with previous literature, this research adopts multiple approaches, specifically, covariation and profile deviation in view of providing a better understanding of using the multivariate relationship for strategic alignment. Since both approaches (covariation and profile deviation) to fit are known for aligning more than two variables and have been theoretically tested, this research aligns three organisational strategies together, precisely a triadic strategic alignment, that has not been developed nor been empirically



examined to date. Triadic strategic alignment is also a concept that extends configurational theory across interorganisational boundaries. It describes the extent, direction, and strength of the internal consistency between the three strategies aiming to provide a richer view of strategic alignment from two points of view. Firstly, this research adopts the fit as covariation because, according to this fit conceptualisation, it may include more than two variables and is best known for capturing coalignment through the use of a multivariate relationship. In other words, the triadic approach is used to conceptualise and empirically test the impact of the triadic strategic alignment of business, IT, and marketing strategies on business performance. Secondly, the use of the profile deviation approach would provide further insights to examine the degree of orientations or rather the generic types of business, IT, and marketing strategies influencing organisational performance. These will be further investigated in the next sections.

### **3.4 Research Hypotheses**

Underpinned by configurational theory, strategic management literature, and chapter two's discussion, the two research questions identified in chapter one may be answered conceptually and be tested empirically:

- 1) How and why should a firm seek to achieve triadic strategic alignment amongst its business, IT, and marketing strategies?
- 2) How and to what extent does triadic strategic alignment relate to firm strategic performance?

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To be able to answer these research questions, the possible relationship presented in Figure 3.1 is analysed through the development of testable hypotheses. The hypothesis development is presented in two sections: covariation and profile deviation. Then these are tested empirically and findings are discussed extensively later in chapter six.

Since the research theoretical framework offers the foundation that guides the rest of the research, through identifying the relationships amongst important variables in the research study, it is necessary to list the different groups of constructs. The constructs that were identified as of significance to this research can be broadly grouped into five main contingency constructs. Each group contains a number of variables that were covered extensively in chapter two and are also covered in chapters four and five. These are:

1. Business Strategic Orientation Construct
  - a. Prospectors
  - b. Defenders
  - c. Analysers
2. IT Strategic Orientation Construct
  - a. Flexibility
  - b. Efficiency
  - c. Comprehensiveness
3. Marketing Strategic Orientation Construct
  - a. Customer-focused
  - b. Competitor-focused
4. Triadic Strategic Alignment Construct

5. Business Performance Construct

- a. Market Share
- b. Return on Investment
- c. Net Profit
- d. Financial Liquidity

**3.4.1 Covariation Hypothesis**

The first research question restated is “*How and why should a firm seek to achieve triadic strategic alignment amongst its business, IT, and marketing strategies?*” In order to address this research question and respond to previous calls for including additional factors into the relationship of strategic alignment and organisational performance, and the need to introduce a third variable in the traditional strategic alignment model, this research proposes the use of the covariation approach. The covariation perspective entails taking a holistic approach through the adoption of a multivariate relationship. This approach captures the multivariate relationship of coherent elements and the criterion through patterns of covariation, which requires the conceptualisation of a new construct. It implies a structure for the covariances between the observed variables (Hox and Bechger, 1998).

Based on this logic, employing the covariation approach seems to be more appropriate to test the internal consistencies for coherent elements (i.e. business, IT, and marketing strategies). However, to be able to conceptualise a newly developed construct that best describes coalignment, this approach requires conducting a second-order factor analysis that can capture the covariation between the set of the first-order factors (Venkatraman, 1989a). An appropriate fit for this model implies that such variation and covariation is

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accounted for by the second-order factor, which lends support to the existence of internal fit amongst the set of related variables (Lindow, 2012; Venkatraman and Camillus, 1984). Thereupon, the alignment relationship amongst the three strategies (business, IT, and marketing) and organisational performance is best conceptualised as triadic strategic alignment (TSA).

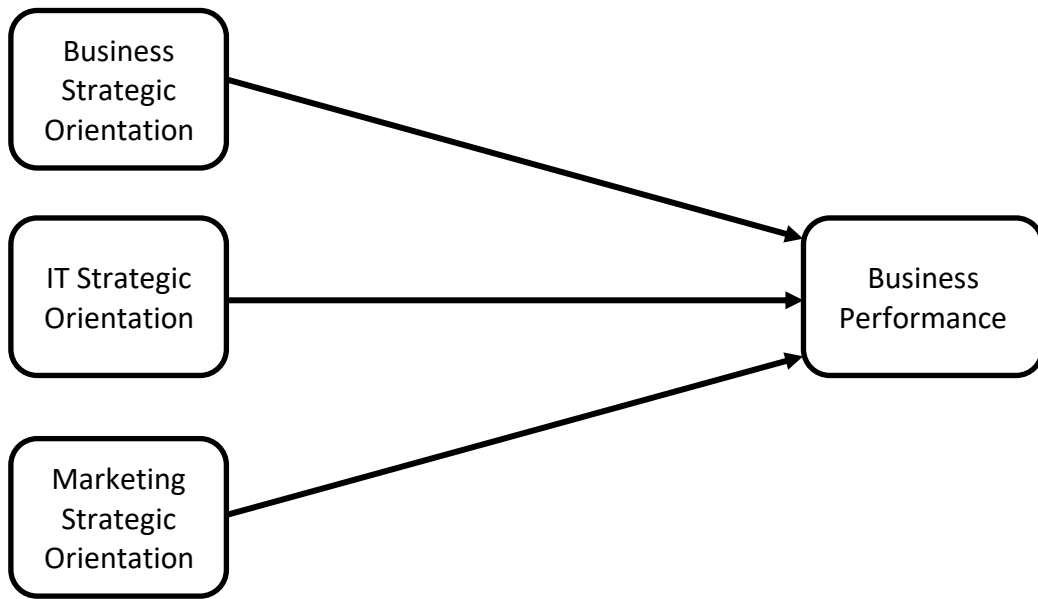
In this regard, a firm should seek to achieve triadic strategic alignment between business, IT, and marketing strategies as this allows the firm to support its business strategy with IT, which has become an integral part of all organising (Orlikowski and Scott, 2008), and marketing strategy that considers dramatic changes in the overall business environment (Iivari, 1992; Rogers *et al.*, 1999). Such triadic alignment is more holistic since aligning multiple strategies tends to enable a firm to act as a whole (Schniederjans and Cao, 2009), thereby to achieve a higher level of alignment and better performance (Chen, 2010). Strategic alignment is also achievable amongst three or more factors (Venkatraman and Camillus, 1984). By including multiple organisational strategies, triadic strategic alignment is likely to give a richer and more realistic view of strategic alignment, as pointed out by Venkatraman and Prescott (1990) that strategic alignment including factors has greater explanatory power because of its ability to retain the complex and interrelated nature of the relationships between multiple factors. A few studies have empirically tested that alignment including multiple factors allows a firm to enhance its performance (Bergeron *et al.*, 2004; Schniederjans and Cao, 2009; Zheng *et al.*, 2010). Chatzoglou *et al.* (2011), for example showing that the alignment between IT, strategic orientation, and organisational structure has positive effects on organisational performance.

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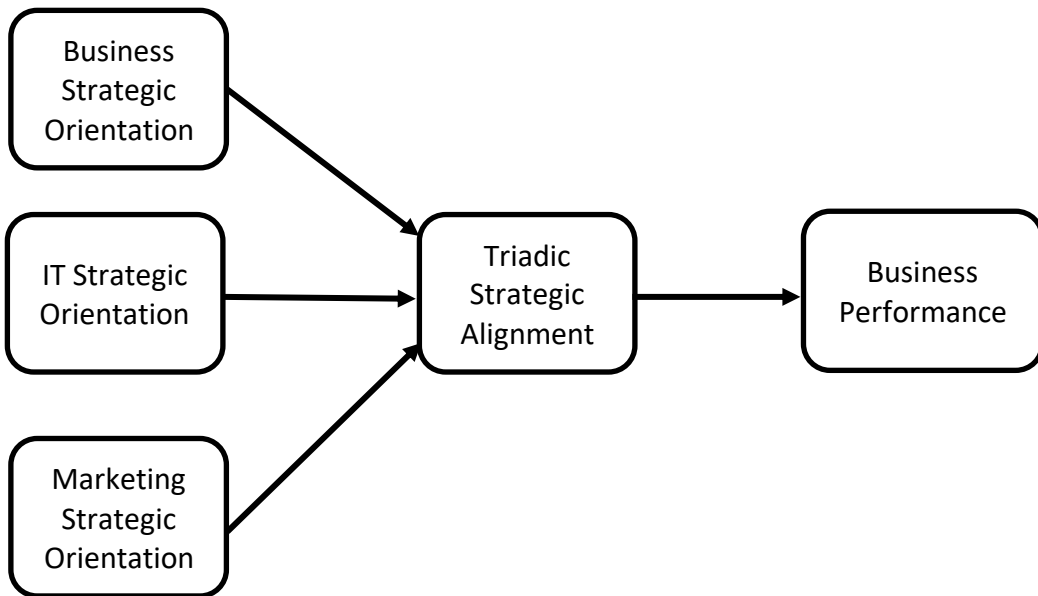
According to Venkatraman (1989a), to explain fit as covariation it is important to develop a higher-order (i.e. second-order) construct that can capture the covariation between a set of lower-order (i.e. first-order) constructs. Another reason for using coalignment as a higher-order model is that a regression model does not suffice for this model of fit (Venkatraman, 1989a). This is because regression coefficients could be statistically significant and yet fail to yield any logical linkage between triadic strategic alignment and strategic orientations.

In order to assess the assumption that within each strategic type there exist ideal types against which other firms can benchmark their relationship characteristics in ways to improve performance, this research model examines the impact of internal consistency regarding aligning a company's strategic orientation with triadic strategic alignment to achieve superior relationship performance. This is done by comparing the triadic strategic alignment model with the main effect model in which all the lower-order constructs are directly linked to the performance construct, as suggested by Venkatraman (1989a) and empirically tested by Xu *et al.* (2006). This would assess the extent to which the research framework will influence performance construct. The developed research model presented in Figure 3.2 shows how the researcher theorises the relationships amongst several factors identified as being important to the research questions. It draws on the reviews of previous knowledge to discuss the interrelationships amongst variables that are deemed to be integral to the dynamics of the situation being investigated. Hence, it helps to postulate appropriate hypotheses to test certain relationships and thus improve our understanding of the phenomenon under study.

Figure 3.2: Research Model



A. Main Effect Model



B. Covariation Model

The conceptualised second-order construct (i.e. triadic strategic alignment construct) is important to understand the relationship between business, IT, and marketing strategies and its impact on organisational performance. The relationships between the

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contextual variables and triadic strategic alignment construct are represented in the model by a single directed arrow connecting each contextual variable (business, IT, and marketing strategic orientations) with the triadic strategic alignment construct. The newly developed construct, triadic strategic alignment, explains the covariation amongst the first-order constructs in a more close-fitted manner. The elaborated research framework consists of five major constructs. The first three constructs are the business strategic orientation integrated together with the second and third constructs representing IT and marketing strategic orientations, which together are represented by the TSA construct. Linking the fourth construct (TSA) to the fifth construct (organisational performance) can test the direct effect of such a combination of organisational attributes on performance.

In terms of operationalising the covariation approach, it can be modelled in different forms of structural equation modelling (Venkatraman, 1989a). Structural equation modelling was used in past studies to investigate the conceptualised coalignment through the use of multidimensional variables and found to have positive effects on organisational performance (e.g. Chatzoglou et al., 2011; Xu et al., 2006). The literature has indicated very definitely that IT (e.g. Sabherwal and Chan, 2001) and marketing (e.g. Bamford and West, 2010) each aligned together with business (e.g. Miles et al., 1978) exercised a positive influence on business performance. Indications were that where the integration of additional strategy constructs (Celuch and Murphy, 2010) within the dyadic strategic alignment could prove fruitful. Whereas Bergeron (2002) emphasised the urge to integrate other domains of business and IT strategy and structure to extend the understanding of strategic alignment on organisational performance. Similarly, Chan

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et al. (1997) indicated that for examining IT strategic alignment domains of interest could add much to the literature. This could mean that the integration of IT with marketing can also produce competitive advantage.

One recent study supported this argument. Hooper *et al.*'s (2010) model demonstrated that IT-marketing strategic alignment is significantly related to marketing and business performance. This empirical study also noted that factors other than IT-marketing strategic alignment can clearly impact on performance. At the same time, Olson *et al.* (2005) investigated the implication of fit between business and marketing strategic orientation on business performance. Although the marketing strategic orientation contribution to strategic alignment is under-researched, it is certainly important to unveil the contribution of marketing to strategic alignment on business performance. Another study (Borges *et al.*, 2009) highlighted that IT capabilities positively influence business performance, if they have an adequate marketing orientation. This empirical study does not necessarily reflect on IT capabilities, but rather it provides a useful insight that IT strategic orientation could be part of the strategic alignment.

Despite the fact that configurational studies (e.g. Bergeron, 2002; Bergeron *et al.*, 2001; Chatzoglou *et al.*, 2011; Chen, 2014; Croteau *et al.*, 2001; Croteau and Raymond, 2004; Jouirou and Kalika, 2004; Verdú - Jover *et al.*, 2008; Xu *et al.*, 2006; Zaefarian *et al.*, 2013) found congruence between more than two constructs, there is still an unclear relationship between business, IT, and marketing strategic orientation that needs to be explored. Thus, this research assumes and proposes the necessity to fit business strategic orientation with IT and marketing strategic orientation and that such a fit will



have beneficial impact on an organisation's business performance. The idea of triadic strategic alignment is captured in an unobserved theoretical construct at a higher level than the individual elements of business, IT, and marketing strategic orientations. The assumption is that if business, IT, and marketing strategic orientations have an influence on the triadic strategic alignment, then the triadic strategic alignment model should work better in comparison to the direct effect model (Venkatraman, 1989a). Therefore, the following hypothesis is tested based on the covariation perspective:

**H1:** *The triadic strategic alignment between business strategic orientation, IT strategic orientation, and marketing strategic orientation is positively associated with better firm performance.*

### **3.4.2 Profile Deviation Hypotheses**

Against the theoretical background discussed earlier and based on the research questions stating "*How and to what extent does triadic strategic alignment relate to firm strategic performance?*", the second configurational perspective of this study focuses on the profile deviation fit. The profile deviation fit is characterised by holistic view that can play in the development of theory.

Previous literature used fit as profile deviation to examine the alignment in order to identify the generic alignment type (e.g. Chan *et al.*, 2006; Sabherwal and Chan, 2001; Sabherwal and Kirs, 1994; Tallon, 2007). The generic type is measured by how much alignment there is in the context of deviation or difference. For instance, for a given strategic orientation, how different is a company's actual IT use from its ideal IT use

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where ideal is reflective of perfect alignment. These generic types of dyadic strategic alignment are then examined against organisational performance (e.g. Bergeron *et al.*, 2004; Sabherwal and Chan, 2001). The generic types of dyadic strategic alignment were clearly noted by researchers as limited for not including crucial factors that could add value to firm performance (Bergeron *et al.*, 2004; Celuch and Murphy, 2010; Wehmeyer, 2005; Zhu and Nakata, 2007). However, the profile deviation approach, on the other hand, overcomes this limitation by assessing strategic alignment amongst several factors through the use of multivariate approach. This is because this approach assesses the simultaneous impact of the multiple variables on performance (Doty *et al.*, 1993; Venkatraman, 1989a) through examining the degree of adherence to a specified ideal strategic profile or pattern (Chen and Huang, 2012) for a given strategy type (Dess *et al.*, 1993), which in turn addresses the major deficits of the dyadic strategic alignment studies.

Although the proposed alignment model in the previous section is to examine the relationship between the triadic strategic alignment and organisational performance using the covariation approach, the profile deviation approach can investigate the different configurations or generic types of the triadic strategic alignment. This approach assumes generic types of triadic strategic alignment exist and deviations from the ideal alignment should result in lower firm performance (Venkatraman and Camillus, 1984).

Based on the above argument, three generic types of triadic strategic alignment could be identified by considering different types of strategic orientation of firms. It can be

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expected that prospectors, defenders, and analysers should be supported and enabled by different IT and marketing strategies. Due to the fact that the covariation fit focuses on testing the impact of internal consistency, it is complementary to fit as profile deviation. That is to say both approaches to fit assess the assumption that generic strategic types exist in ways that improve the relationship with performance. Therefore, this led to the development of the second theoretical framework which suggests that different types of strategic orientation of firms with optimal IT and marketing strategies can accomplish an ideal triadic strategic alignment.

The emerging body of literature on strategic alignment depicts triadic strategic alignment or congruence amongst generic types of strategic orientations leading to better organisational performance than those achieved when alignments are misfit. Subsequently, the adherence to the ideal profile between the main constructs and variables are expected to be significantly associated with better performance and any deviations will cause misfit. It has been noted that configurational theory has been taken by prior studies (e.g. Andres and Zmud, 2001; Ghobadi and D'Ambra, 2013; Sambamurthy and Zmud, 1999) to reveal such fit or misfit amongst multiple factors. Yet recent studies supporting theoretical based patterns (or generic types) have not examined the relationship amongst the three strategies (Olson *et al.*, 2005; Sabherwal and Chan, 2001). To my knowledge, such generic types of business strategic orientations (Miles *et al.*, 1978), IT strategic types (Sabherwal and Chan, 2001), and marketing strategic types (Bamford and West, 2010) has not previously been done.

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However, research on triadic strategic alignment and performance relationship is limited and the configurational perspective is the best approach to fill this gap by defining, measuring, and testing configurations because the fit amongst factors depends on the configurations that are considered (Kim *et al.*, 2014). As discussed previously, this approach to fit suggests that prospectors, defenders, and analysers should be aligned in a way that is more congruent with IT and marketing strategies, and therefore these unique generic types result in triadic strategic alignment and higher business performance. On the contrary, poor performance could be the result of misalignment (Obel *et al.*, 2000). This will provide insight as to whether a firm that has achieved triadic strategic alignment would perform significantly better than a firm that has not. Hence, a number of hypotheses are developed to test the three generic types of triadic strategic alignment.

Prospectors desire for flexibility and innovativeness in their market. They are leading innovators; invest heavily in product R&D and environmental scanning so they can continually innovate new products and enter new markets (Miles *et al.*, 1978). As far as IT is concerned, they emphasise flexibility so they can make quick strategic decisions (Sabherwal and Chan, 2001). With regard to business environment, prospectors tend to view the industry from their own perspectives and customers; they collect detailed information about customers in order to meet customer needs Slater *et al.* (2010a). Therefore, it is plausible that prospectors can be better supported by IT flexibility strategy and customer-focused marketing strategy and will perform better, which is triadic strategic alignment; if prospectors are supported by other IT or marketing

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strategies, this is misalignment and poor performance could be the result (Obel *et al.*, 2000).

This will provide insight as to whether a firm that has achieved triadic strategic alignment would perform significantly better than a firm that has not. For example, alignment of IT flexibility profile with prospector strategic orientation is likely to work well than being aligned with defender strategic orientation. This suggests the following:

**H1.1:** *Prospectors aligned with IT flexibility strategy and customer-focused marketing strategy are more strongly associated with better performance than those prospectors supported by other IT and marketing strategies.*

Defenders emphasise reducing costs, avoiding organisational change, and maximising effectiveness and efficiency of productions (Miles *et al.*, 1978). Thus, they are seen to be best supported by IT efficiency strategy that is oriented towards internal and interorganisational efficiencies and long-term decision making (Sabherwal and Chan, 2001). Considering business environment, they are competitor-focused; they defend their competitive positions against all competitors or potential competitors by focusing on a limited number of key criteria such as costs (Bamford and West, 2010). Thus, defenders should be supported by IT efficiency strategy and competitor-focused marketing strategy; otherwise, aligning defenders with other IT and marketing strategies will cause misalignment. Therefore, it is conceivable to assume that:

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**H1.2:** *Defenders aligned with IT efficiency strategy and competitor-focused marketing strategy are more strongly associated with better performance than those defenders supported by other IT and marketing strategies.*

The third generic type of triadic strategic alignment considers analysers that are a combination of prospectors and defenders. On the one side, they monitor customer reaction and perform sophisticated customer analysis; on the other hand, they intensively examine competitors' activities (Olson *et al.*, 2005). Thus, they focus on maintaining a stable domain of core products, closely watching competitor's activities, and seeking new market opportunities (Miles *et al.*, 1978). They are seen to be best supported by IT comprehensiveness strategy to enable them to make comprehensive decisions (Sabherwal and Chan, 2001). Therefore, it is hypothesised that:

**H1.3:** *Analysers aligned with IT comprehensiveness strategy and a marketing strategy focused equally on competitors and customers are more strongly associated with better performance than those analysers supported by other IT and marketing strategies.*

The fit as profile deviation can be operationalised using pattern analysis (Lindow, 2012). A number of studies that comply and assist in developing the research theoretical framework, for example, Sabherwal and Chan (2001, p.20) have used fit as profile deviation between business and IT strategies stating that:

*for an approach that examines alignment using interaction terms or moderating effects of variables becomes cumbersome and problematic when multiple*

*variables are involved. Because of these difficulties, a profile deviation approach relying on a theoretical or empirical configuration is recommended for assessing alignment between two multivariate constructs.*

They operationalised this by creating ideal profiles or patterns to measure the degree of alignment. As for the strategic alignment and performance relationship, it was operationalised using regression analysis. A further discussion on operationalising these perspectives are presented in the next chapter.

### **3.5 Summary**

Chapter three provides a theoretical overview, explanation and discussion of the triadic strategic alignment concept. A lack of understanding of the triadic strategic alignment suggests a need for clarification and this study explains the theory by offering a definition of the concept.

This chapter has presented a clear understanding of the strategic alignment theories in the literature and the different conceptualisations of fit. The underpinning theory of this research was developed on the basis of conducting literature review. Also, the development of triadic strategic alignment concept was discussed, which was supported by the conceptualisation approaches of fit and the antecedent studies of strategic alignment. The following section identified fit as covariation and fit as profile deviation as the most appropriate approaches employed in this study through illustrating the relationship between business, IT, and marketing strategic orientations. In addition, testable hypotheses were developed from theoretical considerations and prior research

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that underline the conceptualised associations between the variables. Hypothesis 1 is derived from the first research question. It addresses the main concern of this study of whether there is an effective impact of triadic strategic alignment on business performance. Meanwhile, Hypotheses 1.1, 1.2, and 1.3 are derived from the second research question. They address the generic types of triadic strategic alignment for each business strategic orientation. Table 3.2 summarises the developed hypotheses of which are deemed to be important to the present study aim and objectives. Table 3.3 summarises how the developed hypotheses map against research questions. This chapter concludes by highlighting the importance of triadic strategic alignment, which should be of interest to both practitioners and researchers. Chapter four will present the research method that is used to conduct the empirical study.

*Table 3.2: Summary of Hypotheses*

<b>Hypotheses</b>	<b>Description of Hypotheses</b>
<b>H1</b>	The triadic strategic alignment between business strategic orientation, IT strategic orientation, and marketing strategic orientation is positively associated with better firm performance.
<b>H1.1</b>	Prospectors aligned with IT flexibility strategy and customer-focused marketing strategy are more strongly associated with better performance than those prospectors supported by other IT and marketing strategies.
<b>H1.2</b>	Defenders aligned with IT efficiency strategy and competitor-focused marketing strategy are more strongly associated with better performance than those defenders supported by other IT and marketing strategies.
<b>H1.3</b>	Analysers aligned with IT comprehensiveness strategy and a marketing strategy focused equally on competitors and customers are more strongly associated with better performance than those analysers supported by other IT and marketing strategies.



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*Table 3.3: Mapping Hypotheses and Research Questions*

<b>Research Questions</b>	<b>Hypotheses</b>
<b>RQ1:</b> <i>How and why should a firm seek to achieve triadic strategic alignment amongst its business, IT, and marketing strategies?</i>	<b>H1</b>
<b>RQ2:</b> <i>How and to what extent does triadic strategic alignment relate to firm strategic performance?</i>	<b>H1.1, H1.2, H1.3</b>

## **CHAPTER 4: METHODOLOGY**

### **4.1 Introduction**

After determining the research questions in chapter one and reviewing the relevant literature in chapter two, chapter three discussed the theoretical foundation of this thesis which proposes to examine the impact of triadic strategic alignment amongst business, IT, and marketing strategic orientations on organisational performance. In order to appropriately address the research questions and test the developed hypotheses, an adequate research methods have to be selected.

This chapter details the methodology used to examine the theoretical framework developed in chapter three. To achieve that, a reminder of the research questions are stated that express the main objectives of the research. Thereafter, this chapter starts with an overview of the research paradigm of the empirical research in terms of philosophical perspective and then moves on to a description of the research methodology. Quantitative approach is discussed and explained in section four. Then, section five covers the survey methods including measurements employed to conduct empirical tests of the proposed hypotheses. Following that, a description of the data collection method which uncovers the selected population and the instrument design, also the reliability and validity will be discussed. These sections are also followed by a discussion of the data analysis methods adopted in this research. Final section will include a brief description of the ethical considerations.

## 4.2 Research Questions Restated

Based on the gaps in the literature identified in chapters one and two, this research's key objective is to understand and describe the role of alignment between business, IT, and marketing strategic orientations and organisational performance.

**RQ1:** *How and why should a firm seek to achieve triadic strategic alignment amongst its business, IT, and marketing strategies?*

This question aims to explore the importance of achieving triadic strategic alignment, specifically by aligning business, IT, and marketing strategies. Given the concept is newly adopted in the strategic alignment literature, this will determine the scope of achieving strategic goals and enhanced performance through working IT and marketing strategic orientations jointly towards the firm's strategic orientation. As well as, that firms should seek to achieve triadic strategic alignment; it is also quite important to provide insights on how to align these strategies. Thus, this descriptive question aims to better understand the different types of IT and marketing strategic orientations and how they best align with firm's strategic orientation which can shape a proper triadic strategic alignment that affects performance.

**RQ2:** *How and to what extent does triadic strategic alignment relate to firm strategic performance?*

This research question is best addressed through the utilisation of the profile deviation approach to fit. Because the concept represents the degree of adherence to a specific ideal strategic profile or pattern, the generic type is measured by how far is triadic

strategic alignment in the context of deviation or difference from the firm's strategic orientation. Thus, it has become necessary to explore the different types of strategic orientation of firms with optimal IT and marketing strategies which can accomplish an ideal strategic alignment. This implies that there are generic types of triadic strategic alignment and a firm should adopt either type to achieve enhanced performance. Whilst the second research question focuses on identifying the generic types of triadic strategic alignment, it is also to distinguish between the generic types and learn whether performance components are affected by the triadic strategic alignment or not. Thus, this research question examines the perceived outcomes of the triadic strategic alignment in organisations.

### **4.3 Research Philosophy**

In order to explore the above research questions and to collect data in effective and appropriate manner, the study has to adopt certain philosophical position. According to Saunders (2015), the term 'research philosophy' refers to a system of beliefs and assumptions about the development of knowledge. These beliefs and assumptions matter in terms of explaining 'how knowledge can be created and constructed in a rigorous and meaningful way in order to answer a research problem' (Altinay and Paraskevas, 2008:69). Different beliefs and assumptions influence researchers towards the selection of appropriate methodologies. This means that a suitable research philosophy must be clarified to help gather evidence to be able to answer the research questions. As highlighted by Easterby-Smith *et al.* (2002), the knowledge of research philosophy assists the researcher with different types of methodologies and as such

avoiding inappropriate and unrelated works. Nevertheless, Saunders (2015) identified three major ways of thinking in business and management about research philosophy regarded as:

1. Ontology (the nature of reality and being).
2. Epistemology (the study of knowledge).
3. Axiology (the role and place of values in the research process).

### **4.3.1 Ontology**

*Ontology* is concerned with the nature of reality, which raises questions of the assumptions researchers have about the way the world operates and the commitment held to particular views (Saunders, 2015). Jacquette (2014) described ontology's discipline as a method or activity of enquiry into philosophical problems about the concept or facts of existence. Although the philosophy meaning is to seek the degree to which we think a phenomenon is real or not real, it presents two different aspects, namely objectivism and subjectivism to help understand the theory of being (Glynn and Woodside, 2009). Whereas the former refers to the position that social entities exist in reality external to social actors concerned with their existence (Saunders, 2015). Whilst the latter aspect holds that social phenomena are created from the perceptions and consequent actions of those social actors concerned with their existence (Saunders, 2015). Ontology focuses on answering questions like what is existence? What properties can explain the existence? Thus it is very important to perpetuate the sense of reality. The relevance of ontology philosophy in business and management, is its meaning on

how a researcher understands things existed as tangible versus intangible and tacit versus explicit (Strang, 2015).

### **4.3.2 Epistemology**

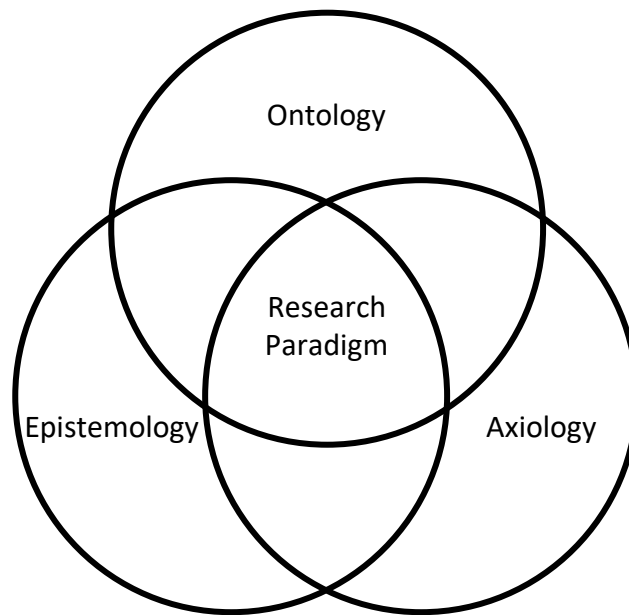
*Epistemology* concerns what constitutes acceptable knowledge in a field of study (Saunders, 2015). This means it seeks to discover the nature, origin, and limits of human knowledge to provide foundation for what we consider to be true knowledge (Tymieniecka, 2014). The study of epistemology generally involves a debate between rationalism and empiricism, which concerns the extent to which we are dependent upon sense experience in our effort to gain knowledge (Semple, 2008). Rationalism is a philosophy based on the ideas that human make sense of the world through reason and that reason provides the means of acquiring knowledge (Denham and Lobeck, 2012). Whereas empiricism philosophy is based on the idea that humans learn through experience rather than reason (Littlejohn and Foss, 2009). Epistemology seeks to answer questions such as what can we know? How do we acquire knowledge? This is important because it is substantial to how we think. Without understanding how we rely upon our senses, how we acquire knowledge, we have no coherent path for our thinking (Runge, 2014). In general, epistemology in business and management refers to the disciplinary socialisation govern the nomenclature of the practitioners or terminology for communicating knowledge (Strang, 2015).

### 4.3.3 Axiology

*Axiology* is a branch of philosophy that studies judgments about value (Saunders, 2015). It refers to the theory of beliefs, such as religion and soci-cultural values, however, in business and management it refers to the priority of values conditioned by organisational and global culture socialisation (Strang, 2015). This philosophy incorporate the values of ethics and aesthetics concerned with morals and with the problems of beauty and art, respectively (Mingers, 2003). Axiology focuses on questions about what 'ought to be'. For example, axiological questions can be like what is value? What is desirable? Thus these questions are important in one's curriculum development (Tomar, 2014). Nevertheless, in business and management, axiology does not question the existence but rather the importance of values in the mind of the researcher (Strang, 2015).

As simple as it can be, the three major ways of thinking (i.e. ontology, epistemology, and axiology) together form a paradigm (Figure 4.1). According to Willis (2007, p.8), a research paradigm (philosophical position or alignment) is "*made up of the general theoretical assumptions and laws, and techniques for their application that the members of a particular scientific community adopt*". To view this properly, the ontological assumptions informs the epistemological assumptions which informs the axiological assumptions and these all give rise to the methods employed to collect data. The philosophical alignment (alignment between researcher's belief) leads into the identification of the research paradigm and research methodology (Durant-Law, 2005).

