



A roadmap of career capital accrual for knowledge workers

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ABSTRACT

Knowledge workers need to understand, leverage and capitalise on the new world of work to progress their careers through accumulating career competencies. Career capital is the concept of cumulative career competencies that are of value to the field of the individual's work. A need exists for greater understanding of career path opportunities available and a possible sequence of accrual.

This research adopts an exploratory approach and aims to probe rather than answer questions arising out of the need for more understanding. A qualitative methodology was used through a series of semi-structured but in-depth interviews on a sample of knowledge workers of engineers and information technology workers.

The roadmap of career capital accrual for knowledge workers (Figure 5) transpired from empirical research findings founded from within the literature. The model concludes that career capital is accumulated along a recognisable path and sequence and that career gates generally act as reflection opportunities for workers. Not all workers enter these career gates, but value creation and career capital formation is possible for both workers entering and staying behind to specialise and optimise. The outcome of this research could support knowledge workers in unlocking value from their careers, making them more sufficient in creating careers with knowledge that is sought after by organisations. The research outcome could also facilitate organisations to retain top talent by understanding their career capital accrual approach.



DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

Date:	13 November 2008

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CHAPTER 1: INTRODUCTION TO RESEARCH PROBLEM

1.1 PROBLEM DEFINITION

Global competitive pressures, technology, downsizing and outsourcing of noncore activities are just some of the factors that have been impacting the organisational landscape in recent years. More and more traditional organisations are being superseded by agile and continuously adapting ones according to Inkson and Parker (2005). The strategy of organisations has shifted towards the need to be flexible and adaptable (Dickmann and Doherty, 2008) and many have become unable to offer or even promise long-term job outlooks (Clarke and Patrickson, 2008). However, this disintegration of intraorganisational career growth opportunities does not imply a complete lack of opportunities as career paths are able to go beyond the boundaries of a single employer as stated by DeFillippi and Arthur (1994).

Drucker (1994) highlights how the twentieth century has been the era of transformations, firstly through industrialisation and later as a result of technology and the pace of its introduction. This era of transformation has changed the world not only from an organisational perspective, but also from a worker career point of view (Mayrhofer, Iellatchitch, Steyrer, Schiffinger and Strunk, 2004).

According to Drucker (1994) the career of the worker firstly changed from the traditional worker to the industrial worker and then again to that of a knowledge worker, a term he first used in his 1959 book; Landmarks of Tomorrow. Drucker



insists that knowledge and not natural resources, capital or even labour, has become the key resource of the new era and expresses his concerns about a social order as a result of inequalities that are based on differentials in knowledge and not on traditional resources that governments, to some extent, could manage and perhaps solve. Peel and Inkson (2004) suggest from findings that only a selected few are able to take advantage of this complexity.

DeFillippi and Arthur (1994) state and are supported by Drucker (1994) that knowledge careers are characterised by a formal learning period, an application of the knowledge period, as well as a period of continuous adaptation to the organisational settings resulting in a continuous learning culture. In contrast traditional careers are identified as stable employment that generally involves predictability, hierarchy with opportunities of regular succession of related jobs and clearly defined career progression paths (DeFillippi and Arthur, 1994 and Wilensky in Sommerlund and Boutaiba, 2007).

Instead of employment security, employability is now considered to be the new form of psychological contract where this "unspoken promise" (Clarke and Patrickson, 2008, p.123, Baruch, 2001, p.544) may now differ substantially in the perceptions of the organisation and the employee (Baruch, 2001). One of the questions asked by Clarke and Patrickson is whether or not the responsibility towards the development of employability in individuals is really taken up by organisations. The particular findings from their research indicate that very few organisations have taken up an employability approach with their employees. In other words, very few organisations are found to promote training



and development of general or occupational skills and competencies that contribute towards employability. Instead most organisations are still employing job-specific or even worse for the worker, company specific training and development that still support the employment security paradigm.

