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Motivating the knowledge worker to perform

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A research report submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Business Administration

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ABSTRACT

Competitive advantage for any organisation relies on the output of knowledge workers. The more motivated the knowledge worker the more likely they are to perform. This research explores the links between motivation and performance and creates a better understanding of which motivational factors would fall within the ambit of the psychological contract. The secondary portion of the research was to clarify if different types of knowledge workers performed in response to motivation in the same way.

The research was done through in-depth interviews of knowledge workers in the 4 defined clusters. A total of 26 interviews were conducted. A questionnaire using open ended questions was used to guide the interview. The interviews were recorded, and the key themes in the results were captured, transformed and analysed, after which a ranking process was done on the results. The findings were analysed from various perspectives.

The research found that there are differences in the groups studied from a number of perspectives, such as; motivation and performance scores, the motivation factors, the factors that act against performance, the organisational and individual duties as would be 'held' in the psychological contract. The research found that most of the factors that motivate are in the psychological contract. The findings strongly recommend that management needs to fully understand and manage the unique motivators of each individual knowledge worker in order to obtain maximum performance and hence competitive advantage.

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements of the degree of Master of Business Administration for the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other university.

…………………………………….   Date: ………………………………

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1.1. DESCRIPTION OF THE PROBLEM AND BACKGROUND

1.1.1.   PROBLEM DESCRIPTION

With the changing of the world to a knowledge economy, the need to maximize on the delivery of outputs or performance, through the scarce skills of knowledge workers is vital for competitive advantage of any organization. Knowledge workers were described by Drucker (1999) as those individuals who carry knowledge as a resource that they, not the organisation, own.

The added complexity is that the delivery of knowledge work lies in the hands of the worker and thus requires the worker to <u>want</u> to deliver the knowledge and the 'want' can only be driven through some form of motivation. Motivation is described as the desire to perform by McCormack and Ilgen (1992).

The question this raises is whether this motivation is specific to the individual, and if so, is it more likely to be intrinsic than extrinsic and will it be 'found' in the psychological contract? The psychological contract is the unwritten agreement that exists between employee and employer and contains a set of mutual expectations (Rousseau and Tijoriwala, 1998).   The implication is that the extrinsic or external factors will be in the formal contract, such as salary, and working hours, whereas the intrinsic is the elements such as informal recognition, working environments and the content of the job itself.

DelCampo (2007b, p. 434) poses that the 'management of the psychological contract can result in increases in job performance, lower staff turnover and higher job satisfaction…'. The current importance of the psychological contract can be demonstrated; as in the conference held by the Academy of Management and Organizational Behaviour Division, the submissions on the topic of the psychological contract were one and a half times as numerous as the next most popular area (DeNisi in DelCampo, 2007a). Despite the focus and ongoing debate on the psychological contract, there is concurrently another debate raging on the value of the human capital element, as it is in this human capital, where the value of knowledge workers exists. More of the economic world is driven through knowledge. This can be demonstrated from the simple personal experiences to the wealth of literature that exists on these 'Gold Collar Workers' (Holland, Hecker and Steen, 2002) and the ways this component of the workforce has found different ways to stimulate and challenge themselves.

The need for the organization to leverage knowledge based assets for competitive advantage (Holland, Hecker and Steen, 2002), contrasts with the view of McGregor, Tweed and Pech (2004) who speak of the human capital element in the new economy as the 'Devils Bargain', but still stress the need to understand what drives, attracts and motivates the 'best people' in the knowledge economy. Motivation has been under the microscope since the 1960s, but it is arguably more important today where the competitive advantage of any organisation is dependant on the knowledge workers motivation to produce the outputs required.

There has been mu [UNIVERSITEIT VAN PRETORIA / UNIVERSITY OF PRETORIA / YUNIBESITHI YA PRETORIA] ration, with many authors claiming to have the solution, such as Nelsons hierarchy of wants (Nelson, 2005) where he looks at 7 levels of motivation; to the Tale of two motivators (Terez, 2001), which views two different life perspectives in terms of motivation. The literature abounds on this topic and each article presents another view and another way to get it right. The literature review expands on some of these written theories.

Despite all that has been written on the individual factors, the apparent gap, lies in the interrelatedness of the psychological contract, motivation, performance and knowledge worker. The view that has been applied for the research is that; the bulk of the factors that could motivate knowledge workers to perform would be embedded in the psychological contract and hence would be intrinsic and in comparisons between groups of knowledge workers there will be differences in the factors that motivate.

1.1.3.   OVERVIEW

The focus of the research was on the two interrelated elements; the first was the factors that motivate knowledge workers. The second component was how and in what way; are these motivational factors reflected in the psychological contract. The motivational topic has gained more prominence as so much of the economic world becomes driven through knowledge. The key question that required an answer was 'What are the factors that motivate the knowledge worker of today and of these which are 'articulated' in the unwritten psychological contract?', and hence how important in the knowledge economy is the psychological contract.

Many research pape
chological contract, but a strong focus was on the violations and breach and the factors that will contribute to this (Restubog, Bordia, Tang, 2006; Turnley and Feldman, 1998; Turnley and Feldman, 1999; Turnley and Feldman, 2000; Morrison and Robinson, 1997; Johnson and O'Leary-Kelly, 2003; DelCampo, 2007a). As recently as March 2007, Del Campo (2007a, p. 43) suggested that attention should now move from the traditional area and focus on outcomes based evaluation, or as he put it: 'on the positive attributes of the intact psychological contract'.   In line with this, the research focused on the positive aspects of the contract and which of these factors act as motivators to knowledge workers.

Fundamental to organizational development and industrial psychology disciplines and as articulated by Drucker (1998), the theory was that all people needed to be correctly motivated. Extrinsic motivation is based on factors external to the individual whereas the intrinsic motivation comes from the work task enjoyment (Quigley and Tymon, 2006). Herzberg (1968) reviewed the entire process of getting an employee to do what the organisation wants and demonstrated there are different ways to motivate. Since the early theories, there has been much written on the topic of motivation.

The complication lies in the actual work performed by the knowledge worker, since this worker is the expert in the field and is employed to produce the outputs of knowledge, they should know more about their field than their functional manager does. Drucker (1998) emphasizes that knowledge workers own their means of production in terms of knowledge. Drucker (2004, p. 3) stated, 'the way people are managed assumes that the workforce is made up of people who are employed

by the enterprise and quit, retire or die. Yet two fifths of people in the organization are … not full time employees'. To obtain performance from the knowledge worker they must want to perform.

This raises the question as to the nature of the psychological contract – the individuals' belief in mutual obligations (Rousseau and Tijoriwala, 1998). Herzberg (1968) suggested, money is not a motivator, but should be seen as a hygiene factor (although the lack of money can still be the cause of de-motivation), the question this raises is; what are the factors that can motivate knowledge workers, and is this similar across different groups of knowledge workers?

1.1.4.   PROBLEM THAT THIS RESEARCH ADDRESSES

The improved understanding that is required lies across the interrelatedness of the psychological contract, motivation and knowledge workers. The research explores whether the factors that motivate knowledge workers to perform are embedded in the psychological contract and hence are intrinsic and that there is no one single correct form of motivation across all types of knowledge workers.

The problem was selected as the economic world is driven increasingly through knowledge and since the production of knowledge workers can be difficult to measure, a better understanding of the motivators and the relationship to the psychological contract is required. The evidence that identifies the problem was that although both motivation and psychological contracts are well described in the literature; a large component of the psychological contract research focuses on breach or violation of the contract and the impact thereof. This research was

intended to uncover the _____ _____ sychological contract. The topic is relevant to business in South Africa, as productivity is the combination of ability (skills) and motivation (the desire to perform) – McCormack and Ilgen (1992). The better the understanding of what motivates and the psychological contract impact, the more likely performance can be obtained from knowledge workers.

Much research has been done to understand the factors influencing productivity. Horwitz, Heng and Quazi (2003) as part of a study looked at specifically what motivated knowledge workers, however this was only done on organisations in Singapore and they suggested further research to eliminate cultural boundedness.

Ridley (2007), looking at performance elements, investigates the key performance areas of each area of the body. The key job performance elements for the head/brain are planning, implementation and problem solving. Knowledge workers should demonstrate the ability to innovate, however this is not an easily measurable outcome. The elements suggested such as problem solving are also not easy to measure. How is it possible to rate one knowledge worker fairly against another in terms of the ability to solve complex problems? This then re-enforces the original thinking, that knowledge workers need to be motivated and then they will perform.

1.2.1.   AIM

The key aim is to create a better understanding of the factors that would motivate or de-motivate different clusters of knowledge workers. Part of this, is the exploration of the relationship of motivation to the individuals perceived performance across different clusters, in order to create a better understanding of the influence of motivational and de-motivational factors on performance. The research also aims to review which of the motivators are likely to be present in the psychological contract, as opposed to only present in the formal contract that exists between the individual and the organisation. Guest (1998) in his model of the psychological contract shows motivation as a consequence of the psychological contract. Improved understanding of the factors that motivate different clusters of knowledge workers and thus lead to increased productivity of knowledge workers, remains a pertinent topic as more of the economy is knowledge worker driven.

1.2.2.   OBJECTIVE

The objective is to improve the understanding of the relationship of motivational factors to performance and which of these are found in the psychological contract versus the formal contract.

The research was intended to review different clusters of knowledge workers from a number of perspectives to confirm if similarities or differences exist:

- Relationship of

- Factors that motivate

- Factors that act against performance

- Psychological contract expectations from the individual and the organisation

The research also seeks to improve the understanding of the clustering of motivators and create a clearer view of those which can be used to drive performance.

CHAPTER 2: L

2.1. INTRODUCTION

The world of work is changing from an industrial, often labour intensive environment to a knowledge economy. Within the knowledge economy knowledge workers have become the most important factors of production, and need to be leveraged for sustainable competitive advantage (Holland, Hecker and Steen, 2002). To achieve this leverage the firm will need to know how to motivate the individual to perform. 'The most productive knowledge workers tend to employ the most efficient workflow and work methods. More important they tend to be better at managing the use of their time, attention and motivation' (Davis, 2002, p. 69). Improved understanding of the factors that motivate knowledge workers can lead to better ability to motivate these individuals to perform.

Initially the literature review focuses on an improved understanding of what the knowledge worker is and what the new economy requires. The review then briefly looks at performance and the productivity of the knowledge worker, with a focus on what is required.

As motivation is not a new concept, this is fully explored from the older theories/models through to the current research. The bulk of the current research focus on factors of motivation, however the review will demonstrate the activity and the range of research that is still taking place in this area.

The review moves to been described for almost as long a time period as motivation. The definition as well as the evolution is reviewed. Then the current research is reviewed once again to show the depth of the research still taking place such as into the value of the contract as well as breach and trust issues.
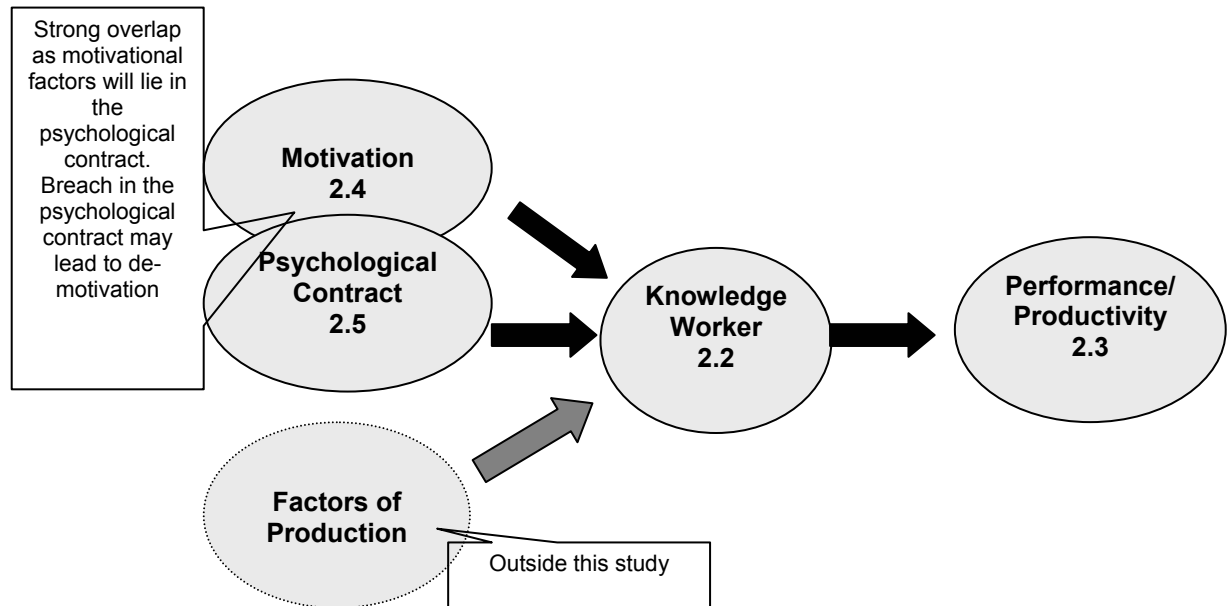
Figure 1 : Overview of literature review

As shown in the summary in figure 1, the review will explore each of the factors independently. The role of the psychological contract, especially in terms of intrinsic motivation, is explored. The link is explored between the knowledge

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workers motivation a [UNIVERSITEIT VAN PRETORIA / UNIVERSITY OF PRETORIA / YUNIBESITHI YA PRETORIA] inally the literature review seeks to show the linkages between each of these.