Figure 4.1: Research Paradigm. Source: Durant-Law (2005)



This paradigm explains the study of general and fundamental problems concerned with the nature of reality (ontology), how this reality is captured (epistemology), and what exist in reality (axiology) (Leong, 2008). As a matter of fact, there are number of research paradigms and a variety of research approaches, starting from positivism, towards interpretivism in the centre with the pragmatism at the extreme end (Saunders, 2015). Table 4.1 below describes these three paradigms against the three philosophical approaches discussed previously.

The first paradigm, refers to the *positivist* who believe that reality is a stable and can be observed and described from an objective viewpoint (Saunders, 2015). Positivism is based on relative explanatory power, logical consistency, and theoretically to confirm empirical observations (Kura, 2012). Thus, this paradigm methodologically advocates abstracted empiricism based on quantitative methods, which were mainly numerical and subjected to statistical analysis (Kura, 2012).



CHAPTER 4: METHODOLOGY

Table 4.1: Research Major Philosophies and Paradigms. Source: Saunders (2015)

		Philosophies			
		Ontology (nature of reality or being)	Epistemology (what constitutes acceptable knowledge)	Axiology (role of values)	Typical methods
Paradigms	Positivism	<ul style="list-style-type: none"> <li>• Real, external, independent</li> <li>• One true reality (universalism)</li> <li>• Granular (things)</li> <li>• Ordered</li> </ul>	<ul style="list-style-type: none"> <li>• Scientific method</li> <li>• Observable and measurable facts</li> <li>• Law-like generalisations</li> </ul>	<ul style="list-style-type: none"> <li>• Value-free research</li> <li>• Researcher maintains objective stance</li> </ul>	<ul style="list-style-type: none"> <li>• Typically deductive, highly structured, large samples</li> </ul>
	Interpretivism	<ul style="list-style-type: none"> <li>• Complex, rich</li> <li>• Socially constructed through culture and language</li> <li>• Multiple meanings, interpretations, realities</li> </ul>	<ul style="list-style-type: none"> <li>• Focus on narratives, stories, perceptions and interpretations</li> <li>• New understandings and worldviews as contribution</li> </ul>	<ul style="list-style-type: none"> <li>• Value-bound research</li> <li>• Researchers are part of what is researched, subjective</li> <li>• Researcher interpretations key to contribution</li> </ul>	<ul style="list-style-type: none"> <li>• Historical analysis</li> </ul>
	Pragmatism	<ul style="list-style-type: none"> <li>• Complex, rich, external</li> <li>• Reality is the practical consequences of ideas</li> <li>• Flux of processes, experiences and practices</li> </ul>	<ul style="list-style-type: none"> <li>• Practical meaning of knowledge in specific contexts</li> <li>• True theories and knowledge are those that enable successful action</li> <li>• Problem solving and informed future practice as contribution</li> </ul>	<ul style="list-style-type: none"> <li>• Value-driven research</li> <li>• Research initiated and sustained by researcher's doubts and beliefs</li> <li>• Researcher reflexive</li> </ul>	<ul style="list-style-type: none"> <li>• Range of methods: mixed</li> <li>• Emphasis on practical solutions and outcomes</li> </ul>

Second paradigm is the *interpretivism* which advocates that it is necessary for the researcher to understand differences between humans in our role as social actors (Saunders, 2015). According to Kura (2012), interpretivists seek to understand knowledge based on social reality through detailed understanding and interpretation of meaning of events and specific life experiences. To be more precise, this paradigm

## CHAPTER 4: METHODOLOGY

position is based on exploratory and subjective. It simply draws on concepts that positivists ignore.

The third paradigm, *pragmatism*, asserts that concepts are only relevant where they support action (Saunders, 2015). This particular paradigm sidesteps the contentious issues of truth and reality, accepts, philosophically, that there are singular and multiple realities that are open to empirical inquiry and orients itself towards solving practical problems in the 'real world' (Creswell and Clark, 2007). Thus, pragmatists questioning the dichotomy of positivism and interpretivism and calling for a convergence of quantitative and qualitative methods, reiterating that they are not different at an epistemological or ontological level and that they share many commonalities in their approaches to inquiry (Hanson, 2008; Johnson and Onwuegbuzie, 2004).

Whilst the ontology philosophy determines what paradigm position most suitable to research questions and the context, the ontology position of the research questions is objectivism. Since the developed research questions seek to answer 'what', 'how', 'relationship between?', and are best answered with numerical precision, objectivism is the most appropriate position. This is because it employs the highly successful methods to investigate social science phenomena. This influences the epistemological position, which suggest that the two research questions are feasible to be quantifiable. In that case, axiology value is viewed as an objective which describes philosophy as a collection of theoretical framework to understand a relationship. Thus, the nature of this research is carried out from a positivism position in order to achieve the aim of the research.

In that sense, with the contribution of the three philosophies (i.e. ontology, epistemology, and axiology), the positivism position provides a useful structure for posing and answering philosophical questions which will aid to determine which content is to be put in the curriculum. This position allows conducting research through the construction of appropriate hypotheses derived from theory and adopts a suitable methodology to confirm or refute the developed hypotheses. In order to fully analyse a phenomenon, this research draws heavily on the deductive reasoning. The deductive reasoning is used to address the two research questions and seeks generalisation through adopting the quantitative approach. This approach is further elaborated in the next section.

### **4.4 Research Methodology**

Since the adopted research philosophy has been sorted out in the previous section, it is essential to clarify the research methodology employed in order to carry out the empirical study appropriately. According to Saunders (2015), research methodology refers to the techniques and procedures used to obtain and analyse data. Because the deductive method is a study for developing a concept and theory and testing an empirical observation (Hussey and Hussey, 1997), quantitative methodology is best suited to explain some phenomena. The quantitative approach is used to answer questions about relationships amongst measured variables with the purpose of predicting, explaining, and controlling phenomena (Leedy and Ormrod, 2013). Nonetheless, this approach is adopted in this study for three reasons. First, the research questions (**RQ1** and **RQ2**) are best answered using numerical method. Second, the

quantitative research is useful for conducting audience segmentation. Third, developed hypotheses are best tested using the quantitative approach.

Whilst hypothesis testing presumes relationship between variables to be tested empirically, the quantitative approach objectively identifies variables (cause) to be manipulated in strategic alignment to enhance organisational performance (effect). The relationship between the variables and the newly constructed variable will be examined and validated. Although this study uses quantitative (numerical) data to provide a general understanding of the research problem, it also uses interview data to help explain, or elaborate on, the statistical results obtained. This is discussed in the next section.

### **4.5 Research Strategy**

According to Remenyi and Williams (1998), research strategy provides overall direction of the research including the process by which the research is conducted. There are a number of research strategies, however, this study employed the survey-based research strategy in terms of collecting data. According to Saunders (2015), survey is a common and popular strategy in business and management research and is most frequently used to answer 'what', 'where', 'who', 'how much', and 'how many' questions. This is the suitable strategy in this study as it suits the need to address the nature of questions in this study. As discussed in the previous chapter, triadic strategic alignment entails the use of multivariate relationship of which survey-based deemed to be most suitable strategy for conducting such relation (Healy and Perry, 2000).

Furthermore, survey-based strategy is used to collect large amounts of data from the people who have knowledge about their organisation's strategic alignment i.e. management. The methods of survey data collection can be divided into two broad categories: questionnaire-based survey and follow-up interviews. Both methods aim to produce generalisations about populations by collecting information from samples (Thomas, 2004). In relation to the research questions, this study employs both methods to evaluate and validate the proposed research model in order to gain a better understanding of the strategic alignment effects on organisational performance. In this study, hypotheses were developed to address research questions (**RQ1** and **RQ2**) through testing relationships of variables that are measurable. This entails collecting numerical data for statistical analysis to verify which of such hypotheses are true. Thus, questionnaire method is adequate for collecting data that addresses **RQ1**, **RQ2**. Meanwhile, the follow-up interviews are used to explain the results of the intervention and to follow up on the experiences of participants with certain types of outcomes (Creswell and Clark, 2007). Thus, the following sections provides an overview for each survey method adopted.

### **4.5.1 Questionnaire-based Survey**

Data for this study has been collected using self-administrated questionnaires which is one of the most widely used data collection methods within the survey strategy (Saunders, 2015). According to Babbie (2009), a questionnaire is a document containing questions and other type of items designed to solicit information appropriate for analysis. Thus, the necessary observations about strategic alignment are collected in this

study using the questionnaire instrument. Because each respondent is asked to respond to the same set of questions, that provides an efficient way of collecting responses from a large sample.

### **4.5.1.1 Target Population**

The target population refers to the larger population to which the researcher ultimately would like to generalise the results of the study (Saunders, 2015). It is thus the entire group of individuals, events or objects having a common observable characteristic. Thus, the research population for this study comprised senior and middle management, namely, executives (i.e. Chief Executive Officer (CEO), Chief Information Officer (CIO), and Chief Marketing Officer (CMO)), directors, and managers of business, IT, and marketing in Yemen. Based on the scope of this research, those respondents are familiar with the affiliated strategic planning, strategic implementation, and business performance. In order to obtain a probability sample, company selection follows a systematic sampling procedure by picking a company randomly from a list using Excel (Hartas, 2015; Saunders, 2015). The purpose of collecting data from these respondents is to avoid the possible bias in single-sided self-reported data (Wu *et al.*, 2015).

A survey of organisations registered with the Ministry of Industry and Trade in Yemen from different industries was conducted with a target response consisting of 350 IT, business, and marketing managers and executives for two reasons. First, since there are no known statistics or academic articles available on strategic alignment in the context of Yemen, a self-administrated questionnaire was undertaken to which the results of the study would be generalised across the population of the study. Since there was a

lack of research and information in this topic of strategic alignment in Yemen, this presents a significant dilemma for researchers in Yemen. Second, was due to the fact that the target population is reachable to which statistical data is obtainable considering the difficulties of acquiring information from over 300 firm's directors in the UK within a limited time period.

### **4.5.1.2 Sample Frame**

The sampling frame operationally defines the target population from which the sample is drawn and to which the sample data will be generalised. In order to empirically validate the research model, a sample must be selected that is related to the population highlighted in the research questions and objectives. In every research design, the rationale for selecting the sample and its size is crucial. A sampling frame is a list of all items where a representative sample is drawn for the purpose of research (Saunders, 2015).

The purpose of this research focuses on discussing the impact of triadic strategic alignment on organisational performance in Yemen. In specific it focuses on aligning three intellectual strategies i.e. business, IT, and marketing, so the sample firms need to have these three managements in their firm to investigate strategic alignment. In this research, the sampling frame contains 1,201 firms from the private and public sectors. Those firms are ranging from small to large size companies in Yemen from various industries such as manufacturing, banking, service, telecommunication, etc. This list of registered firms was drawn from the database of the Ministry of Industry and Trade in Yemen.

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Not all of the organisations provided were actually surveyed. The purpose of sampling is to gain an understanding about some features of the whole population based on the characteristics of the sample. A sample is a portion or part of the population of interest (Hartas, 2015). In order to select a sample, all public-sector firms were removed because this study is focused to investigate how organisations can increase their market growth, etc. through the triadic strategic alignment, which is not applicable to the public sector. Also, because one of the key variables under study is IT strategy, companies that were known not to have IT infrastructure were dropped. This is updated periodically in the Ministry's database which clearly states companies that implemented IT infrastructure. Out of this list, 700 firms remained.

Further, to implement probability sampling procedure simple random sampling was the method chosen for selecting sample because each element has an equal and independent chance of being selected. Retaining only private sector firms that have at least one of each of IT, business, and marketing managers in their firm. The sample size was determined by calculating the population size, confidence interval, and margin of error (Aaker and Day, 1986). This led to the selection of 350 firms chosen randomly using Excel in an attempt to obtain a sample that appears to be representative of the population. Also, it enables each element to have an equal chance of selection independent of any other event (Babbie, 2009). This variation in industries not only provides a reasonably similar context for respondents but is also broad enough for the results to be generalisable (Olson *et al.*, 2005), therefore, avoiding bias and staying objective. Thereafter, the target population must be selected from the sample frame identified earlier to avoid bias.



#### 4.5.1.3 Validity and Reliability

The questionnaire was divided into five main categories; practical information, business strategy, IT strategy, marketing strategy, and organisational performance. The development of the questionnaire was based on the reviewed literature and was originally developed in English. It was subsequently translated into Arabic language to correspond with the nation in which data were being collected. To enhance reliability and validity within a cross-national sample, it is essential to ensure that the items translate effectively into both the language and the culture of the target audience, and that the intended meaning is functionally equivalent rather than merely literally identical across translations (Geringer *et al.*, 2002). In most cases, the questionnaires were subjected to a translation and back translation process by native academics which facilitated conceptual equivalence, in addition to retention of meaning, due to familiarity with the local culture and language (Geringer *et al.*, 2002). These latter translations were then subjected to review by academics, located in Yemen, who were natives of the target nation.

It is quite important to measure the validity and reliability of the questionnaire because validity of an instrument is the determination of the extent to which the instrument actually reflects the abstract concept being examined (Hartas, 2015). There are two forms to test validity. First, content validity indicates the content reflects a complete range of the attributes under study and is usually undertaken by experts (Saunders, 2015). To estimate the content validity of the strategic alignment questionnaire, the researcher clearly defined the research model of triadic strategic alignment by

## CHAPTER 4: METHODOLOGY

undertaking a thorough literature review and seeking expert opinion. Once the research model was established, couple of experts chosen in the areas of management information system and business research methods were asked to review the draft questionnaire to ensure it was consistent with the research model. Second, *face validity* evaluates the appearance of the questionnaire in terms of feasibility, readability, consistency of style and formatting, and the clarity of the language used (Saunders, 2015). Face validity was assessed after conducting the pilot study. In overall the questionnaire was validated before conducting the main study.

Furthermore, the *reliability* of a research instrument is the degree of consistency with which the instrument measures the attribute it is supposed to be measuring (Saunders, 2015). There are two forms of reliability, one is testing *consistency*. It measures consistency within the instrument and questions how well a set of items measures a particular behaviour or characteristic within the test (DeVon *et al.*, 2007). This is computed using Cronbach's alpha to examine the internal consistency showing that all items are satisfactory (see Table 5.2). The second form for testing reliability is *test-retest*. According to DeVon *et al.* (2007), test-retest reliability refers to the temporal stability of a test from one measurement session to another. This assessment of reliability of the strategic alignment questionnaire was undertaken by administrating the questionnaire to five managers. Same questionnaires were distributed to the same respondents two months later to assess the similarity of the answers given. Thus, reliability is achieved with no discriminations. The items listed in the questionnaire survey reflect the construct definition of the research model. These items are explained in the next section.

#### 4.5.1.4 Measurements

To be able to test the developed hypotheses, variables have to be clarified. Variables (i.e. items/indicators) are used to operationalise (i.e. measure) the constructs. Each hypothesis can be defined with a set of variables for testing relationships. Thus, all four hypotheses (**H1**, **H1.1**, **H1.2**, and **H1.3**) are tested with the data obtained from the questionnaire.

In order to measure the impact of TSA on performance, measurement indicators must be selected from the reviewed literature. The constructs defined in the research models were operationalised by selecting measurement scale items. Likert 7-point scale ranging from 'strongly disagree' to 'strongly agree' was used to assess the level of alignment amongst business, IT, and marketing strategies. This scale was adopted because it is easy and does not take much time to answer by the respondents (Hartas, 2015). There were five constructs defined in the proposed research models which are business strategic orientation (BSO), IT strategic orientation (ITSO), marketing strategic orientation (MSO), triadic strategic alignment (TSA), and organisational performance (OP). All the measurement indicators for these constructs listed in Table 4.2 have been adopted from previous published studies. In total 32-measurement scale indicators were used to measure the underlying constructs in the proposed model.

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*Table 4.2: Measurements Indicators*

	Dimensions	Indicators	Sources
Business Strategic Orientation (BSO)	Proactiveness	PRO1: Our organisation constantly seeks new opportunities related to the present operations PRO2: Our organisation seeks market share position at the expense of cash flow and profitability PRO3: Our organisation cuts prices to increase the market share	Miles <i>et al.</i> (1978), Venkatraman (1989b)
	Defensiveness	DEF1: Our organisation uses cost control systems for monitoring performance DEF2: Our organisation uses production management techniques DEF3: Our organisation emphasises on product quality through the use of quality circles	
	Analysis	ANA1: Our organisation's IT provides support for decision making ANA2: When making a major decision, we usually try to develop thorough analysis ANA3: Or organisation uses planning techniques and uses the outputs of management information and control systems	
IT Strategic Orientation (ITSO)	Flexibility	FLEX1: Our organisation use competitive intelligence systems FLEX2: Our organisation use IT for product marketing and promotion FLEX3: Or organisation use IT for obtaining customer feedback and providing service	Sabherwal and Chan (2001)
	Efficiency	EFF1: Our organisation use IT in business processes EFF2: Our organisation use IT to support research and development EFF3: Our organisation use IT to support manufacturing	
	Comprehensiveness	COMPR1: Our organisation use IT to support strategic planning and decision-making COMPR2: Our organisation use IT in risk analysis of processes COMPR3: Our organisation use IT in risk analysis of processes	

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*Table 4.2: Continued*

	Dimensions	Indicators	Sources
Marketing Strategic Orientation (MSO)	Customer-focused	<p>CUS1: Our organisation continuously try to discover additional needs of our customers of which they are unaware</p> <p>CUS2: Our organisation incorporates solutions to unarticulated customer needs in our new products and services</p> <p>CUS3: Our organisation brainstorms on how customers use our products and services</p> <p>CUS4: Our organisation innovates even at the risk of making our own</p> <p>CUS5: Our organisation works closely with lead users who try to recognise customer needs months or even years before the majority of the market may recognise them</p>	Olson <i>et al.</i> (2005), Narver and Slater (1990)
	Competitor-focused	<p>COMP1: Our organisation rapidly responds to competitive actions</p> <p>COMP2: Our organisation's top management discusses competitor's strategies</p> <p>COMP3: Our organisation targets opportunities for competitive advantage</p> <p>COMP4: Our organisation's salespeople collect competitor information</p>	
	Organisational Performance (OP)	<p>PERF1: The sales growth position is much better than our principal competitors</p> <p>PERF2: The market share gains is much better than our principal competitors</p> <p>PERF3: The return on investment position is much better than or principal competitors</p> <p>PERF4: The net profit position is much better than our principal competitors</p> <p>PERF5: The financial liquidity position is much better than our principal competitors</p>	Croteau and Bergeron (2001)

- Business strategic orientation (BSO)* has been measured using nine indicators adopted from Venkatraman (1989b) in terms of proactiveness, defensiveness, and analysis to determine the degree of orientation. As suggested by Churchill (1979, p.68), *"the researcher probably would want to include items with slightly different shades of meaning because the original list will be refined to produce the final measures"*. Although there are other dimensions suggested by Venkatraman (1989b), only three were selected to test the proposed hypotheses led by the reviewed literature to properly answer the research questions.

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Similarly, this study omitted the third strategic orientation of marketing mainly because most antecedent studies have dropped it, and specifically because it defines market competency as gathering and dissemination of information about customer-focused and competitor-focused needs and intents (e.g. Bamford and West, 2010; Slater *et al.*, 2010a; Zheng Zhou *et al.*, 2007).

- *IT strategic orientation (ITSO)* is measured using nine indicators adopted from Sabherwal and Chan (2001) in terms of the extent to which the employed IT strategy in the organisation is flexibility, efficiency, or comprehensiveness oriented.
- *Marketing strategic orientation (MSO)* is measured using nine indicators adapted from Narver and Slater (1990) and Olson *et al.* (2005). McDaniel and Kolari (1987) argued that different organisational types would have different marketing strategies. This means the measures will differentiate whether the firm is customer-focused or competitor-focused distinguished by the two dimensions. The former would be concerned with the organisation development of responsiveness to information about the expressed and latent needs of both current and potential customers (Kohli and Jaworski, 1990), whilst the latter would be more concerned with the development of responsiveness to information about competitors and strategies (Slater and Narver, 1995).
- *Organisational performance (OP)* can be measured using five indicators adapted from Croteau and Bergeron (2001) and Kearns and Sabherwal (2006). This construct is actually related, to some extent, to the practical information that was collected from the respondents. It reflects the respondent's perception of

organisational sales growth, market share, return on investment, net profit, and financial liquidity (Venkatraman, 1989a).

The measures defined are for the research model variables (constructs and dimensions). To test the research model, it is important to identify which ones are dependent, independent, and coalignment variables. According to Jöreskog and Sörbom (1993, p.88), dependent variables (criterion) *“have one-way arrows pointing towards them, and are not perfectly related to other variables in the model”*. For example, in this case, organisational performance is a dependent variable because it is being affected by the independent variable. On the contrary, an independent variable (predictor) is basically a variable that does not depend on that of another (Jöreskog and Sörbom, 1993). Meaning that BSO, ITSO, and MSO are all independent because these variables affect organisational performance. In addition to these variables, the coalignment variable has been described by Venkatraman (1989a, p.437) as *“an unobservable theoretical construct at a higher plane than the individual functional dimension”*. Hence, triadic strategic alignment is the coalignment variable which explicitly specifies the covariation amongst the three independent variables. Because the triadic strategic alignment construct is a higher-order variable, it is measured using all indicators of the lower-order variables (Ringle *et al.*, 2012). Following this section, the selected measurements indicators from the literature are validated by conducting a short pilot study.

### **4.5.1.5 Pilot Study**

To enhance questionnaire validity and reliability, a pilot study was conducted before conducting the main study questionnaire. Pilot study is used to determine feasibility of

conducting a large-scale study (Saunders, 2015). A pilot study was conducted during December 2013 testing the questionnaire on 25 out of 30 managers (business, IT, and marketing) in six different industries in Yemen by filling the questionnaire in hardcopy. This represents 10% of the accessible population, which is generally recommended by Hartas (2015). For the pre-test, the response rate was 83%. Most of the respondents were business managers followed by marketing managers and IT managers. The researcher reviewed the results of the pilot study taking into consideration the feedback received from both academics and practitioners. The adopted set of items from previous literature was examined and are potentially promising indicators except for one of the practical information indicators in the Arabic version. One of the first item choices that stated 'Category of your position: Business Manager' was translated into technical terminology. This caused confusion for most of the respondents. The item was modified then as suggested by the respondents to assure they do understand the terminology clearly and categorise themselves in the correct field in the category of their position. A copy of the final version of the questionnaire can be found in Appendix A. After conducting the pilot study and ensuring that all construct measurements of the research model are validated, conducting the main study with representative sample is described in the next sections.

### **4.5.1.6 Data Collection**

Once the appropriateness of the instrument is confirmed as a result of the pilot study, reliability test, and validity test outlined in the above sections, a number of steps were adopted to conduct the final survey and collect the research data. First, the final draft



of the questionnaire was presented to my academic supervisors for final revision. Second, once approved, 350 hard copies of the questionnaire survey were distributed to managers and executives, in both Arabic and English languages in person in July 2014. One week later 187 were returned for a response rate of approximately 53%. Third, a reminder was sent to the others a week later to increase the response rate. The data collection was officially closed at the end of July 2014 with a total of 257 questionnaires collected for a response rate of 73%, a rate that is on a par with matched surveys found elsewhere in the alignment literature (Sabherwal and Chan, 2001; Tallon and Pinsonneault, 2011). The received hard-copy questionnaires were transferred to and stored electronically in Excel.

### **4.5.2 Follow-up Interviews**

According to Kvale (1996, p.14), interview is *“an inter-change of views between two persons conversing about a theme of mutual interest”*. It is best known for obtaining rich insights from in-depth observations and interviews (Myers and Avison, 2002) to provide a deeper understanding of social phenomena (Silverman, 2005) as an opportunity to allow the words of the respondent, and their experiences and perspectives, to shine through (Hesse-Biber and Leavy, 2010). Based on these considerations, it becomes clear that the interview is to provide understanding of things that cannot directly be observed: in this case, learning how should business, IT, and marketing strategies be aligned, which cannot be statistically verified.

Furthermore, interviews may be useful as follow-up (i.e. post survey interview) to individual respondents after conducting the questionnaire survey in order to pursue in-

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depth information around a theme (McNamara, 1999; Park, 2007). In this study, the two research questions (**RQ1** and **RQ2**) entail collecting numerical data and follow-up interviews. The aim of the follow-up interview was not to ‘test’ the research hypotheses but to learn the opinions of the participants concerning how firms align business, IT, and marketing strategies.

Having said that, there are several types of interviews to choose amongst: this study used semi-structured interviews. According to Hesse-Biber and Leavy (2010, p.125), semi-structured interviews “*rely on certain of questions and try to guide the conversation to remain, more loosely, on those questions*”. This means that the researcher has a list of themes and possibly some key questions to be covered, although their use may vary from interview to interview (Saunders, 2015). Added to that, flexibility is what makes this type of interview advantageous because it uses open-ended questions (Bryman, 2012). It gives the participants ample time and scope to express their diverse views and allows the researcher to react to and follow up on emerging ideas and unfolding events (Creswell and Clark, 2007). Also, semi-structured interviews can be used to further enhance and validate outcomes generated from different data collection method and gain deeper insights into the thoughts and rationale for such outcomes (Duan *et al.*, 2012).

Besides, semi-structured interviews were conducted because of the nature of the research questions that needed interaction with managers to understand their view of the strategic alignment. It allowed the researcher to change the order of the pre-set interview questions based on the interviewee’s job position and to ask probing

questions. More importantly, this form of interview was used to understand the relationships between variables investigated in the quantitative method. Thus, a more detailed analysis was conducted using semi-structured interviews to explore the degree of strategies being aligned. But first, the next section discusses how the data was collected from the participants.

### **4.5.2.1 Selection**

To appropriately conduct the follow-up interviews, it is important for participants to be knowledgeable within the area in order to fully understand the arguments (Lindén and Andersson, 2011). Thus, the process started by contacting top executives and managers of who were believed to be highly knowledgeable individuals with expertise within the area of business, IT, and marketing alignment. At first, six individuals were contacted by email prior to the interview on January 2016 then another 18 were contacted on January 2017, randomly selected from the questionnaire survey respondents. A personalised email request for a recorded telephone interview with a short description of the research purpose was also attached. Three out of the six and eight out of the 18 agreed to take part in the study. A total of 11 participants from six different sectors: food, service, manufacturing, telecom, bank, and trading.

### **4.5.2.2 Data Collection**

Before conducting the follow-up interviews, extensive interview training was done with academic colleagues to establish clarity of language and more importantly to prepare for the actual interviews. The interview consisted of 11 telephone-based interviews with

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business, IT, and marketing executives/managers. Six of the firms were based in Yemen due to the questionnaire survey context being conducted in Yemen. Given the current political situation, it was difficult to get a response and interview all managers from Yemen. Therefore, in order to obtain sufficient number of interviews, an alternative approach was to interview managers remotely related to the context of this study. Hence, two Yemeni affiliates firms based in the UK and three firms based from neighbouring countries (Saudi Arabia and Qatar) were interviewed. The telephone interview was preferred over other types of interview (e.g. face to face) because telephone interview allows access to participants across wide geographical areas; it gives the interviewees the possibility to answer open questions broadly and to include some examples or specific stories about that issue, as well as offering great flexibility in scheduling the different conversations (Creswell and Clark, 2007).

Whilst telephone interview allows for a great flexibility in scheduling the different conversations (Redlich-Amirav and Higginbottom, 2014), participants were offered to select a date and time that was convenient for them. Three interviews were conducted between January 2016 and March 2016 over a period of 10 weeks. Another eight interviews were conducted between March 2017 and April 2017 over a period of 8 weeks. The first three interviews were to be of short duration, lasting between 10 and 12 minutes. The other eight interviews were lasting between 30 and 50 minutes. Whilst the aim of the interview was to gain in-depth understanding, the interview question structure was based on answering 'why' and 'how' instead of 'what' questions, see Appendix B and C. However, at the beginning of the interview the participants were asked some general questions, for instance about their firm's business, IT, and

marketing strategic orientations. This way the interviewer learnt the interviewees' opinions concerning their perception of strategies in their firm. Moreover, all the interviews were audio-recorded because this enables accurate transcribing through rewinding the recorded audio. Further discussion of the results is provided in chapter five. Next is a discussion of the methods employed to analyse data obtained from the questionnaire survey and follow-up interviews.

### **4.6 Methods of Analysis**

Based on the theoretical framework discussed in the previous chapter, two conceptualisations of fit are deemed to be appropriate to address the research questions (**RQ1** and **RQ2**). Therefore, the data acquired from the questionnaire survey and follow-up interviews is used in the analysis to empirically support the theoretical development. These stored and recorded data are required to be processed to reduce complexity and access relevant and useful information. Hence, numerical data are retrieved and transformed into a form suitable for analysis, such as with the Statistical Package for the Social Science (SPSS), Partial Least Squares approach for structural equation Modelling (PLS-SEM), and One-way Multivariate Analysis of Variance (MANOVA). Meanwhile, the recorded interview data is analysed using the thematic analysis with the aid of NVivo software. These four analytical methods are discussed in separate sub-sections here.

### 4.6.1 SPSS Analysis

The first analytical method adopted in this study involves the Statistical Package for the Social Science (SPSS). Much of the preliminary analyses involved SPSS to prepare to answer the research questions. SPSS is one of the most popular statistical programs that can be used to perform data entry and analysis and to create tables and graphs (Hinton *et al.*, 2014). Using SPSS allows the analysis of quantitative data quickly using various statistical tools, which in turn saves time and helps to perform complicated statistical techniques more easily (Hinton *et al.*, 2014). It reveals the central tendency and dispersions of the variables, the mean and the standard deviation are also calculated. This study used SPSS to check assumption testing, conduct descriptive statistics, and perform multivariate tests to further test the research hypotheses.

### 4.6.2 PLS-SEM Analysis

Second, in order to be able to answer the first research question, Structural Equation Modelling (SEM) is used to test the first hypothesised relation. The first hypothesis entails forming a new construct (i.e. Triadic Strategic Alignment) that captures the covariation between the set of the first-order variables (Venkatraman, 1989a). This means that the new construct (TSA) is theoretically formed rather than being observed. Although there are many programs that offer SEM analysis, Partial Least Squares (PLS) tests the estimates of the relationships especially when the research model is a combination of both reflective and formative measurement model (Hair *et al.*, 2013; Ringle *et al.*, 2012).

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PLS has enjoyed increasing popularity in recent years. It is one of the second-generation of multivariate analysis techniques. It combines theoretical and empirical knowledge in order to maximise the variance explained (Fornell and Larcker, 1981). According to Hair *et al.* (2013), the number of PLS applications in strategic management compared to disciplines like marketing or management information systems is substantially smaller. That is due to strategic management researchers predominantly relying on first-generation analysis techniques, such as regression analysis and analysis of variance (ANOVA), and only to a limited extent on second-generation analysis techniques, such as SEM (Becker *et al.*, 2012). Although this second-generation technique is substantially employed in analysing data, it has been noted that it is increasing in the strategic management discipline and is expected to grow in the future (Hair *et al.*, 2013; Nathan *et al.*, 2006).