One has to agree with Cappellen and Janssen (2005) who accentuate that career development has become the responsibility of the individual rather than the organisation because:

- There is a lack of organisations taking up an employability approach in this new and dynamic environment of work (Cappellen and Janssen, 2005).
- Workers have different expectations for their careers (Grobler, Wärnich, Carrell, Elbert and Hatfield, 2006).
- Career paths are able to go beyond the boundaries of a single employer (DeFillippi and Arthur, 1994).

As the careers of successful knowledge workers are no longer limited to only one opportunity or employer (Inkson and Arthur, 2001) accumulating the necessary relevant knowledge has become the main career strategy of the knowledge worker.

The concern of Drucker (1994), as mentioned before, about social order as a result of inequality based on knowledge has become a similar concern for the knowledge worker but with a different approach. For both the inequality is created between individuals through disparity in knowledge, but for the



knowledge worker having specific relevant and applicable knowledge, skills and insights contributing towards employability (Lamb, 2007) the concern is about a career order. The knowledge worker is confronted with inequalities in employability that is based purely on the ability to accumulate, apply and continuously adapt career specific knowledge (Suutari and Mäkelä, 2007). Career specific competencies can leverage the employability of individuals and career opportunities generally remain available to those individuals prepared and able to make the necessary investments (Rosenbaum, 1986) into their career capital.

The idea of career capital as first presented by DeFillippi and Arthur is the concept of "cumulative career competencies" (DeFillippi and Arthur, 1994, p. 320). These relevant, applicable and career specific competencies could be classified into three unique but interdependent forms of career competencies. Each of these according to them could be accumulated in the intraorganisational but also particularly in the inter-organisational labour market of the boundaryless career.

Lamb (2007) describes career capital as the capital that is of value to the field of the career, were an individual would possess a particular set of competencies or capitals unique to that specific individual. Lamb further puts forward from her research that the individual starts with a primary set of capitals that is his/her nature or temperament and then develops and accumulates along a career path, while being influenced by personal, social, educational and organisational drivers as well as the interactions between them, as also suggested by Suutari



and Mäkelä (2007). There is a need identified from the existing research to expand the investigation to verify the importance of these aspects, investigate if a general sequence exists in the interaction and also to investigate some individual drivers. When singled out these factors and their impact are not easily predictable and controllable, but are postulated by literature (Myers and Pringle, 2005, Dickmann and Harris, 2005 and Dickmann and Doherty, 2008) to be influential and also interacting with other factors. Specific aspects identified to be discussed further are managerial support and serendipity (specifically in the context of unintended good fortune).

On account of individuals having different expectations regarding their careers (Grobler, et al., 2006) and since their career paths may involve job opportunities going across organisational boundaries one has to agree that career development has become the responsibility of the individual. It offers individuals the possibility, within a better understanding of the complex interactions between the career competencies, the new continuously adapting organisation and the boundaryless career, to develop, accumulate and leverage their relevant career capital.

By specifically exploring the existence of a roadmap for the accrual of relevant and appreciated career capital, this research will build on the existing exploratory research on components of career capital for knowledge workers done by Lamb (2007).



1.2 OBJECTIVE OF THE STUDY

For most individuals their career is a substantial part of their life, not only in terms of energy invested, but also the time, skills and even relationships invested into performing the job and fitting into the company and organisational setting (Inkson and Arthur, 2001). Yet as factors previously mentioned impact the organisational landscape and organisations respond by becoming more agile and responsive, long-term job outlooks are the first to be marginalised (Clarke and Patrickson, 2008).

What is more disquieting for the worker is that organisations in general (when healthy attrition rates apply) actually gain from career paths stretching across the boundaries of a single employer. As Inkson and Arthur (2001) explain, careers are the repositories of knowledge and as individuals move between organisations they take specific knowledge with them. The learning and adaptation for organisations are in the individual learnings that, in accumulation between various workers, are transported between organisations when career paths stretch between organisations. Inkson and Arthur find this to be particularly true if career paths stretch between organisations within the same industry.