2.2. KNOWLEDGE WORKER

2.2.1. KNOWLEDGE WORKER DEFINED

Drucker (1998), describes knowledge workers as workers who own their means of production in terms of knowledge. A broad definition is all workers who use, create or maintain information (Drucker, 1998). Drucker (1999), also used the term technologists to describe those workers who do both knowledge and manual work, i.e. individuals who use the knowledge to perform manual tasks, and he cites an example of the neurosurgeon to explain this concept fully. Thus the term technologist can also be used to describe a knowledge worker. Drucker (1999) proposes that the technologist may be the natural successor to the 19th and 20th century skilled workers. A different perspective is suggested to contrast knowledge workers to other groups such as professional workers, because some work with knowledge and others work from knowledge (Carter and Scarbrough 2001).

Drucker (2003) describes the old way of thinking where the corporation is the 'master' and the employee the 'servant', this is due to the fact that the corporation owned the means of production. The new assumption required is that the knowledge worker owns the means of production. This then implies that the means of production is highly portable, which then allows the individual to move to another organization taking the means of production with them.

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The value placed on knowledge workers as they carry the means of production with them (Drucker, 1998) has led to the term being coined of gold collar worker (Holland, Hecker and Steen 2002). As they are essential to the productivity of the organization in terms of innovation and competitive advantage, it becomes key to the organization to retain these workers and ensure they are motivated to perform.

2.2.3. CONCLUSION

Knowledge workers are vital to the success of the organization; however as the knowledge worker and not the organization own the means of production this presents a challenge to the organisation. The organisation will have to attract and retain the correct knowledge workers. The organisation also has to ensure the knowledge worker is delivering the outputs (performance) required by the knowledge economy.

2.3. PERFORMANCE

2.3.1. PERFORMANCE DEFINED

Campbell and Prichard (1976), give a classic expression for human performance that it's; a function of Ability multiplied by Motivation. Ability can be influenced through education; however motivation is harder to measure and is influenced through many factors.   Study of motivation has been ongoing for decades; Herzberg (1968) looked at hygiene factors versus motivators. Herzberg (1968) also

refers to the philosophy of employees, these three being Industrial Engineering, Organisation Theory, and Behavioural Science.

2.3.2. PRODUCTIVITY OF THE KNOWLEDGE WORKER

The biggest challenge or most important contribution that management needs to make is to increase the productivity of the knowledge worker (Drucker, 1999). Drucker (1999) proposes 6 major factors that determine the knowledge workers' productivity:

- Need to know the task

- Responsibility for productivity must lie with the knowledge worker themselves

- Continuous innovation is to be part of the task

- Continuous learning and teaching

- Quality is as important as quantity of output

- Knowledge workers should be seen as assets rather than costs

Drucker (1999) also discusses the asset value of the human capital, and as such how this should be managed for optimum productivity. With an understanding that as the knowledge worker can leave the organisation they can then not really be classified as an asset, and yet normally the means of production could be seen as an asset on the balance sheet of an organisation.

2.3.3. CONCLUSION

Attracting and retaining the knowledge worker to the organisation is not sufficient; the knowledge worker also needs to perform. As performance can be linked to

productivity it become [logo] on to enable the knowledge worker to perform and thus reach maximum productivity. Since there is a strong link between motivation and performance the organisation needs to ensure knowledge worker motivation.

2.4. MOTIVATION

2.4.1.   MOTIVATION DEFINED

Latham and Pinder (2005) describe work motivation as the set of energetic forces that originate both from within and outside the individuals' being, that will initiate work related behaviour and this will determine the form the work will take, as well as the intensity and the duration. Mc Cormick and Ilgen (1992) describe the complexity of studying motivation as there are 4 factors that need to be taken into consideration, these are; the diversity of reasons why people work, stereotypes, different reasons for different behaviours at different times, and the final complicating factor is the different behaviours in the work setting.

2.4.2.   EVOLUTION OF MOTIVATIONAL THEORIES

Motivational theories have abounded over the modern age. These speak of the acceptance of the importance of motivation in the workforce and also provide frameworks for the study into motivation.

• **Needs theories**

Mc Cormick and Ilgen (1992) describe Maslows, Need hierarchy theory where people are continually in a motivational stage but it is rare for complete satisfaction.

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As a single need is ce. Maslow proposed that needs were hierarchical and as the lower order needs are satisfied then the individual will move up to the higher order needs. Maslow did not rule out that more than one need could be operating at the same time.

Mc Cormick and Ilgen (1992) describe Alderfelders Existence, Relatedness and Growth (ERG) theory. This theory was closely related to Maslows needs theory, although this theory received criticism it did allow the needs to be non-hierarchical, and it also postulated that frustrated needs would lead to regression and an increase in gratification on another level. The other difference to Maslow was the way that a fulfilled need could increase in importance, instead of just moving to another need. As an example the implications for knowledge workers could be that the more challenging they find work the more they will seek challenging work to do.

The issue that Mc Cormick and Ilgen (1992) raise with need theories is that needs and other personality traits do not explain the variance in behaviour in studies that have been performed.

• **Balance Theories**

The most popular of these was the Adams equity theory (Mc Cormick and Ilgen, 1992). The basis of these theories is that the individual has some set of beliefs and they evaluate the behaviour they should provide, according to the beliefs and that the behaviour is modified accordingly.

- **Hertzberg's Tw**

Key to this theory (Mc Cormick and Ilgen, 1992) is that a distinction was made between motivators and hygiene factors. Hygiene factors need to be present and the absence will lead to dissatisfaction, whereas the motivators will only motivate if the hygiene needs are satisfied.

- **Expectancy theory**

Vroom's version of this theory was presented in 1964 (Mc Cormick and Ilgen, 1992). The theory has been modified and expanded over decades. The theory postulates that people make decisions that at the time appear most advantageous. How rational the decisions are would be subject to the individual, and would be influenced through behaviours and beliefs.

- **McClelland's theory of needs**

Three areas of need are used to explain motivation (Robbins, 2005) these are:

Need for achievement

Need for power

Need for affiliation.

Depending on which need drives the individual, and the way this is likely to be satisfied will directly motivate the behaviour or decisions that the individual will make.

The volume of these theories on motivation, demonstrate the complexity of any study of motivation. The empirical measurement of an emotion is also difficult, hence the use of other means of measures such as outputs. If no single theory was universally adopted, when output was probably more empirically measurable, then in the age of the knowledge economy this is likely to remain a complex subject.

2.4.4. RECENT RESEARCH ON MOTIVATION

A review by Latham and Pinder (2005), suggests that only 3 frameworks on motivation dominate the literature over the last number of decades, these three frameworks being; goal setting, social cognitive and organisational justice.

Horwitz, Heng and Quazzi (2003), review motivational strategies such as freedom to plan and work independently and rank these in terms of their research findings. They also look at the factors that will attract and retain knowledge workers.

Tampoe (1993) identified key motivators for knowledge workers, which include the individual competence, the facilitated environment, purpose and knowledge exchange, this model also views rewards as either psychological or material.

Gagne and Deci (2005) used a model to define motivators into 3 categories of, amotivation (factors that have no intention for the behaviour, do the opposite of motivating), extrinsic motivators and intrinsic motivation. These motivators will then motivate the individual in different ways.

Schepers, de Gieter, Pepermans, Du Bois, Caers, and Jegers (2005) suggest only 3 factors contribute to work motivation in teachers, these being personal biography, job characteristics and work conditions. Teachers according to Drucker (1998) would be categorised as knowledge workers since they own their means of production in terms of knowledge. Schepers *et al.* (2005) also suggest that the profit orientated distinction between extrinsic and intrinsic motivators may need refinement.

The differences in the motivators of knowledge workers in terms of age differences was recently explored (Lord and Farrington, 2006). They found that there is strong correlation between organisational commitment and motivation, this was regardless of age. They then suggested that instead of measuring job satisfaction that organisational commitment would be a better measure of attitude.

2.4.5.   RELATIONSHIP OF MOTIVATORS TO PRODUCTIVITY

Peterson and Beard (2004) discuss the impact of workspace technology on the team's productivity. Since this is only one of many potential factors, it can demonstrate the degree, to which the various seemingly insignificant elements can have an influence on the productivity. This would complicate any study of motivation as there are many uncontrolled variables.

Barney (1991) has suggested that competitive advantage can be maintained by an organisation which has resources which are valuable, rare, imperfectly imitable,

and not easily substit [UNIVERSITEIT VAN PRETORIA / UNIVERSITY OF PRETORIA / YUNIBESITHI YA PRETORIA] nisation that is best able to harness these resources will have the superior competitive advantage.

Marcum (2000) argues that it is not about motivation but actually about engagement, however he acknowledges that motivated employees are more likely to be engaged. The argument posed is that the organisation looks to motivate the individual, to do something the organisation wants it to do, rather than what the individual would do.

A suggestion is made by Sirota, Mischkind and Meltzer (2006) that instead of motivating the employees, the role of management needs to change, in order to stop de-motivating the employees. The research that they did, on the staff of 52 fortune 1000 companies found that although employees are initially enthusiastic that morale declines sharply in the first 6 months, the responsibility for this finding, they place at the feet of management. They suggest that management is thus not responsible for motivating but that they need to enable the 'motivated' employee to remain motivated.

Sirota *et al* (2006) recommend that managers seek to satisfy the 3 sets of goals most workers seek. These being

- Equity
- Achievement
- Camaraderie

Although the first goal is aligned to the extrinsic factors such as pay and security. The other 2 goals would lie in the domain of intrinsic factors.

Osteraker (1999) put[s]
[n]ot so much that the older

motivational theories are out of date, but rather the application of the theories. She

puts forward a dynamic model of motivation consisting of 3 interlinking dimensions,

Social, Physical and Mental. At the heart of this is the identity of the individual.

She then interrelates the employee, the organisation and the environment to

demonstrate the context and shows a link to the preferred motivational factors as

shown in the figure 2.
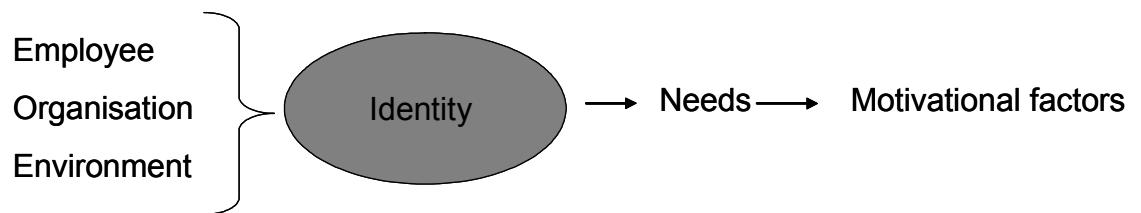
Figure 2 : Link between a specific context and preferred motivational factors
(Osteraker, 1999, p. 106.)

2.4.6.   CONCLUSION

Motivation is not a new topic; it has been hotly debated and studied over decades.

Many theories and models abound. Research support for models is not always

clear cut. The difficulty lies in the individualistic way that motivation is experienced.