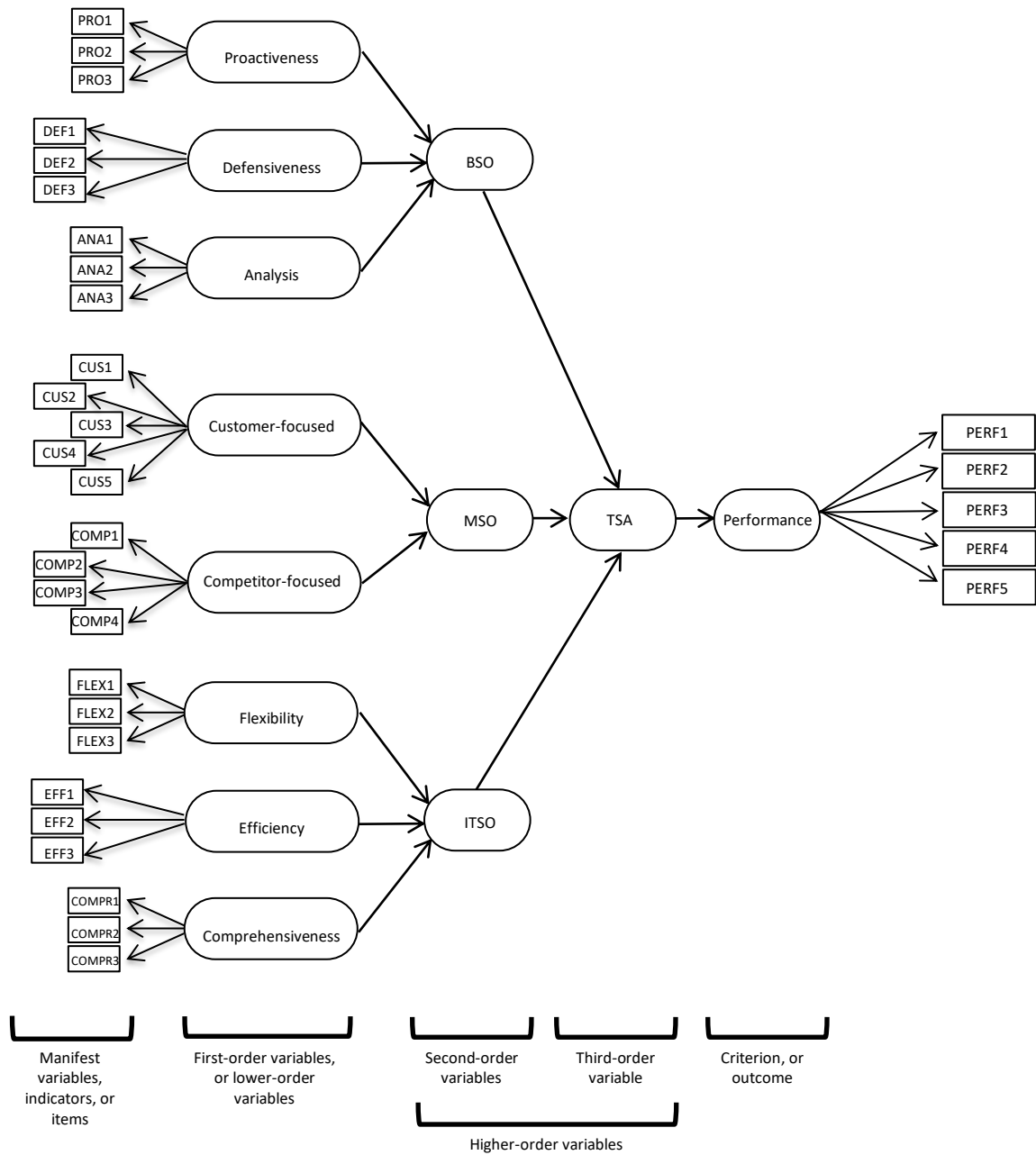
The researcher has employed the PLS approach as it is more rigorous at estimating the proposed model and it enables the simultaneous of the structural component and measurement component in one model (Albers, 2010; Chin *et al.*, 1998; Hair *et al.*, 2013). The most common reason chosen for selecting PLS-SEM as an analytical approach is the sample size, as PLS can accommodate small sample sizes (Chin *et al.*, 1998; Diamantopoulos, 2011). Moreover, a key argument for employing PLS, as discussed by Ringle *et al.* (2012), relates to the use of formative measurement models since PLS readily handles both reflective and formative measures. This is one of the main characteristics that differentiates PLS from other statistical analysis methods.

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Furthermore, PLS is best adopted for theory development and testing stages especially with multiple constructs that result in complex models (i.e. hierarchical models). According to Becker *et al.* (2012, p.362), a hierarchical model is “*multidimensional constructs that exist at a higher level of abstraction and are related to other constructs at a similar level of abstraction completely mediating the influence from or to their underlying dimensions*”. It is certain that a covariation model requires the adoption of a hierarchical model (i.e. multidimensional variables), as explained previously in chapter three. However, different types of hierarchical models appear in the literature (Ringle *et al.*, 2012), known as reflective-reflective, reflective-formative, formative-reflective, or formative-formative models. Selecting the correct type of hierarchical model is dependent on identifying the latent variable (unobserved) (Becker *et al.*, 2012). Because the higher-order variable (TSA) has no direct observable indicators (Venkatraman, 1989a) and the lower-order variables are independent (i.e. BSO, ITSO, and MSO dimensions), this thesis adopts the reflective-formative hierarchical model, which is shown in Figure 4.2. All variables except for higher-order ones are measured using a reflective measurement model.



Figure 4.2: Reflective-Formative Measurement Model

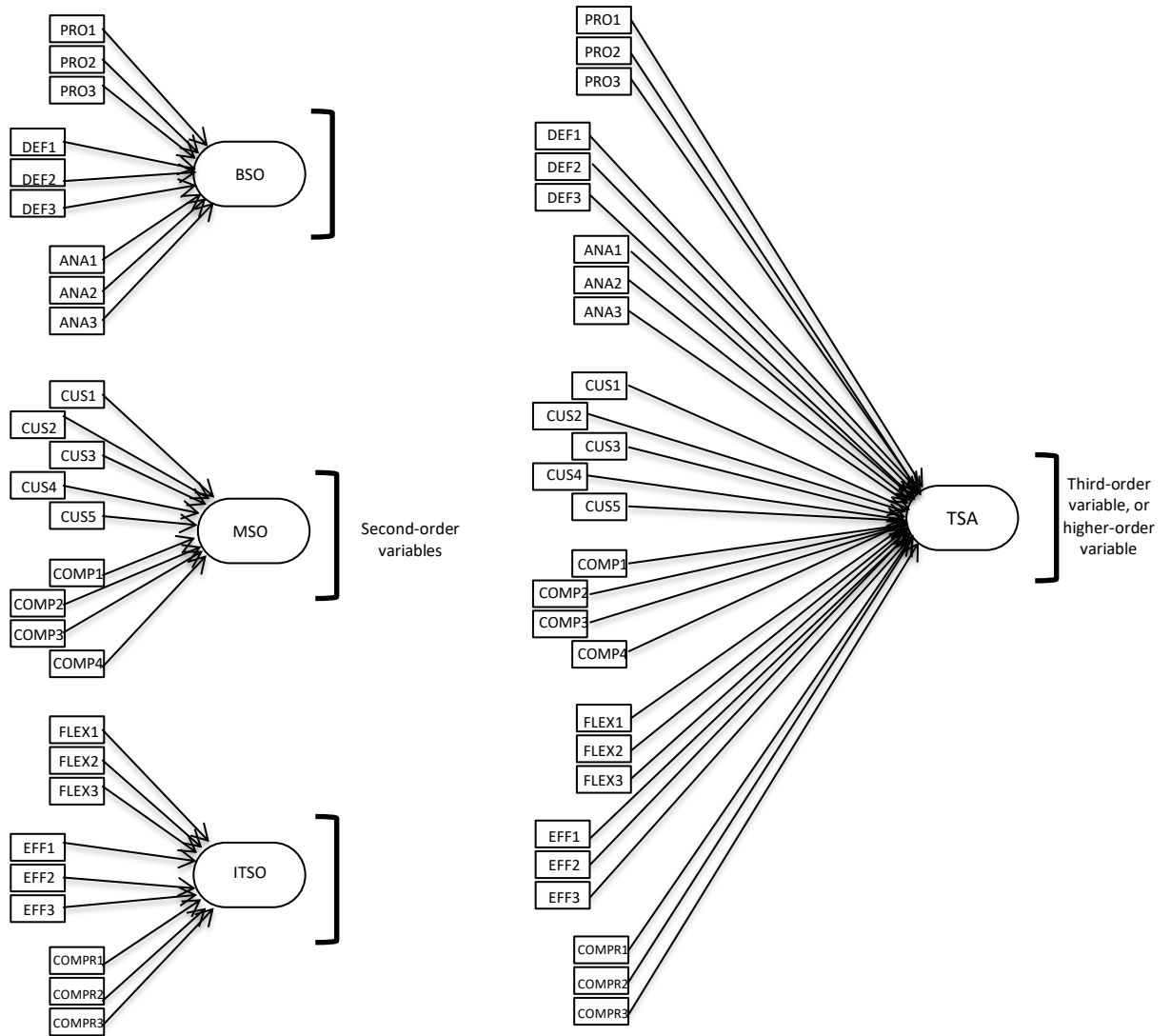


The direction of the arrows in the measurement model determines the formative and reflective variables. This means that variables can be measured either with reflective or formative indicators (Diamantopoulos, 2011). According to Diamantopoulos (2011), the

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choice of measurement perspective should be based on a clear conceptual definition of the focal construct. The reflective indicators captures the self-perceived of the variable whilst the formative indicators measures the actual or objective of the variable (Diamantopoulos, 2011). In this context, the independent variables (BSO, ITSO, and MSO dimensions) are measured using reflective indicators and the higher-order variables (i.e. BSO, ITSO, MSO, and TSA) are measured using formative variables, which includes all reflective indicators from the lower-order (Wetzels *et al.*, 2009). An overview of how higher-orders are measured using formative indicators is depicted in Figure 4.3.

Figure 4.3: Higher-order Measurements Model



### 4.6.3 One-way MANOVA Analysis

The third analytical approach is One-way Multivariate Analysis of Variance (MANOVA) used for testing the relationships for hypotheses **H1.1**, **H1.2**, and **H1.3**, which in turn

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would provide sufficient results for research question **RQ2**. These hypotheses were developed on the basis of the profile deviation approach to fit, which entails developing an ideal profile that can be used as benchmark against which their fit can be examined (Doty *et al.*, 1993; Venkatraman, 1989a; Vorhies and Morgan, 2003). In order to operationalise these hypotheses MANOVA was adopted as to identify generic types of TSA and to examine whether the generic types of TSA show differences in their performance.

MANOVA is a member of the general linear model, a family of statistical procedures that are often used to quantify the strength between variables (Zientek and Thompson, 2009). MANOVA, specifically, is an analysis of variance (ANOVA) that has two or more dependent variables (Warne, 2014). The MANOVA analysis is used to investigate whether the quantitative variables can be combined to maximally discriminate between distinct groups of people, places, or things (Grice, 2007). In this case, MANOVA is used to compare two or more dependent variables (e.g. sales growth, market share, return on investment (ROI), financial liquidity, and net profit) by a single independent variable (e.g. prospector, defender, or analyser). This technique is used to identify the generic types of triadic strategic alignment. The benefit of using this method of analysis is to determine whether the independent variables are related to combinations of dependent variables, which provides useful information in answering the research questions. MANOVA analysis can also be conducted using SPSS.

### **4.6.4 Thematic Analysis**

The fourth analytical method is used to analyse the information acquired from the follow-up interviews. According to Saunders (2015), thematic analysis involves a researcher coding data to identify themes or patterns for further analysis related to the research question. This method is used to understand how alignment is achieved between business, IT, and marketing strategies and why it is important to align these strategies. Themes are identified with the aid of the program NVivo, which is specialised for coding and analysing audio data. The themes identified using this analysis would then be linked to the existing theory, which will provide support for the empirical results. Similarly, **RQ1** and **RQ2** can also be partially answered with the contribution of the thematic analysis. This is because this analytical method is known for its flexibility through dealing with participants' perceptions, which enables the researcher to compare data collected using questionnaires (Alhojailan, 2012).

Overall, these are the four analytical methods employed for analysing data obtained from the questionnaire survey and follow-up interviews, which are discussed extensively in the next chapter. Next is the declaration of any ethical concerns.

### **4.7 Ethical Considerations**

In order to proceed with the research, it is required to address any ethical issues. Ethical considerations are vital to any study because of the influence on the researcher's ability to acquire and retain participants (Saunders, 2015). The appropriateness or acceptability of a researcher's conduct will be influenced by boarder social norms of

behaviour. In this study, the ethical consideration of confidentiality is strictly upheld. Confidentiality is maintained through protection of the privacy of the participants by not revealing their identity since the data was collated and gathered by the researcher in person. The information accessed is kept in the possession of the researcher in a safe place and kept confidential. The research proposal was further subject to approval by the Business and Management Research Institute at the University of Bedfordshire.

### **4.8 Summary**

This chapter described the research methodology in detail. The purpose of providing such fundamental underpinnings for the various research philosophies and approaches is to elicit the potential assumptions of each, which guides the choice of particular paradigm for this research. The philosophical position of this research is positivism and it uses a deductive method and a quantitative approach.

This study used two surveys. Firstly, the researcher used a cross-sectional questionnaire survey adopted from the reviewed literature to answer research questions **RQ1** and **RQ2**. Secondly, follow-up interviews were conducted, specifically telephone semi-structured interviews. The follow-up interviews are used for defining the research concept in-depth, which supports understanding of the statistical results. Four analytical methods are proposed: SPSS, PLS-SEM, MANOVA, and thematic analysis. Three methods are used to analyse questionnaire data and thematic analysis is used to analyse interview data. Findings are discussed in the next chapter.

## CHAPTER 5: FINDINGS

### 5.1 Introduction

The overall quantitative approach of this research and the rationale for its choice has been discussed in the previous chapter, including the research design, population sample, and the data collection instruments. This chapter focuses on presenting the results of the data collected for this research, such as performing statistical tests and thematic analysis. The result of the analyses provides empirical evidence to examine the relationship between triadic strategic alignment and organisational performance across the private companies and more specifically to answer these two research questions:

- **RQ1:** *How and why should a firm seek to achieve triadic strategic alignment amongst its business, IT, and marketing strategies?*
- **RQ2:** *How and to what extent does triadic strategic alignment relate to firm strategic performance?*

The first research question was partially answered by the literature review and theoretical development, whilst the other research questions (**RQ2**) is answered using the quantitative survey collected from 242 participants. Added to that, partial of **RQ1** and **RQ2** were answered after conducting a follow-up interview from 11 participants. The results of the data analysis are presented.

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This chapter is categorised into two phases based on the data collection method: questionnaire-based survey and follow-up interviews. The first phase has three sections, starting by cleaning the dataset from any errors using the SPSS analysis followed by estimating the research model using PLS-SEM. The third section is to identify the generic types of triadic strategic alignment by using the one-way MANOVA technique.

The second phase presents the findings from the semi-structured telephone interviews of the participants as well as their responses to the questionnaire. The semi-structured interviews were analysed with the aid of NVivo. The interview results are primarily used to uncover information that could be of use to the research. These two phases together present the findings that correspond to the research questions of the study and support achieving the research objectives.

### **5.2 Questionnaire Results**

Following the research design, this chapter begins with the first phase in analysing the quantitative data. This phase is divided into three different sections to achieve the final results. Before carrying out any statistical techniques and prior to analysing the raw data, the first section explains the process of inspecting the data collected for errors using SPSS.

As a primary cleaning stage for the measures prior to analysing the dataset, section two runs several tests on the reflective measurement model and the formative measurement model. Next, the structural model was assessed after ensuring the quality



assurance of validity and reliability is achieved. The purpose of this section is to examine the first hypothesis of this research using PLS-SEM.

The third section involves analysing the dataset using one-way MANOVA. The multivariate analysis of variance is used to investigate the degree of triadic strategic alignment with relation to organisational performance. This section's main objective is to address the other three research hypotheses.

### **5.2.1 SPSS Analysis**

To process and analyse the quantitative survey data, the information collected from the questionnaire instrument were coded to be able to link the data that is entered into the computer to the actual questionnaire (Malhotra *et al.*, 1996). This ensures the completeness and consistency of the data.

Subsequent to the careful coding of the data from all questionnaires, and the entry of those data into SPSS version 23, the data was then screened using appropriate statistical techniques to rigorously minimise bias. After the data screening, preliminary information about the dataset was analysed to help understand the main research findings.

#### **5.2.1.1 Missing Data**

A data screening was performed which involved the removal of unusable data to prevent the study from being biased. It is the first stage in data analysis which makes sure that the collected data is entered correctly. Screening the dataset means cleaning the data for outliers, multivariate normality, and multicollinearity, all of which are

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prerequisites of the multivariate data analysis (Hair *et al.*, 2013). Whilst entering the raw data into SPSS, eye screening was the first method used to identify the completeness and quality of questionnaires. Then, the data were screened for errors using descriptive statistics to ensure the values of each variable did not fall outside the possible range.

Next, is the treatment of missing data. Missing data is a problem because nearly all standard statistical methods presume complete information for all the variables included in the analysis. When a data case is incomplete, the precision of confidence intervals is harmed, statistical power weakens and the parameter estimates may be biased (Soley-Bori, 2013). Thus, it is important to remove incomplete cases from the dataset that have more than 10% of missing data (Tabachnick and Fidell, 2001).

Missing data treatment is divided into two steps. The first step is the removal of unusable cases from the dataset. The second step is replacing missing data. The first step was lead to the removal of nine cases from the dataset because they were shown to have missing values of more than 10%, i.e. unanswered questions. Then unengaged responses were removed from the dataset, i.e. where some respondents answer with the exact same value for every single question of the questionnaire. This led to the deletion of six cases. Next, an outlier implies an extreme value that differs substantially from the other values in the distribution (O'Rourke *et al.*, 2005). It is important to identify outliers because they can arise from procedural errors or a result of an extraordinary event (Hair *et al.*, 2013) that significantly distort data. Although removing outliers is crucial, this does not apply to the study's dataset because all indicators are measured using Likert scales that have maximum high or low values.

The second step was to replace missing data for cases that have less than 10% of missing data. Patterns of missing data were analysed to evaluate whether values were missing completely at random (MCAR). Little's MCAR test was performed using the expectation maximisation (EM) procedure and proved not significant (sig. = 0.493), suggesting that cases with less than 10% missing data in the sample was missing completely at random. Since the indicators are measured using Likert scales, it was decided to replace the missing data with the median using the SPSS tool. The median is considered to be an appropriate replacement value when a Likert scale is used (Sekaran and Bougie, 2010). Out of the 257 cases, a total of 15 cases were excluded.

### **5.2.1.2 Non-Response Bias**

Although missing data is considered one of the most common issues in survey research one could face, potential bias is often considered as the biggest threat to valid survey research such as non-response bias and common method bias (Lineback and Thompson, 2010). Non-response bias, which exists in the missingness of the data, is the statistical difference between a survey that includes only the actual respondents and a perfect survey that would include also those who failed to respond (Zikmund, 2003). It refers to a situation in which respondents who do not return a questionnaire have opinions that are systematically different from the opinions of those who do return their questionnaire. According to Saunders (2015), obtaining a high response rate reduces the risk of non-response bias and ensures the sample is representative. Although this study has obtained a high response rate, it remains a vital procedure to investigate for possible non-response bias.

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To check for potential non-response bias, this study followed Armstrong and Overton (1977); Creswell (2003); Jayaram and Tan (2010); Lambert and Harrington (1990); Zikmund (2003) where the answers of late respondents were compared with those of early respondents. Those late respondents who return the questionnaire are treated as non-respondents. In this research, there were 187 participants who responded in the first week and 70 who responded two weeks later after the reminder was sent. After performing data screening, 178 valid cases for early respondents compared with 64 late respondents. Independent sample *t*-test was used to compare the means of all variables for early and late respondents. Table 5.1 shows that out of the 32 variables only four were found to be statistically significant at the 0.05 level. Those variables with statistical significant differences between the two groups were; DEF1 (our organisation uses cost control systems for monitoring performance), ANA1 (our organisation's IT provides support for decision making), COMPR1 (our organisation use IT to support strategic planning and decision-making), and sales growth.

Although significant statistical differences were found in some variables, the magnitude of these differences was trivial because there were minor differences between total sample and total respondents. Whilst differences between the means were not statistically significant for the other 28 variables, it suggests that researchers and practitioners can feel confident that all variables do not bias the results because the non-response bias has a negligible effect on overall survey results (Cheshire *et al.*, 2011; Graeff, 1999). Therefore, it is expected that the 242 respondents in this research are representative of the whole selected sample.

**5.2.1.3 Common Method Bias**

The common method bias denotes the flawed estimation of relationships between constructs due to the use of a single data source (Podsakoff *et al.*, 2003). It is also said that common method bias has occurred when statistical relationships between variables are due to the method used to measure the variables rather than relationships between the constructs they represent (Venkatraman and Ramanujam, 1987). As reported in the literature, the problem with this common method bias is that it distorts data validity (Döscher, 2014).

*Table 5.1: Independent Sample t-test*

Constructs	Dimensions	Indicators	Levene's Test for Equality of Variances	
			F	Sig.
Business Strategic Orientation (BSO)	Proactiveness	PRO1	0.293	0.589 <sup>ns</sup>
		PRO2	0.605	0.438 <sup>ns</sup>
		PRO3	2.394	0.123 <sup>ns</sup>
	Defensiveness	DEF1	3.941	<b>0.049*</b>
		DEF2	1.921	0.167 <sup>ns</sup>
		DEF3	0.298	0.586 <sup>ns</sup>
	Analysis	ANA1	7.243	<b>0.008*</b>
		ANA2	1.997	0.159 <sup>ns</sup>
		ANA3	1.053	0.306 <sup>ns</sup>

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Table 5.1: Continued

Constructs	Dimensions	Indicators	Levene's Test for Equality of Variances	
			F	Sig.
IT Strategic Orientation (ITSO)	Flexibility	FLEX1	2.710	0.101 <sup>ns</sup>
		FLEX2	0.679	0.411 <sup>ns</sup>
		FLEX3	3.679	0.057 <sup>ns</sup>
	Efficiency	EFF1	0.005	0.946 <sup>ns</sup>
		EFF2	0.283	0.595 <sup>ns</sup>
		EFF3	0.011	0.916 <sup>ns</sup>
	Comprehensiveness	COMPR1	10.947	<b>0.001*</b>
		COMPR2	2.185	0.141 <sup>ns</sup>
		COMPR3	2.217	0.138 <sup>ns</sup>
Marketing Strategic Orientation (MSO)	Customer-focused	CUS1	2.593	0.109 <sup>ns</sup>
		CUS2	1.114	0.293 <sup>ns</sup>
		CUS3	0.346	0.557 <sup>ns</sup>
		CUS4	1.258	0.263 <sup>ns</sup>
		CUS5	0.166	0.684 <sup>ns</sup>
	Competitor-focused	COMP1	0.075	0.785 <sup>ns</sup>
		COMP2	3.131	0.078 <sup>ns</sup>
		COMP3	0.030	0.862 <sup>ns</sup>
		COMP4	0.637	0.426 <sup>ns</sup>
Organisational Performance	Performance	PERF1	4.939	<b>0.027*</b>
		PERF2	1.562	0.213 <sup>ns</sup>
		PERF3	0.124	0.725 <sup>ns</sup>
		PERF4	0.013	0.908 <sup>ns</sup>
		PERF5	0.030	0.863 <sup>ns</sup>

\*  $p < 0.05$ , <sup>ns</sup> -not significant

Although this study has attempted to reduce the occurrence of common method bias throughout designing and administrating the questionnaire, it is likely that the potential for common method bias may exist. This is because respondents might have tried to be consistent in their answers or avoided answering certain questions. To limit the occurrence of this phenomenon, the survey questions were kept specific and simple to avoid influencing some of the results because of the way the questions are constructed. In addition to that, the statistical test is as important as the procedural methods carried

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out to prevent the occurrence of common method bias. Thus, Harman’s single factor test was conducted using SPSS, as suggested by Podsakoff *et al.* (2003), to perform an exploratory factor analysis with all independent and dependent variables. Although 33.3% is a lot of variance to be explained by a single factor, it is not a majority as long as the test result indicates that the “total variance explained” is less than 50% of the all variables in the model. Results of this test suggest that common method bias is unlikely to be a serious problem in the data.

### 5.2.1.4 Preliminary Information

The researcher received a total of 257 questionnaires, 15 were removed after data screening, so 242 remain and are usable data for further analyses. Table 5.2 summarises the profile of the respondents and their firms. A total of 29.8% of 242 respondents came from telecom industry followed by 25.2% working in the banking and finance industry. These firms ranged from small to large in terms of the business size; the three largest groups are 250–999 (37.6%), >1000 (33.1%), and 50–249 (17.8%).

*Table 5.2: Respondents’ Profiles (n = 242)*

Firm Profile	Percentage (%)	Respondent Profile	Percentage (%)
<u>Industry</u>		<u>Job Position</u>	
Telecom	29.8	Business Manager	12.0
Banking and Finance	25.2	IT Manager	6.2
Manufacturing	11.2	Marketing Manager	5.8
Retail	5.8	Other Managers/Executives	76.0
Service	4.1		
Property	3.7		
Other	20.2		

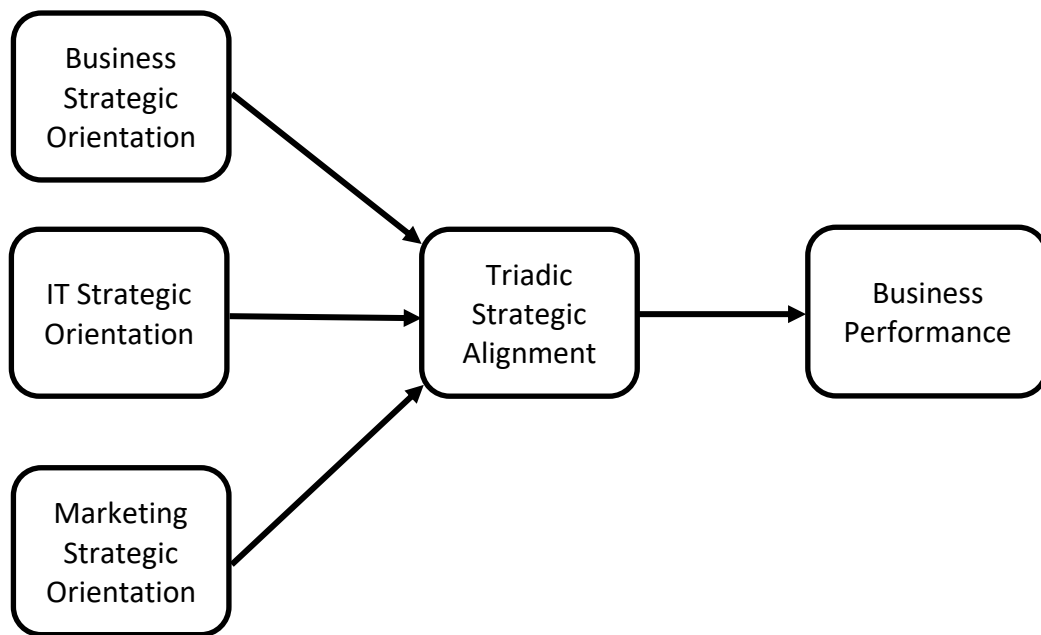
The respondents were analysed in terms of their job position. The major group of respondents are other managers or executives (that do not fall into one of the three specified managerial categories, i.e. business, IT, or marketing) representing 76% and business manager (12%).

### 5.2.2 PLS-SEM Analysis

The second analytical approach used in this research is PLS-SEM. The examination of the research model was performed in SmartPLS version 2.0 (Ringle *et al.*, 2012). It is employed to test the research's hypothesised model (**H1** The triadic strategic alignment between business strategic orientation, IT strategic orientation, and marketing strategic orientation is positively associated with better firm performance). The result of the adopted analytical approach comprises of measurement model and structural model. Once the research model (Figure 5.1) has been constructed using PLS-SEM, the dataset of 242 usable cases can be estimated using the path analysis. The prerequisite for evaluating the structural model is that the measurement models (reflective and formative) are reliable and valid. The analysis procedure falls into three distinct categories; the first two procedures deal with the relations between measurement indicators and the respective latent construct, meanwhile the third procedure deals with the relations amongst latent constructs.



Figure 5.1: Research Model (a)



The first procedure starts by testing the reflective measurement model for the manifest indicators. The second procedure empirically tests the formative measurement model for the formative constructs, followed by the third procedure for assessing the structural model.

The measurement model relates to the relations between manifest variables and latent variables. The measurement model is tested by assessing the validity and reliability of the items and constructs in the model. This ensures that only reliable and valid construct measures are used before assessing the nature of relationships in the overall model. PLS-SEM includes two different kinds of outer models: reflective and formative measurement models (Hair *et al.*, 2013). The reflective measurement model indicates causality from constructs to measurement items, whereas the formative measurement model works in the other direction. Given that there are two types of measurement

models, the nature of the proposed model in this research adapts to the reflective-formative hierarchal model identified by Becker *et al.* (2012). The conceptualisation of a hierarchal model in PLS-SEM was processed through repeating the measurement items (Becker *et al.*, 2012; Diamantopoulos, 2011; Hair *et al.*, 2013; Ringle *et al.*, 2012), these are explained and analysed in the following sub-sections.

### **5.2.2.1 Reflective Measurement Model**

Reflective measurement models should be assessed with regard to their reliability and validity (Becker *et al.*, 2012). It is important that the reflective measurement items have a high level of correlation (Diamantopoulos, 2011). Assessing the reflective measurement model for the first-order constructs and the criterion (performance) is determined by the quality of internal consistency (composite reliability), indicator reliability, convergent validity (average variance extracted), and discriminant validity (Hair *et al.*, 2013). Determining how well each indicator relates to the constructs indicates the reliability of each measure (Ruiz *et al.*, 2008).

The researcher highlights the quality criteria starting by checking the internal consistency reliability to ensure validity. It is a form of reliability used to judge the consistency of results across items on the same test (Hair *et al.*, 2013). The most common statistic testing internal consistency is Cronbach's  $\alpha$  coefficient, which is used to assess the reliability for a set of two or more constructs indicators (Kundu and Bairi, 2014). The acceptable value for the  $\alpha$  coefficient is between 0.7 and 0.9 representing in high reliability and between 0.5 and 0.7 representing moderate reliability (Kapoor *et al.*, 2014). However, Cronbach's  $\alpha$  tends to provide a severe underestimation of the internal

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consistency reliability of latent variables in PLS-SEM (Hair *et al.*, 2013). Table 5.3 contains Cronbach's  $\alpha$  values for the reflective constructs.

All reflective constructs displayed high reliability except for prospector and defender constructs, which indicate moderate reliability. Also, it is more appropriate to apply a different measure of internal consistency reliability, which is referred to as composite reliability. Unlike Cronbach's  $\alpha$ , composite reliability does not assume equal indicator loadings (Hair *et al.*, 2013). The composite reliability considers that indicators have different loadings, and can be interpreted in the same way as Cronbach's  $\alpha$ . It is suggested by Henseler *et al.* (2009) that the value of composite reliability has to be above 0.70 in order to report internal consistency as reliable, whereas below 0.60 indicates lack of reliability. The results presented in Table 5.3 show that composite reliability for all reflective constructs is greater than 0.70 and can be regarded as robust and satisfactory.

Next, the researcher measures indicator reliability which represents how much of the variation in an indicator is explained by the construct and is referred to as the variance extracted from the indicator (Hair *et al.*, 2013). In assessing the reliability of each indicator, the researcher examined the loadings of the measures with their respective constructs generated by PLS-SEM. As this study's research model has not been used in the strategic alignment literature, therefore the study uses a minimum outer loading of 0.50 for reflective indicators to ensure indicator reliability (Hutzschenreuter, 2009). Each loading was reviewed to verify whether the individual items were reliable. All reflective indicators achieved good reliability including the square multiple correlation (the square

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of the loadings); in this case the researcher did not eliminate any indicator, which is an indication of indicator reliability (Fornell and Larcker, 1981).

Table 5.3: Convergent Validity and Internal Consistency Validity

Second-order Constructs	Reflective First-order Constructs	Manifest Indicators	Outer Loadings	Indicator Reliability	AVE	Composite Reliability	Cronbach's $\alpha$
Business Strategic Orientation (BSO)	Proactiveness	PRO1	0.73	0.50	0.51	0.75	0.51
		PRO2	0.70	0.51			
		PRO3	0.71	0.51			
	Defensiveness	DEF1	0.81	0.65	0.61	0.82	0.67
		DEF2	0.83	0.70			
		DEF3	0.69	0.48			
	Analysis	ANA1	0.80	0.65	0.69	0.87	0.78
		ANA2	0.85	0.71			
		ANA3	0.85	0.73			
IT Strategic Orientation (ITSO)	Flexibility	FLEX1	0.66	0.40	0.64	0.84	0.72
		FLEX2	0.85	0.74			
		FLEX3	0.87	0.77			
	Efficiency	EFF1	0.80	0.66	0.66	0.85	0.74
		EFF2	0.85	0.71			
		EFF3	0.77	0.60			
	Comprehensiveness	COMPR1	0.88	0.77	0.71	0.88	0.79
		COMPR2	0.89	0.78			
		COMPR3	0.75	0.58			
Marketing Strategic Orientation (MSO)	Customer-focused	CUS1	0.76	0.58	0.57	0.87	0.81
		CUS2	0.80	0.64			
		CUS3	0.79	0.62			
		CUS4	0.63	0.40			
		CUS5	0.78	0.60			
	Competitor-focused	COMP1	0.78	0.61	0.65	0.88	0.82
		COMP2	0.85	0.72			
		COMP3	0.86	0.73			
Organisational Performance	Performance	PERF1	0.83	0.70	0.75	0.94	0.92
		PERF2	0.90	0.82			
		PERF3	0.91	0.82			
		PERF4	0.88	0.77			
		PERF5	0.81	0.66			

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The third step in assessing the reflective measurement model is testing the convergent validity. According to Hair *et al.* (2013), convergent validity is the extent to which a measure correlates positively with alternative measures of the same construct. This means it is analysed by indicator reliability and construct validity (Peter, 1979), which convergent validity resolves if the indicators of a construct correlate more highly amongst themselves than with indicators of a different construct. As the reliability of indicators has been established, the next step is to measure the construct validity using average variance extracted (AVE) in order to achieve convergent validity. The AVE is the degree to which a latent construct explains the variance of its indicators (Hair *et al.*, 2013). As suggested by Ellwart and Konradt (2011), AVE should be greater than the variance shared between the construct and other constructs. The AVE, shown in Table 5.3, was found to be more than the recommended threshold, i.e. 0.50 (Fornell and Larcker, 1981), for all of the reflective constructs in this study. As a result, the convergent validity was achieved indicating that all latent variables explained more than 50% of the variance in their observable measures.