In other words although the new economy marginalise individual career paths and long-term job outlooks, whilst individuals contribute substantial amounts of resources into their careers, it is still the company that is standing primal in this new perspective (Inkson and Arthur, 2001). There is a need observed here for individuals to better serve, without being too self-interested one would propose,



their own interests regarding the accumulation of their career capital. In contrast they will, at the same time, actually also contribute to organisational learning and through it to industry learning when adopting a boundaryless career approach.

The study is therefore aligned to continue the current search for more understanding in the field of career capital management for knowledge workers and focuses on doing so specifically by exploring the career capital activities developed, accumulated and leveraged. Knowledge workers do this, not only in a quest to climb the corporate ladder as described by Komisar (2002), but also in an effort to find career fulfilment and long-term career satisfaction not only based on designation and responsibility (Biolos, 2004). The sequence of these activities developed, accumulated and leveraged is therefore also of interest.

The research investigates the perceived components of career capital accrual for knowledge workers across a sample of knowledge workers consisting of graduate engineers and information technology knowledge workers. The research further investigates the career path discussed by Lamb (2007) and searches for a possible sequence of accrual that is perceived to be effective, especially from the perspective of Rosenbaum (1986) stating that later investments offer a smaller return on investment effect as less time is available to capitalise on the investment.



Essentially the research aims to:

- Identify the perceived components of career capital for knowledge workers in the new economy.
- Identify a chronological sequence in which the components are acquired, accumulated and developed.
- Identify an order of perceived importance of the components and competencies acquired, accumulated and developed.
- Explore the influence of managers and of serendipity (or unintended good fortune) as two unintentional but possibly impacting components in career capital accrual.



CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

For most individuals their career is a substantial part of their life where they not only invest a large amount of their energy, time and skills, but also effort in building relationships, networks and accomplishments (Biolos, 2004). Inkson and Arthur (2001) describe this behaviour as the worker's attempt to perform a specific job consisting of daily tasks and to make the worker fit into a company and organisational setting.

The knowledge worker as described by Drucker (1994) is an individual who relies on knowledge as the true resource and means of performing his/her daily job. Unfortunately for the knowledge worker only focussed on fitting into a company and the wider organisational setting, the landscape is continually changing as various factors are impacting the organisation landscape. More and more traditional organisations adjust to become, or are relentlessly superseded by, newer agile and continuously adapting ones (Inkson and Parker, 2005).

These new organisations adopt different strategies enabling them to be more flexible and adaptable (Dickmann and Doherty, 2008). Many become unable to offer traditional career routes or even promise long-term job outlooks (Clarke and Patrickson, 2008) resulting in new forms of the psychological contract between employer and employee. This disintegration of intra-organisational career growth opportunities does not however translate into a total lack of



career opportunities since career paths are able to successfully go beyond the boundaries of the single employer (DeFillippi and Arthur, 1994).

Knowledge workers who accumulate relevant, applicable and career specific competencies actively develop their career capital. This concept of "cumulative career competencies" first presented by DeFillippi and Arthur (1994, p.320) is broadly based on the competency-based model of employer firms. They propose these competencies as three groups of knowing namely knowing-why, knowing-how and knowing-whom. Accumulation of these competencies is normally driven by various factors described in the literature by amongst others, Lamb (2007) and Suutari and Mäkelä (2007).

The complexity for the knowledge worker is hidden inside the understanding of the new organisational landscape, building the necessary applicable and relevant career capital to promote employability through having the right level of internal and / or external locus of control.

2.2 THE KNOWLEDGE-BASED ECONOMY

As mentioned by Drucker (1994) knowledge workers utilises knowledge as a primary resource operating in a knowledge-based economy. In this economy knowledge is not only an input, but also a main component of the output (Arthur, 1996). The knowledge-based economy is also not an economy of diminishing returns, but one of increasing returns (Arthur, 1996) and intangibles such as skills, professional knowledge, organisational capabilities, reputational capital and other collections of data are imperative to its success (Edvinsson, 2002).



As stated by Clarke (2001) this is an economy that requires integrated knowledge where success of enterprises are more and more dependant on the effective collection, storage and utilisation of this knowledge. A network society results where the prospect and capacity to access and take part in knowledge as well as the capability to enter into a learning intensive environment determines a social order, as also mentioned by Drucker (1994).