There are definitely factors that motivate, but at the same time there may be other

factors that detract. A factor that motivates one individual may not apply to another,

yet the link of motivation to performance is accepted. In the knowledge age it is

critical that organisati [UNIVERSITEIT VAN PRETORIA / UNIVERSITY OF PRETORIA / YUNIBESITHI YA PRETORIA] nowledge workers in order to obtain competitive advantage.

2.5. PSYCHOLOGICAL CONTRACT

2.5.1. PSYCHOLOGICAL CONTRACT DEFINED

Rousseau (1998) defines the psychological contract as the perception of an exchange agreement between oneself and another party. O'Donohue, Sheenan, Hecker and Holland (2007) describe the psychological contract as the pattern of unwritten and implied beliefs held by the employee and the organisation about what each should offer, and what each is obliged to provide, in the exchange relations that operate between them. Anderson and Schalk (1998) describe the characteristics of the psychological contract as subjective, dynamic, based on mutual obligations, but that they are also bound within the context of the relationship.

2.5.2. EVOLUTION

There is a discrepancy in the literature as to if it was 1962 or 1960 when the psychological contract was first used (Guest, 1998; DelCampo, 2007b). The psychological contract was first described in passing by Argyris in 1962, (DelCampo, 2007b). Argyris has been credited to have first used the contract in 1960 (Guest, 1998), with a different interpretation by Levinson in 1962. The description was revised over the years and the most popular definition is the Rousseau definition from 1995 (DelCampo, 2007b). There has been debate

between two different
chological contract (Guest, 1998).

In an evaluation of the value of the contract Anderson and Schalk (1998, p. 639) mention the high 'face validity' of the contract; they state that 'everyone agrees it exists and that most employees are able to describe the content of the contract'.

At this time only 2 types of psychological contracts were described (Anderson and Schalk, 1998). These were relational and transactional which were to have differed on five dimensions. These dimensions are time frame, stability, scope, tangibility and the focus of the contract.

Schalk and Roe (2007) offer that the existence of the psychological contract implies the employee is already in a state of commitment, but that: employees evaluate the actual 'state of affairs'. Schalk and Roe (2007) also suggest that employees will be less likely to engage in organisational citizenship behaviour if they feel the organisation has not fulfilled its side of the contract. They also suggest the psychological contract is inherently dynamic, as it will change over time but they state that our knowledge on the way the contract develops over time, as well as the conditions that will initiate and influence these changes is limited (Schalk and Roe, 2007).

Harris (2001) explores the relationship between the line managers' beliefs and the way employees are rewarded. Hence this offers the notion that employees prefer an organisation which links pay and performance.

Atkinson and Cuthbert (2006) found that the level of the worker in the organisation created differences in the psychological contract, with managers having a more relational contract. The potential relationship with the knowledge workers psychological contract then needs to be better understood, in terms of the transactional or relational needs that could act as motivators or de-motivators to the knowledge worker.

Sels, Jananssens and van den Brande, (2004) identified 6 dimensions that capture the nature of the psychological contract:

- Tangibility
- Scope
- Stability
- Time frame
- Exchange symmetry
- Contact level

The psychological contract should then be able to be described in terms of each of these dimensions.

Atkinson (2007) sugg[...] contract is under explored, but on researching a finding was that the transactional contracts were more aligned with hygiene factors rather than motivators. Once the hygiene factors were fulfilled (such as pay) then the contract could move into the relational factors that act as motivators. The key finding of the research was that trust was indeed present in all types of psychological contract.

Schalk and Roe (2007) explore the dynamic nature of the contract; they see the contract as changing in line with a number of factors. DelCampo (2007b) refers to the dichotomous nature of the contract as it has transactional and relational components.

Flood, Turner, Ramamoorthy and Perason (2001), suggest that innovation through the creative energy of employees will only be released if the individual is committed to the organisation. This commitment is given through both formal and the unwritten psychological contract. Breach or breakdown of trust will result in a lower organisational commitment, and a high likelihood to leave.

2.5.4. CONCLUSION

The psychological contract has evolved from either a transactional or a relational set of expectations, to a mutual agreement that has a number of dimensions. Breach and violations of the psychological contract has been well explored; however the positive impact of a well managed contract is not well published, nor is the employer view of the contract well described. Due to this it would seem that the

exploration of the spe [ ] the psychological contract may provide management insights.

2.6. THE LINK BETWEEN THE KNOWLEDGE WORKER, THE RELATIONSHIP OF PRODUCTIVITY, MOTIVATORS AND THE PSYCHOLOGICAL CONTRACT

Knowledge workers are crucial in any company for competitive performance (Kubo and Saka, 2002), so improved understanding of the motivators should enable the increased productivity of the knowledge worker. This better understanding of the relationship of motivation to performance becomes essential for competitive advantage.

Anderson and Schalk (1998) discuss the 'waning of motivation' due to the organisation failing to fulfil the psychological contract. Elements such as job content, job security, training and development, rewards and benefits and future career prospects are described. A link between the factors that motivate the individual and the factors present in the psychological contract should be identifiable. Since the psychological contract is unwritten and is an expectation, the investigation into the factors that motivate knowledge workers, should be able to identify clusters of motivators. These clusters should then be able to be related back to either the formal contract or the psychological contract. The same factors should also be able to be related back to perceived performance by the individual.

Using the model proposed by Osteraker (1999) figure 2, it is shown that the interface between the organisation and the individual is made up of both the

formal contract and
ctors of motivation can be found within both the formal contract and in the psychological contract; hence the exploration of motivation should be able to be linked back to this interface.

2.7. CONCLUSION

Demonstrably the literature is awash with findings on the area of motivation. The decades have brought different theories of motivation and current research postulates new models. The view that there is no one correct way to motivate is substantiated by the literature.

The knowledge economy depends on the productivity of knowledge workers. Since this productivity cannot be forced, it requires the knowledge worker to be motivated to perform. Finally the psychological contract is hotly debated not least for the perceived value. A great deal of the literature describes breach or violation of the psychological contract and yet the benefits in terms of the productivity of knowledge workers in response to a successful, well managed contract do not appear to be well described.

The area of the psychological contract is described as a 'well–developed, emerging and dynamic area ripe for further research' (DelCampo, 2007b, p.439). The literature describes motivation, it describes knowledge workers, and it describes the psychological contracts, especially the breach thereof. What does not seem well described is the positive outcomes of successfully managed psychological

contracts, and the
n, performance and the psychological contracts across different types or clusters of knowledge workers.

The complexity is that factors that motivate are diverse and thus a single motivator cannot be used to motivate all knowledge workers. The research intends to investigate the similarities between motivators in different clusters of knowledge workers. The articulation and management of the psychological contract by both, the employee and employer, should achieve improved motivation and hence productivity. The intent of the research was to explore the factors that are expected to and due to the organisation across different clusters. The research also intended to improve the understanding of the relationships, between motivation, performance, and the psychological contract, by the exploration of these across different clusters of knowledge workers.

CHAPTER 3:   RESEARCH QUESTIONS

The objectives of the research study are to:

- Gain an improved understanding of the relationships of motivation to performance across different clusters of knowledge workers.

- Gain an improved understanding of the relationship between motivators, performance and the psychological contract.

In order to do this the questions posed are:

Research question 1 – What are the factors that knowledge workers perceive as positively influencing their performance?

Research question 2 – Do the same factors act as motivators across different groups of knowledge workers?

Research question 3 – What are the factors that knowledge workers perceive as negatively influencing their performance?

Research question 4 – Are different groups of knowledge workers impacted by the same negative influences on performance?

Research question [logo] the motivational factors described by the knowledge workers and the factors present in the psychological contract?

Research question 6 – Do the expectations to and from the organisation differ across different groupings of knowledge workers?

Research question 7 – Is the link of motivation to performance, constant across different clusters of knowledge workers?

CHAPTER 4:   RESEARCH METHODOLOGY

4.1. INTRODUCTION

The research was intended to better understand the links between motivation and the psychological contract. Exploratory research was done largely because, a psychological contract is an individuals' belief, (Rousseau, 1998), and so subjective measures would be the most direct source of information about the nature and content of the psychological contract. The exploratory research took the form of interviews; a structured questionnaire was used to guide the interview. The intent was to have a sample of 24 knowledge workers. The focus of the interviews was on the:

- Relationship of motivation to performance

- Factors that motivated the knowledge worker

- Factors that detracted from optimum performance

- Psychological contract from both the organisation's perceived obligations and the employee's obligations

The findings were only from the perspective of the employee and did not take into account the organisational views. The use of the in depth interview allowed for the time to explore the interviewee views more fully, and the use of the structured questionnaire also directed the conversation while still allowing flexibility.

4.2. METHOD

Surveys, a research technique to gather information using a questionnaire from a sample of people (Zikmund, 2003), was the research method of choice, as this was most suited to the gathering the information that could be described as 'in the minds' of the interviewees. Face to face interviews were conducted on the target sample.

A questionnaire was set up to guide the interview process. The findings were captured and analysed to produce the findings.

4.3. POPULATION

The views of knowledge workers within SA were the target population. Convenience sampling was used. A broader section of knowledge workers than only those in the information technology industry, as was done by Chick (2001), was sought; this is intended to enable some clustering of types of knowledge workers, the research was to look for similarities as well as differences in the clusters. The study was however limited to the South African context. The study used two populations:

- o Information technology knowledge workers – seen as those knowledge workers who work using technology to create functionality.

- o Financial services knowledge workers - such as financial advisors, private and personal bankers and middle management. Those chosen

work in the ~~[UNIVERSITEIT VAN PRETORIA logo]~~ent base delivering wealth

management solutions to clients.

- o Contract workers – within the two populations a further split was made into those who are salary based and those who will be described as contractual, these can be knowledge workers who are paid commission on earnings, those who earn an hourly rate and sign a contract for a time period (can be months or even years), or those who agree to produce a certain output in a certain time frame at a certain cost.

4.4. SAMPLING

The study was done only in the South African context. Convenience sampling also known as accidental or haphazard (Zikmund, 2003) was used. This implies that people who are most conveniently available are used, it also means that the results cannot be predicted for more than the specific sample that has been used (Zikmund, 2003). The study used two populations of knowledge worker, those in the information technology sector and those within the financial services sector. The target plan was to have 6 knowledge workers in each of the defined clusters (see table 1), of whom 12 would represent each knowledge worker cluster and half of each cluster would be salary based. A sample of 26 was used and at least 10 interviews per defined knowledge worker cluster were performed. In the sample used, the information technology knowledge workers were from four different organisations while the financial services knowledge workers came from two different organisations.

	I[...] T[...]		[...]		Total
	planned	actual	planned	actual	
Salaried	6	8	6	5	13
Contractual	6	8	6	5	13
		16		10	**26**

Table 1: Overview of the research sample

To minimise the variance of different levels, a homogeneous group was sought. To obtain this in the financial services area, all knowledge workers were on the same level. In the Information technology cluster those selected had been working in the industry for a number of years, and were not in a senior management position. The representations of the sample also insisted in making the group less single organisation dependant.

4.5. MEASUREMENT/UNIT OF ANALYSIS

The unit of analysis used was the perceptions of the currently working knowledge workers.

4.6. QUESTIONNAIRE DESIGN

4.6.1. OVERVIEW

The interview guide (Appendix 1), was designed in line with the research intent of obtaining further information on the link between motivation and performance, the factors that motivate and the link to the psychological contract. The minimum

demographic informa [UNIVERSITEIT VAN PRETORIA / UNIVERSITY OF PRETORIA / YUNIBESITHI YA PRETORIA] and specific cluster was used.

4.6.2.   QUESTIONS

The questions posed were to firstly understand the motivation and performance levels as perceived by the knowledge worker. These were done as a fixed scale rating. The balance of the questions, were open ended. The questions also tried to avoid order bias, defined by Zikmund (2003, p. 344) as 'the bias caused by the influence of earlier questions in a questionnaire or by and answers position in a set of answers'. These started with the knowledge workers understanding of the link of performance to motivation. Then the questions looked to elicit the factors that would motivate the individual knowledge workers, then to the factors that are seen to hamper the performance. The questions designed to explore the psychological contract, were what is owed by the organisation and what should the organisation expect from the knowledge worker. The questions allowed the interviewee to give their own words and phrases rather than those descriptions available in the literature.