The final step in assessing the reflective measurement model is examining the discriminant validity. It is described as the extent to which a construct is truly distinct from other constructs, in terms of how much it correlates with other constructs (Hair *et al.*, 2013). Discriminant validity of the construct indicators can be analysed by examining the cross-loadings and the Fornell-Larcker criterion (MacKenzie *et al.*, 2011). Starting by the cross-loadings, PLS-SEM also offers an evaluation of the cross-loadings indicating that discriminant validity is fulfilled due to the indicator having the highest loading on its desired construct. Additionally, the Fornell-Larcker criterion needs to be checked to

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assess discriminant validity by comparing the square root of the AVE values with the construct correlations (Peng and Lai, 2012). As can be observed in Table 5.4, the square root of the AVE should be greater than its correlation with any other construct, which means it shares more variance with its own measures than with other constructs in the model.

*Table 5.4: Inter-construct Correlations*

Constructs	1	2	3	4	5
1 BSO	<b>n/a</b>				
2 ITSO	0.71	<b>n/a</b>			
3 MSO	0.67	0.74	<b>n/a</b>		
4 PERF	0.46	0.45	0.55	<b>0.87</b>	
5 TSA	0.81	0.79	0.97	0.59	<b>n/a</b>

**Note:** Diagonal elements are the square root of AVE and highlighted in bold; **n/a:** not applicable to formative constructs

This condition is met in all cases except for the formative constructs, as the AVE is not required in assessing formative measurement models (Rodríguez-Pinto *et al.*, 2008). Based on the preceding assessments of reliability, convergent validity and discriminant validity across all reflective constructs, the measures showed satisfactory reliability and validity, and were thereby retained. The formative measurement model tests of validity, multicollinearity, and the significance of relevance of the indicators are discussed and described in the next sub-section.

### 5.2.2.2 Formative Measurement Model

Diamantopoulos (2011) maintained that traditional validity assessments and classical test theory do not apply to manifest variables that are used in formative measurement

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models and that the concepts of reliability and construct validity are not meaningful when a formative model is employed. It is not essential for one scale of measurement items to be highly correlated in a formative measurement model. The estimates of second-order outer loadings and outer weights can be obtained along with structural relationships and their significance. According to Hair *et al.* (2013), formative measurement is assessed by convergent validity, collinearity issues, and the significance and relevance of the formative indicators. Also, the formative measurement has to be investigated in terms of nomological validity, discriminant validity, and external validity (Kim *et al.*, 2010) to determine the quality of the measurement model (Hardin *et al.*, 2008). This study follows the procedure of evaluating the formative relationships between first-order constructs and second-order construct as a formative measurement model provided by Thornton *et al.* (2014) and Diamantopoulos (2011).

Firstly, concerning the process of empirically validating the formative constructs, nomological validity should be established. The nomological validity is posited to relate the formative constructs to other constructs with which they are expected to have a relationship, on theoretical grounds (Johnson *et al.*, 2006). The nomological net for the indicators may differ for the formative measurement model, unlike the reflective measurement model, for which the nomological net for the indicators should not differ (Petter *et al.*, 2007). The relationship between the formative index and other constructs in the path model should be strong and significant (MacKenzie *et al.*, 2011). Table 5.5 shows the output results of the coefficient path amongst TSA and its three antecedents and one outcome (performance). The structural path coefficients related to the

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formative construct is significant and strong providing the key test of nomological validity, thus increasing confidence in the validity of indicators.

Table 5.5: Structural Estimates

Path	$\beta$ coefficient	Standard error	$p$ value	90% Confidence interval
BSO -> TSA	0.29	0.15	0.0000***	(0.03, 0.54)
PRO -> BSO	0.32	0.10	0.0000***	(0.15, 0.48)
DEF -> BSO	0.53	0.10	0.0000***	(0.38, 0.69)
ANA -> BSO	0.44	0.11	0.0000***	(0.25, 0.62)
ITSO -> TSA	0.02	0.15	0.0000*	(0.23, 0.27)
FLEX -> ITSO	0.37	0.09	0.0000***	(0.22, 0.52)
EFF -> ITSO	0.13	0.12	0.0000***	(0.08, 0.33)
COMPR-> ITSO	0.64	0.10	0.0000***	(0.47, 0.80)
MSO -> TSA	0.76	0.14	0.0000***	(0.53, 0.99)
CUS -> MSO	0.49	0.13	0.0000***	(0.29, 0.70)
COMP -> MSO	0.59	0.12	0.0000***	(0.40, 0.79)
TSA -> PERF	0.59	0.04	0.0000***	(0.52, 0.67)

\*\*\*  $p < 0.001$ , \*  $p < 0.01$

Secondly, the weighting of the formative indicator should be at least 0.10, as suggested by Peng and Lai (2012). The next step in assessing the formative construct is to calculate the  $p$  value by using the bootstrapping tool (242 cases, 3000 samples, according to Henseler *et al.* (2009)) in PLS-SEM. The bootstrap procedure tests coefficients for their significance at the 0.01 level. The  $p$  value is recommended by Hair *et al.* (2013) to be above 1.96 or significance level of 5%. The results of bootstrapping show that all the weights of the indicators and path relationships are significant. Hence the estimated indicator weights of the formative measurement model are significant and are reliable. Moreover, the external validity is estimated from the outer loadings, shown in Table 5.3, indicating that the reflective indicators are significant.



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Thirdly, in order to measure convergent validity, it is critical to run path analysis to estimate the outer loadings of every manifest indicator. The average standardised outer loading was 0.75 (sum of all loadings divided by number of manifest indicators), and all loadings were highly significant, above 0.50 for theory development, as shown in Table 5.3. Thus, convergent validity was indicated.

The final step for assessing formative measurement model was to perform a collinearity test of formative indicators, which is equivalent to the variance inflation factor (VIF). The multicollinearity refers to the relationship between more than two independent variables and the existence of multicollinearity can be an issue in multivariate analyses (Hair *et al.*, 2013). The formative measurement models are likely affected by considerable indicator collinearity (Diamantopoulos *et al.*, 2008). General statistical theory suggests that multicollinearity is a concern if the VIF is higher than 10 (Henseler *et al.*, 2009); however, with formative measures, multicollinearity poses more of a problem (Diamantopoulos, 2011). Following Hair *et al.* (2013), steps for evaluating formative measurement of the collinearity value should be no more than the threshold value of 5 because it would discriminant validity and complicates the assessment of indicators (Ruiz *et al.*, 2008). The retrieved result indicates that there are no major concerns because the range of the VIF is between 1.34 and 3.31, which indicates low levels of multicollinearity and exhibits discriminant validity.

Consequently, no further indicators needed to be rejected since the tests indicate no redundancy. These results also support the appropriateness of the lower-order reflective measures and the higher-order formative measures. After confirming that all

the items are good indicators of their respective constructs, the researcher proceeded to examine the hypothesised relationship between triadic strategic alignment and organisational performance, presented in the following section.

### **5.2.2.3 Structural Model**

A structural model specifies relations between latent constructs. The estimations of indicators in the measurement model permit an evaluation of the structural path model estimates. Estimating the structural model involves examining the model's predictive capabilities and the relationships between the constructs such as assessing collinearity issues, significance and relevance of the structural model relationships, the level of coefficient of determination ( $R^2$  value), and the predictive relevance ( $Q^2$  value) (Hair *et al.*, 2013). It is important before assessing the structural model to check for collinearity issues as it arises in the context of structural model evaluation when two constructs are highly correlated. The VIF values of the analyses are between 1.23 and 3.11 which are below the threshold of 5, representing no collinearity issue in the structural model.

The essential criterion for assessing the structural model is examining the  $R^2$  values of the endogenous constructs (Henseler *et al.*, 2009).  $R^2$  indicates the percentage of a construct's variance in the model, whilst the path coefficients indicate the strengths of relationships between constructs (Chin *et al.*, 1998). The coefficient of determination is a measure of the proportion of an endogenous construct's variance that is explained by its predictor construct (Hair *et al.*, 2013). In order to assess the structural model and examine the  $R^2$  value, data were analysed in two models as conceptualised in chapter

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three. In Figure 5.2, data were analysed using the main effect model, and in Figure 5.3 data were analysed using the research model (i.e. covariation model).

Figure 5.2: Structural Estimates for Main Effect Model

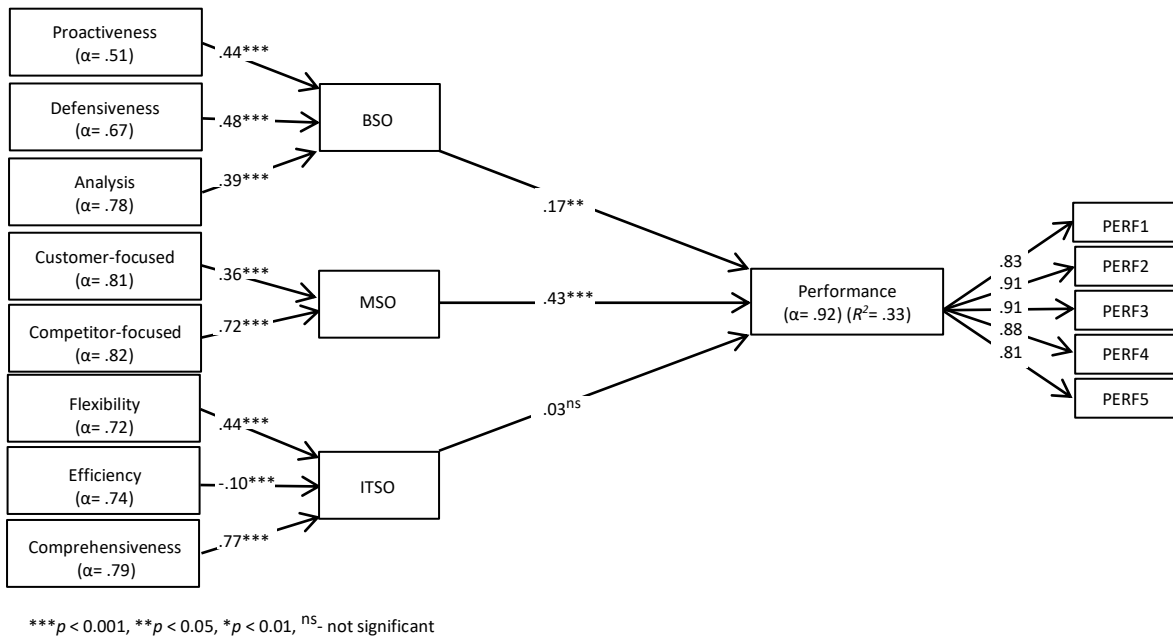
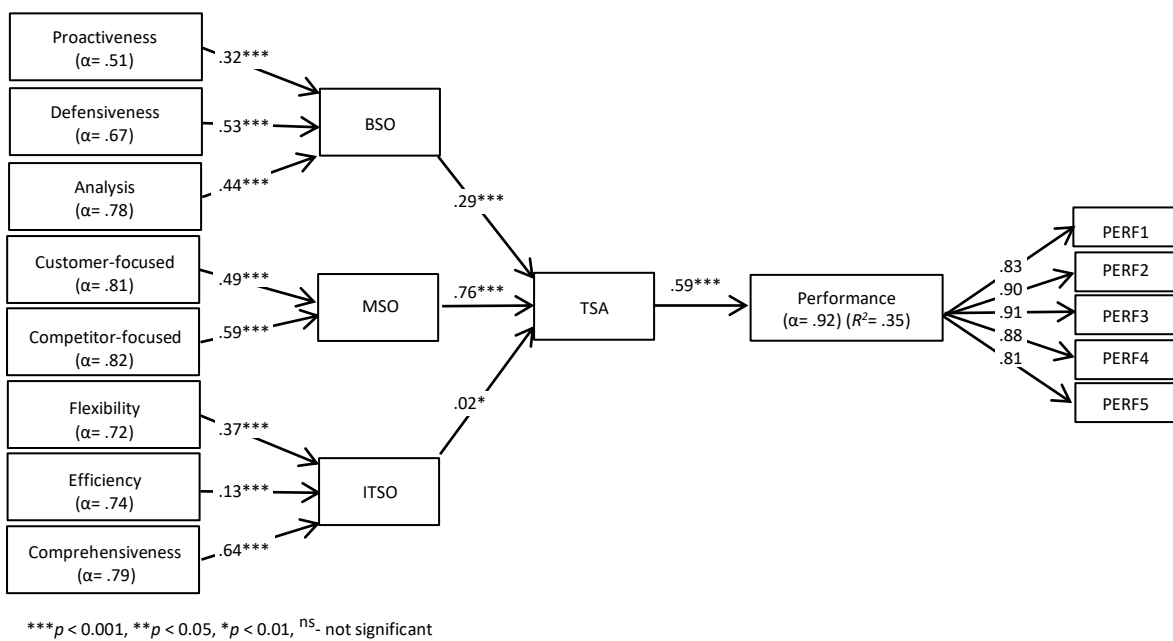


Figure 5.3: Structural Estimates for Research Model



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In general, the path coefficient values and the  $R^2$  value of the research model were superior to those generated by the main effect model. First, MSO remains the factor with the strongest path coefficient (0.76) within the TSA construct. Second, the path coefficient of BSO has been significantly strengthened (0.29), whilst ITSO has a relatively weak path coefficient (0.02). Further, there is a remarkable relation between TSA and performance (0.59), implying that triadic strategic alignment of business, IT, and marketing strategic orientations may indeed positively affect organisational performance. The analysis also indicated that the research model explained variance in performance with  $R^2$  value (0.35) increased by 6% compared to the  $R^2$  value (0.33) of the main effect model. Thus, the research result and discussion is based on the research model.

Furthermore, the  $R^2$  value of performance construct is 0.35, which is higher than threshold of 0.33 (Chin *et al.*, 1998). Nonetheless, the performance construct has one exogenous dependent construct (i.e. TSA) with  $R^2$  value 0, therefore it is accepted. Looking at the path coefficient in Table 5.5, one finds that the triadic strategic alignment ultimately influences the key target construct, performance, via the formative constructs (BSO, ITSO, and MSO). The confidence intervals of the path coefficient was determined by setting the confidence intervals at 90% (1.65), as recommended by Hair *et al.* (2013), then computed using the path coefficient value and standard error obtained from PLS-SEM.

Next, the research calculates the predictive relevance ( $Q^2$  value) which is critical to assess the predictive validity of a complex model (Chin *et al.*, 1998). Calculating the  $Q^2$

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value is based on the blindfolding procedure (Hair *et al.*, 2013). It shows how well the data collected empirically can be reconstructed with the help of the model and the PLS-SEM parameters (Vinzi *et al.*, 2010). The  $Q^2$  values of BSO, ITSO, MSO, TSA, and performance endogenous constructs are 0.35, 0.49, 0.50, 0.35, and 0.25, respectively. The rule of thumb indicates that all  $Q^2$  values are above 0 (Vinzi *et al.*, 2010). Hence, the observed values are well reconstructed providing support for the model's predictive relevance.

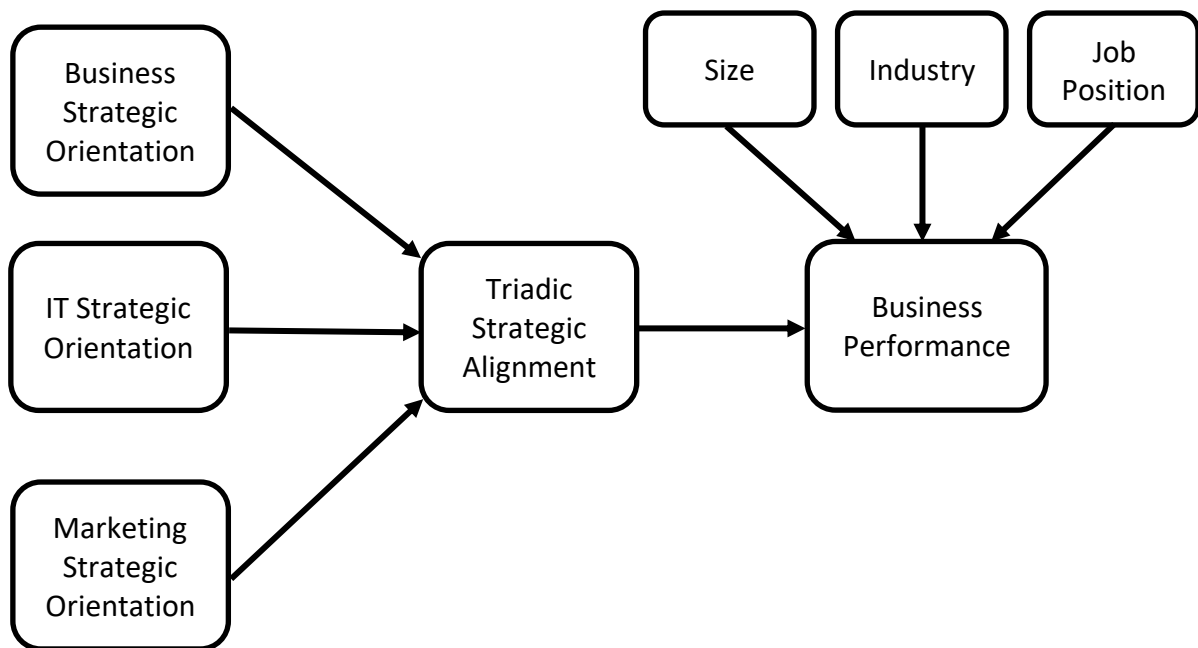
Thus, the overall result indicates that the concept of triadic strategic alignment of business, IT, and marketing strategic orientations with organisational performance is rather strong (**H1** The triadic strategic alignment between business strategic orientation, IT strategic orientation, and marketing strategic orientation is positively associated with better firm performance). This study finds a significant, positive impact of triadic strategic alignment on organisational performance (Table 5.5;  $TSA \rightarrow PERF$   $\beta = 0.59$ ,  $p < 0.001$ ,  $R^2 = 0.35$ ). This means that triadic strategic alignment is positively associated with organisational performance but only insofar as business, IT, and marketing strategic orientations are correlated, in turn, and contributes to higher firm performance. The researcher further notes that marketing strategic orientation is highly related to triadic strategic alignment ( $\beta = 0.76$ ,  $p < 0.001$ ) compared to the other two strategies, which contributes to better business performance. To conclude, the structural model provided an adequate model fit demonstrating that the overall results of the triadic strategic alignment of the model and the assessment of the measurement model accommodate fundamental support to confirming the conceptualised model.

#### 5.2.2.4 Control Variables

A control variable is a variable that the researcher suspects is influencing the relationship between the independent and dependent variables (David and Sutton, 2004; Rubin, 2009). Although it is not the main focus of the study, omitting it would make the results less accurate. Prior studies indicated firm size, industry sector, and also job position as control variables that influence the alignment because they stay constant throughout to clarify the relationship (e.g. Chan *et al.*, 2006; Cragg *et al.*, 2002; Powell, 1992; Sproull, 2002).

Control variables are treated as independent variables in a model with arrows directed from those variables to the dependent variable. In this study, three control variables were added to the SEM model linking them directly to the dependent variable (i.e. organisational performance). This was computed using PLS to obtain path coefficients between constructs (see Figure 5.4).

Figure 5.4: Full Model (b)



In order to test whether control variables have a significant effect on performance, linear regression was computed using SPSS. Although the control variables have little influence on organisational performance with  $R^2$  value increased from 0.35 to 0.37, the linear regression revealed that those control variables do not have a significant effect (see Table 5.6). Although there is no right or wrong level of significance required for testing (Ang, 2014), the majority of researches published in the strategic management literature are using 5% level of significance (Goldfarb and King, 2016) whilst researchers often assume a significance level of 10% when a study is exploratory in nature (Hair *et al.*, 2013). Ultimately, this study follows prior strategic alignment studies that adopts the same level of significance (e.g. Sabherwal and Chan, 2001; Bergeron *et al.*, 2001; Vorhies and Morgan, 2003).

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Table 5.6: Path Analysis

Variable	Theoretical Model (a)		Full Model (b)	
	Path Coefficients	t-value	Path Coefficients	t-value
<b>Independent Variables</b>				
PRO -> BSO	0.299	3.297***	0.316	3.294**
DEF -> BSO	0.516	5.623***	0.534	5.566***
ANA -> BSO	0.471	3.951***	0.439	4.089***
FLEX -> ITSO	0.370	4.197***	0.372	3.977***
EFF -> ITSO	0.122	3.312***	0.124	0.994 <sup>ns</sup>
COMPR -> ITSO	0.643	6.394***	0.640	6.548***
CUS -> MSO	0.512	3.822***	0.494	4.048***
COMP -> MSO	0.575	4.905***	0.593	5.126***
TSA -> PERF	0.592	13.374***	0.583	12.601***
<b>Control Variables</b>				
SIZE -> PERF			0.074	1.610 <sup>ns</sup>
INDUSTRY -> PERF			-0.066	1.340 <sup>ns</sup>
JOB -> PERF			0.071	1.533 <sup>ns</sup>
<b>R<sup>2</sup> Value for PERF</b>	<b>R<sup>2</sup> = 0.365<sub>b</sub> – 0.350<sub>a</sub> = 0.015***</b>			

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05, <sup>ns</sup> -not significant

This suggest that the three variables (i.e. firm size, industry type, and manager’s job position) do not explain variance in all performance components (Jabbour *et al.*, 2015). In conclusion, there is no evidence that firm size, industry, and/or job position is associated with better firm performance (Liang *et al.*, 2007; Modi, 2006). Hence, the research result and discussion is based on research model (a). Next, the MANOVA technique is performed on the results obtained from the questionnaire survey.

### 5.2.3 One-Way MANOVA Analysis

The third analytical technique adopted in this research is one-way MANOVA, conducted in SPSS. The MANOVA technique was performed to differentiate the modes of triadic



strategic alignment. It is appropriate technique to test the other three hypotheses (**H1.1**, **H1.2**, and **H1.3**). In order to proceed with analysing the data using this technique, a preliminary assumption testing was conducted in terms of a homogeneity test and a multivariate normality test. Then a classification procedure was performed. All steps are summarised in the next sub-section.

### 5.2.3.1 Preliminary Assumption

The first step before using one-way MANOVA is to carry out a homogeneity test since there are multiple dependent variables (e.g. sales growth, market share, etc.). Although preliminary assumption testing was conducted in the previous sections to check outliers and multicollinearity, this test is required to ensure that the dependent variables' intercorrelations are homogeneous (French *et al.*, 2008). Thus, Levene's test was conducted to check the assumption of homogeneity of variance across the groups using ( $p < 0.05$ ) as a criterion. The test shown in Table 5.7 is not significant for any of the dependent variables except for sales growth. As a result, the sales growth variable has been excluded from the study and the homogeneity of variance assumption has not been violated for the other variables.

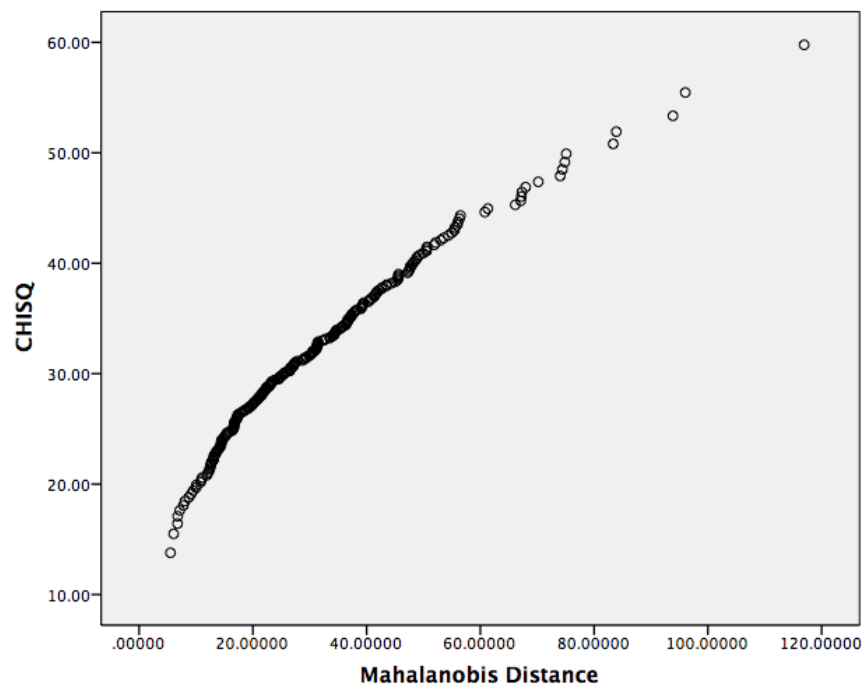
*Table 5.7: Test of Homogeneity*

Dependent Variables	Levene Statistic	df1	df2	Sig.
Sales Growth	5.549	3	238	0.001
Market Share	2.738	3	238	0.044
ROI	1.542	3	238	0.204
Net Profit	2.493	3	238	0.061
Financial Liquidity	1.263	3	238	0.288

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The second step is testing multivariate normality. The test has to verify if the data satisfy the distribution assumptions (Morgan *et al.*, 2012). Multivariate normality is when each variable under consideration is normally distributed with respect to each other variable (Khattree and Naik, 2000). Before using the one-way MANOVA technique, a multivariate normality graphical assessment was carried out following Wan Nor's (2015) steps by constructing chi-square against Mahalanobis distance. The Mahalanobis distance is the distance of a particular case from the point created by the means of all variables and aims to identify cases that follow a strange pattern of scores on the dependent variables (Pallant, 2013). Figure 5.5 clearly shows that the variables plotted in the graph do not form a clear-cut straight line. Apart from the few cases plotted in the upper right part of the graph which are regarded as outliers, the multivariate normal distribution is not violated (Warren *et al.*, 2011).

*Figure 5.5: Multivariate Normality Test*



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The third step was to organise and classify the dataset to be able to view the results in groups. The classification procedure of the modes of alignment was based on the business strategic orientation. For instance, prospectors were selected based on each case's three proactiveness indicators scored simultaneously between five and seven (somewhat agree, agree, and strongly agree). Then all cases of prospectors were further divided into three modes based on the reviewed literature: ideal alignment, medium alignment, and low alignment. Ideal alignment refers to triadic strategic alignment between prospector (business strategic orientation), flexibility (IT strategic orientation), and customer-focused (marketing strategic orientation) where all relevant indicators scored five or more. Medium alignment refers to prospectors aligned with either IT flexibility strategy or customer-focused marketing strategy. This means only one of the latter two strategies with all its indicators scored five or more. Finally, low alignment for prospectors refers to prospectors aligned with neither the IT flexibility strategy nor the customer-focused marketing strategy. That is, none of the latter two strategies with all their indicators scored five or more. The same procedure was performed for defenders and analysers. As a result, there were 28 prospectors, 41 defenders, and 127 analysers. There were also 45 cases having mixed strategic orientation (see Section 6.2.3).

Thereafter, the research can compare modes of triadic strategic alignment based on the mean value of performance to clearly distinguish alignments level from one another. Because the analysis used is one-way MANOVA, the independent variable was set as the mode of triadic strategic alignment acquired from step one and the dependent variables used are: market share, ROI, net profit, and financial liquidity. A one-way MANOVA test was then applied to the 242 cases based on the four performance components. The

results are presented in three sections addressing the three hypotheses (**H1.1:** Prospectors, **H1.2:** Defenders, and **H1.3:** Analysers).

**5.2.3.2 Results of Triadic Strategic Alignment for Prospectors**

In the first generic type, 28 prospectors were identified: 14 with ideal mode of triadic strategic alignment between business, IT, and marketing strategic orientations, 12 with triadic strategic alignment, and two with low triadic strategic alignment. The descriptive statistics for prospectors is summarised in Table 5.8.

*Table 5.8: Descriptive Statistics (Prospector, n = 28)*

Modes	No	Market Share		ROI		Net Profit		Financial Liquidity	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
<b>Ideal</b>	14	5.36	1.151	5.57	1.089	5.57	0.852	5.50	0.941
<b>Medium</b>	12	4.33	1.231	4.25	1.215	4.08	1.165	4.17	1.403
<b>Low</b>	2	3.00	2.828	3.00	2.828	2.50	2.121	2.50	2.121

A one-way MANOVA was conducted. Box’s Test of Equality of Covariance Matrices confirmed that the data did not violate the assumption ( $p = 0.243$ ); the significant values of Levene’s Test of Equality of Error Variances for the dependent variables were 0.097 (market share), 0.118 (ROI), 0.288 (net profit), and 0.486 (financial liquidity), suggesting the assumption of equality of variance was not violated. The multivariate tests indicated that there was a statistically significant difference between the three alignment modes on the combined dependent variables; that is, the ideal triadic strategic alignment performed better than medium alignment, which performed better than low alignment, with the modes’  $F = 2.255$ ,  $p = 0.041$ , Wilks’ Lambda = 0.503, and partial eta squared =

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0.291. Since the multivariate tests were significant, this allowed Tests of Between-Subject Effects to be further conducted (Table 5.9). The results indicated that all three modes of alignment were significantly different on market share, ROI, net profit, or financial liquidity. The importance of the impact of mode on market share, ROI, net profit, or financial liquidity could be evaluated using the effect sizes' partial eta squared, which were considered medium (Hair *et al.*, 2013), suggesting that mode could explain 24.2% of the variance in market share, 31.7% in ROI, 46.3% in net profit, and 36.9% in financial liquidity.

*Table 5.9: Test of Between-Subject Effects for Prospector*

<b>Dependent Variables</b>	<b>F</b>	<b>Sig.</b>	<b>Partial Eta Squared</b>
Market Share	3.990	0.031	0.242
ROI	5.806	0.008	0.317
Net Profit	10.777	0.000	0.463
Financial Liquidity	7.317	0.003	0.369

### **5.2.3.3 Results of Triadic Strategic Alignment for Defenders**

In the second generic type, 41 defenders were identified and the descriptive statistics is summarised in Table 5.10.

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Table 5.10: Descriptive Statistics (Defenders, n = 41)

Modes	No	Market Share		ROI		Net Profit		Financial Liquidity	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
<b>Ideal</b>	21	5.95	1.117	5.48	1.250	5.38	1.244	5.67	1.155
<b>Medium</b>	18	4.22	0.943	4.17	1.098	3.89	1.183	3.83	1.098
<b>Low</b>	2	6.00	1.414	5.50	2.121	6.00	1.414	6.00	1.414

A one-way MANOVA was conducted. Box’s Test of Equality of Covariance Matrices was  $p = 0.472$ , indicating that the data did not violate the assumption; the significant values of Levene’s Test of Equality of Error Variances for the dependent variables were 0.741 (market share), 0.201 (ROI), 0.766 (net profit), and 0.485 (financial liquidity), suggesting the assumption of equality of variance was not violated. The multivariate tests indicated that there was a statistically significant difference between the three alignment modes on the combined dependent variables. The ideal triadic strategic alignment performed better than medium alignment; however, low alignment performed better than both ideal and medium alignment, whilst the number of low cases was only two. The modes’  $F = 3.668$ ,  $p = 0.001$ , Wilks’ Lambda = 0.469, and partial eta squared = 0.295. Furthermore, Tests of Between-Subject Effects were conducted (Table 5.11). The results indicated that all three modes of alignment were significantly different on market share, ROI, net profit, or financial liquidity. The importance of the impact of mode on market share, ROI, net profit, or financial liquidity could be indicated by the effect sizes’ partial eta squared, which were considered medium (Hair *et al.*, 2013), suggesting that mode could explain 41.9% of the variance in market share, 23.6% in ROI, 30.4% in net profit, and 41.7% in financial liquidity.