2.2.1 THE ORGANISATIONAL LANDSCAPE

Inkson and Parker (2005, p.18) observe a fundamental shift in the organisational landscape from a centralised, planned and regulated environment which they refer to as the "industrial state-view" to a new environment where entrepreneurship, competition, decentralisation and flexibility instead define enterprise and society. DeFillippi and Arthur (1994, p.307) agree largely with this opinion but from a different perspective. They argue that the "fixed lattice of job positions" is being eliminated at speed as the result of organisations adapting to an environment that is changing swiftly and continuously.

A further presentation of the subject by Suutari and Mäkelä (2007) is that globalisation is one of the factors resulting in a high pace of change in organisational landscapes and that managers are experiencing lateral rather than vertical movements as a result. They continue to state that involuntary job losses and even career interruptions are directly related to these organisational landscape changes.



As stated by Arthur (1996) the knowledge-based economy is one of increasing returns, which does not create equilibrium but instability instead when a product, company or technology gets ahead by some means or the other. The opposite is unfortunately also often true as the instability works both ways, when opportunities do not materialise, matters can get far worse than in a stable diminishing return economy. Increasing returns therefore results in business that operates differently and affects careers in new ways.

Literature suggests various driving forces behind the changing organisational landscape driving it towards a knowledge-based economy (Baruch, 2006, Edmondson, 2008, Inkson and Arthur, 2001). Amongst others these are:

- Globalisation
- Open markets
- Technology
- Information/Knowledge flow and intensity
- Pace of recent organisational change and restructuring
- Company downsizing and outsourcing of noncore activities.

Baruch (2006) provides the following as a figurative explanation of the difference between the old traditional and the new post-corporate organisation.



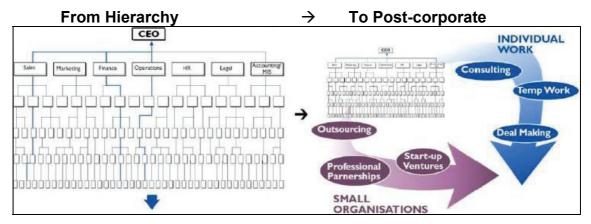


FIGURE 1. FROM TRADITIONAL TO POST-CORPORATE (BARUCH, 2006)

2.2.2 THE KNOWLEDGE WORKER

Drucker was the inventor of the term knowledge worker as he first used in his 1959 book; Landmarks of Tomorrow (Drucker, 1994). The term knowledge worker generally refers to individuals who rely on knowledge as their true resource and means of performing their daily job. The structure of modern day economy has changed from an era where companies in the past relied on a manual workforce to one today where they rely on knowledge workers. Ramirez and Nembhard (2004) also states that it is as a result of companies moving from manual production to more automated and knowledge driven production that the career of the worker has changed from the traditional to the industrial and now to the knowledge worker.

As external factors have affected the working environment to such an extent that knowledge is now considered to be "the business of business" (Adelstein, 2007, p.853) and forms an integral part in an organisation's success, the knowledge worker has become more and more inseparable to the daily operation of organisations. Drucker (1994) describes knowledge workers as



individuals that require formal education as well as the ability to apply knowledge in their work. These workers are therefore educated, have the ability to continue to educate and reinvent themselves and are able to apply their knowledge in their work.

For a knowledge worker with a particular set of skills as described here, with organisations that are in need of workers that can work in this new world of knowledge and with an economy of increasing returns the career is no longer limited to a single opportunity or employer (Inkson and Arthur, 2001). Knowledge workers have therefore become a tradable asset.

2.3 CAREER MANAGEMENT

People have diverse expectations about their jobs, ranging on a continuum from seeing work as an inescapable painful evil, a necessity for satisfying certain human needs, some find immense pride and satisfaction in their work, others again are completely consumed by their work and everything else come second to investing long and hard hours at work (Grobler, et al., 2006). While people all have different expectations of a career, the relationship between organisation and worker has changed drastically as well. The organisational landscape change is forcing organisations to delayer their structures and in the process removed many positions from the career ladder. Many organisations have become unable to offer, even promise long-term job outlooks (Clarke and Patrickson, 2008).