4.6.3.   DESIGN

The guide was designed to avoid redundancy and repetition of questions. The questionnaire was designed to logically follow from motivation level to the factors which motivate the individual knowledge worker and then the organisational duty in these.

4.6.4.   PILOT STUDY GROUP

The questionnaire was tested on a pilot study of 3. Prior to this it was tested on a single knowledge worker in terms of the logical flow and the ease of questions. Minor amendments to the guide were made such as the addition of the high and low on the rating scale to avoid any ambiguity.

4.6.5.   QUESTIONNAIRE

The use of this open ended questionnaire was expected to elicit more information that could be clustered, than would a closed ended questionnaire although the questionnaire would have been able to cover a greater number of interviewees.

After the demographic questions the initial questions were for the interviewee to mark on a scale the level of motivation and the level of performance. This was before exploring the linkages between motivation, de-motivators and the psychological contract components. The use of this at the beginning of the interview ensured the scores given for motivation and performance were unaffected by the later discussions. The interviewer required a ruler in order to measure on the 100 point scale the level of motivation and performance perceived by the knowledge worker, in all instances this was reflected back during the interview to ensure that there was no misunderstanding on the scale.

The questions flowed ~~~~~~~~~~~~~~~~~~~ rough to the psychological contract components. This interview guide was verified through the use of the consistency matrix to ensure that the research questions were answered comprehensively. Once the interview guide was finalised it was tested for flow, understanding and usefulness. It was then refined and piloted on a further 3 people as described in 4.6.4, before the conduction of the information gathering component of the research.

4.7. DATA COLLECTION

In depth interviews were scheduled with the target sample. The interviews were held at the place of maximum convenience, so some of the interviews were done in the workplace. Privacy was seen as important so this was ensured, through use of closed offices, interview rooms and where this was not available, a quiet corner with minimum interruptions was used. Some of the interviews were done in the home setting but again privacy was seen as important to enable the interviewee to be honest and open without the fear of inputs being misinterpreted.

The interview guide was used to ensure the interview remained structured and focused on the topic. During each of the interviews the process was to probe and hence to deepen the understanding of the motivation levels, link of motivation to performance, the factors that either motivated or distracted, and the factors that the knowledge worker felt should be present in the psychological contract.

The starting point of terviewee of confidentiality and the fact that the interview would not be able to be traced to an individual. The interview length was directly dependant on the interviewee responses, and the time taken to explore these. The interview was recorded and the questionnaire was also completed. The recording was to be used in the event of any lack of clarity in the recorded questionnaire. All the interviews were completed before any transcription of the data was performed. This was in part to avoid the interviewer leading the questions.

All those interviewed appeared to be comfortable with the entire process, and the honesty of the answers in some cases appeared to surprise the person being interviewed. Of interest was the different ways in which the questions on motivation versus the factors impeding performance were answered. Motivation was usually a rapid response, in some cases the same element phrased in different ways. Factors that impact the reaching of the 100% performance usually meant a few moments silence and in a few cases the response was 'cannot think of any' and only when the initial grid where they had marked a scale was pointed out did they then delve deeper and find the reasons. A similar process happened with the organisational duties; what the knowledge worker owed to the organisation came easily, however when the question was posed as to what does the organisation owe the knowledge worker, long silences and deep thought was the initial common response.

The questionnaire was completed during the interview and the interviews were recorded, to ensure no loss of information. The analysis done was performed on the completed questionnaires; these were cross referenced back to the recording

of the interview durin[...] [...] [...]ere necessary for clarity, additional notes were made.

4.8. DATA ANALYSIS

The responses were extracted onto Excel in tabulated form. In order to do content analysis the data was then transformed through a number of iterations into a form that better supported analysis (Zikmund, 2003). Patterns and similar responses were sought in the transformed data. These were then consolidated to more generic terms, however it should be noted that where a number of similar responses from one individual were distilled into a similar generic term then the counts still remained. To clarify, by example; of 'correct IT systems' was given as one answer and 'administration support' as another, and through a number of iterations these were both distilled to 'infrastructure' each response was counted so in this incidence the knowledge workers perceptions would have counted 2 towards 'infrastructure'.

The frequency with which the various responses were given was assessed. Further analysis was done on the spreadsheet data to identify any patterns within each of the 4 clusters of knowledge workers. The clusters were then compared based on all of the demographic data, to identify strong differences, similarities, or patterns.

4.9. ASSUMPTIONS

A number of assumptions were made. Firstly the sample represented the population of knowledge workers. That the knowledge workers can be divided into more than one cluster and that the 4 clusters chosen do indeed represent different populations.

A further assumption is that all those interviewed do understand the concepts of motivation and performance. In order to lessen the impact of this assumption, the definitions as provided in the literature review were given to the knowledge workers prior to the capturing of data.

The truthfulness of the responses must be an assumption; however the assurance of confidentiality and the range of responses did seem to indicate that the assumption was validated.

4.10. LIMITATIONS

One limitation of the study is that the populations have been defined based on potential accessibility, as they were done as a convenience sample (Zikmund, 2003), and so this cannot be generalised. In addition four clusters were analysed and many significant clusters were omitted. The exploratory nature of the research and the convenience sample used implies that it cannot be generalised to the entire population of knowledge workers.

Hall and Rist (1999) [logo] ument analysis should be used as well as the interview to improve results. It was found that (as expected) that minimal observational evidence and no documentary evidence were available.

The knowledge workers perception of their own performance may not align with actual performance, however the individual perceptions are being measured, and so the impact is constant across the entire sample.

4.11.   CHOICE OF CLUSTERS

The choice of the four clusters was done in an attempt to isolate the motivational, performance and psychological contract variances. The contract versus the salary split in the knowledge worker base was done to use both the transactional and the relational types of psychological contract as described by Anderson and Schalk, (1998).

The second choice of the information technology knowledge worker and financial services knowledge worker was to isolate two clusters who may have been different. This study is based on the fact that different clusters of knowledge workers may be motivated and demotivated similarly within the specific group.

- Financial services knowledge workers – as these were expected to be driven through a people service orientation, but would also be expected to be driven by monetary rewards.

- Information tec these were expected to be driven more through the challenges of creation, and were expected to be less people orientated.

The 2 clusters, but with the addition of the split of salary to contractual was done in order to better divide the clusters in terms of the psychological contract.

4.12. CONCLUSION

The research was designed to elicit responses to the factors of motivation, performance and the psychological contract, and hence the questionnaires include questions on each of these topics. The questions were designed to elicit responses without being prescriptive and the challenge then lies in analysing these optimally. The samples were chosen to be as different to each other as possible while still being in the broad definition of knowledge workers.

CHAPTER 5: RESULTS

5.1. INTRODUCTION

A total of 26 interviews were completed across the four knowledge worker clusters. These were split between salary based workers and commission or hourly paid workers. The data was transcribed onto a number of spreadsheets and translated for analysis purposes. The data was reviewed in terms of motivational factors and factors seen to act to distract from performance (seen as de-motivators).

5.2. DEMOGRAPHIC OVERVIEW OF KNOWLEDGE WORKERS INTERVIEWED

A total of 26 interviews were completed (table 2).

	Salary	Contractual
Information technology	8	8
Financial services	5	5

Table 2 : Split of interviews held in the clusters of knowledge workers

5.2.1. EDUCATIONAL QUALIFICATIONS

The potential educational qualifications on the questionnaire were; PhD, Masters, Honours, Bachelors, Diploma (3-4 yr) and other which had to be specified. Of the 26 knowledge workers qualifications, 4 were qualified as Masters, 2 with honours, 4 with bachelors and 10 were Diplomas as the highest level of qualification, two

were other (one NQF
diploma in education) and 4 had a matric as the highest level of qualification. There was no clustering of education in either the information technology or the financial services knowledge worker cluster or on the groupings of salary versus contractual knowledge worker. Those with the qualification of masters were all in the financial services sector, those with the qualification of bachelors were all in the Information technology sectors but those with qualification of honours were split between the two clusters.

5.2.2.   GENDER

On gender the split was 12 male to 14 female. There was no correlation of educational qualification to gender. The mix of gender was across both the financial services and the information technology clusters. Finally on gender there was an even spread across both salary and commission based knowledge workers.

5.3. LINK OF MOTIVATION TO PERFORMANCE

5.3.1.   MOTIVATION

The score, as marked by the interviewee and then translated to an absolute number, was analysed. The scale equated to a 100 point scale so scores are from a total of 100. Of the total set of responses, the majority gave a high score for motivation. The lowest values were 7 and 9 with the next lowest being 47. On exploration of the 2 outliers, one was due to the recent personal impact of crime,

and the next low o [logo] of the individual that the organisation had failed to deliver according to the initial agreements.

mean	72
median	78.5
mode	89
max	97
min	7

Table 3 : Motivation scores across all interviewees

The high median would imply most of the interviewees see themselves as fairly highly motivated. If this analysis is performed for the two main clusters they are very similar (table 4).

	Motivation Information technology	Motivation Financial services
mean	72.25	73.6
median	78	79
max	95	97
min	7	9

Table 4 : Information technology and financial services knowledge workers motivation compared

If the medians of all 4 clusters are compared, they all lie within 11.5 points of each other.

Table 5 : Comparison of the medians of motivation across all 4 clusters

5.3.2.   PERFORMANCE

The score as marked and translated to an absolute number was analysed. The scale equated to a 100 point scale so scores are from a total of 100. In the total set of responses, the bulk of the scores were lower than for motivation. Once again the low score of 4 was one individual with 36 being the next lowest score.

mean	66.4
median	70
mode	70
max	95
min	4

Table 6 : Performance scores across all clusters

Note that as this is ordinal data only the medians will be used further in discussions.

The medians across the 4 clusters of knowledge workers are shown in table 7 for the performance scores as given. The scale was a 100 point scale. The median does show a marked difference in the performance levels of those contractual knowledge workers in the financial services sector, with this figure being a full 23

points lower than the dians of performance all lie within 5 points of each other, see table 7.

	Information Technology	Financial services
Salary	74.5	67
Contract	69.5	46

Table 7 : Comparison of the medians of performance across all 4 clusters

5.3.3.   RELATIONSHIP IN VALUES BETWEEN MOTIVATION AND PERFORMANCE

The relationships between the motivation and the performance score were investigated. Of interest was that no financial services person gave a score that was higher for performance than for motivation. On the information technology knowledge worker cluster side 7 of the 16 interviewees rated motivation lower than actual performance.