*Table 5.11: Test of Between-Subject Effects for Defender*

Dependent Variables	F	Sig.	Partial Eta Squared
Market Share	13.721	0.000	0.419
ROI	5.869	0.006	0.236
Net Profit	8.316	0.001	0.304
Financial Liquidity	13.612	0.000	0.417

#### 5.2.3.4 Results of Triadic Strategic Alignment for Analysers

The third generic type, 127 analysers were identified with only two modes of alignment and the descriptive statistics is summarised in Table 5.12. A one-way MANOVA was conducted to indicate that there was no statistically significant difference between the two alignment modes on the combined dependent variables. Thus, no further tests were conducted.

*Table 5.12: Descriptive Statistics (Analysers, n = 127)*

Modes	No	Market Share		ROI		Net Profit		Financial Liquidity	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
<b>Ideal</b>	92	5.18	1.089	5.21	1.163	4.99	1.209	5.22	1.239
<b>Medium</b>	35	4.86	1.556	4.86	1.353	4.86	1.556	4.83	1.339

#### **5.2.4 Hypothesis Testing**

The research hypotheses were tested by assessing the direction, strength and level of significance of the path coefficient estimated by PLS-SEM and by performing a one-way MANOVA test to confirm the significance level of the mean between the three modes of alignments. Table 5.13 summarises the testing results of all hypotheses. The first hypothesis is supported by the empirical evidence. Table 5.5 suggests that the relationship between triadic strategic alignment and organisational performance is rather strong.

Hypothesis 1.1 assumes that prospectors aligned with IT flexibility strategy and customer-focused marketing strategy, the ideal alignment, will perform better than those prospectors supported with other IT or marketing strategies. This hypothesis is supported by the empirical evidence. Table 5.8 suggests that prospectors with the ideal alignment perform much better than those with medium and low alignments.



Table 5.13: Hypotheses Testing

	Hypothesised Path	Path Coefficient	Empirical Evidence
<b>Hypothesis 1</b>	TSA -> PERF	0.59***	Yes
<b>Hypothesis 1.1</b>	Prospector with Ideal alignments perform better than misalignment	Larger mean value than medium and low modes	Yes
<b>Hypothesis 1.2</b>	Defender with Ideal alignments perform better than misalignment	Larger mean value than medium mode	Partially
<b>Hypothesis 1.3</b>	Analysers with Ideal alignments perform better than misalignment	No statistical significant between modes	No

\*\*\*  $p < 0.001$

Hypothesis 1.2 suggests that defenders aligned with IT efficiency strategy and competitor-focused marketing strategy, the ideal alignment, will perform better than those defenders supported with other IT or marketing strategies. Tables 5.10 suggests that defenders with the ideal alignment perform better than those with medium alignment; however, low alignment including only two cases performs better than both ideal alignment and medium alignment, thus hypothesis 1.2 is only partially supported.

Hypothesis 1.3 conjectures that analysers aligned with IT comprehensiveness strategy and a marketing strategy that focuses equally on customers and competitors, the ideal alignment, will perform better than those analysers supported with other IT or marketing strategies. This hypothesis is rejected by the empirical evidence because there was no statistically significant difference between the two alignment modes on the combined dependent variables.

Overall, the data collected from the questionnaire survey were inspected using different types of tests assuring that the data is reliable, valid, and free from any errors to perform the main study analyses. All hypotheses were tested in this phase by quantitative analysis (PLS-SEM and one-way MANOVA) concluding that the result of triadic strategic alignment is positively related to firm performance. In addition, the lack of significant research on the relation between triadic strategic alignment and business performance may suggest that awareness of this topic is limited. Thus, the results from the semi-structured interview shed further light in to this topic. The next phase describes the process of analysing the semi-structured interviews.

### **5.3 Interview Results**

A follow-up interview research was deemed most appropriate to seek further explanation about the research topic (Creswell, 2003; Saunders, 2015). Following the questionnaire results which analysed the quantitative data, this phase analyses the follow-up telephone interviews in order to ensure thorough exploration of the phenomenon of triadic strategic alignment to support the discussion in the next chapter. This phase is divided into four sections to ensure the results are accurate and relevant to the research topic. The first section includes a brief description of the participants. The second section provides details about transforming the audio-recorded data into text. Next, the third section describes the process for generating codes for the transcribed data. The fourth section describes how the semi-structured interviews with these participants were analysed and made trustworthy.

### **5.3.1 Participant Demographics**

This section presents data that were obtained from the interviews with the 11 research participants. The main purpose of the interview is to gain in-depth understanding on why and how triadic strategic alignment enhances, rather than confirming the hypotheses. This led to choosing participants randomly from the survey respondents to comply with the quantitative research. Therefore, no demographic questions were asked during the interview except for confirming their business, IT, and marketing strategic orientations their business adopts. All 11 interviews were conducted in English. Although the number of participants interviewed is very much smaller than the questionnaire survey, it is a better approach to gain useful insight compared with the questionnaire survey.

Based on the preliminary information analysed in the questionnaire phase and because the data were coded, the researcher was able to obtain demographic information with ease for the three participants chosen for the interview. Table 5.14 gives a summary of the participants' position, the size of their firm, and the industry type. These 11 participants are business, IT, and marketing executive/managers representing service, manufacturing, food, telecommunication, trading, and banking industries. All the firms are of small to large size, with number of employees ranging from 10 to 999.

Table 5.14: Interview Participants Demographics (n = 11)

Participant ID	Position	Interview Method	Interview Duration	Industry	Firm Size
1	Marketing Manager	Telephone	10 min	Food Industry	Large (Yemen)
2	Business Executive	Telephone	12 min	Service Industry	Medium (Yemen)
3	IT Manager	Telephone	10 min	Manufacturing Industry	Medium (Yemen)
4	IT Manager	Telephone	50 min	Telecommunication Industry	Large (Yemen)
5	Marketing Manager	Telephone	12 min	Telecommunication Industry	Large (Yemen)
6	IT Manager	Telephone	31 min	Banking Industry	Large (Yemen)
7	Business Manager	Telephone	40 min	Service Industry	Small (Qatar)
8	Business Manager	Telephone	37 min	Marketing & Advertising Industry	Medium (Saudi Arabia)
9	Marketing Manager	Telephone	30 min	Service Industry	Small (Saudi Arabia)
10	Marketing Manager	Telephone	44 min	Banking Industry	Medium (UK*)
11	Business Manager	Telephone	33 min	Service Industry	Medium (UK*)

\* Companies in Yemen Affiliates in the UK

### 5.3.2 Transcribing Process

Given the importance of analysing interviews accurately, it is required to transcribe the recorded interviews into texts that will allow capture of the interview contents. The follow-up interview used in this study contains nine questions divided into two categories (Appendix B), which took around 10-12 minutes for the first three interviews:

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1. Organisation's perception and practice of strategic alignment
2. Organisation's performance.

Then another eight follow-up interviews were conducted. Seven interviews took around 30-50 minutes apart from one interview which only lasted for 12 minutes due to the participant's availability. The interview contains 11 questions divided into two categories (Appendix C) which are meant to be answered by all three (business, IT, and marketing) managers:

1. Managers' point of view of business, IT, and marketing managements.
2. Managers' perception of triadic strategic alignment.

The interview questions covered a range of key issues related to the alignment topic to ensure that there was no relevant information missing. In addition to that, the nature of the semi-structured interview is to leave some space for the participants to add comments and thoughts about the triadic strategic alignment which were not covered by the questions. It could take several hours to transcribe one recorded interview into text and could cause the loss of important words or phrases. Fortunately, there are several methods used to transcribe interview data automatically with the aid of computer software such as NVivo. The interviews in this research were transcribed verbatim using NVivo software as it is deemed the most common software capable of organising data (King *et al.*, 2004).

In spite of the fact that NVivo transforms the data automatically, it is also important that the transcript retains the information needed in a way which is true to its original nature.

Thus, the researcher re-checked the transcripts back against the original recording and any necessary corrections were made to ensure accuracy of the transcripts.

### **5.3.3 Coding Process**

Once the 11 interviews have been successfully transcribed by retrieving text from audio data, the next stage is to start generating codes from the transcripts. This is initially done by reading the transcripts several times and making notes that refer to a word, theories or short phrases that symbolically assign a summative, salient, essence-capturing, and / or evocative attribute for a portion of language based on what is being said in the text (Saldaña, 2015). The coding process consists of three steps: open coding, axial coding, and selective coding (Braun and Clarke, 2006).

The open coding process for the transcribed transcripts was performed manually by going through the transcripts line-by-line. The first coding process was completed due to the fact that the researcher became familiar with the transcripts from the previous stage whilst reading the transcripts over and over. The identified notes were labelled in a descriptive manner. Those labelled codes were extracted from the transcripts and saved in separate documents for each participant.

The second step is to process the axial coding which consists of identifying relationships, categories, or patterns amongst the open codes (Neumann, 2011). This process was done by reviewing and examining the initial codes in step one, then reducing the number of codes into categories by grouping similar phrases or words together. The third step involved scanning all the grouped codes for comparison, and further refinement

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reduced the groups by linking them to the research topic. This led to the development of thematic framework. An example of this is presented in Table 5.15.

*Table 5.15: Coding Example*

Interview Transcript	Open Coding	Axial Coding
<p>“This is because the senior management has sufficient information about the two departments as well as excellent technical knowledge to the extent they totally understand the content of the technical reports raised to them. For example, the executive director of IT his background and specialised as an engineer and daily reports are submitted to support decision-making..... I do not think that the top management to make a decision on the two departments without refereeing to the managers allocated to the two departments in the sense that even there was not enough knowledge of the top management, they discuss with the departments’ directors to make a decision”</p>	<p>Management sharp knowledge</p> <p>Understanding context</p> <p>Expert makes decisions</p> <p>Management with limited knowledge seek experts’ advice</p>	<p>Sufficient knowledge support decision making</p>

### 5.3.4 Thematic Analysis

In this section, the developed thematic frameworks are analysed. It describes the executives’ responses to 11 open-ended questions, with descriptive quotations. The findings from the interview data are presented below as two thematic frameworks organised under the following key topics:

- Knowledge sharing
- Triadic strategic alignment value

#### **5.3.4.1 Theme 1: Managers' opinions about knowledge sharing**

The participants' explanations as to how and why knowledge sharing amongst departments of the organisations capturing the essence of triadic strategic alignment evolved from two points. Regardless of formality, knowledge sharing between business, IT, and marketing departments facilitates business goal achievement. The following quotation from the transcript supports the first point:

*"...we start our meeting by discussing general or specific concerns which helps us in identifying issues, then managers contribute in solving all issues raised by sharing information and suggesting solutions"* – [Participant 2: Business Manager, Code: 8]

It was noticed that context between information sharing is in line with the views of Kearns and Lederer (2003) when they emphasise the participation of executives in knowledge sharing to provide competitive advantage. As of the quantity of knowledge needed to take part in making suggestions for other departments depends on many factors. However, it was totally noted from one of the participants the following:

*"I would not say enough knowledge but at least little because it is necessary to be in contact with the managements in everything technically to obtain ideas and plans that makes us closer to them"* – [Participant 7: Business Manager, Code: 4b]



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This knowledge sharing between the three managements is regarded as three-way process of which IT and marketing managers have significant business knowledge and are able to influence the business strategy and the opposite is true. This ultimately means that the three managements have to be in regular contact that clearly highlights the business goals. The following supports that:

*“It is necessary to be synchronous with the three managements because the strategy needs to pass by all stations of all managements so that it embrace their goals. This can only be done when the three managements are synchronised because they complete each other”* – [Participant 8: Business Manager, Code: 2]

In more general sense, the closer the three managements synchronise the better chance they form perfect three-way communication. Working closely together involves business, IT, and marketing to facilitate the achievement of strategic objectives. This was noted from the following:

*“All managements participate in proposing suggestions to improve the company and to draw plans in parallel with the objectives for profit-making and rapid growth”* – [Participant 9: Marketing Manager, Code: 11]

The aforementioned quotations from the participants briefly explain that the three managements are clearly synchronised in their firms. Obviously, this mutual understanding leads managements to resolve issues by appreciating the viewpoints of each other and participate in formulating strategies for the three managements. These have been noted from the following responses:

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*“Executives and managers from different departments discuss issues observed from the market within each other until a unified solution is agreed” –*

[Participant 3: IT Manager, Code: 5]

*“...business, IT, and marketing managements discuss and contribute planning strategies at the level of these managements ...they are participating because they have gained sufficient knowledge that allows them to share their thoughts”*

– [Participant 6: IT Manager, Code: 5]

An example of effective strategic alignment was given by participant 1 related to their organisation where he described how departments are involved in forming strategies. The example given describes how congruence should exist between departments to involve management aligning goals together. The description was as follows:

*“For example, IT people were involved in the strategy formation for all other departments, finance, marketing and operations” –* [Participant 1: Marketing

Manager, Code: 6]

*“There is a unified meeting every week between all managers including managers from IT and marketing to discuss the goals of each department separately and then the goals of the company as a whole” –* [Participant 2:

Business Manager, Code: 5]

This also applies to business management constructing vision on the role of IT and marketing departments. That is due to the fact that at strategic level business, IT, and marketing strategies must complement and support each other relative to the external

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business environment. There is no better way to build the visions than the involvement of business management. This following quote supports the given statement:

*“...business management are the ones who determine and regulate how the company is growing rapidly in the market and they are participating in developing the vision of the two IT and marketing since they are the largest two departments in the company”* – [Participant 4: IT Manager, Code: 3]

Together, participants agree that collaboration and effective communication were a necessity to achieve business goals. However, as to how this could be achieved, participants mentioned several aspects that could enhance information sharing. First, they stressed that unified meetings between organisational departments on a regular basis should allow management to grasp key points. These meetings are the most common method of formal communication between managements run by the board from time to time based on the urgency and policy of the firm. Some examples from participants are listed:

*“The board meets every week. A total of 52 meetings per year which is done every Monday”* – [Participant 11: Business Manager, Code: 1]

*“We usually do periodic meetings which are held monthly between the management of business, IT, and marketing”* – [Participant 6: IT Manager, Code: 1]

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*“...we have a system which involves all executives and managers to join and contribute in monthly meeting to review the company’s strategies”* – [Participant 3: IT Manager, Code: 6]

Second, the informal liaison between the managements is more flexible and the contact frequency is perceived as sufficient. This method varies depending on the situation and the policy of the firm. This was recorded from the following participants:

*“...the managers are accustomed to the daily informal communication with staffs from various departments because it is part of their job description. It ensures that when a problem arises it is resolved within matter of time due to the continuous of communication between managements”* – [Participant 9: Marketing Manager, Code: 2]

*“...managers often enter any office in the company and have chit-chats with co-workers and sometimes go through reports on their desks for quick read. Their presence and supervision develops short conversations from mere observations”*  
– [Participant 11: Business Manager, Code: 4]

Third, is the urge to run workshops. Participant 1 described the importance of running workshops to help employees understand the department’s goals that in turn reflect on business goals. Furthermore, the ongoing workshops for management engagement are required to increase the awareness on how to align strategies, specifically, business, IT, and marketing, which could be beneficial to a business as a whole. Thus, effective

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communication and information sharing must not be hindered. The next quotation supports the second point:

*“...a workshop was done... where all corporate level executives’ key employees from all different departments gathered to inline each department strategy with the corporate strategy”* – [Participant 1: Marketing Manager, Code: 5]

Furthermore, an important note was recorded from participant 6 describing how the three managements share information. He describes that their company have a group of employees from different departments working together as a team reporting to their managements. This interesting method of sharing knowledge incorporates business, IT, and marketing plans effectively:

*“...we have a team that is composed of the three departments and it is considered as a link that consists of a group of employees and the mutual work is their task ...and so we need to coordinate with business, IT, and marketing managements to be in parallel line and work closely and continuously with this team”* – [Participant 6: IT Manager, Code: 2]

Although knowledge sharing within departments, as individuals, is done with the use of regular communication, it is not the same across organisational departments, where knowledge gaps are believed to exist and their existence affects triadic strategic alignment. If top management do not understand and accept the fact that coordination and knowledge sharing is success, the organisation would suffer from poor performance. Thus, its management processes and goals that must be in alignment.

It can be summarised that information sharing and congruence existence embody a crucial value for an effective triadic strategic alignment. A further explanation of this value is covered in the next theme.

### **5.3.4.2 Theme 2: Value of triadic strategic alignment in business**

In relation to the first theme, this section highlights several factors fostering effective triadic strategic alignment. Although business, IT, and marketing departments seem to be very independent in conducting their activities but the truth is they rely on each other to avoid losing sight of the organisation's goals. The participant's point of view reflects on the fact that these departments must collaborate to bring the organisation forward as a whole:

*"The marketing department is the eye of the bank because it is the one that touches the external reality and the external environment for our clients. The business department is the one that sets for us decisions with participation of the two departments. The IT department is supporting the two departments by transforming plans and ideas into systems and infrastructure"* – [Participant 6: IT Manager, Code: 7b]

This is best achieved through intercommunication as previously discussed between departments regardless of the staff level of job positions. This helps to underscore its importance and maintain an effective flow of information. Eventually the valued information reaches departmental managements and is used for multiple purposes such as aligning key management processes to strategy:

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*“The involvement of departments within each other helps management obtaining variety of thoughts and ideas that creates mutual understandings which aligns together with the objectives. As a result, these mutual understandings have a great effect on our company’s performance”* – [Participant 1: Marketing Manager, Code: 9]

This understanding between the three departments develops a relationship that influences a firm’s performance. It was noted that with the support of other departments a business can boost its production not just by investing on a new project or assessing capital investments but by involving business, IT, and marketing managements. This increases the efficiency and effectiveness of the relationship and limits any divisions. Substantially, the relationship must be maintained at a certain level to avoid possible risks evolved from inconsistency:

*“There is a harmonisation between the three managements of IT, marketing, and business. Together they managed to increase the production and the company’s market growth just by utilising the bond between the managements”* – [Participant 4: IT Manager, Code: 7]

*“Of course, the human being is always eager to evolve to be able to reach the perfection level so does our company through reaching high level of satisfaction with the linkage of strategies”* – [Participant 8: Business Manager, Code: 7a]

*“The most important thing that links the managements is coordination and to remain in constant contact”* – [Participant 7: Business Manager, Code: 7b]

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As important as it may seem, the linkage and relationship strength between the managements represents how they are aligned. This allows managements to express their strategies in a focused and coherent way which in turn increases the likelihood of successful implementation. The managements must put their objectives in parallel that serves the firm's vision and depicts how the company intends to translate its strategic objectives and resources into concrete performance results:

*"...the three managements operate efficiently when working in parallel with each other. Our company is dependent on emergent management insights and relies heavily on it"* – [Participant 6: IT Manager, Code: 7a]

*"...the strategies need to be parallel so that all managements be on the same page driving the company to the requested destination. Being on the same page means business must be synchronised with IT and marketing"* – [Participant 11: Business Manager, Code: 11]

Substantially, a company benefits greatly from such alignment. However, neglecting the importance of alignment could influence firm's performance negatively. This happens when strategies are not aligned and each department is acting independently. Misalignment relies on the notions of contradiction of which causes issues in consistency between company's strategy and each activity of the departments:

*"...if one management's strategy is not clear with the other managements or if the strategy overlaps, there will be imbalance causing contradiction in the work"* – [Participant 7: Business Manager, Code: 11b]



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*“...In the event that strategies are not compatible with each other a conflict evolves causing frustration in the work environment that affects not just the company’s performance but also the staff’s performance”* – [Participant 10: Marketing Manager, Code: 11]

Furthermore, the impact of triadic strategic alignment on organisational performance showed that existence of misalignment can be problematic. Participant 2 described one of these factors in the following quotation:

*“...if there were misalignment in our company then it would limit our company’s performance due to the conflict of responsibilities and objectives”* – [Participant 2: Business Manager, Code: 9]

This participant mentioned conflict of responsibilities as the main cause for misalignment. The lack of information sharing between managers as explained previously develops conflict of responsibilities. It could mean that, for example, business managers lack the understanding of the IT roles or IT managers do not accept the role of marketing managers in strategy formation. However, not only was there a conflict of responsibilities that could cause an ineffective triadic strategic alignment, participants agreed that without mutual understanding the business could also suffer failure. This participant emphasises the necessity of sharing thoughts amongst management to reduce the possibility of developing unnecessary outcomes. Another participant shared his view in the following quotation:

*“We know misalignment exists when we face difficulties and it becomes complicated to compromise and defer issues which eventually affects our company’s performance severely”* – [Participant 3: IT Manager, Code: 8]

The examples described above indicate how managers value the alignment between strategies. They are aware of the alignment importance and how it could boost the firm’s performance, believing that aligning strategies plays an important role. Without alignment, strategy is merely a plan on paper lacking effective execution by the management and their firm. From their point of view, misalignment or ignoring alignment of these key strategies causes problems not only to the firm, but also between managers and executives. Thus, a firm should seek to achieve alignment between business, IT, and marketing strategies for performance enhancement and for management participation in formulating appropriate IT and marketing strategies that align together with the firm’s strategy.

From the above description of the participants’ responses, it can be summarised that achieving effective triadic strategic alignment is challenging for business, IT, and marketing managers. That is management has to keep mutual understanding updated between managers in order to become involved in problem solving and department strategy formation that aligns with the organisation’s objectives.

### **5.4 Summary**

The research instruments presented in the previous chapter were tested and reported in this chapter through two phases. The aim of the two phases is to answer the two

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research questions. In the first phase, the questionnaire survey results were presented and analysed using three analytical techniques. The SPSS analytical method screened the data from any possible errors and gave preliminary information about the data. The next analytical method, SEM (PLS), tested the first hypothesis based on a valid sample of 242 questionnaires. The conceptual model proposed in chapter three reveals all the relationships. The statistical result of the impact of triadic strategic alignment on organisational performance was found to be rather strong with path coefficient of 0.53. The final analytical tool used in the questionnaire survey is one-way MANOVA. This technique was used to test the other three hypotheses in which one hypothesis was supported, one was partially supported, and the last hypothesis was rejected.

The second phase of this chapter provides data analysis of 11 follow-up confirmatory interviews. Through adopting the thematic analysis method, this phase started by transcribing and coding the interviews to be able to analyse the textual data. Two key findings were obtained from the follow-up interviews: 1) knowledge sharing which refers to collaboration and communication between managers and 2) value of an effective triadic strategic alignment is achieved when conflict of responsibilities does not exist but instead there is mutual understanding. The two themes identified examines the characteristics of triadic strategic alignment. Further discussion of the findings is covered in the next chapter.

## **CHAPTER 6: DISCUSSION AND CONCLUSION**

### **6.1 Introduction**

Chapter five presented the results of the collected data from various industries, in reference to finding the impact of triadic strategic alignment on organisational performance as illustrated previously in chapter three. This chapter summarises the issues addressed in this study and presents a discussion and interpretation of the significance findings of the research. In addition, it also comments on the contributions and limitations of this research and suggests recommendations for future research.

As discussed in chapter three, this research revolves around developing an understanding of the triadic strategic alignment between business strategic orientation, IT strategic orientation, and marketing strategic orientation, and the impact of the triadic strategic alignment on organisational performance. This research has found that present theorising is limited in provision of adequate guidance to how triadic strategic alignment could enhance business performance. Hence, this study intends to make a significant contribution to the literature by arguing three statements which are sequenced in accordance with the study's objectives and research questions. The first argument is whether a firm should seek to achieve triadic strategic alignment. The second statement intends to argue that there are generic types of triadic strategic alignment taking into account a firm's specific strategic orientation. The third argument attempts to address whether triadic strategic alignment could affect organisational performance positively.

Consequently, this chapter is organised into five sections. The first section aims to elaborate commentary by answering the research questions with the aid of outlining the literature reviewed and interpreting the conclusive results obtained throughout the quantitative research and the follow-up interviews. The second section discusses theoretical implications by evaluating the research model and its contribution to the existing literature for academics. Section three provides the contribution of the research to practitioners in order to enhance triadic strategic alignment and reduce risks that affects a firm's performance. The final sections of the chapter evaluate the study's limitations and highlight future research directions.

### **6.2 Interpretation of the Results**

This section answers the research questions developed, by interpreting the obtained results from chapter five with the support of the literature reviewed from chapters two and three. It is divided into two sub-sections based on addressing each research question separately.

#### **6.2.1 Research Question One**

*RQ1: How and why should a firm seek to achieve triadic strategic alignment amongst its business, IT, and marketing strategies?*

This research question is designed to reduce the research gaps identified in chapter one and two from previous studies of 1) aligning multiple factors to achieve superior organisational performance (Drazin and Van De Ven, 1985); 2) investigating the influence of environmental factors with the strategic alignment between business and

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IT (Bergeron *et al.*, 2004; Chen, 2010; Croteau and Raymond, 2004; Kearns and Sabherwal, 2006); and 3) integrating additional strategy (Celuch and Murphy, 2010) to the model of strategic alignment of IT and marketing (Zhu and Nakata, 2007). This study responded to these calls by including multiple factors, namely three strategies, integrating business, IT, and marketing strategies. These strategies play a crucial role in an organisation by supporting the firm to survive in its environment. Using the configurational theory, which is characterised by a holistic view (Miller, 1986), and drawing on strategic management and marketing literature, this study proposed the first configurational model that concerns aligning business, IT, and marketing strategies to maximise firm's performance. The developed research model was shown in Figure 3.2. The empirical findings of this study confirm that leveraging triadic strategic alignment characteristics in ways yields strong relationship amongst strategies, and subsequently leads to higher firm performance.

The main hypothesis (**H1**) regarding research model was tested adopting the covariation approach. This hypothesis was tested through capturing the interdependence between independent constructs. Results provide satisfactory fit in which the triadic strategic alignment strongly and significantly contributes to firm's performance (see Section 5.2.2.3). This result confirms that valuable interdependencies exist between the triadic strategic alignment and the three strategies. As such, it can be argued that the formulation of IT and marketing strategies should be in line with the requirements of a given business vision.

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The implication of this finding is that top management are in need to bring their organisation forward as a whole by collaborating marketing and IT managements with business management in a concurrent and consistent way (see Section 5.3.4.1). Interview participants explicitly asserted that marketing management collaboration adds value to formulating business goals, so does IT management. Such a coalignment (i.e. triadic strategic alignment) of strategies is concluded as an approach of achieving superior performance (Venkatraman, 1990). From this point, alignment of the three strategies together is better than any two strategies for effective better performance. This finding is consistent with the literature in which strategic IT alignment requires additional environmental factors such as marketing in the strategic relationship to exhibit higher levels of alignment (Chen, 2010). Therefore, if the relationship between the three strategies (triadic strategic alignment) is viewed as an evolved representation of the traditional strategic alignment, it can be argued that the coalignment of business, IT, and marketing strategies also exhibits higher levels of performance.

Moreover, prior studies (e.g. Bergeron *et al.*, 2004; Schniederjans and Cao, 2009; Zheng *et al.*, 2010) suggested that alignment of more than two constructs creates a competitive advantage and enhances firm performance. In line with priori studies, this research finding indicates that the complementary impact of triadic strategic alignment of business, IT, and marketing enhances firm performance. Despite the fact that these prior studies tested the coalignment between strategy and other factors, this is due to the extent of prior empirical support for such a thesis has been very limited to a few narrow domains including business-IT strategic alignment (Sabherwal and Chan, 2001), business-marketing strategic alignment (Vorhies and Morgan, 2003), and IT-marketing

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strategic alignment (Hooper *et al.*, 2010). In more general sense, this thesis succeeded previous studies by integrating the three strategies together as a set, rather than being modelled independently or in pairs. Furthermore, Borges *et al.* (2009) argued that IT capabilities positively influence business performance, if they have an adequate marketing orientation. Although this empirical study does not necessarily reflect on IT capabilities, but rather it provides a useful insight on IT strategic orientation and how marketing orientation could influence business performance. This study certainly did unveil the contribution of marketing to strategic alignment on business performance.

Following the validation of the statistical results, the practical findings also suggest the same. Interview participants extremely believe that when business, IT, and marketing managements work closely they become synchronise forming a perfect three-way communication that facilitates the achievement of business goals. This involvement creates congruence amongst the departments and so does between these organisational strategies. When congruence occurs, it generates a beneficial outcome to the organisation. This is only to incorporate mutual information to reflect the fact that business, IT, and marketing strategies are moving closer together as they evolve and become more integrated. This integration strengthens the linkage between the three managements allowing them to express their strategies in a focused and coherent way. Eventually this harmonisation represents triadic strategic alignment increasing efficiency and effectiveness of the relationship of which begins to make a positive difference by enhancing the firm's performance. The relationship must be maintained at a certain level to avoid possible risks evolved from inconsistencies.



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As tempting as it may seem to achieve triadic strategic alignment within a firm it is not that simple. The intercommunication amongst business and IT managers are confirmed to be the major enabler to alignment and support between business and IT management (Luftman, 1996). This argument is strongly supported by the findings in this research; however, the intercommunication does not necessarily have to be limited to business and IT managements to trigger a better alignment. In addition to the statistical results, it is also confirmed that the intercommunication between marketing management with business and IT managements strongly supports strategic planning (see Section 5.3.4.2).

The intercommunication is the key point in achieving triadic strategic alignment. It is a procedure of obtaining mutual understanding through knowledge sharing between departments that facilitates business goal achievement. The participants emphasised the need for a common language to facilitate shared understanding. Put another way, it means that communication amongst top management provides a better understanding for resolving issues and sharing information that facilitate achieving business goals. It is a vital component for any organisation seeking to outperform competitors because without communication it would be impossible for top management to coordinate in business, IT, or marketing activities, preventing the firm from making significant progress.

This intercommunication is captured in two different occasions. First, it was emphasised that top management should be involved in regular department and board meetings. The unified meetings between business, marketing, and IT managers facilitate the organisation to adopt a more holistic view of the business as a whole through resolving

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issues raised from various departments. This method of intercommunication is by far the most common formal communication between managements.

Second, there is also informal communication which is deemed to be very effective in sharing knowledge such as regular liaison. This method is more flexible and the contact frequency is perceived sufficient of which knowledge sharing is quickly obtainable. Effective liaison helps in establishing and maintaining close communications with three managements. This is where business, IT, and marketing managers learn about each other's activities through informal interactions. This improves, for example, marketing managers' business and IT knowledge. Therefore, marketing managers that are knowledgeable about business and IT strategies are able to utilise other management's strength. In this case marketing and IT strategies must be compatible with business strategy. Thus, with the aid of the triadic strategic alignment marketing and IT strategies can be further exploited not just to maintain the firm's survival in the market but also allowing it to evolve and grow. This entails identifying the firm's weaknesses in the existing market, allowing top management to respond in strategically coherent ways.

Substantially, participants asserted that failing to align the strategies together would have a negative impact on business performance. This could be the result of lack intercommunication between the managements or insufficient knowledge shared. Either way disrupted or weak interaction between managements may arise developing contradictions that affect alignment.

### 6.2.2 Research Question Two

*RQ2: How and to what extent does triadic strategic alignment relate to firm strategic performance?*

This second research question is formulated to reduce the research gaps identified in chapter one and two from previous studies of 1) examining the strategic alignment between IT and marketing using the pattern matching or the generic types of strategic orientation (Wehmeyer, 2005); and 2) examining the interaction of other strategic orientations such as IT on business and marketing strategic alignment (Grinstein, 2008). This study responded to these calls by integrating IT and marketing strategic orientations to business strategic orientation. Whilst the empirical findings strongly indicate that triadic strategic alignment has a positive impact on business performance, the question thus arises as to whether there are forms of triadic strategic alignment which may vary in the impact on organisational performance. It is therefore suggested that the better the 'fit' between strategic orientations the better the effect on organisational performance. The positive result provided in the previous sub-section presents a beneficial support for the following discussion.

In order to address the second research question, a number of hypothesised relationships were developed (**H1.1**, **H1.2**, and **H1.3**). The hypotheses developed led to the identification of three generic types of triadic strategic alignment based on two steps. First, an 'ideal alignment scenario' was deduced from theory. Second, deviations from this ideal state are calculated (De Haes and Van Grembergen, 2015). This research attempted to define IT and marketing strategic orientations that map best to specific

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business strategic orientations through the traditional (dyadic) strategic alignment. Thus, the basis for identifying the alignment scenarios is based on the business strategic orientation adopted by each firm.