This change in the organisational landscape has brought new career realities for knowledge workers (Mayrhofer, et al., 2004) who now have to revisit their career management strategies. The knowledge worker is confronted with inequalities in employability that is based purely on the ability to accumulate, apply and continuously adapt career specific knowledge (Suutari and Mäkelä, 2007). A career management strategy is needed that fundamentally optimises the disparity in knowledge through having specific relevant and applicable knowledge, skills and insights contributing towards employability (Lamb, 2007).

These career specific competencies can leverage the employability of individuals and career opportunities generally remain available to individuals prepared and able to make the necessary investments (Rosenbaum, 1986) into their career capital. Peel and Inkson (2004) suggest from their research findings though that only a selected few are able to take advantage of this complexity. These new career realities originating out of the new organisational landscape and accompanied new forms of organisations are presented here in the following table, as put forward by Herriot in Grobler, *et al.* (2006).

Old career realities	New career realities
Full-time permanent contracts	Part-time temporary contracts
Employment security	Employment insecurity
Once-off career choice	Repeated changes in career
Occupation for life	Several occupations
Organisation for life	Several or no organisation
Regular promotion	Maintenance of employability
Multi-level hierarchy	Delayered pyramid
Predictable job moves	Unpredictable job moves
Internal labour market	External labour market
Organisations manage careers	Individuals manage careers
Organisations develop people	People develop themselves

TABLE 1. THE OLD AND NEW CAREER REALITIES (HERRIOT IN GROBLER, *ET AL.*, 2006)



Mayrhofer, et al. (2004) support this by stating that new career realities result in career path development activities shifting from being managed by organisations to be managed by workers themselves. This change in career pattern is motivating and driving the employability concept, which gradually takes the place of the psychological contract according to Clarke and Patrickson (2007). Individuals consequently have to accept personal responsibility for their own career development, planning and management.

2.3.1 TRADITIONAL CAREERS

DeFillippi and Arthur (1994) suggest the traditional idea around employment is related to an organisation that is less and less likely to be found in today's organisational landscape. They associate the following with the traditional career:

- Stability
- Hierarchy
- Clearly defined job positions for career progression.

This is largely supported by Biolos (2004, p.21) who calls the traditional career an "old step-by-step climb up the corporate pyramid" path and describes it as "increasingly obsolescent". He argues that it is used more as a model of what a career should look like than what actual careers today resemble. Biolos (2004, p.25) further suggests that this "granddaddy of career models" is still an attractive model for workers who strive to be influential within their organisation and who prefer stability in times of uncertainty about career movements.



lellatchitch, Mayrhofer and Meyer (2003) agrees that stability is quite characteristic to the traditional career model and explain it by stating that its generally a career based on initial training in an early stage of the career followed by working in the same profession or area of expertise, even sometimes in the same organisation or kind of organisation for the duration of their career.

2.3.2 KNOWLEDGE CAREERS

In the new organisational landscape with its flexible and fast moving organisations the capacity to generate, integrate, utilise and transfer knowledge becomes a core capability of the organisation (Clarke, 2001). Knowledge as an asset to the organisation has to be valued, developed and managed (Bogdanowicz, 2002) offering opportunities of a knowledge career to certain individuals. Inkson and Arthur (2001) propose that similar to small scale investors creating the financial economy, individual knowledge workers create knowledge careers and possibly the knowledge economy.

Literature indicates that knowledge careers are only available to individuals with the correct combination of education, skill and learning culture. For example Drucker (1994) suggests that the knowledge career is somewhat of an elusive career to the non-knowledge worker and he presents the following reasons:

- Knowledge workers acquire admission to their jobs firstly through formal education.
- Knowledge workers learn how to learn early on in their careers.