A Spearman's correlation was done for the performance and motivation scores across all four clusters, this correlation gave a figure of 0.66, which does mean there is some correlation between the two sets of figures.
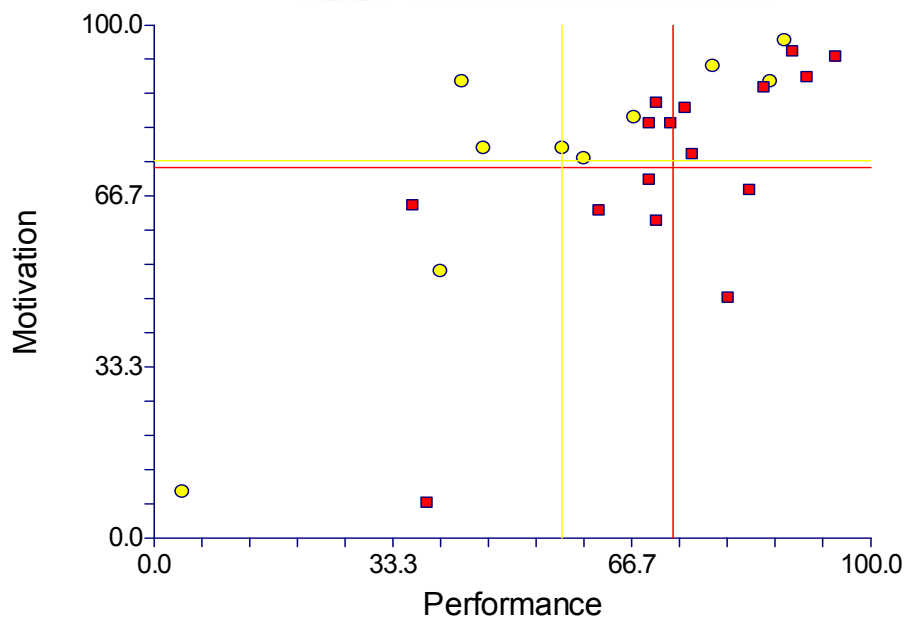
Figure 3 : Comparison of Information Technology and Financial services clusters

Note: Red squares/lines = Information technology knowledge workers

     Yellow circles/lines = Financial services knowledge workers

Lines indicate the medians of both performance and motivation for the 2 clusters

Outliers were discussed in 5.3.1
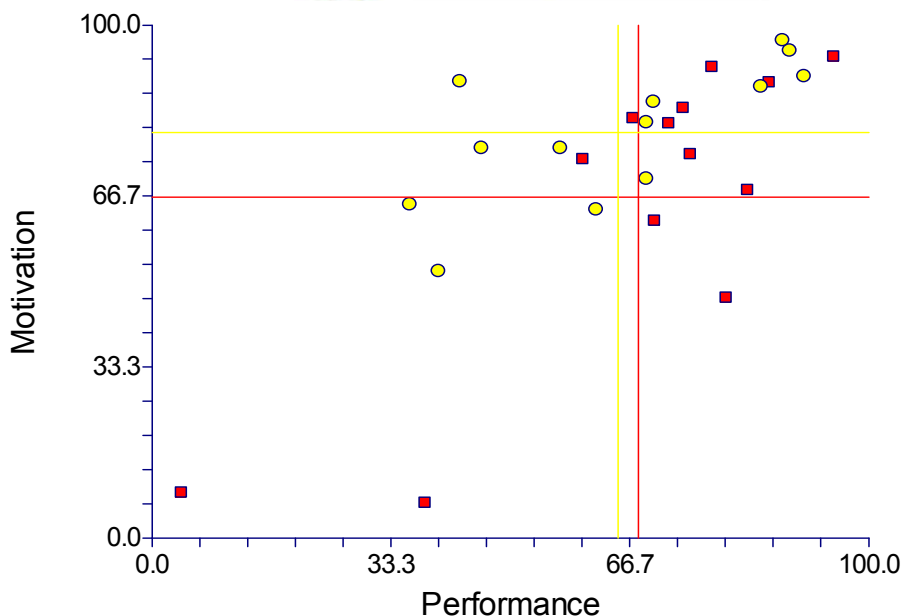
Figure 4 : Link of motivation to performance in salary versus contract knowledge workers

Note: Red squares/lines = Salaried knowledge workers

    Yellow circles/lines = Contract knowledge workers

    Lines = Medians for the knowledge worker cluster

Visually there does appear to be a difference in the information technology cluster of knowledge workers as opposed to the financial services. In terms of salary versus contract there does not seem to be any marked difference.

At this stage of the interview, no mention of motivational factors had been discussed. Three of the interviewees although not prompted, specifically cited, money or financial rewards as key in driving motivation and hence performance. All 3 were in the hourly or commission based cluster of knowledge workers, but were not specific to one cluster.

5.4. LINK BETWEEN MOTIVATION AND PERFORMANCE PER INTERVIEWEE.

All the interviewees were asked their understanding or interpretation of the link between motivation and performance. All of the interviewees said there was a link. Of the total interviewees 17 said the link was direct and strong, as high as a one to one or exponential. Of the balance of those interviewed, a further 6 interviewees said it is important and would have a high correlation but that the relationship was not as strong as a one to one or a direct linear relationship. Out of the total; 3 knowledge workers felt that although there was a link that other distracters could have just as significant an influence on performance as motivation.

5.5. MOTIVATORS AND FACTORS THAT WOULD ACT AGAINST MOTIVATION

These factors were in response to the open ended question of 'what are the factors that you think keep you motivated', and 'what are the things that keep you from the 100% performance'.

5.5.1.   MOTIVATION

An initial 108 motivational factors were captured from the interviews held. These were taken through a number of grouping processes. Firstly they were distilled into more commonly used terms but only where the meaning was identical. These were then grouped according to the meanings. These groups were then re-phrased with

a single construct thattructs were then reviewed back to the original information set to confirm the real meaning had not been lost. This process yielded a set of 14 constructs, which were then ranked in accordance with number of times in total the response was used. Table 8 shows the ranking across all the clusters (in terms of the frequency of mention).

For tables 8 to 11, in which various types of constructs are shown, all are ranked in terms of a total frequency of mention across all the groups. In the event of a single group not aligning to the overall rank ordering, the anomaly has been highlighted within the table.

The analysis of the data showed 'monetary rewards', as being the highest ranked in terms of frequency of mention. This construct was mentioned almost twice as many times as the next highest construct. No large scale differences appear to exist between the financial services and the information technology knowledge worker clusters. With the exception of the salaried information technology knowledge worker cluster, the highest scoring construct for this group is the 'actual work itself' and 'monetary rewards' ranked second. 'Monetary rewards' were thus seen as the most important factor in motivation across both clusters of knowledge workers (table 8).

Ranking	Factors that are seen as motivators - distilled / Constructs	Information technology knowledge worker cluster		Financial services knowledge worker cluster		Frequency of mention
		Salary	Contract	Salary	Contract	
1	Rewards - monetary	6	10	6	7	29
2	The actual work itself (job satisfaction)	8	4	1	3	16
3	Personal growth and development (including learning)	3	6	1	3	13
4	Team and peer support	5	2	1	2	10
5	Work environment	4	1	2	1	8
6	Recognition /acknowledgement	2	2	3	1	8
7	Management	4	1	0	0	5
8	Work/life balance	0	2	1	2	5
9	Challenging work	1	2	3	0	6
10	Clear goals or expectations	2	1	1	0	4
11	Factors external to work - but impact	1	0	1	2	4
12	Trust /security	0	2	0	0	2
13	Company culture	0	1	0	0	1
14	Good time management	0	1	0	0	1

Table 8 : Ranking of motivational constructs across all 4 clusters

An initial 88 de-motivational factors were captured from the interviews held. Through a process of grouping in the same way as was done for the motivational factors these were clustered into 19 core factors which were then ranked in accordance with response. Notable on the response time was the ease with which interviewees answered the question on what motivates against the factors that de-motivate. In many instances the difference between motivation and performance as given by the knowledge worker was used to prompt the further discussion. This is further evidenced by only 88 factors for de-motivation against the 108 for motivation.

The most important factor that distracts from performance is seen to be the 'actual working environment and infrastructure', in essence the tools to do the actual job (table 9).   There is however a clear difference in the information technology knowledge worker group in this section, as their most important construct was the 'constant pressure/workload on deliverables', while this factor was not mentioned at all by the financial services cluster. Linked back to the difference in scores given for motivation and performance levels by the knowledge worker this may be a contributing factor.

Ranking	Factors seen as distracting from performance (de-motivators) - distilled / Constructs	technology knowledge worker cluster		Financial services knowledge worker cluster		Frequency of mention
		Salary	Contract	Salary	Contract	
1	Work environment as well as infrastructure (physical, location and tools as well as ambiance)	2	3	5	2	12
2	Constant pressure/workload on deliverables	7	5	0	0	12
3	Personal life impacts	2	1	3	4	10
4	Not enough challenge	3	4	2	1	10
5	Management	3	5	1	0	9
6	Lack of growth (responsibility, learning opportunities, career)	0	4	4	0	8
7	Lack of recognition (verbal incentives, support)	4	2	2	0	8
8	Goals and/or focus not clear	4	0	0	1	5
9	Lack of knowledge/skills	2	0	1	2	5
10	Distractions - soft side that remove attention from work	1	3	0	0	4
11	Financial worries	0	2	0	1	3
12	Isolations (left out or unsupported)	1	0	1	0	2
13	Work/life balance	0	0	1	1	2
14	Distrust	0	1	0	0	1
15	Job itself is not enjoyable	0	1	0	0	1
16	Must motivate self	0	0	0	1	1
17	Negative influence of the actual work - effort without reward (e.g. difficult clients)	1	0	0	0	1
18	Not doing the right things	0	0	0	1	1

Table 9 : Comparison of the construct ranking for factors preventing performance in those interviewed

The data was tabulated and clustered in a similar manner to the exercise done on the motivational and de-motivational factors in order to create 'constructs'.

5.7. EXPECTATIONS OF THE EMPLOYER IN THE PSYCHOLOGICAL CONTRACT

As a contract is an 'agreement between parties' (Fowler and Fowler, 1964, p.264), the psychological contract is no different. The psychological contract has two perspectives, the employer and the employee; however since it is a set of mutual expectations (Rousseau and Tijoriwala, 1998) the psychological contract has four different perspectives; that from the employer side, seen as due to the organisation and due by the organisation. Then from the individual side which is then due to the organisation and due from the organisation. In this research only the individual perceptions of the psychological contract were reviewed.

An initial 96 explicit expectations of what the individual expected from the employer were captured from the interviews held. Through a process of grouping in the same way as was done for the motivational factors these were clustered into 23 constructs, which were then ranked in accordance with response (table 10). Notable on the response time was the difficulty the interviewees had with answering this question.

Ranking	Constructs	Information technology knowledge worker cluster		Financial services knowledge worker cluster		Frequency
		Salary	Contract	Salary	Contract	
1	Fair remuneration - money	7	4	3	3	17
2	Learning and career growth opportunities	5	4	2	2	13
3	Infrastructure and environment	2	3	1	4	10
4	Fairly treated, equality	3	2	1	1	7
5	Acknowledgement and recognition	4	0	1	1	6
6	Must care about the individual (not just a number)	2	2	2	0	6
7	Must deliver according to initial agreements	0	2	2	2	6
8	Respect, honesty transparency and openness	6	0	0	0	6
9	Support of knowledge outputs (decisions innovation)	0	0	2	2	4
10	Clear goals and vision	1	1	1	1	4
11	Challenging and exciting work	0	3	0	0	3
12	Job security	0	3	0	0	3
13	Backing and support	0	0	2	1	3
14	Commitment	1	0	0	0	1
15	Encouragement in work	1	0	0	0	1
16	Growth	0	0	1	0	1
17	High level of integrity	0	0	0	1	1
18	Organisation owes nothing	0	0	0	1	1
19	Relationships in environment	0	0	0	1	1
20	To ensure have work every day	1	0	0	0	1
21	To keep up with technology	0	1	0	0	1
22	Value what you produce and supply inputs	0	0	1	0	1
23	Work/life balance	0	1	0	0	1

Table 10 : Psychological factors - the organisational duty constructs

One anomaly that is
rity' only in the contractual information technology knowledge worker cluster; this group would be expected to be in the salaried cluster if job security is important as contract work by nature is not seen as secure.

One interviewee was of the opinion that the organisation owed nothing, and stood very firm to this opinion despite the attempt to elicit more. In the pilot group one person interviewed also had the same view that the organisation owed only what was described in the original contract, and all else was up to the individual.

The bulk of the interviewees held 'monetary reward' as being the most important construct that the organisation must deliver on. This construct covered elements such as 'market related salary', 'financial rewards' and 'paying according to value added'.

'Learning and growth opportunities' which rated second in importance was seen to be more important to information technology knowledge workers, than to the financial service knowledge worker cluster. Within the clusters both salaried and hourly or commission based knowledge workers rated this similarly.

The provision of the 'optimum environment and infrastructure' was 3rd on the scale. No large differences were seen in the clusters, with the exception of 'respect, honesty transparency and openness' which was only perceived to be a requirement from the organisation by salaried information technology knowledge workers.

'Support of knowledg██████████████ort' were only seen to be a requirement by the financial services knowledge worker, however these did not score highly in the ranking order (number 9 and 13 respectively).

5.8. EXPECTATIONS OF THE EMPLOYEE IN THE PSYCHOLOGICAL CONTRACT

An initial 94 explicit expectations as to what the employer was owed by the employee were captured from the interviews held. Through a process of grouping in the same way as was done for the motivational factors these were clustered into 13 constructs, which were then ranked in accordance with the number of responses (table 11). It was very noticeable on the response time that the interviewees answered the question on what they owe versus what the organisation owes rapidly without much need for deep reflection.

The most important factor is seen to be, 'to give of the knowledge workers' best effort', this included factors such as 'production of quality work', and 'to deliver outputs on time'. This was mentioned more than twice as often by information knowledge workers versus those in the financial services cluster (table 11).