In the light of this, the ideal alignment scenario is determined on how well the strategic orientation of IT and marketing is congruent with business strategic orientation. Nevertheless, there is also a possibility for a firm to have a deviated marketing and/or IT strategy that does not correspond to its business strategic orientation. This means that, for example, a firm with prospector strategy aiming to enter new markets and expand their customer base has an IT efficiency strategy oriented towards maintaining long-term decision-making and a marketing strategy oriented towards obtaining competitor information rather than being concerned with the customer base. The example provided shows a lack of harmony between business, IT, and marketing strategies where marketing and IT strategic orientations neglect the firm's goals and are focused on pursuing their departmental objectives. Although the mixture of these strategic orientations do not chime with each other, the alignment between them does not necessarily prevent a firm from improving performance. However, this triadic strategic alignment is regarded as poor alignment considering the lack of congruence between business, marketing, and IT strategic orientations. Moreover, the generic types of dyadic strategic alignment were clearly noted by researchers as limited for not including crucial factors that could add value to firm performance (Bergeron *et al.*, 2004; Celuch and Murphy, 2010; Wehmeyer, 2005; Zhu and Nakata, 2007). Yet recent studies supporting strategic alignment generic types have not examined the relationship amongst three strategies (Olson *et al.*, 2005; Sabherwal and Chan, 2001). As a result,

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this study establishes the first empirical study to investigate the generic types of triadic strategic alignment of business, IT, and marketing strategic orientations. The three generic types of triadic strategic alignment determined on the basis of firm's strategic orientation. The first generic type is the one with marketing and IT strategies derived towards assisting the firm's strategic orientation. The second generic type of triadic strategic alignment is when a firm has either marketing or IT strategy deviated from the firm's strategic orientation. The third generic type identified in this research is the firm with neither marketing nor IT strategies congruent with the firm's strategic perceptions.

At the same time, it was found that a fourth group of mixed strategic orientations exist within the sample of the population obtained. These firms with mixed strategies were not included in further analyses because it would not be possible to tell whether high or low organisational performance is the result of triadic strategic alignment. This abnormal result could explain that departments within these firms are not communicating well enough to share valuable information that motivates managers in forming department goals together. Thus, when managers are asked to complete the questionnaire survey, which included questions about business, IT, and marketing strategic orientations, they might have limited knowledge about other departments that led to misunderstood identification of their firm's adopted strategic orientation. However, given the different numbers of firms across business, IT, and marketing strategic orientations types, it was clear that many were using conflicting strategies.

In the light of identifying three generic types of triadic strategic alignment, it became necessary to validate the underlying assumptions before testing the hypotheses (**H1.1**,

**H1.2**, and **H1.3**) in order to answer the research question. The validation test passed for all performance components with no violations to the homogeneity variance except for sales growth. It indicates unequal variances which means differences are unlikely to have occurred, thus it was omitted from the study, similar to prior studies (Hu and Plant, 2001).

In addition to that, results obtained from the follow-up interview provides further confidence in the findings attained from the questionnaire survey. The quotations of participants in Section 5.3.4.2 supports the statistical results. It was described that attaining triadic strategic alignment has a great effect on organisational performance. It shows how mutual understandings between departments and top management boost a firm's performance.

With this clarified, the three generic types of triadic strategic alignment were examined against the four performance components: market share, return on investment, net profit, and financial liquidity. These performance components are the main criteria used to measure business performance overall in the strategic alignment literature (Croteau and Bergeron, 2001; Kearns and Sabherwal, 2006). The idea of measuring performance is to be able to distinguish between the three generic types of triadic strategic alignment and to learn if there is any specific performance component that is not affected by the generic types of triadic strategic alignment. The empirical results (in Section 5.2.2.3) show that triadic strategic alignment has a strong influence on business performance regardless of the generic type, whereas measuring business performance differs from one another when considering the generic types of triadic strategic alignment. For

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example, it was found that prospector strategic orientation with ideal alignment has a greater performance outcome than medium and low alignments in all performance components (see Table 5.8). This evidence supports hypothesis **H1.1** by showing that any deviation from the ideal alignment scenario causes a gradual decrease in firm performance. Similarly, the findings also indicate that defenders with ideal alignment influence business performance significantly compared to medium alignment alone. This can be seen from the results that firms scoring high in business, IT, and marketing strategic orientations (e.g. prospector, flexibility, and customer-focused) have achieved better performance results than those with deviated strategic orientation.

Furthermore, medium triadic strategic alignment is when either IT or marketing strategic orientation deviated from business strategic orientations. This medium mode alignment can be viewed as dyadic strategic alignment where either marketing or IT strategic orientation is aligned with the firm's strategic orientation. The findings of this research provide a strong empirical support that triadic strategic alignment is better than the traditional strategic alignment. The medium mode alignment of both prospectors and defenders shown in Table 5.8 and 5.10 scored lower values in all performance components compared with the ideal mode alignment. The results are in line with prior study investigating the relationship between business and IT strategies (Sabherwal and Chan, 2001). However, when these results are compared with the ideal mode of triadic strategic alignment, it is strongly suggested that triadic strategic alignment is much better. As a consequence, the medium mode of triadic strategic alignment influences business performance positively but not as well as when aligned with the ideal IT and marketing strategic orientations.

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Last but not least, the low mode alignment is when neither IT nor marketing strategic orientations are oriented towards the business strategic orientation. For example, prospectors with low mode alignment scored the least value in all components of performance compared against the medium and ideal mode of alignment. Interestingly, it appears that defenders with low mode of alignment are shown to have better performance than in medium or ideal alignment modes. Again, defenders were reported in previous studies (Pollard and Morales, 2015; Sabherwal and Chan, 2001) for unstable results compared to those for prospectors and analysers. Although defenders with low mode of alignment were found to have better performance compared to those with medium and ideal modes of alignment, this might have been found lower had the sample size been larger and not limited to two as in this study.

Apart from defenders with low mode of alignment, who scored high values in all performance components as high as the ideal mode of alignment, prospectors with low mode of triadic strategic alignment have provided a sufficient understanding of the research triadic strategic alignment concept. This is because the comparison between the three generic types of triadic strategic alignment clearly clarifies that aligning appropriate IT and marketing strategic orientations derived towards business strategic orientation matters to achieve superior business performance.

This study has shown that ideal fit amongst the three strategic orientations is important to increase the business profit and to gain competitive advantage. It is believed that the results obtained could help understand the role of triadic strategic alignment in influencing each component of organisational performance. The results shown in Tables



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5.8 and 5.10 provide a comprehensive insight of the modes of alignment and how they affect each component of organisational performance. These values are in line with profile deviation studies in the strategic management literature (Bergeron *et al.*, 2001; Chan *et al.*, 2006; Sabherwal and Chan, 2001; Vorhies and Morgan, 2003). In prior studies the impact of the traditional (dyadic) strategic alignment was found to be positive on business performance, whereas this study provided a more holistic view of strategic alignment suggesting a triadic strategic alignment is better than a dyadic strategic alignment.

As for analysers, no recorded data was obtained in this research for analysers with low mode alignment. Although 127 analyser firms are reported in this study, the analysis indicates that there was no statistically significant difference between the two alignment modes, thus the fourth hypothesis (**H1.3**) is not supported. This finding was previously reported by Gani and Jermias (2012), indicating that the magnitude of the difference is not statistically significant for analysers. Overall, the second hypothesis (**H1.1**) was supported empirically given the sufficient evidence to show that prospectors with ideal alignment mode perform better in comparison with those with medium or low alignment modes. However, the third hypothesis (**H1.2**) is partially supported where defenders with ideal alignment perform better than medium alignment but not compared to low alignment mode.

The statistical findings confirm that firms with ideal triadic strategic alignment are better performing companies. On the one hand, these results lend further support to the argument of previous literature (e.g. Chan *et al.*, 1997; Kearns and Lederer, 2003; Reich

and Benbasat, 2000; Rodríguez-Pinto *et al.*, 2008; Sabherwal and Chan, 2001) that strategic alignment improves business performance. In particular, the outcomes of this study has some merit in identifying three generic types of triadic strategic alignment indicating that prospectors, defenders, and analysers have the platform for significantly improving performance. On the other hand, the results suggest that firms should integrate IT and marketing strategies with business strategic orientation to ensure a more concentrated focus on the firm's common purpose to produce desired marketplace results. This suggests that through triadic strategic alignment a firm has the ability to identify which strategy is deviated from the firm's strategic orientation. Had a firm relied on either marketing or IT strategic alignment and abandoned the other, it would have limited its performance enhancement. Hence, a firm can boost its firm performance depending on how it orientates its organisational strategies. However, the mindset of alignment not only incorporates connections between these strategies but also motivates top management to learn more about specific facets of business, IT, and marketing. Consequently, it could lead to the engagement of top management in positioning marketing and IT strategies based on the degree of adherence with the firm's strategic orientation in order to better exploit the firm's technology and to perform better in the market.

### **6.3 Theoretical Implication**

The first contribution of this study is the conceptualisation of triadic strategic alignment between business, IT, and marketing strategies. Also, this study demonstrates the merits of applying multiple perspectives. Strategic alignment has been extensively examined;

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but many prior studies examine strategic alignment using a pairwise approach (Cao, 2010), which can only partially capture the nature of strategic alignment as strategic alignment includes multiple factors (Drazin and Van De Ven, 1985). Consequently, it has been suggested that alignment including multiple factors is achievable (Venkatraman and Camillus, 1984) and more holistic (Schniederjans and Cao, 2009); however, only a limited number of studies examined alignment by including multiple factors such as business strategy, IT strategy, and organisational structure (e.g. Chatzoglou *et al.*, 2011).

Previous literature has called for the alignment of more than two strategies to achieve even better business performance (Venkatraman and Camillus, 1984). Although a few studies used the concept of strategic alignment on more than two factors (Bergeron *et al.*, 2004; Chatzoglou *et al.*, 2011; Xu *et al.*, 2006), their assessment of strategic alignment is between strategy and process or structure. Thus, this research responded to this call by proposing the triadic strategic alignment between business, IT, and marketing strategies that is likely to give a richer and more realistic view of strategic alignment since it is more likely to retain the complex and interrelated nature of the relationships between multiple factors (Venkatraman and Prescott, 1990). Drawing on the strategic alignment literature and using the covariation and the profile deviation approaches to fit (Venkatraman and Camillus, 1984), this study proposed the first triadic strategic alignment model through employing two forms of fit to complement each other. Thus, this research has extended the existing research on strategic alignment by developing the concept of triadic strategic alignment, which emphasises simultaneously aligning business strategy, IT strategy that is an integral part of all organising, and marketing strategy that considers dramatic changes in the business environment. This

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concept of triadic strategic alignment between three strategies also moves beyond the dominant pairwise approach to strategic alignment, and thus makes a conceptual contribution to strategic alignment literature. As previously discussed in section 6.2.2, the empirical result shows that dyadic strategic alignment or medium mode of triadic strategic alignment has a lower performance impact compared to those firms with ideal mode of triadic strategic alignment.

Second, in terms of methodology, this study stems from the use of PLS-SEM. The structural model developed was analysed using PLS-SEM that has not previously been employed in strategic alignment literature to explore the complex nature of triadic strategic alignment. In addition, only a few studies in the strategic alignment literature (Bergeron *et al.*, 2001; Xu *et al.*, 2006) adopted the covariation approach to fit and developed a coalignment construct. When the objective is to confirm interrelationships of constructs, the PLS-SEM technique has the advantage to estimate it and the complexity of the model (Falk and Miller, 1992). More importantly, the results of the structural model offer the first empirical support for the existence and significant performance impact of triadic strategic alignment amongst business strategic orientation, IT strategic orientation, and marketing strategic orientation.

Third, this research contributes to strategic alignment literature by identifying three generic types of triadic strategic alignment by specifically considering the strategic orientation of firms as prospectors, defenders, or analysers. Whilst the concepts of strategic orientation (Venkatraman, 1989b) and strategic types (Miles *et al.*, 1978) are well discussed in strategic management literature, few studies have used them to

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examine strategic alignment (Chan *et al.*, 2006). Many prior studies assumed strategic alignment is applicable to all types of firms without considering how a firm should support its unique business strategy with appropriate IT and marketing strategies. By taking into account strategic orientation of firms, this research helps understand the antecedents to strategic alignment and consequently the link from strategic alignment to organisational performance. Specifically, this research suggests that prospectors should align with IT flexibility strategy and customer-focused marketing strategy, and defenders with IT efficiency strategy and competitor-focused marketing strategy. However, the research results did not support the hypothesis about analysers aligning with IT comprehensiveness strategy and a marketing strategy that focuses on both competitors and customers. This could be caused by the complexity of pursuing a business strategy that simultaneously focuses on both competitors and customers and using a comprehensiveness IT strategy, which requires further investigation. The findings have generally shown that triadic strategic alignment is positively associated with better organisational performance, and that misalignment (low and medium alignment modes) between business, IT, and marketing strategies will exhibit lower levels of organisational performance. As a result, this research suggests that firms with different strategic orientation need to achieve different types of strategic alignment. Therefore, this research has made an important conceptual contribution to the literature by conceptually identifying three but empirically supporting two generic types of triadic strategic alignment whilst considering the strategic orientation of firms. The findings also add to the limited number of studies that examine strategic alignment using either strategic types (Chan *et al.*, 2006; Luo and Park, 2001; Raymond and Croteau,

2009) or strategic orientation (Bergeron *et al.*, 2004; Chan *et al.*, 1997; Sabherwal and Chan, 2001; Yayla and Hu, 2012). In addition, this study successfully operationalised fit as covariation and provided strong evidence to reinforce Venkatraman's (1989a) suggestion that this approach to fit is complementary to fit as profile deviation.

Fourth, the findings contribute to the literature by demonstrating the value of triadic strategic alignment. The results suggest that ideal triadic strategic alignment for each strategic orientation is associated with better organisational performance than medium alignment, that is dyadic alignment between either business strategy and IT strategy or business strategy and marketing strategy. This provides empirical evidence to suggest that triadic strategic alignment provides a better indication of the nature and performance impact of strategic alignment than dyadic alignment, and to support the view that strategic alignment including multiple factors has greater explanatory power (Venkatraman and Prescott, 1990) because it is more holistic (Schniederjans and Cao, 2009).

### **6.4 Empirical Implication**

In reconciling the research findings with previous theoretical and empirical work, potential implications can be drawn. The findings suggest that firms need to take a more holistic approach to achieving strategic alignment by including multiple factors since dyadic alignment has limited capacity and is likely to result in poor performance. The research makes it particularly clear that triadic strategic alignment modes is a valid alternative approach to strategic alignment. For a firm to pursue a particular business strategy to achieve superior performance it has to implement an appropriate

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combination of IT and marketing strategies. It emphasises support business strategy by assessing dramatic changes in the business environment and developing appropriate IT to meet business needs, thus organisational strategies are coherently aligned and act more as a whole.

The central finding and key argument of this study is that successful IT and marketing strategies implementation is required to adapt to business strategy for superior performance. Also, it suggests that marketing strategy plays a crucial role in strategic alignment and is contingent on the specific strategy in use. The researcher notes, in particular, that the role of marketing strategy in the triadic strategic alignment model has a significant contribution in alignment and performance, as Yayla and Hu (2012) also point out. Therefore, the involvement of marketing managers, as a third factor in corporate strategy formation, would increase the chance of strategic alignment influencing business performance significantly.

The findings of the interview evidently support the aforementioned discussions by frequently stating that departments require managers to engage more regardless of formality to allow the involvement of managers in sharing departments' objectives, which in turn will reflect on aligning business, IT, and marketing strategies effectively. This will allow educating top management about the competitors' strategic uses of IT and to adapt to the changing market. These results are also in line with prior studies investigating strategic alignment (e.g. Byrd *et al.*, 2006; Chan *et al.*, 2006; Gartlan and Shanks, 2007; Hooper *et al.*, 2010; Kearns and Lederer, 2003; Wu *et al.*, 2015). Although previous literature reported that top management involvement is an important factor

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in achieving traditional strategic alignment, it is also applicable to triadic strategic alignment. For example, because IT managers can increase their efforts to establish and refine the alignment by participating in business planning and developing informal relationships with business managers it does not make marketing managers comprehend any less the same procedure taken by IT managers to engage with IT and business managers. Thus, diligence in developing mutual understanding between business, marketing, and IT managers should assist in establishing triadic strategic alignment. These knowledge sharing, communication, involvement in other departments, and contributing in resolving issues all add up in enhancing the alignment between business, IT, and marketing strategies.

The three generic types of triadic strategic alignment and the three modes of alignment provide useful tools, which can be used by a firm to assess its current status of strategic alignment: its strategic orientation, form of alignment between different strategies, and its performance. It is important for managers to realise that business performance is not about the chosen business strategic orientation, but rather is dependent upon how closely the IT and marketing strategic orientations resembles the form of alignment for its given business strategic orientation. Then the firm could seek to achieve the ideal alignment to cope and perform better in their market.

Since this study differentiate between high-performance and low-performance firms throughout the mode of alignment, managers can use the findings from this study to assist performance improvement. Although business strategy, IT strategy, and marketing strategy affect business performance separately, their impact is significantly



higher when they are aligned. Results from this study indicate multiple modes of alignment impact differently on performance depending on the firm's business strategic orientation.

### **6.5 Limitations of this Research**

Despite its extensive contribution and both managerial and theoretical implications, this study has its limitations and thus caution is needed in interpreting and applying the research findings. In this research, the methodological contribution has been made by using PLS-SEM to deal with a small sample size and a formative scale (Chin *et al.*, 1998; Hair *et al.*, 2013). However, whilst the total sample has 242 managers, the sample is divided into prospectors, defenders, and analysers and further into three modes of alignment; thus this study suffers from the issue of a small sample size when analysing each specific group and form of alignment.

The second limitation stems from the origin of the data used in this study. This study focused on obtaining quantitative data from companies in Yemen and follow-up interviews from Yemen, Saudi Arabia, Qatar, and Yemeni affiliates in the UK; no claim for generalisation of the results beyond the sampling frame can be made. Although the sample represents a wide range of industries, they are mainly from the telecom and banking sectors. The particularity of the research setting limits the generalisability of the findings to markedly different populations, given the competitive, environmental, and cultural differences that exist between industries and countries (Hughes and Morgan, 2008).

The third limitation relates to the development of the three generic types of triadic strategic alignment. Although the results presented in chapter five provide evidence of the significant differences between the mode of alignments for prospectors and defenders, the hypothesis about analysers was not empirically supported. Previous studies also reported issues regarding analyser firms not being statistically significant different (Gani and Jermias, 2012). Whilst it was tempting to overcome this reported problem, the researcher acknowledges this as a limitation of this study and suggests a further investigation of this matter is needed.

### **6.6 Directions for Future Research**

Despite the preceding limitations, there are several potential directions for future research. This study theoretically links triadic strategic alignment between three strategies to business performance, which is empirically supported by the research results. The concept of triadic strategic alignment is thus seen to constitute a valid theoretical foundation on which to further investigate strategic alignment on other industries and countries.

This study empirically investigated triadic strategic alignment based on intellectual alignment which is focused on understanding the relationship of business, IT, and marketing strategies, plans and goals. Alternatively, future research could focus on cross-domain that focuses on interaction between strategy and structure. It also could be on operational alignment or social alignment.

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Furthermore, future area for studying may be the investigation of triadic strategic alignment based on Porter's competitive strategy rather than Miles and Snow's business strategic orientations. This can also be compared against the model in this study. Otherwise, researchers can examine the developed concept against other criterion such as marketing performance, IT performance, financial performance, competitive advantage, etc.

Given the fact that integrating multiple factors is empirically better than two factors, researchers can focus on investigating four factors. Another interesting route for future research is to consider how other factors such as organisation structure or environmental dynamism would affect triadic strategic alignment. The expansion of the model can be compared to this research's model. The differences amongst those models would provide a more complete and reliable model.

Another future research may increase the sample size to test analysers in more detail with the three modes of triadic strategic alignment. This will encourage investigation of the generalisability of triadic strategic alignment in other settings. Thus, conducting similar research whilst focusing on other industries and countries will reduce the limitations of this research.

### **6.7 Conclusion**

This research revolved around developing an understanding of how and why a firm should support its strategic orientations by formulating IT and marketing strategies that contributes in enhancing the firm's organisational performance – or rather triadic

strategic alignment amongst business, IT, and marketing strategies and its performance impact. Hence, this study unveils the importance about why triadic strategic alignment outperforms traditional strategic alignment, which is a vital concern to academics and practitioners alike.

In elaborating on the key research questions, one research model was developed addressed by two configurational approaches and quantitative survey and follow-up interviews in Yemen and neighbouring countries were carried out. A brief and explicit answer to each of the research questions is provided below:

**1. RQ1: *How and why should a firm seek to achieve triadic strategic alignment amongst its business, IT, and marketing strategies?***

*A coalignment of the three strategies is indeed a desirable property for achieving superior performance. The coalignment of these three strategies is captured in an unobservable theoretical construct at a higher plane than the individual functional dimensions (see Section 3.3). As discussed in Section 6.2.1, this study confirms that impact of triadic strategic alignment on organisational performance is significantly strong. Aligning the strategies prevent developing contradictions between managements through intercommunication.*

**2. RQ2: *How and to what extent does triadic strategic alignment relate to firm strategic performance?***

*A profile deviation fit approach examined whether there is ideal triadic strategic alignment against firms' performance (see Section 3.3). As discussed in Section 6.2.2, this study confirms that the closer the IT and marketing strategic*

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*orientations are to the appropriate business strategic orientation, the higher firm performance. Business, IT, and marketing managements should engage more in positioning marketing and IT strategies based on the degree of adherence with the firm's strategic orientation in order to better exploit the firm's technology and to perform better in the market.*

The triadic strategic alignment theory implies that firms which have their business strategic orientation aligned with the ideal IT and marketing strategic orientations are able to generate better business performance than those firms which have not aligned their business strategic orientation with the ideal IT and marketing strategic orientations. This study identifies that there was a previous lack of knowledge about this relationship in the published literature. The findings of this research evidently confirmed that triadic strategic alignment has a positive influence on business performance. Added to that, this study confirms that integration of marketing and IT strategies with business strategy is better compared to traditional strategic alignment.

Also, managerial implications were outlined suggesting companies that want to improve their performance have to create mutual understanding amongst top management, and the better management interact with each other, the better marketing and IT managers utilise their strategies to achieve business goals. In overall conclusion, this research has made four main contributions to research and practice:

- Conceptualisation of the triadic strategic alignment model between business, IT, and marketing strategies and organisational performance

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- Estimating the structural model using PLS-SEM
- Identification of generic types of triadic strategic alignment
- Illustrated that triadic strategic alignment is better than dyadic strategic alignment.

Finally, it is envisioned that a number of features will be of considerable of this study to follow out other research opportunities. This concludes Chapter six and the thesis.

## REFERENCES

- Aaker, D. A. and Day, G. S. (1986) 'The perils of high - growth markets', *Strategic Management Journal*, 7 (5), 409-421.
- Acur, N., Kandemir, D. and Boer, H. (2012) 'Strategic Alignment and New Product Development: Drivers and Performance Effects', *Journal of Product Innovation Management*, 29 (2), 304-318.
- Akpan, E. O. and Carter, R. (2007) *Strategic Alignment: The Business Imperative for Leading Organizations*. Mustang, OK: Tate Publishing & Enterprises.
- Al-Ansaari, Y., Bederr, H. and Chen, C. (2015) 'Strategic orientation and business performance: An empirical study in the UAE context', *Management Decision*, 53 (10), 2287-2302.
- Al-Mamary, S., Hasan, Y., Shamsuddin, A. and Aziati, A. (2015) *Investigating the Key Factors Influencing on Management Information Systems Adoption among Telecommunication Companies in Yemen: The Conceptual Framework Development*.
- Albers, S. (2010) 'PLS and Success Factor Studies in Marketing', in Esposito Vinzi, V., Chin, W. W., Henseler, J. & Wang, H. (eds.) *Handbook of Partial Least Squares*. Berlin Heidelberg: Springer pp. 409-425.
- Alhojailan, M. I. (2012) 'Thematic analysis: A critical review of its process and evaluation', *West East Journal of Social Sciences*, 1 (1), 39-47.
- Altinay, L. and Paraskevas, A. (2008) *Planning Research in Hospitality and Tourism*. London: Elsevier.
- Alyahya, M. and Suhaimi, M. A. (2013) 'A Conceptual Model for Business and Information Technology Strategic Alignment from the Perspective of Small and Medium Enterprises', *International Journal of Business, Humanities and Technology*, 3 (7), 83-90.
- Andres, H. P. and Zmud, R. W. (2001) 'A Contingency Approach to Software Project Coordination', *Journal of Management Information Systems*, 18 (3), 41-70.
- Ang, S. H. (2014) *Research Design for Business & Management*. SAGE Publications.
- Armstrong, J. S. and Overton, T. S. (1977) 'Estimating nonresponse bias in mail surveys', *Journal of Marketing Research*, 396-402.
- Avison, D., Jones, J., Powell, P. and Wilson, D. (2004) 'Using and validating the strategic alignment model', *The Journal of Strategic Information Systems*, 13 (3), 223-246.

- Babatunde, B. O. and Adebisi, A. O. (2012) 'Strategic environmental scanning and organization performance in a competitive business environment', *Economic Insights-Trends & Challenges*, 64 (1), 24-34.
- Babbie, E. (2009) *The Practice of Social Research*. Boston: Cengage Learning.
- Baïna, S., Ansias, P.-Y., Petit, M. and Castiaux, A. (2008) 'Strategic Business/IT alignment using goal models', *3rd International Workshop on Business/IT Alignment and Interoperability (BUSITAL)*. Montpellier, France, 16-17 June 2008, 31-43.
- Baker, M. J. (2008) *The Strategic Marketing Plan Audit*. Cambridge: Cambridge Strategy Publications.
- Bamford, C. E. and West, G. P. (2010) *Strategic Management: Value Creation, Sustainability, and Performance*. Boston: South-Western Cengage Learning.
- BBC (2017) *Yemen country profile* [Online]. Available at: <http://www.bbc.co.uk/news/world-middle-east-14704852> (Accessed: Date Accessed).
- Becker, J.-M., Klein, K. and Wetzels, M. (2012) 'Hierarchical Latent Variable Models in PLS-SEM: Guidelines for Using Reflective-Formative Type Models', *Long Range Planning*, 45 (5/6), 359-394.
- Belardo, S., Duchessi, P. and Coleman, J. R. (1994) 'A Strategic Decision Support System at Orell Fussli', *Journal of Management Information Systems*, 10 (4), 135-157.
- Bergeron, F. (2002) 'Strategic alignment and business performance: Operationalizing and Testing a Covariation Model', *Cahier de la Chaire de gestion stratégique des technologies de l'information*, 02 (01), 34-64.
- Bergeron, F., Raymond, L. and Rivard, S. (2001) 'Fit in strategic information technology management research: an empirical comparison of perspectives', *Omega*, 29 (2), 125-142.
- Bergeron, F., Raymond, L. and Rivard, S. (2004) 'Ideal patterns of strategic alignment and business performance', *Information & Management*, 41 (8), 1003-1020.
- Blotnick, K. (2009) *Examining the Impact of Marketing Orientation on Information Technology Adoption in Canadian Firms*. PhD thesis. Northcentral University. Available at: <http://gradworks.umi.com/33/93/3393712.html> (Accessed: 26 September 2016).
- Borges, M., Hoppen, N. and Luce, F. B. (2009) 'Information technology impact on market orientation in e-business', *Journal of Business Research*, 62 (9), 883-890.
- Braun, V. and Clarke, V. (2006) 'Using thematic analysis in psychology', *Qualitative Research in Psychology*, 3 (2), 77-101.



- Broadbent, M. and Weill, P. (1993) 'Improving business and information strategy alignment: Learning from the banking industry', *IBM Systems Journal*, 32 (1), 162-179.
- Brown, S., Bessant, J. R. and Lamming, R. (2013) *Strategic Operations Management*. London: Routledge.
- Bryman, A. (2012) *Social Research Methods*. Oxford: OUP.
- Byrd, A., Lewis, B. R. and Bryan, R. W. (2006) 'The leveraging influence of strategic alignment on IT investment: An empirical examination', *Information & Management*, 43 (3), 308-321.
- Cadogan, J. W. (2012) 'International marketing, strategic orientations and business success: Reflections on the path ahead', *International Marketing Review*, 29 (4), 340-348.
- Camillus, J. C. and Lederer, A. L. (1985) 'Corporate Strategy and the Design of Computerized Information Systems', *Sloan Management Review*, 26 (3), 35-42.
- Cao, G. (2010) 'A four-dimensional view of IT business value', *Systems Research & Behavioral Science*, 27 (3), 267-284.
- Cao, G., Wiengarten, F. and Humphreys, P. (2011) 'Towards a contingency resource-based view of IT business value', *Systemic Practice and Action Research*, 24 (1), 85-106.
- Cataldo, A., McQueen, R. J. and Hardings, J. (2012) 'Comparing strategic IT alignment versus process IT alignment in SMEs', *Journal of Research and Practice in Information Technology*, 44 (1), 43-57.
- Cater-Steel, A. (2008) *Information Technology Governance and Service Management: Frameworks and Adaptations: Frameworks and Adaptations*. Hershey: IGI Global.
- Caves, R. E. and Porter, M. E. (1977) 'From entry barriers to mobility barriers: Conjectural decisions and contrived deterrence to new competition', *The Quarterly Journal of Economics*, 91, 241-261.
- Cavusgil, S. T. and Zou, S. (1994) 'Marketing Strategy-Performance Relationship: An Investigation of the Empirical Link in Export Market Ventures', *Journal of Marketing*, 58 (1), 1-21.
- Celuch, K. and Murphy, G. (2010) 'SME Internet use and strategic flexibility: the moderating effect of IT market orientation', *Journal of Marketing Management*, 26 (1/2), 131-145.
- Cha, H. S., Pingry, D. E. and Thatcher, M. E. (2009) 'What determines IT spending priorities?', *Communications of the ACM*, 52 (8), 105-110.

- Chaffey, D. and Wood, S. (2005) *Business Information Management: Improving Performance Using Information Systems*. Harlow: Financial Times & Prentice Hall.
- Chan, Y. (2002) 'Why Haven't We Mastered Alignment? The Importance of the Informal Organization Structure', *MIS Quarterly Executive*, 1 (2), 97-112.
- Chan, Y. E. (2000) 'IT Value: The Great Divide Between Qualitative and Quantitative and Individual and Organizational Measures', *Journal of Management Information Systems*, 16 (4), 225-261.
- Chan, Y. E., Huff, S. L., Barclay, D. W. and Copeland, D. G. (1997) 'Business Strategic Orientation, Information Systems Strategic Orientation, and Strategic Alignment', *Information Systems Research*, 8 (2), 125.
- Chan, Y. E. and Reich, B. H. (2007) 'IT alignment: what have we learned?', *Journal of Information Technology (Palgrave Macmillan)*, 22 (4), 297-315.
- Chan, Y. E., Sabherwal, R. and Thatcher, J. B. (2006) 'Antecedents and Outcomes of Strategic IS Alignment: An Empirical Investigation', *IEEE Transactions on Engineering Management*, 53 (1), 27-47.
- Chandler, A. (1962) *Strategy and Structure*. Cambridge, MA: MIT Press.
- Chatzoglou, P. D., Diamantidis, A. D., Vraimaki, E., Vranakis, S. K. and Kourtidis, D. A. (2011) 'Aligning IT, strategic orientation and organizational structure', *Business Process Management Journal*, 17 (4), 663-687.
- Chen, D. Q., Mocker, M., Preston, D. S. and Teubner, A. (2010) 'Information Systems Strategy: Reconceptualization, Measurement, and Implications', *MIS Quarterly*, 34 (2), 233-A8.
- Chen, L. (2010) 'Business-IT alignment maturity of companies in China', *Information & Management*, 47 (1), 9-16.
- Chen, Y. Y. (2014) 'Performance implications and fit of knowledge management strategy and strategic information technology management', in Tsiakis, T., Kargidis, T. & Katsaros, P. (eds.) *Approaches and Processes for Managing the Economics of Information Systems*. Hershey: IGI Global, pp. 267-277.
- Chen, Y. Y. and Huang, H. L. (2010) *The Knowledge Management Strategic Alignment Model (KMSAM) and Its Impact on Performance: An Empirical Examination*. InTech Open Access.
- Chen, Y. Y. and Huang, H. L. (2012) 'Knowledge management fit and its implications for business performance: A profile deviation analysis', *Knowledge-Based Systems*, 27, 262-270.