The next most important factor was 'to be a good organisational citizen'. This construct covered various items such as 'supporting the company', 'taking an interest in fellow employees', and 'being part of making the company the best to work for'. Notable here is the commission based financial services workers who did not see the need to owe this to the organisation.   However the 'giving of best

effort' and 'honesty highly by this cluster of knowledge workers.

Ranking	Psychological factors - the knowledge worker duty constructs - distilled	Information technology knowledge worker cluster		Financial services knowledge worker cluster		
	Constructs	Salary	Contract	Salary	Contract	Frequency
1	To give my best (effort, output, good quality)	14	15	7	7	43
2	Be a organisational citizen (co best to work for, supportive, environment, staff etc)	3	4	4	0	11
3	Honesty and integrity	5	1	1	2	9
4	Intellectual knowledge	3	1	2	0	6
5	Time	5	0	0	0	5
6	Loyalty	1	1	1	1	4
7	Commitment	2	1	1	0	4
8	Growth	0	1	0	2	3
9	Innovation and creativity	0	1	2	0	3
10	Reciprocation - what company delivers they will get in return	0	0	0	2	2
11	Trust	0	2	0	0	2
12	Communicate	1	0	0	0	1
13	Reliability	0	1	0	0	1

Table 11 : Psychological factors - the knowledge worker duty constructs

'Honesty and integrity' was seen as important mostly by the information technology knowledge workers; however there are other responses on this, but far fewer.

'Time' as a commitment that should be made to the organisation was only given as a response by the information technology knowledge workers. Of this cluster only the salaried knowledge workers mentioned this as a factor in what they owed to the organisation.

5.9. PSYCHOLOGICAL CONTRACT LINK TO MOTIVATORS AND FACTORS OWED BY ORGANISATION

The employee's perspective of the factors of motivation and the expectations from the organisation were categorised into those which would more likely be in the formal contract between the employer and employee and those which would only be present in the psychological contract. Some factors mentioned could overlap between the formal contract and the psychological contract. The results of this categorisation are shown in table 12. Those constructs that only had a single response were excluded from the analysis.

Factors that would be found in a formal contract	partially in formal contract and partially in psychological contract	Factors that would only be found in the psychological contract
Factors that would motivate those interviewed		
Rewards - monetary	**Personal growth and development (including learning)**	**The actual work itself (job satisfaction)**
	Work environment	Team and peer support
	Recognition /acknowledgment	**Management**
	Work/life balance	Factors external to work - but impact
	Challenging work	**Trust /security**
	Clear goals or expectations	
Seen by those interviewed to be the duty of the organisation to deliver		
Fair remuneration - money	**Learning and career growth opportunities**	Fairly treated, equality
Must deliver according to initial agreements	**Infrastructure and environment**	Must care about the individual (not just a number)
	Acknowledgment and recognition	Respect, honesty transparency and openness
		Support of knowledge outputs (decisions innovation)
		Clear goals and vision
		Challenging and exciting work
		Job security
		Backing and support

Table 12 : matching of the responses to the formal and informal contracts

In table 12 the factors that have a direct match both as a need to motivate and an expectation that it will be provided by the organisation are highlighted in bold. Noticeable are the bulk of the requirements for motivation lie outside the formal contract, but so does the bulk of what is expected from the organisation.

5.10.   CONCLUSION

The analysis has shown patterns within the different clusters. The link of motivation to performance supports the literature. The findings on the psychological contract, does not support the notion that contract workers are more likely to have a transactional contract versus the relational contract of the salaried knowledge worker. Finally there are differences in the different clusters of knowledge workers in terms of motivation and performance and the factors that motivate and the factors that distract from the optimum performance.

CHAPTER 6: D

6.1. INTRODUCTION

This chapter looks at the results as described in chapter 5. A view of what was found in the literature compared to the research findings will be done for each of the research questions.

Within the knowledge economy knowledge workers have become the most important factors of production, and need to be leveraged for sustainable competitive advantage (Holland, Hecker and Steen, 2002). To achieve leverage the firm will need to know how to motivate the individual to perform.

A sample of 26 knowledge workers representing four different clusters was used for this research. There was no conscious effort made to obtain a balance in terms of gender or educational qualification in the convenience sample, however these were equally represented so leads to the finding that no differences exist in the clusters in terms of gender or educational qualification.

The objectives of the research study were to:

- Gain an improved understanding of the relationships of motivation to performance across different clusters of knowledge workers.

- Gain an improved understanding of the relationship between motivators, performance and the psychological contract.

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6.2.1.   RESEARCH QUESTION 1

What are the factors that knowledge workers perceive as positively influencing their performance?

The motivators of performance are seen as the positive influence on performance. The question linked into the open ended question through the question of the factors that motivate. The interviewee was also asked to give a score of how motivated they felt on a scale of 1-100.

6.2.1.1.   THE RESEARCH RESULTS

The motivational results (table 3) show a mean, median and mode all above 70 which does indicate that the knowledge workers interviewed would consider themselves highly motivated. When the medians are compared across the 4 clusters studied, the greatest difference was less than 12 points and all were similar.

The most important factor was seen as 'monetary rewards' (table 8). This factor was mentioned almost twice as often as the next nearest factor. This factor rated highly regardless of whether the cluster was salaried or contractual.   One interviewee however made the comment that 'money cannot buy motivation'.

The next most important factor across all the groups of knowledge workers is the 'actual work itself' and the 'satisfaction gained from doing the actual job'.   This

appears in line with from knowledge workers, where a large portion of satisfaction comes from what is delivered and the pride in this achievement.

The third most important factor was seen to be 'personal growth and development', which has a logical fit in terms of the fact that these are knowledge workers, and if personal growth and development stagnates then the value of the knowledge outputs is likely to diminish and over time the knowledge worker will become obsolete in terms of the skills and knowledge they are able to apply.

Finally 'team and peer support' was seen as the third most important construct only in the group of the salaried information technology worker cluster (highlighted in table 8). This was seen as more important than the 'personal growth and development' which in this group would have been the 5th most important construct.

A comment made in the interview was the acknowledgement of the enormous role management has to play in motivating staff, and the significant part that is focusing on not de-motivating staff. This construct as a motivating factor was only ranked at 7 across all the groups. Another interviewee made the comment that 'you cannot work with an organisation if the goals are in conflict'.

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The results align with what would have been expected from the literature. Tampoe (1993) identified key motivators for knowledge workers, which include the individual competence, the facilitated environment, purpose and knowledge exchange, this model also views rewards as either psychological or material. The constructs in table 8 could be mapped according to each of the models. The top 6 constructs are shown mapped to the components of motivation as described by Tampoe (1993) in table 13.   The mapping shows a direct mapping between the classifications according to Tampoe (1993) and the research constructs from the data gathered. It can then be seen that the constructs elicited in the research fully support the theory. So although there are differences in the clusters overall there is still alignment, and this fully supports the classification model as proposed.

Tampoe: Classification/categories	Construct classification: from the research data
Individual competence	personal growth and development (including learning)
Facilitative environment	work environment
	team and peer support
Purpose	the actual work itself (job satisfaction)
Knowledge exchange	personal growth and development (including learning)
Psychological rewards	recognition /acknowledgment
Material rewards	rewards - monetary

Table 13 : Matched classification according to Tampoe (1993) to the interview results

Gagne and Deci (2005) used a model to define motivators into 3 categories of, amotivation, extrinsic motivators and intrinsic motivation. The motivators described in the research groups can all be mapped onto the extrinsic and intrinsic motivator categories suggested, top 6 have been mapped (table 14).   The way these align to

...elf determination as a core

portion of the research, suggest that even apparently different types of models can

still be perfectly aligned.

Classification according to Gagne and Deci		Top constructs according to the data from interviews
Motivation types	Types of extrinsic motivation	
amotivation		
extrinsic	External regulation	Recognition /acknowledgment
		Rewards - monetary
	Introjected regulation	Personal growth and development (including learning)
		Team and peer support
	Identified regulation	Work environment
	Integrated regulation	
intrinsic		The actual work itself (job satisfaction)

Table 14 : Matched classification according to Gagne and Deci (2005) to the interview results

Sirota *et al* (2006) has 3 sets of goals most workers seek, these being; equity,

achievement and camaraderie. If the constructs were to be mapped they would

align perfectly. The dynamic model of motivation (Osteraker, 1999) consisting of 3

interlinking dimensions, social, physical and mental, could again be used to map

the constructs that were distilled from the interviews.

6.2.1.3.   CONCLUSION TO RESEARCH QUESTION 1

The results therefore support the literature view. From the literature there are many

different ways of reviewing motivational factors, however what is clear is that the

constructs as derived from the interviews can in all instances be perfectly mapped

onto the literature. This implies there is commonality in the literature views even if

this is not clearly evi UNIVERSITEIT VAN PRETORIA / UNIVERSITY OF PRETORIA / YUNIBESITHI YA PRETORIA ews on motivation and as shown the constructs that were derived from the interviews can fit the theory; however all deal with the intrinsic and extrinsic factors in one way or another. These constructs should be reviewed in conjunction with the motivation scores as high motivation scores and the relation to the constructs would imply these are the real factors that motivate. The bulk of the motivation scores of the knowledge workers were high which would indicate on a self perception basis that the knowledge workers feel motivated.

The constructs that were derived are mostly intrinsic in nature with the monetary rewards still being seen as important. As monetary rewards are typically part of the formal contract, it remains important for all organisations to ensure the remuneration models are fair and align with the market to ensure that the knowledge workers remain motivated.

Ranking the 'actual work' so highly implies that regardless of knowledge worker cluster this is important, but there is a strong difference in that the information technology knowledge workers count for 12 out of the ranking of 16, and this is the highest ranking factor in this group, so for this group 'job satisfaction' counted higher than 'monetary rewards', this also aligns with the high frequency of mention for the category of 'personal growth and development'. The construct being very important for those in the contractual information technology sector, would imply that different groups are motivated differently but it would still seem as though across all knowledge workers some factors are more important. At least the top 6 constructs obtained from the data should be managed in order to motivate.

Motivation of knowle~~d~~ ~~main~~ tain optimum performance and hence competitive advantage.

6.2.2.   RESEARCH QUESTION 2

Do the same factors act as motivators across different groups of knowledge workers?

The research used 4 different groups of knowledge workers explicitly to see if they were homogeneous. This question seeks to find if there are differences in the groups.

6.2.2.1.   THE RESEARCH RESULTS

The scores for motivation had a median of 78.5 as seen on table 5, but on the medians the salary based information technology knowledge worker cluster scored less that all the others, 71.5 compared to the next lowest score of 76. On evaluation of the salary based information technology knowledge worker in terms of constructs (table 8), this does show a clear difference of this group as compared to the other groups studied. While 'monetary reward' was ranked highest frequency on all the other clusters, for this group it only ranked second. The most important factor across this group of knowledge workers is the 'actual work itself' and 'the satisfaction gained from doing the actual job'. Then the third most important construct for this group was 'team and peer support' which was again different from the other groups.

With the third factor 'personal growth and development' the contractual information technology knowledge workers were different, seeing this as more important than 'the actual work'. This can probably be explained in terms of future employability of these contractual workers because they need to have relevant skills, to ensure their employability. This group also cited 'trust and security' which was not mentioned by any of the other groups.

From the data gathered the information technology knowledge workers do appear different to the financial services knowledge workers, with the salary based workers clearly different to the other groups as shown by the highlighted areas in table 8.

6.2.2.2.   THE LITERATURE VIEW

Research has been done on the various factors that motivate, and the classification of these. Despite this none of those included in the literature review focus specifically on the different populations to evaluate the motivation factors of one population against another. Individual populations, such as Japanese financial industry (Kubo and Saka, 2002), are more typically used. Horwitz *et al* (2003) did research in Singapore, and within the responses these were classified into 6 industrial groups, although there is some mention in the article of some differences in motivation for the information technology versus other groups, this was not the focus of this particular research.

The research shows differences in the different groups in terms of the relative importance of the motivational factors described. The fact that Horwitz *et al* (2003) also mentioned a difference in Singapore does seem to support this finding. Within the literature there is no focus on motivation in heterogeneous groups, so by this there is no contradiction to this in the literature.

The ranking of the actual work so highly in that the information technology knowledge workers count for 12 out of the ranking of 16, and this is the highest ranking factor in this group shows a strong difference in this group compared to the others. Another difference is for this group job satisfaction counted higher than monetary rewards, this also aligns with the high frequency of mention for the category of personal growth and development.   The different frequency of mentions of these constructs (and others in table 8), for the information technology sector, would imply that different groups are motivated differently.

6.2.3.   RESEARCH QUESTION 3

What are the factors that knowledge workers perceive as negatively influencing their performance?

As the focus is getting knowledge workers to perform, the factors that are seen to distract from performance need to be explored.

The median for performance across all the groups was lower than for motivation at a score of 70, from a 100 point scale, see table 6. However this is still seen as high. On comparison of the medians across all 4 groups a stark outlier is the financial services contractual group, where performance has a median of only 46 see table 7.

The joint highest ranking constructs, see table 9, are the 'work environment' which included infrastructure such as tools, systems, the physical environment, and 'constant pressure and workload'. Third is 'personal life impacts' on the work environment, which does not allow sufficient time for work. On this category there is a gender bias in the way the responses are phrased, of the sample only 2 males gave this construct, with the balance being female. In the nuance the males 'chose to work fewer hours so they could…' but the females worded the response as 'this ….factor in my personal life impacts leaving me less time'. The results would imply for the sample that the males see themselves in control of this factor acting against performance. A comment made by one of those interviewed in response to, 'why do you choose to work 3 days a week' was: 'I eat enough'.

A large number of the constructs detracting from performance can be directly correlated back to the factors that motivate, and are merely worded in a negative sense as in the case of 'clear goals and expectations' which was in table 8 as a motivator' to 'goals and focus not clear' as the distraction from performance as seen in table 9.

Overall unlike the mo
clustering of a few strong

factors, 12 was the highest number of times the construct was classified.

Insufficient challenge was surprisingly low at number four, as expectations are the

knowledge workers thrive on challenges and if this is lacking that they would have

felt demotivated, however this ranking does suggest this not to be the case

Management did rank 5th as 'getting in the way of performance'.

6.2.3.2.   THE LITERATURE VIEW

The factors proposed by Drucker (1999) do have correlations such as knowledge

skills, ranked 9th, equating with the 'need to know the task' the growth ranked 6th

equating to 'continuous learning and teaching'. This mapping is done for some of

the factors mentioned during the interviews (table 15).

Drucker 6 factors of knowledge worker productivity	Factors that can act against performance from interview data
Knowledge worker productivity - 'What is the task?'	Work environment as well as infrastructure (physical, location and tools as well as ambiance)
	Goals and/or focus not clear
	Lack of recognition (verbal incentives, support)
	Not doing the right things
Autonomy	Management
Innovation	
Continuous learning	Lack of knowledge/skills
	Not enough challenge
	Lack of growth (responsibility, learning opportunities, career)
Quality and Quantity	Constant pressure/workload on deliverables
Knowledge worker to be seen as an asset	Must motivate self
	negative influence of the actual work - effort without reward (e.g. difficult clients)

Table 15 : Knowledge worker factors of productivity mapped against the constructs from the interviews that would act against performance.

Sirota *et al* (2006) at management needs to change, in order to reduce employee de-motivation. This is certainly the case as this was ranked 5th.

The main studies in the literature are more on motivational factors, rather than the factors that act against optimum performance, the literature that deals in a better way with factors that would cause less than the optimum performance are in the psychological contract. The factors could also be mapped against the wealth of studies that exist on the psychological contract, if the top factors are considered in the light of the psychological contracts all would fall into this domain rather than that of the formal contract.

Flood *et al* (2001) mentions gender as an attribute in terms of males felt lower obligations to contribute to the organisation compared to females. This is fully supported in the choice of words used in the male versus female groups in those interviewed.

6.2.3.3. CONCLUSION TO RESEARCH QUESTION 3

The factors that impact on performance are in many cases the opposite of the factors that motivate. If a mapping is done of the factors that detract from the maximum performance all of the factors could be mapped onto the motivational theories as proposed in chapter 2. This would then imply that the findings of this study fully support the available literature.

The bulk of the studies ition do not explicitly study the 'de-motivational' factors, however an area that has studied this is in the research into the psychological contract, and if table 9 is viewed from a perspective of which of the constructs score 5 or more in frequency of mention. Each and every one will lie in the psychological contract; a total of 9 constructs. Only the first construct which is around infrastructure may partially lie in the realm of the formal contract. This then strongly supports the view that the psychological contract should be known and actively managed in order not to de-motivate the knowledge worker.

6.2.4.   RESEARCH QUESTION 4

Are different groups of knowledge workers impacted by the same negative influences on performance?

This question looks to see if there are differences across the separate groups of knowledge workers when it comes to the factors that would negatively impact on the ability to perform.

6.2.4.1.   THE RESEARCH RESULTS

From table 9 it is clear that the information technology workers groups, regardless of salary or contractual have the highest ranking for the construct of 'constant pressure and workload'. This construct did not arise at all in the financial services group, and so the high ranking of this is made up of only the information technology knowledge worker group.

The impact of management is mentioned by the information technology contractual knowledge workers, as often as the highest construct in this group. If this is related to growth opportunities which are usually facilitated by management, then this becomes a heavily mentioned construct.

There are certainly differences in the different groups of knowledge workers. A group with the most differences to the rest is the information technology salaried based knowledge workers. Constructs 7 and 8 on table 9, would be second and third for this group.

6.2.4.2.   THE LITERATURE VIEW

As discussed in section 6.2.4.3 the literature does not specifically review the factors that would impede performance. Differences in the various knowledge worker clusters, does not seem to have been explored in the various literature that has been referenced.

6.2.4.3.   CONCLUSION TO RESEARCH QUESTION 4

It can be concluded that there are strong differences in the factors that would impact on optimum performance. This does not contradict what is in the literature. The pressure and workload is a factor, that is only relevant to the information technology cluster for knowledge workers and this crosses both salary and contractual based workers. A better understanding of why this is the case and if

this has any link to th
knowledge workers often perform to a level beyond which they are motivated would require further research.

Overall the constructs for the salaried technology workers are different in terms of rank ordering, this further suggests as a single group that this is different even to the other information technology group. Constructs that across the full sample lie 7th and 8th for the salaried information technology group of knowledge workers these would be second and third on the frequency of mention. These differences would be an area that could be further explored in order to see if this holds true across different clusters of knowledge workers or even in a larger sample of information technology workers compared to others.

6.2.5.   RESEARCH QUESTION 5

Is there any overlap in the motivational factors described by the knowledge workers and the factors present in the psychological contract?

The psychological contract is a two sided 'agreement', and this question seeks to explore the relationship of the factors that the knowledge worker would see as motivational in nature and which of these are likely to be 'present' in the psychological contract.

Table 12, splits the factors of motivation, and the right-hand column gives those 5 motivation factors that are most likely to be found only in the psychological contract. The second portion of table 12 would be those factors which the knowledge worker expects the organisation to deliver or provide. The factors in bold are the factors present both as motivators as well as expected from the organisation, so 'the actual work itself' is seen to be motivational but it is also seen to be the duty of the organisation to provide such work. Management is also seen as an important factor in terms of motivation, but clearly this factor is provided by the organisation. Then final linking factor is 'trust and security' can belong with job security, backing and support and the support of knowledge outputs in terms of decisions and innovation.

The contrast is the factors that are most likely found in the formal contract. Here monetary rewards or fair remuneration crosses the motivators and the formal contract.

The key finding is that in these clusters of knowledge workers there is a stronger overlap on the motivational factors that would be found in the psychological contract rather than in any formal contract.

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In the literature as discussed in chapter 2, the existence of the contract is without doubt (Anderson and Schalk, 1998). As Schalk and Roe (2007) suggest that employees will be less likely to engage in organisational citizenship behaviour if they feel the organisation has not fulfilled its side of the contract, this would imply that motivation is inherent as long as the knowledge worker perceives the organisation has kept to its side of the contract.   The motivation between pay and performance (Harris, 2001) supports the relationship that pay is a motivator.

In the work of Sels *et al*, (2004) the use of exchange symmetry as one of the parameters clearly suggests mutual exchange, which has to imply the desire to perform and hence motivation.

The expectation was that the transactional contracts were more aligned with hygiene factors rather than motivators, (Atkinson and Cuthbert, 2006). The split on contractual and salary based knowledge worker, to give a proxy on relational versus transactional, did not uncover hygiene factors such as pay needing to be fulfilled before the contract could move into other areas. The view that the contract has both transactional and relational components (DelCampo, 2007b), is substantiated in the findings.

The view of Flood *et al* (2001), where innovation is released only if the formal and unwritten psychological contract is intact, would require further investigation as table 9 sees the ninth construct (individual owes the organisation) as 'innovation

and creatiﬁvity'. This co [UNIVERSITEIT VAN PRETORIA / UNIVERSITY OF PRETORIA / YUNIBESITHI YA PRETORIA] e who think both the formal

and informal contracts are fulﬁlled.

6.2.5.3.   CONCLUSION TO RESEARCH QUESTION 5

Based on this research; the bulk of the factors that motivate lie in the psychological

contract realm rather than the formal contract. This ﬁnding fully supports the

available literature. From the data and the constructs created the hygiene factors

would then lie in the formal contract and the bulk of the motivational factors would

be in the psychological contract.

 On the question of the overlap of motivators to the psychological contract, it is

clear that the overlap is signiﬁcant with only monetary rewards as a motivator lying

outside of the psychological contract, but even for this factor, the perceptions of the

individual that they are being remunerated fairly will have an impact in the

psychological contract domain.

6.2.6.   RESEARCH QUESTION 6

**Do the expectations to and from the organisation differ across different
groupings of knowledge workers?**

This question is to see if the groups are homogeneous in terms of what they would

expect the organisation to deliver to them, and what they expect to give to the

organisation.

Table 11 shows an unambiguous view that the knowledge worker owes the organisation their best output; in many instances the word 100% was used. The frequency of mention was high across all the clusters of knowledge workers.

The balance of the constructs, were very similar in terms of ranking for all the groups except the salaried information technology worker group. These groups saw honesty and integrity and their time as very important to the organisation. A possible reason for this difference may well lie in the type of work, contractual information technology workers are more typically utilised by organisations for discrete pieces of work, whereas the salaried workers will often be used in support environments where data sensitivity is vital, and where system outages need to be addressed regardless of time, hence the need to be available for calls, and the need for complete integrity. The data does show that in terms of this research the knowledge worker duty to the organisation is indeed different across the groups studied.

For the expectations from the organisation as shown in table 10, there is a greater homogeneity amongst the groups. The main differing group is again the salaried information technology knowledge worker where the second most frequent mentioned construct in this group is the 'respect, honesty, transparency and openness'.

The financial services groups both mentioned 'support of knowledge outputs' as an organisational need while this was not mentioned at all by the information

technology group, a p [logo] in the fact that information technology workers will deliver according to articulated business needs. One person interviewed made the comment that 'Line management are those responsible, and who must keep the organisational side of the bargain', this probably sums up the real crux of the relationship.

Then on construct 11 and 12 in table 10, the contractual information technology knowledge worker group is the only one that gave, 'challenging and exciting work' and 'job security' as constructs. Both of these constructs are unexpected in the specific group, as the expectation would have been that the salaried information technology group of knowledge workers would have cited these.

6.2.6.2.   THE LITERATURE VIEW

Within the literature the psychological contract especially the different types, has been well researched, however the specific constructs and types of psychological contract does not appear to have been studied specifically. Flood et al (2001) studied high technology and financial services, but this did not seem to be referenced in the article.

Much research has been done within specific clusters such as retail banks (Atkinson, 2002) and MBAs' plus health care (Turnley, Bolino, Lester and Bloodgood, 2003), aerospace, electronics and accounting (Porter, Pearce, Tripoli and Lewis, 1998) however none of these set out to specifically look for similarities and differences between clusters.

6.2.6.3. CONCLUSION TO RESEARCH QUESTION 6

This research finds that the groups are different. The literature studied in chapter 2 does not contradict this; however the literature has focused on various factors, and studied these factors, rather than a view of the homogeneity of various groups. The salaried information technology workers are very different in the ranking of the constructs for both the organisational duty to the knowledge worker as well as the duty of the knowledge worker towards the organisation. The further question this raises is would this hold true across different organisations and clusters of knowledge workers.