- Cheshire, H., Ofstedal, M. B., Scholes, S. and Schroeder, M. (2011) 'A comparison of response rates in the English Longitudinal Study of Ageing and the Health and Retirement Study', *Longitudinal and Life Course Studies*, 2 (2), 127.
- Child, J. (1972) 'Organizational structure, environment and performance: The role of strategic choice', *Sociology*, 6 (1), 1-22.
- Chin, W. W., Marcolin, B. L. and Newsted, P. R. (1998) 'A Partial Least Squares Latent Variable Modeling Approach for Measuring Interaction Effects: Results from a Monte Carlo Simulation Study and an Electronic-Mail Emotion/Adoption Study', *Information Systems Research*, 14 (2), 189-217.
- Churchill, G. A. (1979) 'A Paradigm for Developing Better Measures of Marketing Constructs', *Journal of Marketing Research*, 16 (1), 64-73.
- Ciborra, C. (2000) *From Control to Drift: The Dynamics of Corporate Information Infrastructures*. Oxford University Press.
- Ciborra, C. U. (1997) 'De profundis? Deconstructing the concept of strategic alignment', *Scandinavian journal of information systems*, 9 (1), 2.
- Coltman, T., Tallon, P., Sharma, R. and Queiroz, M. (2015) 'Strategic IT alignment: twenty-five years on', *Journal of Information Technology*, 30 (2), 91-100.
- Conant, J. S., Mokwa, M. P. and Varadarajan, P. R. (1990) 'Strategic Types, Distinctive Marketing Competencies and Organizational Performance: A Multiple Measures-Based Study', *Strategic Management Journal*, 11 (5), 365-383.
- Cragg, P., King, M. and Hussin, H. (2002) 'IT alignment and firm performance in small manufacturing firms', *The Journal of Strategic Information Systems*, 11 (2), 109-132.
- Creswell, J. W. (2003) *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Lincoln: Sage.
- Creswell, J. W. and Clark, V. L. P. (2007) *Designing and Conducting Mixed Methods Research*. Lincoln: Sage.
- Croteau, A., Solomon, S., Raymond, L. and Bergeron, F. 2001. Organizational and Technological Infrastructures Alignment. *Proceedings of the 34th Annual Hawaii International Conference on System Sciences ( HICSS-34) Volume 8*. Washington: IEEE Computer Society.
- Croteau, A.-M. and Bergeron, F. (2001) 'An information technology trilogy: business strategy, technological deployment and organizational performance', *The Journal of Strategic Information Systems*, 10 (2), 77-99.

- Croteau, A.-M. and Raymond, L. (2004) 'Performance outcomes of strategic and IT competencies alignment', *Journal of Information Technology*, 19 (3), 178-190.
- Cui, A. P., Walsh, M. F. and Shaoming, Z. (2014) 'The Importance of Strategic Fit Between Host--Home Country Similarity and Exploration Exploitation Strategies on Small and Medium-Sized Enterprises' Performance: A Contingency Perspective', *Journal of International Marketing*, 22 (4), 67-85.
- Cui, T., Ye, H., Teo, H. H. and Li, J. (2015) 'Information technology and open innovation: A strategic alignment perspective', *Information & Management*, 52 (3), 348-358.
- Dale Stoel, M. and Muhanna, W. A. (2009) 'IT capabilities and firm performance: A contingency analysis of the role of industry and IT capability type', *Information & Management*, 46 (3), 181-189.
- David, M. and Sutton, C. D. (2004) *Social Research: The Basics*. London: Sage.
- Day, G. S. (1991) 'Market Driven Strategy: Processes for Creating Value', *Journal of Marketing*, 55 (4), 116-118.
- De Haes, S. and Van Grembergen, W. (2009) 'An Exploratory Study into IT Governance Implementations and its Impact on Business/IT Alignment', *Information Systems Management*, 26 (2), 123-137.
- De Haes, S. and Van Grembergen, W. (2015) *Enterprise Governance of Information Technology: Achieving Alignment and Value, Featuring COBIT 5*. Boston: Springer International Publishing.
- Delery, J. E. and Doty, D. H. (1996) 'Modes of Theorizing in Strategic Human Resource Management: Tests of Universalistic, Contingency, and Configurations. Performance Predictions', *Academy of Management Journal*, 39 (4), 802-835.
- Denham, K. and Lobeck, A. (2012) *Linguistics for Everyone: An Introduction*. Boston: Cengage Learning.
- Dess, G. G., Newport, S. and Rasheed, A. M. (1993) 'Configuration research in strategic management: Key issues and suggestions', *Journal of Management*, 19 (4), 775-795.
- DeVon, H. A., Block, M. E., Moyle-Wright, P., Ernst, D. M., Hayden, S. J., Lazzara, D. J., Savoy, S. M. and Kostas-Polston, E. (2007) 'A Psychometric Toolbox for Testing Validity and Reliability', *Journal of Nursing Scholarship*, 39 (2), 155-164.
- Diamantopoulos, A. (2011) 'Incorporating Formative Measures into Covariance-Based Structural Equation Models', *MIS Quarterly*, 35 (2), 335-A5.
- Diamantopoulos, A., Riefler, P. and Roth, K. P. (2008) 'Advancing formative measurement models', *Journal of Business Research*, 61 (12), 1203-1218.

- Doherty, N. F., Champion, D. and Wang, L. (2010) 'An holistic approach to understanding the changing nature of organisational structure', *Information Technology & People*, 23 (2), 116-135.
- Donaldson, L. (2001) *The Contingency Theory of Organizations*. California: Sage.
- Donaldson, L. (2006) 'The Contingency Theory of Organizational Design: Challenges and Opportunities', in Burton, R., Håkansson, D., Eriksen, B. & Snow, C. (eds.) *Organization Design*. Springer US, pp. 19-40.
- Doole, I. and Lowe, R. (2008) *International Marketing Strategy: Analysis, Development and Implementation*. Cengage Learning.
- Döscher, K. (2014) *Recovery Management in Business-to-Business Markets: Conceptual Dimensions, Relational Consequences and Financial Contributions*. Wiesbaden: Springer Fachmedien.
- Doty, D. H., Glick, W. H. and Huber, G. P. (1993) 'Fit, Equifinality, and Organizational Effectiveness: A Test of Two Configurational Theories', *Academy of Management Journal*, 36 (6), 1196-1250.
- Drazin, R. and Van De Ven, A. H. (1985) 'Alternative Forms of Fit in Contingency Theory', *Administrative Science Quarterly*, 30 (4), 514-539.
- Duan, Y., Ong, V. K., Xu, M. and Mathews, B. (2012) 'Supporting decision making process with "ideal" software agents – What do business executives want?', *Expert Systems with Applications*, 39 (5), 5534-5547.
- Durant-Law, G. (2005) 'Soft systems methodology and grounded theory combined – a knowledge management research approach?', *Journal of Knowledge Management*, 2 (1), 13-23.
- Dutot, V., Bergeron, F. and Raymond, L. (2014) 'Information management for the internationalization of SMEs: An exploratory study based on a strategic alignment perspective', *International Journal of Information Management*, 34 (5), 672-681.
- Earl, M. J. (1989) *Management Strategies for Information Technology*. Prentice-Hall, Inc.
- Earl, M. J. and Feeny, D. F. (1995) 'Is Your CIO Adding Value?', *McKinsey Quarterly*, 35 (3), 144-161.
- Easterby-Smith, M., Thorpe, R. and Lowe, A. (2002) *Management Research: An Introduction*. London: Sage.
- Ellwart, T. and Konradt, U. (2011) 'Formative Versus Reflective Measurement: An Illustration Using Work-Family Balance', *Journal of Psychology*, 145 (5), 391-417.

- Falk, R. F. and Miller, N. B. (1992) *A Primer for Soft Modeling*. Akron, OH: University of Akron Press.
- Fiedler, F. E. (1964) *A theory of leadership effectiveness*. New York: Academic Press.
- Fink, L. and Neumann, S. (2009) 'Exploring the perceived business value of the flexibility enabled by information technology infrastructure', *Information & Management*, 46 (2), 90-99.
- Fonstad, N. O. and Subramani, M. (2009) 'Building enterprise alignment : a case study', *MIS Quarterly Executive*, 8 (1), 31-41.
- Fornell, C. and Larcker, D. F. (1981) 'Evaluating Structural Equation Models with Unobservable Variables and Measurement Error', *Journal of Marketing Research*, 18 (1), 39-50.
- French, A., Macedo, M., Poulsen, J., Waterson, T. and Yu, A. (2008) 'Multivariate analysis of variance (MANOVA)'. Available at: <http://userwww.sfsu.edu/efc/classes/biol710/manova/MANOVAnewest.pdf> (Accessed: 26 September 2016).
- Gani, L. and Jermias, J. (2012) 'The Effects of Strategy–Management Control System Misfits on Firm Performance', *Accounting Perspectives*, 11 (3), 165-196.
- Garson, G. D. (2006) *Public Information Technology and E-governance: Managing the Virtual State*. Jones and Bartlett Publishers.
- Gartlan, J. and Shanks, G. (2007) 'The Alignment of Business and Information Technology Strategy in Australia', *Australasian Journal of Information Systems*, 14 (2), 113-139.
- Gaskill, A. and Winzar, H. (2013) 'Marketing Metrics That Contribute to Marketing Accountability in the Technology Sector', *Sage Open*, 3 (3), 1-10.
- Gatignon, H. and Xuereb, J.-M. (1997) 'Strategic Orientation of the Firm and New Product Performance', *Journal of Marketing Research*, 34 (1), 77-90.
- Geringer, J. M., Frayne, C. A. and Milliman, J. F. (2002) 'In search of “best practices” in international human resource management: research design and methodology', *Human Resource Management*, 41 (1), 5-30.
- Gerow, J. E., Grover, V., Thatcher, J. and Roth, P. L. (2014) 'Looking toward the Future of IT–Business Strategic Alignment through the Past: A Meta-Analysis', *MIS Quarterly*, 38 (4), 1159-1186.
- Gerow, J. E., Thatcher, J. B. and Grover, V. (2015) 'Six types of IT-business strategic alignment: an investigation of the constructs and their measurement', *European Journal of Information Systems*, 24 (5), 465-491.

- Ghobadi, S. and D'Ambra, J. (2013) 'Modeling High-Quality Knowledge Sharing in cross-functional software development teams', *Information Processing & Management*, 49 (1), 138-157.
- Giannakis, D. and Harker, M. J. (2014) 'Strategic alignment between relationship marketing and human resource management in financial services organizations', *Journal of Strategic Marketing*, 22 (5), 396-419.
- Ginsberg, A. and Venkatraman, N. (1985) 'Contingency Perspectives of Organizational Strategy: A Critical Review of the Empirical Research', *Academy of Management Review*, 10 (3), 421-434.
- Glaister, K. W., Dincer, O., Tatoglu, E., Demirbag, M. and Zaim, S. (2008) 'A causal analysis of formal strategic planning and firm performance: Evidence from an emerging country', *Management Decision*, 46 (3), 365-391.
- Glynn, M. S. and Woodside, A. G. (2009) 'Business-to-business Brand Management: Theory, Research and Executive Case Study Exercises', in Woodside, A. (ed.) *Advances in Business Marketing and Purchasing*. JAI Press.
- Gnjidić, V. (2014) 'Researching the dynamics of Miles and Snow's strategic typology', *Management: Journal of Contemporary Management Issues*, 19 (1), 93-117.
- Goldfarb, B. and King, A. A. (2016) 'Scientific apophenia in strategic management research: Significance tests & mistaken inference', *Strategic Management Journal*, 37 (1), 167-176.
- Graeff, T. R. (1999) 'Uninformed response bias in measuring consumers' brand attitudes', *Advances in Consumer Research*, 26 (1), 632-639.
- Grice, J. W. (2007) 'A Truly Multivariate Approach to Manova', *Applied Multivariate Research*, 12 (3), 199-226.
- Grinstein, A. (2008) 'The relationships between market orientation and alternative strategic orientations: A meta-analysis', *European Journal of Marketing*, 42 (1/2), 115-134.
- Guillemette, M. G. and Paré, G. (2012) 'Toward a New Theory of the Contribution of the IT Function in Organizations', *MIS Quarterly*, 36 (2), 529-551.
- Hackler, D. and Saxton, G. D. (2007) 'The strategic use of information technology by nonprofit organizations: Increasing capacity and untapped potential', *Public Administration Review*, 67 (3), 474-487.
- Hair, J. F., Hult, G. T. M., Ringle, C. and Sarstedt, M. (2013) *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Thousand Oaks: Sage.

- Hakala, H. (2011) 'Strategic Orientations in Management Literature: Three Approaches to Understanding the Interaction between Market, Technology, Entrepreneurial and Learning Orientations', *International Journal of Management Reviews*, 13 (2), 199-217.
- Hambrick, D. C. (1981) 'Environment, Strategy, and Power Within Top Management Teams', *Administrative Science Quarterly*, 26 (2), 253-275.
- Hanson, B. (2008) 'Wither Qualitative/Quantitative?: Grounds for Methodological Convergence', *Quality & Quantity*, 42 (1), 97-111.
- Hardin, A. M., Chang, J. C.-J. and Fuller, M. A. (2008) 'Formative vs. Reflective Measurement: Comment on Marakas, Johnson, and Clay (2007)', *Journal of the Association for Information Systems*, 9 (9), 519-534.
- Harrigan, K. R. (1983) 'Research methodologies for contingency approaches to business strategy', *Academy of Management Review*, 8 (3), 398-405.
- Hartas, D. (2015) *Educational Research and Inquiry: Qualitative and Quantitative Approaches*. London: Bloomsbury Publishing.
- Healy, M. and Perry, C. (2000) 'Comprehensive criteria to judge validity and reliability of qualitative research within the realism paradigm', *Qualitative Market Research: An International Journal*, 3 (3), 118-126.
- Helms, M. M. (2009) *Encyclopedia of Management*. 5th edn. Detroit, MI: Thomson Gale.
- Henderson, J. C. and Venkatraman, N. (1989) *Strategic alignment: a framework for strategic information technology management*. Cambridge, MA: Center for Information Systems Research, Sloan School of Management, Massachusetts Institute of Technology.
- Henderson, J. C. and Venkatraman, N. (1991) 'Understanding strategic alignment', *Business Quarterly*, 56 (3), 72.
- Henderson, J. C. and Venkatraman, N. (1993) 'Strategic alignment: leveraging information technology for transforming organizations', *IBM Systems Journal*, 32 (1), 4-16.
- Henderson, J. C. and Venkatraman, N. (1999) 'Strategic alignment: leveraging information technology for transforming organizations', *IBM Systems Journal*, 38 (2-3), 472-484.
- Henry, A. (2011) *Understanding Strategic Management*. Oxford: OUP.
- Henseler, J., Ringle, C. M. and Sinkovics, R. R. (2009) 'The use of partial least squares path modeling in international marketing', in Sinkovics, R. R. & Ghauri, P. N. (eds.)



*New Challenges to International Marketing (Advances in International Marketing, Volume 20)*. Emerald Group Publishing Limited, pp. 277-319.

Hesse-Biber, S. N. and Leavy, P. (2010) *The Practice of Qualitative Research*. Boston: Sage.

Hinton, P. R., McMurray, I. and Brownlow, C. (2014) *SPSS Explained*. United Kingdom: Taylor & Francis.

Hooper, V. A., Huff, S. L. and Thirkell, P. C. (2010) 'The impact of IS-marketing alignment on marketing performance and business performance', *SIGMIS Database*, 41 (1), 36-55.

Hoque, Z. (2004) 'A contingency model of the association between strategy, environmental uncertainty and performance measurement: impact on organizational performance', *International Business Review*, 13 (4), 485-502.

Howard, C. (2013) *Strategic Adoption of Technological Innovations*. Information Science Reference.

Hox, J. and Bechger, T. (1998) 'An introduction to structural equation modelling', *Family Science Review*, 11, 354-373.

Hu, Q. and Plant, R. (2001) 'An empirical study of the casual relationship between IT investment and firm performance', *Information Resources Management Journal (IRMJ)*, 14 (3), 15-26.

Hughes, P. and Morgan, R. E. (2008) 'Fitting strategic resources with product-market strategy: Performance implications', *Journal of Business Research*, 61 (4), 323-331.

Hunt, S. D. and Lambe, C. J. (2000) 'Marketing's contribution to business strategy: market orientation, relationship marketing and resource-advantage theory', *International Journal of Management Reviews*, 2 (1), 17-43.

Hussey, J. and Hussey, R. (1997) *Business Research: A Practical Guide for Undergraduate and Postgraduate Students*. Hampshire: Macmillan Business.

Hutzschenreuter, J. (2009) *Management Control in Small and Medium-Sized Enterprises: Indirect Control Forms, Control Combinations and their Effect on Company Performance*. Wiesbaden: Gabler.

Iivari, J. (1992) 'The organizational fit of information systems', *Inf. Syst. J.*, 2 (1), 3-29.

Iman, N. and Hartono, J. (2007) 'Strategic Alignment Impacts on Organizational Performance in Indonesian Banking Industry', *Gadjah Mada International Journal of Business*, 9 (2), 253-272.

- Jabbour, C. J. C., Jugend, D., Jabbour, A. B. L. d. S., Gunasekaran, A. and Latan, H. (2015) 'Green product development and performance of Brazilian firms: measuring the role of human and technical aspects', *Journal of Cleaner Production*, 87, 442-451.
- Jacquette, D. (2014) *Ontology*. United Kingdom: Taylor & Francis.
- Jain, S. C. (2000) *Marketing Planning & Strategy*. 6th edn. Cincinnati, OH: South-Western College Publishing.
- Jaworski, B. J. and Kohli, A. K. (1993) 'Market orientation: Antecedents and consequences', *Journal of Marketing*, 57 (3), 53-70.
- Jayaram, J. and Tan, K.-C. (2010) 'Supply chain integration with third-party logistics providers', *International Journal of Production Economics*, 125 (2), 262-271.
- Johnson, A. M. and Lederer, A. L. (2010) 'CEO/CIO mutual understanding, strategic alignment, and the contribution of IS to the organization', *Information & Management*, 47 (3), 138-149.
- Johnson, G. J., Bruner li, G. C. and Kumar, A. (2006) 'Interactivity and its Facets Revisited', *Journal of Advertising*, 35 (4), 35-52.
- Johnson, R. B. and Onwuegbuzie, A. J. (2004) 'Mixed Methods Research: A Research Paradigm Whose Time Has Come', *Educational Researcher*, 33 (7), 14-26.
- Johnston, H. R. and Vitale, M. R. (1988) 'Creating Competitive Advantage with Interorganizational Information Systems', *MIS Quarterly*, 12 (2), 153-165.
- Joia, L. A. (2002) *IT-Based Management: Challenges and Solutions: Challenges and Solutions*. Hershey: Idea Group Pub.
- Jöreskog, K. G. and Sörbom, D. (1993) *LISREL 8: Structural Equation Modeling with the SIMPLIS Command Language*. Chicago: Scientific Software International.
- Jouirou and Kalika 2004. Strategic alignment: a performance tool (An empirical study of SMEs). *Proceedings of the Tenth Americas Conference on Information Systems*. New York: AMCIS.
- Kapoor, K., Dwivedi, Y. K., Piercy, N. and Lal, B. (2014) 'RFID Integrated Systems in Libraries: Extending TAM Model for Empirically Examining the Use', *Journal of Enterprise Information Management*, 27 (6), 1-23.
- Kearns, G. S. and Lederer, A. L. (2000) 'The effect of strategic alignment on the use of IS-based resources for competitive advantage', *Journal of Strategic Information System*, 9, 265-293.

- Kearns, G. S. and Lederer, A. L. (2003) 'A Resource-Based View of Strategic IT Alignment: How Knowledge Sharing Creates Competitive Advantage', *Decision Sciences*, 34 (1), 1-29.
- Kearns, G. S. and Lederer, A. L. (2004) 'The impact of industry contextual factors on IT focus and the use of IT for competitive advantage', *Information & Management*, 41 (7), 899-919.
- Kearns, G. S. and Sabherwal, R. (2006) 'Strategic Alignment Between Business and Information Technology: A Knowledge-Based View of Behaviors, Outcome, and Consequences', *Journal of Management Information Systems*, 23 (3), 129-162.
- Khattree, R. and Naik, D. N. (2000) *Applied Multivariate Statistics with SAS Software*. 2nd edn. Calcutta: SAS Institute.
- Khosrow-Pour, M. (2005) *Encyclopedia of Information Science and Technology*. 1st edn. Hershey: Idea Group Reference.
- Kim, G., Shin, B. and Grover, V. (2010) 'Investigating Two Contradictory Views of Formative Measurement in Information Systems Research', *MIS Quarterly*, 34 (2), 345-A5.
- Kim, T. H., Lee, J.-N., Chun, J. U. and Benbasat, I. (2014) 'Understanding the effect of knowledge management strategies on knowledge management performance: A contingency perspective', *Information & Management*, 51 (4), 398-416.
- King, N., Cassell, C. and Symon, G. (2004) 'Using templates in the thematic analysis of texts', in Cassell, C. & Symon, G. (eds.) *Essential Guide to Qualitative Methods in Organizational Research*. Sage, pp. 256-270.
- King, W. R. (1978) 'Strategic Planning for Management Information Systems', *MIS Quarterly*, 2 (1), 27-37.
- Kohli, A. K. and Jaworski, B. J. (1990) 'Market Orientation: The Construct, Research Propositions, and Managerial Implications', *Journal of Marketing*, 54 (2), 1-18.
- Kundu, G. K. and Bairi, J. (2014) 'A scale for measuring the applicability of lean practices in IT support services', *Journal of Enterprise Information Management*, 27 (5), 1-25.
- Kura, S. Y. B. (2012) 'Qualitative and Quantitative Approaches to the Study of Poverty: Taming the Tensions and Appreciating the Complementarities', *The Qualitative Report*, 17 (34), 1-19.
- Kurti, I., Barolli, E. and Sevrani, K. (2013) 'CRITICAL SUCCESS FACTORS FOR BUSINESS-IT ALIGNMENT: A REVIEW OF CURRENT RESEARCH', *Romanian Economic and Business Review*, 8 (3), 79.

- Kvale, S. (1996) *InterViews: An Introduction to Qualitative Research Interviewing*. California: Sage.
- Lackner, H. (2014) *Why Yemen Matters: A Society in Transition*. Saqi.
- Lambert, D. M. and Harrington, T. C. (1990) 'Measuring non-response bias in mail surveys', *Journal of Business Logistics*, 11 (2), 5-25.
- Lawrence, P. R. and Lorsch, J. W. (1968) 'Organization and Environment: Managing Differentiation and Integration', *Administrative Science Quarterly*, 13 (1), 180-186.
- Leedy, P. D. and Ormrod, J. E. (2013) *Practical Research: Planning and Design*. University of Northern Colorado: Pearson.
- Leelien Ken, H. (2012) 'The Impact of IT Management Sophistication on Perceived IT Importance in Strategic Alignment', *Journal of Computer Information Systems*, 53 (2), 50-64.
- Leong, F. T. (2008) *Encyclopedia of Counseling*. California: Sage.
- Lewington, J., De Chernatony, L. and Brown, A. (1996) 'Harnessing the Power of Database Marketing', *Journal of Marketing Management*, 12 (4), 329-346.
- Liang, H., Saraf, N., Hu, Q. and Xue, Y. (2007) 'Assimilation of enterprise systems: the effect of institutional pressures and the mediating role of top management', *MIS Quarterly*, 31 (1), 59-87.
- Lim, J., Richardson, V. J. and Roberts, T. L. (2004) 'Information technology investment and firm performance: a meta-analysis', *System Sciences, 2004. Proceedings of the 37th Annual Hawaii International Conference on*. 2004: IEEE, 10 pp.
- Lindén, A. and Andersson, J. (2011) *IT Service Management-A paradigm shift from technology to service providers*. Master thesis. Lund University. Available at: <http://lup.lub.lu.se/luur/download?func=downloadFile&recordId=1781811&fileId=1781822> (Accessed: 26 September 2016).
- Lindow, C. M. (2012) *A Strategic Fit Perspective on Family Firm Performance*. Wiesbaden: Springer Fachmedien.
- Lineback, J. F. and Thompson, K. J. (2010) 'Conducting nonresponse bias analysis for business surveys', *Proceedings from the Section on Survey Research Methods, American Statistical Association* [Online]. Available at: [https://www.researchgate.net/profile/Katherine\\_Thompson10/publication/260402114\\_Conducting\\_Nonresponse\\_Bias\\_Analysis\\_for\\_Business\\_Surveys/links/553e18670cf2522f1835e866.pdf?origin=publication\\_detail](https://www.researchgate.net/profile/Katherine_Thompson10/publication/260402114_Conducting_Nonresponse_Bias_Analysis_for_Business_Surveys/links/553e18670cf2522f1835e866.pdf?origin=publication_detail) (Accessed: 26 September 2016).

- Littlejohn, S. W. and Foss, K. A. (2009) *Encyclopedia of Communication Theory*. California: Sage.
- Luftman, J. (2004) 'Assessing business-IT alignment maturity', *Strategies for information technology governance*, 4, 99.
- Luftman, J. N. (1996) *Competing in the Information Age: Strategic Alignment in Practice*. Oxford University Press.
- Lukas, B. A., Tan, J. J. and Hult, G. T. M. (2001) 'Strategic fit in transitional economies: The case of China's electronics industry', *Journal of Management*, 27 (4), 409-429.
- Luo, Y. and Park, S. H. (2001) 'Strategic alignment and performance of market-seeking MNCs in China', *Strategic Management Journal*, 22 (2), 141.
- MacKenzie, S. B., Podsakoff, P. M. and Podsakoff, N. P. (2011) 'Construct Measurement and Validation Procedures in MIS And Behavioral Research: Integrating New and Existing Techniques', *MIS Quarterly*, 35 (2), 293-A5.
- Maelah, R. (2010) *Research in Management Accounting: Malaysian Environment*. Newcastle: Cambridge Scholars Publisher.
- Malhotra, N. K., Agarwal, J. and Peterson, M. (1996) 'Methodological issues in cross - cultural marketing research: A state - of - the - art review', *International Marketing Review*, 13 (5), 7-43.
- Marion, D. (2006) *The Antecedent and Consequences of a Strategic Orientation that Leads to Organizational Structure, Performance, and Competitive Advantage*. The University of Toledo.
- Masli, A., Richardson, V. J., Sanchez, J. M. and Smith, R. E. (2011) 'The Business Value of IT: A Synthesis and Framework of Archival Research', *Journal of Information Systems*, 25 (2), 81-116.
- Matyusz, Z. (2010) *The Effect of Contingency Factors on the Use of Manufacturing Practices and Operations Performance*. PhD Thesis. Corvinus University of Budapest. Available at: [http://phd.lib.uni-corvinus.hu/655/2/Matyusz\\_Zsolt\\_den.pdf](http://phd.lib.uni-corvinus.hu/655/2/Matyusz_Zsolt_den.pdf) (Accessed: 26 September 2016).
- Mavondo, F. T., Hooley, G. and Wong, V. (2007) 'Configuration theory: Fit as coalignment', *Proceedings of Australian and New Zealand Marketing Academy (ANZMAC) Conference*. New Zealand, 3-5 December 2007: University of Otago, 725-730.
- Maxwell, J. A. (2013) *Qualitative Research Design: An Interactive Approach: An Interactive Approach*. California: Sage.

- McDaniel, S. W. and Kolari, J. W. (1987) 'Marketing Strategy Implications of the Miles and Snow Strategic Typology', *Journal of Marketing*, 51 (4), 19-30.
- McLaren, T., Head, M., Yuan, Y. and Chan, Y. (2011) 'A Multilevel Model for Measuring Fit Between a Firm's Competitive Strategies and Information Systems Capabilities', *MIS Quarterly*, 35 (4), 909-929.
- McNamara, C. (1999) 'General Guidelines for Conducting Research Interviews', 2016. Available at: <http://managementhelp.org/businessresearch/interviews.htm> (Accessed: 10 September 2016).
- Mertler, C. A. (2013) *Advanced and Multivariate Statistical Methods: Practical Application and Interpretation*. Pyrczak Publishing.
- Meyer, A. D., Tsui, A. S. and Hinings, C. R. (1993) 'Configurational approaches to organizational analysis', *Academy of Management Journal*, 36 (6), 1175-1195.
- Mikalef, P., Pateli, A., Batenburg, R. S. and Wetering, R. v. d. (2015) 'Purchasing alignment under multiple contingencies: a configuration theory approach', *Industrial Management & Data Systems*, 115 (4), 625-645.
- Miles, R. E., Snow, C. C., Meyer, A. D. and Coleman, J. H. J. (1978) 'Organizational Strategy, Structure, and Process', *Academy of Management Review*, 3 (3), 546-562.
- Miller, D. (1986) 'Configurations of strategy and structure: Towards a synthesis', *Strategic management journal*, 7 (3), 233-249.
- Miller, D., Friesen, P. H. and Mintzberg, H. (1984) *Organizations: A Quantum View*. Englewood Cliffs, CA: Prentice-Hall.
- Min, S., Song, S. and Keebler, J. S. (2002) 'An Internet-Mediated Market Orientation (IMO): Building a Theory', *Journal of Marketing Theory & Practice*, 10 (2), 1-11.
- Mingers, J. (2003) 'A Classification of the Philosophical Assumptions of Management Science Methods', *The Journal of the Operational Research Society*, 54 (6), 559-570.
- Modi, S. B. (2006) *Role of Supply Chain Capabilities in Organizational Innovation Efforts*. PhD thesis. Indiana University. Available at: <https://books.google.co.uk/books?id=ebfqNTLdn3MC> (Accessed: 26 September 2016).
- MoIT (2010) *Report: Organisation Types According to Industries* [Online]. Available at: <http://moit.gov.ye/moit/ar/node/2404> (Accessed: Date Accessed).
- Morgan, G. A., Leech, N. L., Gloeckner, G. W. and Barrett, K. C. (2012) *IBM SPSS for Introductory Statistics: Use and Interpretation*. 5th edn. United Kingdom: Taylor & Francis.

- Morgan, R. E. and Strong, C. A. (2003) 'Business performance and dimensions of strategic orientation', *Journal of Business Research*, 56 (3), 163-176.
- Murray, J. A., O'Driscoll, A. and Torres, A. (2002) 'Discovering diversity in marketing practice', *European Journal of Marketing*, 36 (3), 373-390.
- Myers, M. D. and Avison, D. (2002) *Qualitative Research in Information Systems: A Reader*. California: Sage.
- Nadali, A., Pourdarab, S., Mazloumi, A. and Nosratabadi, H. E. (2011) 'Maturity Assessment of Business/IT Alignment Using Fuzzy Expert System', in Ariwa, E. & El-Qawasmeh, E. (eds.) *Digital Enterprise and Information Systems*. London: Springer, pp. 724-738.
- Nadler, D. A. and Tushman, M. L. (1980) 'A Model for Diagnosing Organizational Behavior', *Organizational Dynamics*, 9 (2), 35-51.
- Narver, J. C. and Slater, S. F. (1990) 'The effect of a market orientation on business profitability', *Journal of Marketing*, 54 (4), 20-35.
- Nasr, F., Zhen, T. and Abdelgader, A. (2015) *National Information and Communication Technology Policy in Yemen: The Response of Security Sector for Decision-Making*. Enter title.
- Nathan, P. P., Wei, S. and Philip, M. P. (2006) 'The Role of Formative Measurement Models in Strategic Management Research: Review, Critique, and Implications for Future Research', in Ketchen, D. & Bergh, P. D. (eds.) *Research Methodology in Strategy and Management*. Emerald Group Publishing Limited, pp. 197-252.
- Neumann, T. (2011) 'Efficiently compiling efficient query plans for modern hardware', *Proceedings of the VLDB Endowment*, 4 (9), 539-550.
- O'Rourke, N., Hatcher, L. and Stepanski, E. J. (2005) *A Step-by-Step Approach to Using SAS for Univariate & Multivariate Statistics*. New York: Wiley-Interscience.
- Obel, B., Burton, R. and Lauridsen, J. (2000) 'Fit and Misfits in the Multi-Dimensional Contingency Model: An Organizational Change Perspective'. Available at: <http://openarchive.cbs.dk/bitstream/handle/10398/8130/8791023009.pdf?sequence=1> (Accessed: 26 September 2016).
- Oh, W. and Pinsonneault, A. (2007) 'On The Assessment of the Strategic Value of Information Technologies: Conceptual and Analytical Approaches', *MIS Quarterly*, 31 (2), 239-265.
- Olson, E. M., Slater, S. F. and Hult, G. T. M. (2005) 'The Performance Implications of Fit Among Business Strategy, Marketing Organization Structure, and Strategic Behavior', *Journal of Marketing*, 69 (3), 49-65.

- Olugbode, M., Richards, R. and Biss, T. (2007) 'The role of information technology in achieving the organisation's strategic development goals: A case study', *Information Systems*, 32 (5), 641-648.
- Orlikowski, W. J. and Scott, S. V. (2008) 'Sociomateriality: challenging the separation of technology, work and organization', *The Academy of Management Annals*, 2 (1), 433-474.
- Pallant, J. (2013) *SPSS survival manual*. Maidenhead: McGraw-Hill Education.
- Papulova, E. and Papulova, Z. (2006) *Competitive strategy and competitive advantages of small and mid-sized manufacturing enterprises in Slovakia*. Slovakia: E-Leader.
- Park, E. A. (2007) *Barriers to Entry Analysis of Broadband Multiple Platforms: Comparing the U.S. and South Korea*. PhD thesis. Pennsylvania State University. Available at: <https://books.google.co.uk/books?id=mKVaW7xc-YC> (Accessed: 26 September 2016).
- Peng, D. X. and Lai, F. (2012) 'Using partial least squares in operations management research: A practical guideline and summary of past research', *Journal of Operations Management*, 30 (6), 467-480.
- Pennings, J. M. (1987) 'Structural Contingency Theory: A Multivariate Test', *Organization Studies*, 8 (3), 223-240.
- Peter, J. P. (1979) 'Reliability: A Review of Psychometric Basics and Recent Marketing Practices', *Journal of Marketing Research (JMR)*, 16 (1), 6-17.
- Petter, S., Straub, D. and Rai, A. (2007) 'Specifying Formative Constructs in Information Systems Research', *MIS Quarterly*, 31 (4), 623-656.
- Pleshko, L. P., Heiens, R. A. and Peev, P. (2014) 'The impact of strategic consistency on market share and ROA', *International Journal of Bank Marketing*, 32 (3), 176-193.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y. and Podsakoff, N. P. (2003) 'Common method biases in behavioral research: a critical review of the literature and recommended remedies', *Journal of Applied Psychology*, 88 (5), 879-903.
- Pollard, C. E. and Morales, M. (2015) 'Exploring the Impact of Aligning business and Is Strategy Types on Performance in Small Firms', *Journal of Small Business Strategy*, 25 (1), 26-45.
- Porter, M. E. (1980) *Competitive strategy: techniques for analyzing industries and competitors*. New York: The Free Press.
- Porter, M. E. and Millar, V. E. (1985) 'How information gives you competitive advantage', *Harvard Business Review*, 63 (4), 149-160.



- Powell, T. C. (1992) 'Organizational Alignment as Competitive Advantage', *Strategic Management Journal*, 13 (2), 119-134.
- Praeg, C. P. (2010) *Quality Management for IT Services: Perspectives on Business and Process Performance: Perspectives on Business and Process Performance*. Business Science Reference.
- Rao, V. S. P. and Krishna, V. H. (2009) *Management: Text and Cases*. India: Excel Books.
- Rathnam, R. G., Johnsen, J. and Wen, H. J. (2004) 'Alignment of Business Strategy and IT Strategy: A Case Study of a Fortune 50 Financial Services Company', *Journal of Computer Information Systems*, 45 (2), 1-8.
- Raymond, L. and Croteau, A.-M. (2009) 'Manufacturing Strategy and Business Strategy in Medium-Sized Enterprises: Performance Effects of Strategic Alignment', *IEEE Transactions on Engineering Management*, 56 (2), 192-202.
- Redlich-Amirav, D. and Higginbottom, G. (2014) 'New emerging technologies in qualitative research', *The Qualitative Report*, 19 (26), 1-14.
- Reeves, T. C., Duncan, W. J. and Ginter, P. M. (2003) 'Strategic configurations in health services organizations', *Journal of Business Research*, 56 (1), 31-43.
- Reich, B. H. and Benbasat, I. (1996) 'Measuring the Linkage Between Business and Information Technology Objectives', *MIS Quarterly*, 20 (1), 55-81.
- Reich, B. H. and Benbasat, I. (2000) 'Factors that influence the Social Dimension of Alignment between Business and Information Technology Objectives', *MIS Quarterly*, 24 (1), 81-113.
- Remenyi, D. and Williams, B. (1998) *Doing Research in Business and Management: An Introduction to Process and Method*. California: Sage.
- Reulink, R. B. J. (2012) *Strategic orientation and innovation performance at Dutch manufacturing SME's: the overrated role of Market Orientation and Entrepreneurial Orientation*. Master thesis. Universiteit Twente. Available at: <http://essay.utwente.nl/61589/> (Accessed: 26 September 2016).
- Rhee, M. and Mehra, S. (2006) 'Aligning operations, marketing, and competitive strategies to enhance performance: An empirical test in the retail banking industry', *Omega*, 34 (5), 505-515.
- Ringle, C. M., Sarstedt, M. and Straub, D. W. (2012) 'A Critical Look at the Use of PLS-SEM in MIS Quarterly', *MIS Quarterly*, 36 (1), iiv-8.
- Rivard, S., Raymond, L. and Verreault, D. (2006) 'Resource-based view and competitive strategy: An integrated model of the contribution of information technology to firm performance', *The Journal of Strategic Information Systems*, 15 (1), 29-50.

- Roberts, M. L., Liu, R. R. and Hazard, K. (2005) 'Strategy, technology and organisational alignment: Key components of CRM success', *Journal of Database Marketing & Customer Strategy Management*, 12 (4), 315-326.
- Rodríguez Cano, C., Carrillat, F. A. and Jaramillo, F. (2004) 'A meta-analysis of the relationship between market orientation and business performance: evidence from five continents', *International Journal of Research in Marketing*, 21 (2), 179-200.
- Rodríguez-Pinto, J., Rodríguez-Escudero, A. I. and Gutiérrez-Cillán, J. (2008) 'Order, positioning, scope and outcomes of market entry', *Industrial Marketing Management*, 37 (2), 154-166.
- Rogers, P. R., Miller, A. and Judge, W. Q. (1999) 'Using information-processing theory to understand planning/performance relationships in the context of strategy', *Strategic Management Journal*, 20 (6), 567-577.
- Rubin, A. (2009) *Statistics for Evidence-Based Practice and Evaluation*. California: Cengage Learning.
- Ruiz, D. M., Gremler, D. D., Washburn, J. H. and Carrión, G. C. (2008) 'Service value revisited: Specifying a higher-order, formative measure', *Journal of Business Research*, 61 (12), 1278-1291.
- Runge, W. (2014) *Technology Entrepreneurship: A Treatise on Entrepreneurs and Entrepreneurship for and in Technology Ventures. Vol 2*. Karlsruhe: KIT Scientific Publishing.
- Sabherwal, R. and Chan, Y. E. (2001) 'Alignment Between Business and IS Strategies: A Study of Prospectors, Analyzers, and Defenders', *Information Systems Research*, 12 (1), 11-33.
- Sabherwal, R. and Kirs, P. (1994) 'The Alignment between Organizational Critical Success Factors and Information Technology Capability in Academic Institutions', *Decision Sciences*, 25 (2), 301-330.
- Saldaña, J. (2015) *The coding manual for qualitative researchers*. California: Sage.
- Sambamurthy, V. and Zmud, R. W. (1999) 'Arrangement for Information Technology Governance: A Theory of Multiple Contingencies', *MIS Quarterly*, 23 (2), 261-290.
- Saunders, M. L. P. T. A. (2015) *Research methods for business students*. Harlow: Pearson Education.
- Schniederjans, M. and Cao, Q. (2009) 'Alignment of operations strategy, information strategic orientation, and performance: an empirical study', *International Journal of Production Research*, 47 (10), 2535-2563.

- Segev, E. (1987) 'Strategy, Strategy-Making, and Performance in a Business Game', *Strategic Management Journal*, 8 (6), 565-577.
- Segev, E. (1989) 'A Systematic Comparative Analysis and Synthesis of Two Business-Level Strategic Typologies', *Strategic Management Journal*, 10 (5), 487-505.
- Sekaran, U. and Bougie, R. (2010) *Research Methods for Business: A Skill Building Approach*. Sussex: John Wiley & Sons.
- Semple, J. (2008) *The Backward-Flowing Method: The Secret of Life and Death*. California: Life Force Books.
- Sharma, G. (2011) 'Do SMEs need to strategize?', *Business strategy series*, 12 (4), 186-194.
- Shortell, S. M. and Zajac, E. J. (1990) 'Research Notes. Perceptual and Archival Measures of Miles and Snow's Strategic Types: A Comprehensive Assessment of Reliability and Validity', *Academy of Management Journal*, 33 (4), 817-832.
- Sigala, M. and Christou, E. (2006) *Global Trends and Challenges in Services*. Emerald Group Publishing Limited.
- Silverman, D. (2005) *Doing Qualitative Research: A Practical Handbook*. California: Sage.
- Singh, J., Verbeke, W. and Rhoads, G. (1996) 'Do organizational practices matter in role stress processes? A study of direct and moderating effects for marketing-oriented boundary spanners', *Journal of Marketing*, 60, 69-86.
- Slater, S. F., Hult, G. T. M. and Olson, E. M. (2007) 'On the importance of matching strategic behavior and target market selection to business strategy in high-tech markets', *Journal of the Academy of Marketing Science*, 35 (1), 5-17.
- Slater, S. F., Hult, G. T. M. and Olson, E. M. (2010a) 'Factors influencing the relative importance of marketing strategy creativity and marketing strategy implementation effectiveness', *Industrial Marketing Management*, 39 (4), 551-559.
- Slater, S. F. and Narver, J. C. (1995) 'Market orientation and the learning organization', *Journal of Marketing*, 59 (3), 63-74.
- Slater, S. F. and Olson, E. M. (2001) 'Marketing's Contribution to the Implementation of Business Strategy: An Empirical Analysis', *Strategic Management Journal*, 22 (11), 1055-1067.
- Slater, S. F., Olson, E. M. and Hult, G. T. M. (2006) 'The moderating influence of strategic orientation on the strategy formation capability–performance relationship', *Strategic Management Journal*, 27 (12), 1221-1231.

- Slater, S. F., Olson, E. M. and Hult, G. T. M. (2010b) 'Worried about strategy implementation? Don't overlook marketing's role', *Business Horizons*, 53 (5), 469-479.
- Soley-Bori, M. (2013) 'Dealing with missing data: Key assumptions and methods for applied analysis'. Available at: <http://www.bu.edu/sph/files/2014/05/Marina-tech-report.pdf> (Accessed: 26 September 2016).
- Sproull, N. L. (2002) *Handbook of Research Methods: A Guide for Practitioners and Students in the Social Sciences*. London: Scarecrow Press.
- Strahle, W. M., Spiro, R. L. and Acito, F. (1996) 'Marketing and Sales: Strategic Alignment and Functional Implementation', *Journal of Personal Selling & Sales Management*, 16 (1), 1-20.
- Strang, K. (2015) *The Palgrave Handbook of Research Design in Business and Management*. New York: Palgrave Macmillan US.
- Tabachnick, B. G. and Fidell, L. S. (2001) *Using Multivariate Statistics*. Needham Heights, MA: Allyn and Bacon.
- Taipala, D. J. (2008) *Information Technology Outsourcing: A Study of Its Role in Strategic Alignment and the Mitigating Effect of Virtual Organization*. PhD thesis. Capella University. Available at: <http://books.google.co.uk/books?id=x2-pXdDOuhkC> (Accessed: 26 September 2016).
- Tallon, P. P. (2007) 'A Process-Oriented Perspective on the Alignment of Information Technology and Business Strategy', *Journal of Management Information Systems*, 24 (3), 227-268.
- Tallon, P. P. and Pinsonneault, A. (2011) 'Competing Perspectives on the Link Between Strategic Information Technology Alignment and Organizational Agility: Insights from a Mediation Model', *MIS Quarterly*, 35 (2), 463-486.
- Tan, H. (2006) *Applying the Miles and Snow's Business Strategy Typology to China's Real Estate Development Industry: A Research Framework*. PhD thesis. Macquarie University. Available at: [http://www.prrs.net/papers/tan\\_applying\\_miles\\_and\\_snow\\_to\\_china.pdf](http://www.prrs.net/papers/tan_applying_miles_and_snow_to_china.pdf) (Accessed: 26 September 2016).
- Teo, T. S. H. and King, W. R. (1997) 'Integration between Business Planning and Information Systems Planning: An Evolutionary-Contingency Perspective', *Journal of Management Information Systems*, 14 (1), 185-214.
- Theodosiou, M., Kehagias, J. and Katsikea, E. (2012) 'Strategic orientations, marketing capabilities and firm performance: An empirical investigation in the context of

frontline managers in service organizations', *Industrial Marketing Management*, 41 (7), 1058-1070.

Thomas, A. B. (2004) *Research Skills for Management Studies*. London: Routledge.

Thornton, S. C., Henneberg, S. C. and Naudé, P. (2014) 'Conceptualizing and validating organizational networking as a second-order formative construct', *Industrial Marketing Management*, 43 (6), 951-966.

Tomar, B. (2014) 'Axiology in Teacher Education: Implementation and Challenges', *Journal of Research & Method in Education*, 4 (2), 51-54.

Trkman, P. (2010) 'The critical success factors of business process management', *International Journal of Information Management*, 30 (2), 125-134.

Tymieniecka, A. T. (2014) *Phenomenology World-Wide: Foundations — Expanding Dynamics — Life-Engagements A Guide for Research and Study*. Netherlands: Springer.

Ullah, A. and Lai, R. (2013) 'A systematic review of business and information technology alignment', *ACM Transactions on Management Information Systems (TMIS)*, 4 (1), 4.

Umanath, N. S. (2003) 'The concept of contingency beyond "It depends": illustrations from IS research stream', *Information & Management*, 40 (6), 551-562.

Valos, M. J. and Bednall, D. H. B. (2010) 'The alignment of market research with business strategy and CRM', *Journal of Strategic Marketing*, 18 (3), 187-199.

Varadarajan, P. R., Jayachandran, S. and White, J. C. (2001) 'Strategic Interdependence in Organizations: Deconglomeration and Marketing Strategy', *Journal of Marketing*, 65 (1), 15-28.

Varadarajan, R. (2010) 'Strategic marketing and marketing strategy: domain, definition, fundamental issues and foundational premises', *Journal of the Academy of Marketing Science*, 38 (2), 119-140.

Venkatraman, N. (1989a) 'The Concept of Fit in Strategy Research: Toward Verbal and Statistical Correspondence', *Academy of Management Review*, 14 (3), 423-444.

Venkatraman, N. (1989b) 'Strategic Orientation of Business Enterprises: The Construct, Dimensionality, and Measurement', *Management Science*, 35 (8), 942-962.

Venkatraman, N. (1990) 'Performance Implications of Strategic Coalignment: A Methodological Perspective', *Journal of Management Studies*, 27 (1), 19-41.

Venkatraman, N. and Camillus, J. C. (1984) 'Exploring the Concept of "Fit" in Strategic Management', *Academy of Management Review*, 9 (3), 513-525.

- Venkatraman, N. and Prescott, J. E. (1990) 'Environment-strategy coalignment: An empirical test of its performance implications', *Strategic Management Journal*, 11 (1), 1-23.
- Venkatraman, N. and Ramanujam, V. (1987) 'Planning System Success: A Conceptualization and an Operational Model', *Management Science*, 33 (6), 687-705.
- Verdú - Jover, A. J., Gómez - Gras, J. M. and Lloréns - Montes, F. J. (2008) 'Exploring managerial flexibility: determinants and performance implications', *Industrial Management & Data Systems*, 108 (1), 70-86.
- Vinzi, V. E., Chin, W. W., Henseler, J. and Wang, H. (2010) *Handbook of Partial Least Squares: Concepts, Methods and Applications*. Berlin: Springer.
- Vorhies, D. W. and Morgan, N. A. (2003) 'A Configuration Theory Assessment of Marketing Organization Fit with Business Strategy and Its Relationship with Marketing Performance', *Journal of Marketing*, 67 (1), 100-115.
- Wagner, H. T. (2012) *A Resource-based perspective on IT Business Alignment and firm performance: Theoretical foundation and empirical evidence*. ibidem.
- Walker Jr, O. C. and Ruekert, R. W. (1987) 'Marketing's Role in the Implementation of Business Strategies: A Critical Review and Conceptual Framework', *Journal of Marketing*, 51 (3), 15-33.
- Wan Nor, A. (2015) 'The graphical assessment of multivariate normality using SPSS', *Education in Medicine Journal*, 7 (2), 71-75.
- Wang, N., Liang, H., Zhong, W., Xue, Y. and Xiao, J. (2012) 'Resource Structuring or Capability Building? An Empirical Study of the Business Value of Information Technology', *Journal of Management Information Systems*, 29 (2), 325-367.
- Wang, X., Zhou, X. and Jiang, L. (2008) 'A method of business and IT alignment based on enterprise architecture', *Service Operations and Logistics, and Informatics, 2008. IEEE/SOLI 2008. IEEE International Conference on*. 2008: IEEE, 740-745.
- Warne, R. T. (2014) 'A Primer on Multivariate Analysis of Variance (MANOVA) for Behavioral Scientists', *Practical Assessment, Research & Evaluation*, 19 (17), 1-10.
- Warren, R., Smith, R. F. and Cybenko, A. K. (2011) 'Use of Mahalanobis distance for detecting outliers and outlier clusters in markedly non-normal data: a vehicular traffic example'. Available at: <http://www.dtic.mil/dtic/tr/fulltext/u2/a545834.pdf> (Accessed: 26 September 2016).

- Wehmeyer, K. (2005) 'Aligning IT and marketing [mdash] The impact of database marketing and CRM', *Journal of Database Marketing & Customer Strategy Management*, 12 (3), 243-256.
- Wei, Y. and Wang, Q. (2011) 'Making sense of a market information system for superior performance: The roles of organizational responsiveness and innovation strategy', *Industrial Marketing Management*, 40 (2), 267-277.
- Wetzels, M., Odekerken-Schröder, G. and van Oppen, C. (2009) 'Using PLS Path Modeling for Assessing Hierarchical Construct Models: Guidelines and Empirical Illustration', *MIS Quarterly*, 33 (1), 177-195.
- Willis, J. W. (2007) *Chapter 1. World Views, Paradigms, and the Practice of Social Science Research. Foundations of Qualitative Research: Interpretive and Critical Approaches*. SAGE Publications, Inc. Thousand Oaks, CA: Sage.
- Wilson, D. T. and Vlosky, R. P. (1998) 'Interorganizational information system technology and buyer - seller relationships', *Journal of Business & Industrial Marketing*, 13 (3), 215-234.
- Wu, S. P.-J., Straub, D. W. and Liang, T.-P. (2015) 'How Information Technology Governance Mechanisms and Strategic Alignment Influence Organizational Performance: Insights from a Matched Survey of Business and IT Managers', *MIS Quarterly*, 39 (2), 497-A7.
- Xu, S., Cavusgil, S. T. and White, J. C. (2006) 'The Impact of Strategic Fit Among Strategy, Structure, and Processes on Multinational Corporation Performance: A Multimethod Assessment', *Journal of International Marketing*, 14 (2), 1-31.
- Yayla, A. A. and Hu, Q. (2012) 'The impact of IT-business strategic alignment on firm performance in a developing country setting: exploring moderating roles of environmental uncertainty and strategic orientation', *European Journal of Information Systems*, 21 (4), 373-387.
- Zaefarian, G. (2011) *Understanding the interplay between business relationships and business strategy using configuration theory*. PhD thesis. The University of Manchester. Available at: <https://www.escholar.manchester.ac.uk/api/datastream?publicationPid=uk-ac-man-scw:122344&datastreamId=FULL-TEXT.PDF> (Accessed: 26 September 2016).
- Zaefarian, G., Henneberg, S. C. and Naudé, P. (2013) 'Assessing the strategic fit between business strategies and business relationships in knowledge-intensive business services', *Industrial Marketing Management*, 42 (2), 260-272.

- Zeithaml, V. A., Varadarajan, P. R. and Zeithaml, C. P. (1988) 'The Contingency Approach: Its Foundations and Relevance to Theory Building and Research in Marketing', *European Journal of Marketing*, 22 (7), 37-64.
- Zheng, W., Yang, B. and McLean, G. N. (2010) 'Linking organizational culture, structure, strategy, and organizational effectiveness: Mediating role of knowledge management', *Journal of Business Research*, 63 (7), 763-771.
- Zheng Zhou, K., Brown, J. R., Dev, C. S. and Agarwal, S. (2007) 'The effects of customer and competitor orientations on performance in global markets: a contingency analysis', *Journal of International Business Studies*, 38 (2), 303-319.
- Zhu, Z. and Nakata, C. (2007) 'Reexamining the link between customer orientation and business performance: The role of information systems', *Journal of Marketing Theory and Practice*, 15 (3), 187-203.
- Zientek, L. R. and Thompson, B. (2009) 'Matrix summaries improve research reports: Secondary analyses using published literature', *Educational Researcher*, 38 (5), 343-352.
- Zikmund, W. G. (2003) *Business Research Methods*. Ohio: Thomson/South-Western.



## **APPENDIX A**

# **Questionnaire on the Impact of Alignment of Business Strategy, Information Technology Strategy, and Marketing Strategy of Companies in Yemen on Organisational Performance**

### **INTRODUCTION:**

This questionnaire seeks to find out about your views, perceptions and experience of the alignment of the strategies in your organisation. Your response will be used in providing an evaluation of this important process linking strategies. The information provided will be conducted with transparency and treated as confidential.

The objective of the research is to underpin the importance of aligning Business, IT, and Marketing strategies of the organisation. None of the personal details and views will be shared and revealed to anyone assuring you full confidentiality in dealing with the information given.

Please provide answers to the best of your knowledge and opinion.

**Abdulrahman M Al-Surmi**

**PhD Student**

**University of Bedfordshire in the UK © 2014**

## Part One: Practical Information

Please answer the following questions by circling the most appropriate choice:

**1.1. Category of your position:**

- a. Business Manager
- b. IT Manager
- c. Marketing Manager
- d. Other

**1.2. Our organisation belongs to ..... industry**

- a. Marketing & Advertising
- b. Education
- c. Manufacturing
- d. Banking & Finance
- e. Hospital
- f. Electronics
- g. Retail
- h. Service
- i. Transport
- j. Property
- k. Telecom
- l. Other

**1.3. The estimated number of employees in our organisation is .....**

- a. 10-49 Employees
- b. 50-249 Employees
- c. 250-999 Employees
- d. More than 1000 Employees

## Part Two: Instrument for Indicating Business Strategy

Please indicate the extent to which you agree or disagree with the following statement:

Statement		Strongly Agree	Agree	Agree Somewhat	Neutral	Disagree Somewhat	Disagree	Strongly Disagree
2.1	Our organisation constantly seeks new opportunities related to the present operations							
2.2	Our organisation seeks market share position at the expense of cash flow and profitability							
2.3	Our organisation cuts prices to increase the market share							
2.4	Our organisation uses cost control systems for monitoring performance							
2.5	Our organisation uses production management techniques							
2.6	Our organisation emphasizes on product quality through the use of quality circles							
2.7	Our organisation's IT provides support for decision making							
2.8	When making a major decision, we usually try to develop thorough analysis							
2.9	Our organisation uses planning techniques and uses the outputs of management information and control systems							

## Part Three: Instrument for Indicating Information Technology Strategy

Please indicate the extent to which you agree or disagree with the following statement:

Statement		Strongly Agree	Agree	Agree Somewhat	Neutral	Disagree Somewhat	Disagree	Strongly Disagree
3.1	Our organisation use competitive intelligence systems							
3.2	Our organisation use IT for product marketing and promotion							
3.3	Our organisation use IT for obtaining customer feedback and providing service							
3.4	Our organisation use IT in business processes							
3.5	Our organisation use IT to support research and development							
3.6	Our organisation use IT to support manufacturing							
3.7	Our organisation use IT to support strategic planning and decision-making							
3.8	Our organisation use IT in risk analysis of processes							
3.9	Our organisation use IT in human resource management							

## Part Four: Instrument for Indicating Marketing Strategy

Please indicate the extent to which you agree or disagree with the following statement:

Statement		Strongly Agree	Agree	Agree Somewhat	Neutral	Disagree Somewhat	Disagree	Strongly Disagree
4.1	Our organisation continuously try to discover additional needs of our customers of which they are unaware							
4.2	Our organisation incorporates solutions to unarticulated customer needs in our new products and services							
4.3	Our organisation brainstorms on how customers use our products and services							
4.4	Our organisation innovates even at the risk of making our own products obsolete							
4.5	Our organisation works closely with lead users who try to recognise customer needs months or even years before the majority of the market may recognise them							
4.6	Our organisation rapidly responds to competitive actions							
4.7	Our organisation's top management discusses competitor's strategies							
4.8	Our organisation targets opportunities for competitive advantage							
4.9	Our organisation's salespeople collect competitor information							

## Part Five: Instrument for Measuring Organisational Structure

Please indicate the extent to which you agree or disagree with the following statement:

Statement		Strongly Agree	Agree	Agree Somewhat	Neutral	Disagree Somewhat	Disagree	Strongly Disagree
5.1	There can be little actions taken here until a supervisor approves a decision							
5.2	A person who wants to make his/her own decisions would be quickly discouraged							
5.3	Even small matters have to be referred higher up for a final answer							
5.4	I have to ask my boss before I do almost anything							
5.5	Any decision I make has to have my boss's approval							

## Part Six: Instrument for Measuring Environmental Dynamism

Please indicate the extent to which you agree or disagree with the following statement:

Statement		Strongly Agree	Agree	Agree Somewhat	Neutral	Disagree Somewhat	Disagree	Strongly Disagree
6.1	Product/services quickly become obsolete in our industry							
6.2	Actions of competitors are quite easy to predict							
6.3	Consumer tastes are fairly easy to forecast in our industry							
6.4	Technology changes more quickly in our industry than other industries							

## Part Seven: Instrument for Measuring Organisational Performance

Please indicate the extent to which you agree or disagree with the following statement:

Statement		Strongly Agree	Agree	Agree Somewhat	Neutral	Disagree Somewhat	Disagree	Strongly Disagree
7.1	The sales growth position is much better than our principal competitors							
7.2	The market share gains is much better than our principal competitors							
7.3	The return on investment position is much better than our principal competitors							
7.4	The net profit position is much better than our principal competitors							
7.5	The financial liquidity position is much better than our principal competitors							

I would like to thank you for your time and sincerity in participating in this research.



## **APPENDIX B**

# **Interview Instrument on the Impact of Alignment of Business Strategic Orientation, Information Technology Strategic Orientation, and Marketing Strategic Orientation of Companies on Organisational Performance**

### **INTRODUCTION:**

This research seeks to find out about your views, perceptions and experience of the alignment of the strategies in your organisation. Your response will be used in providing an evaluation of this important process linking strategies. The information provided will be conducted with transparency and treated as confidential.

The objective of the research is to underpin the importance of aligning Business, IT, and Marketing strategic orientations of the organisation. None of the personal details and views will be shared and revealed to anyone assuring you full confidentiality in dealing with the information given.

Please provide answers to the best of your knowledge and opinion.

**Abdulrahman M Al-Surmi**

**PhD Student**

**University of Bedfordshire in the UK © 2016**

## **Part one: aims to explore the organisation's strategic orientations**

*Companies have been shown to display different approaches, or characteristics to the way in which they operate in their business environment. Some of the characteristics are the following:*

- Prospector – companies seek to continuously develop innovative new products and exploit new market opportunities
- Defender – companies focus more narrowly on maintaining a secure position in existing product and market
- Analyser – companies attempt to maintain a stable domain of core products while seek new product and market opportunities

Question 1: If you had to choose one characteristic that describes your company, which would it be and why?

*Apart from the above, other ways in which companies approach their environments, is to orientate themselves to focus on following aspects:*

- Customers focused – companies tend to integrate customer preferences into the product development and marketing process by putting the interests of customers first
- Competitors focused – companies seek to analyse competitors in their external market, use competitor intelligence as a frame of reference to guide product development and marketing process

Question 2: If you had to choose one aspect or both that your company focuses on, which would it be and why?

*As with the previous list, companies also have their own approach in defining the strategic use of IT based on the systems implemented within their company. Some of the IT systems are the following:*

- Market information systems (flexibility) – the use of IT for observing marketing information and changes of market
- Interorganisational systems (comprehensiveness) – the use of IT for observing marketing information and market changes, supporting function of information sharing and communication to link with customers and suppliers
- Operational support systems (efficiency) – the use of IT for monitoring and controlling daily operations, facilitating operational efficiency

Question 3: If you had to choose the most aspect that defines your company's strategic use of IT, which would it be and why?

## **Part two: aims to explore organisation's perception and practice of strategic alignment.**

*In light with the academic literature in the strategic alignment (e.g. Drazin and Van De Ven (1985), Henderson and Venkatraman (1989), Nadler and Tushman (1980), Tallon and Pinsonneault (2011), Venkatraman (1989a)), alignment refers to the relationship, fit, coherent or link between different groups and the way they work together. This covers all aspects of their activities but focuses particularly on the more strategic aspects. In this case, the relevant groups would be the alignment of IT and marketing strategic orientations with business strategic orientations, which is believed to impact positively on organisational performance in terms of profit, return on investments, market share, and sales growth.*

Question 4: To what extent do you think your company has coherent strategies among business, IT, and marketing?

Question 5: How do you think your company has developed coherent strategies among business, IT, and marketing?

Question 6: Why do you think your company has coherent strategies among business, IT, and marketing?

## **Part three: aims to explore the organisation's performance**

Question 7: To what extent alignment/misalignment affects your company's performance?

Question 8: How alignment/misalignment affects your company's performance?

Question 9: Why alignment/misalignment affects your company's performance?

I would like to thank you for your time and sincerity in participating in this research.

## **APPENDIX C**

### **Interview Instrument on the Impact of Triadic Strategic Alignment on Organisational Performance in Yemen**

#### **INTRODUCTION:**

This research seeks to find out about your views, perceptions and experience of the alignment of the strategies in your organisation. Your response will be used in providing an evaluation of this important process linking strategies. The information provided will be conducted with transparency and treated as confidential.

The objective of the research is to underpin the importance of aligning Business, IT, and Marketing strategic orientations of the organisation. None of the personal details and views will be shared and revealed to anyone assuring you full confidentiality in dealing with the information given.

Please provide answers to the best of your knowledge and opinion.

**Abdulrahman M Al-Surmi**

**PhD Researcher**

**University of Bedfordshire in the UK © 2017**

## **Part one: aims to explore organisation's perception and practice of strategic alignment.**

Question 1: How often is there communication between business management, IT management, and marketing management? On a scale from 1 to 5, how would you rate the contact frequency of business, IT, and marketing managements?

Question 2: How and why would you classify the communication between business, IT, and marketing managements as being a three-way process?

Question 3: How and why does top management construct a vision on the role of IT and marketing for the organisation?

Question 4: How and why business management should have enough IT and marketing knowledge to discuss and judge IT and marketing projects?

Question 5: How and why do the CIO/CMO contribute to the formulation of business goals?

Question 6: How and why do IT managements use IT as a strategic instrument and communicate this to business management?

Question 7: How and why do you think your company has developed coherent strategies among business, IT, and marketing?

## **Part two: aims to explore the organisation's performance**

Question 8: Why do you have the confidence in the IT and marketing departments in terms of reliability and the usefulness of their deliverables? How IT and marketing departments meet their commitments?

Question 9: How would it be possible for IT staff to crossover to more business/marketing related positions and if so, why does this occur?

Question 10: How would it be possible for marketing staff to crossover to more business/IT related positions and if so, why does this occur?

Question 11: How and why alignment/misalignment affects your company's performance?

I would like to thank you for your time and sincerity in participating in this research.