6.2.7. RESEARCH QUESTION 7

Is the link of motivation to performance, constant across different clusters of knowledge workers?

This question is intended to specifically review the perceptions of the different clusters of knowledge workers, for the relationship of performance to motivation, to see if the link between then is constant.

On the information technology knowledge worker cluster, 7 of the 16 interviewees rated motivation lower than actual performance see figure 3, and 4.   This may imply that information technology knowledge workers feel forced to perform regardless of motivation, if this is taken in conjunction with table 9 the highest ranked construct in the information technology knowledge worker groups, 'constant pressure/workload on deliverables' it does re-enforce the view. The information technology knowledge workers represent 4 different organisations so it cannot be an organisation impact.

 The overview in terms of the different clusters as depicted in figure 3 visually does seem to show a difference with more yellow circles lying higher than the red squares. This would seem to indicate that those knowledge workers in the financial services group at a certain level of motivation perform at a lower level when compared to the motivational level of those in the information technology group. This is confirmed visually when comparing the medians for motivation which are extremely close, against the median for performance in which the information technology workers are much higher.

6.2.7.2.   THE LITERATURE VIEW

None of the literature referenced researched the specific link between motivation and performance within different clusters.   However based on chapter 2 the literature suggests that motivation will drive performance.

6.2.7.3.   CONCLUSION TO RESEARCH QUESTION 7

From the sample there is a difference in the clusters from motivation to performance levels with only the information technology workers performing at a level beyond which they are motivated.   This is perhaps as a consequence of the constant pressure and workload that the information technology knowledge worker group experiences. It would appear that further research in the area would be necessary to see if this finding that information technology workers may perform at a level that is beyond the level they feel motivated, is substantiated.

6.3. CONCLUSION

In terms of the scope of this study the relationship of motivation to performance does differ across different clusters of knowledge workers; this is both in terms of the constructs and the values given by the different groups.

The bulk of the motivating and de-motivating factors would lie in the psychological contract rather than that formal contract, regardless of the knowledge worker cluster explored. However the groups do differ in terms of each of the different groups of constructs. The comments made by some of those interviewed show that performance and motivation are important in the knowledge worker economy; 'a happy worker is a performing worker', 'performance and motivation lead through to your personal life'.

7.1. SYNTHESIS OF RESEARCH DATA

The investigation into different clusters of knowledge workers was intended to determine if there were differences between these groups in terms of the factors of motivation, performance and the psychological contract. Although the findings cannot be generalised, they show that the clusters are different in terms of factors that motivate, as well as the factors that would detract from performance and the factors that could be 'found' in the psychological contract.

A model (figure 5) has been devised to show the significance of the input factors in order to achieve performance from the knowledge worker. The model also shows the role that management, representing the organisation, needs to play in enabling optimum performance. The large block depicts the area of influence of management. Performance is a combination of ability and motivation (Campbell *et al*, 1976), so the model shows this as 2 arrows, but when they meet the result is more than the sum of the individual components. To enable motivation management needs to actively manage the factors that can de-motivate (table 9). Management also need to be understand and 'facilitate' the factors that motivate, these are made up of three components:

- Inherent individual factors, over which management has no influence
- Formal contract, which lies fully in the domain of the management

- Psychological co[ntract] [i]s [t]he largest contributor to motivation and also mostly lies in the domain of management to ensure it is fulfilled (tables 10 and 12).

There can be a few influences, such as 'relationships in environment' (table 10) that lie within the psychological contract over which management would have no control (hence the overlap outside management influence).
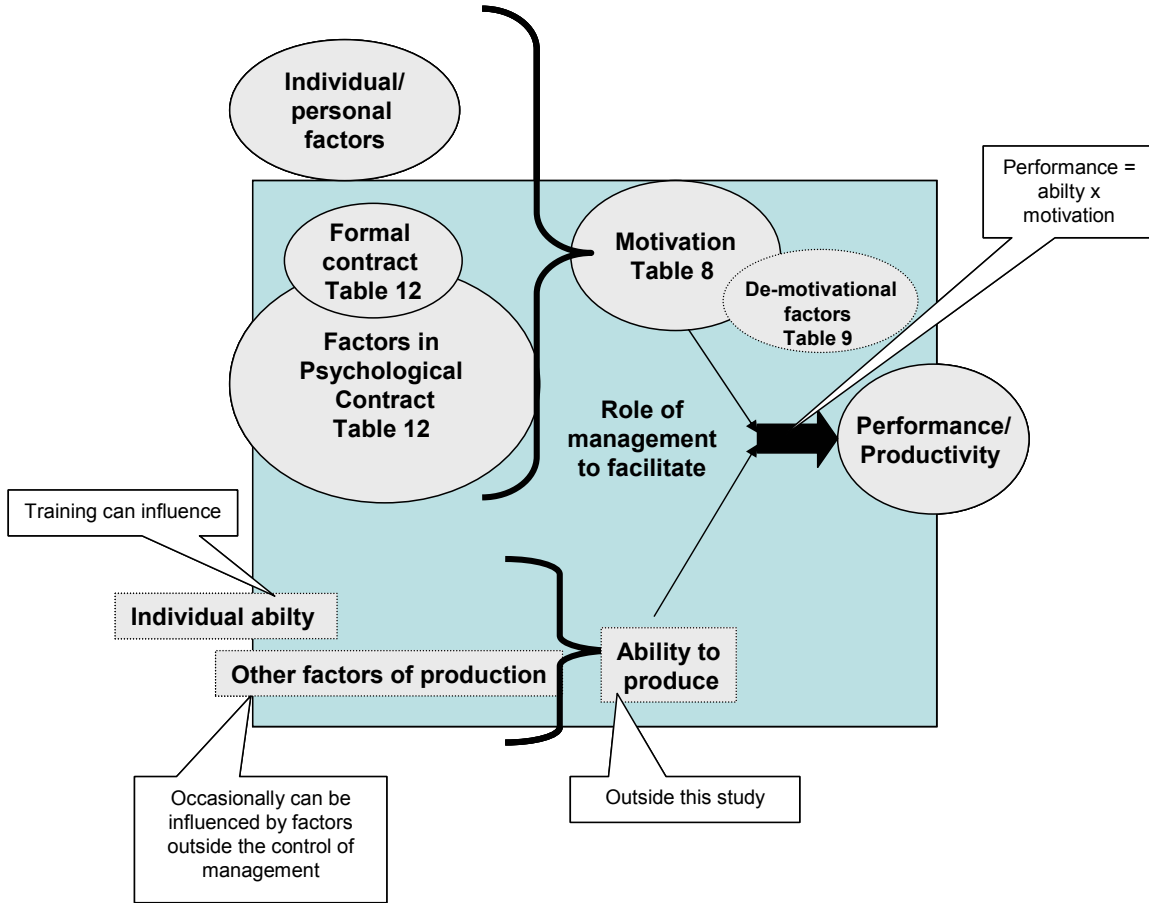

Figure 5 : Motivating the knowledge worker to perform

The role that management needs to play is shown in figure 5; to ensure the needs of both the formal and the psychological contracts are met. This is not merely the motivational factors but would need to extend to the factors that could act against performance as well.

The data shows that ite knowledge workers are found in the psychological contract rather than the formal contract. The implications this has for management is that they need to understand the individual, and create the optimum environment for the individual to want to produce the outputs. The model also depicts the link between motivation and performance as is described in the literature and has been confirmed in the interviews.

The data also shows that the information technology knowledge workers are different to financial services knowledge workers in terms of factors that motivate and factors that detract from optimum performance; they are also different in the psychological contract constructs. These factors may be interlinked, as discussed in chapter 6. There are also differences in the levels of motivation and performance, across the two main groups.

The aim was to create a better understanding of the factors that would motivate or de-motivate different clusters of knowledge workers. The data gathered shows the factors that can be fully aligned to the various theories on motivation within the literature. There is no one set of factors that fit for all groups of knowledge workers and as the performance levels of knowledge workers is related to motivation. The implication for management, is that an understanding of the motivation of the individual is important in order to obtain competitive advantage for the organisation.

The last finding in the data is the differences in motivation scores as compared to performance scores. Unique in this sample is that the information technology clusters of knowledge workers have a number of interviewees that gave a lower

score for motivation tl **UNIVERSITEIT VAN PRETORIA / UNIVERSITY OF PRETORIA / YUNIBESITHI YA PRETORIA** inked to other factors such as pressure and deadlines that have to be met.

Improved understanding of the factors that will motivate different clusters of knowledge workers that leads to increased productivity remains a pertinent topic as more of the economy is knowledge worker driven.

7.2. RECOMMENDATIONS TO MANAGEMENT

Although the sample shows differences in the motivators that motivate certain groups of knowledge workers, further research would need to be done before this could be generalised further. However, the key recommendation to management is that all knowledge workers are not alike and in order to have performance that is likely to be delivered from a motivated worker, management needs to understand the needs of each individual and create the environment that enables optimum performance. This environment should include the factors within the formal as well as the psychological contract, as is shown in figure 5. Important as well is that management should not de-motivate knowledge workers, and the factors as shown in table 9, need to be actively managed to ensure that no impediments are placed in the knowledge worker delivery. It should also be noted that remuneration still came out highly as a motivator; so even though it is not 'just about the money' that is still important to get remuneration right.

The finding from the interviews; a portion of the information technology knowledge workers interviewed, were performing beyond the level to which they are motivated

and the possible link ... imply that for increased productivity across clusters of knowledge workers that pressure and deadline should be set regardless of the industry. At the same time however, the environment should support the delivery of outputs so that the pressure and deadlines does not result in the impediment to performance but rather to the enhancement of the knowledge workers ability to perform beyond the level at which they are motivated.

The bulk of the factors that will motivate the individual knowledge worker will be found in the psychological contract rather than the formal contracts. In most cases direct line management represents the organisational part of the psychological contract. To enable competitive advantage through harnessing the performance of knowledge workers, it is imperative that the psychological contract is well understood. The onus for this rests on management and if it was built in as part of the formal contractual duties of management, this could then be more actively managed.

7.3. SUGGESTIONS FOR FUTURE RESEARCH

This explorative study has led to questions, and hence suggestions for further research would include:

- Quantitative research on the relationship of motivation to performance (scores) across a broad sample of different types of knowledge workers. Review the impact of knowledge worker cluster, age, educational qualification, psychological contract type and gender on this relationship.

- Quantitative resUNIVERSITEIT VAN PRETORIA / UNIVERSITY OF PRETORIA / YUNIBESITHI YA PRETORIA across different clusters to determine if there are clear rank difference in the factors that motivate and detract from optimum performance.

- Qualitative study to include health care workers, educators and engineers, to better understand the motivator, performance and psychological contract links, to verify if the differences seen in the clusters in the research are also found across other clusters.

7.4. CONCLUSION

In the new world of work where knowledge workers who own the factors of production need to be motivated to perform and hence increase competitive advantage, the greater understanding of the factors that will drive this performance is critical. This research will have added to the body of learning that exists on the factors that motivate as well as the psychological contract. The objectives as described have been realised and the relationship of performance to motivation has been confirmed. The factors that would motivate knowledge workers as well as those which would act against performance have been reviewed and the similarities and differences highlighted. Psychological contract expectations from the individual and the organisation were similarly reviewed and the role of the organisation in the management of this has been highlighted.

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APPENDICES

Appendix 1 – blank questionnaire

1. Blank questionnaire

1. Demographic information

a. Gender	M	F

b. Highest educational qualification (minimum matric)

Matric	
Diploma (3-4yrs)	
Bachelors	
Honours	
Masters	
PhD	
Other (specify)	

c. Knowledge worker cluster

Just tick the correct cluster

	Fin services	Info technology
Salary		
Comm/hrly		

2. Data

a. How motivated are you?

low|_____|
max

b. At what level would you say you perform?

low |_____|
max

c. What is **your** understanding, of the link of motivation to performance?

d. Name the top 5 things that you think keep you motivated. *(min 3 max 5)*

e. What are the top 5 things that keep you from the 100% performance? *(min 3 /max 5)*

f. What do you expect from the organization? (what do they owe you?)

(maximum 5) then circle the most important one

g. What do you expect to give the organization? (what do you owe the organization?)

Maximum 5, Also circle the top one

Other comments