- Knowledge of the new knowledge economy is substantially different to that of earlier societies. The liberal arts, that is considered to be necessary knowledge (for nearly the last 300 years) focuses on the person's development and has very little application value.
- Knowledge careers central to the new knowledge economy are in fact occupied by highly specialised workers and it's a mistake to refer to them as generalists.

2.3.3 BOUNDARYLESS CAREERS

As more traditional organisations adapt or become superseded by more agile ones (Inkson and Parker, 2005) and become unable to offer or even promise long-term job outlooks (Clarke and Patrickson, 2008) intra-organisational career growth opportunities appear to be disintegrating for the knowledge worker. Still this collapse in career growth opportunities is not able to completely eliminate opportunities as career paths are able to go beyond the boundaries of a single employer as stated by DeFillippi and Arthur (1994). They also put forward data indicating that an increasing number of workers are found to be moving careers inter-firm, or beyond the boundary of a single employer. Even in countries that traditionally had less of a tendency to do so, for example Japan, the trend is rising.

Becker and Haunschild (2003, p.714) attribute the cause of boundaryless careers directly to the "fading ability of large organisations to provide stable internal careers" and new models of organisation directly affecting career path



development. Inkson and Parker (2005) largely support this by noting that it has resulted in careers being destabilised and motivated the adoption of interorganisational career forms. They remind that organisations actually gain from boundaryless careers when healthy labour turnover applies, as careers are "repositories of knowledge" (Inkson and Parker, 2005, p.18).

Currie, Tempest and Starkey (2006, p.755) advise that the boundaryless career has different levels of impact on employees, with "some losers and some winners". Generically skilled and older workers are typically marginalised, while highly skilled and younger workers typically embrace it. Sullivan and Arthur (2006) also alert that the concept of boundaryless careers should be viewed from more than one perspective, they present the following different dimensions to boundaryless careers:

- Movement across the boundaries of separate employers
- Drawing validation and marketability from outside the present employer,
 i.e. academic workers
- Sustaining work through external networks of information, i.e. real-estate agents
- Individuals rejecting existing career opportunities for personal or family reasons.

Zhao, Li and Yu (2007) offer the following comparison between the traditional and the boundaryless career that is of value for this research:



Dimension	Traditional career	Boundaryless career
Employment relationship	Gain the employment guarantee by loyalty to organisation	Gain the employability by working performance
Career boundary	Single or two organisations	Several organisations
Needed skill	Organisational specific skills	Transferring and taking skills
Successful criteria	Payment, promoting, position	Meaningful working in psychological feeling
Employment contract	Fixed employment contract	Flexible employment contract
Psychological contract	Relational psychological contract	Economic exchange psychological contract

TABLE 2. COMPARING THE TRADITIONAL AND BOUNDARYLESS CAREER (ZHAO, LI AND YU, 2007)

2.3.4 EMPLOYABILITY

Generally speaking, employability relates to the capacity of a worker to find, retain and move between employment(s). Hillage and Pollard in Clarke and Patrickson (2008, p.122) define employability as "the capability to move self-sufficiently within the labour market to realise potential through sustainable employment". To actualise employability the worker needs to have the right set of intellectual capital, this includes:

- Skills and qualifications
- Personal attributes
- How the capital is used and presented to the employer
- Contextual factors, such as labour market conditions.

Baruch (2001) presents contrasting evidence on the notion that employability is offered by organisations as the new form of psychological contract where shorter-term or more precarious career opportunities exist. In his research he quotes the following from interviews (Baruch, 2001, p.560) "One said: 'It would



be too negative an idea to sell', another stated: 'Such an approach might encourage people to look out', and another contemplated: 'No. The company must be honest.' As one emphasised, 'Trying to apply the concept of employability, it will create a de-stabilising employment relationship'". These findings are also supported by Clarke and Patrickson (2008).

2.3.5 PSYCHOLOGICAL CONTRACT

Often referred to as the "unspoken promise" between the organisation and the employee (Clarke and Patrickson, 2008, p.123, Baruch, 2001, p.544) the psychological contract is defined as promises expressed or implied (Wöcke and Sutherland, 2008). Central to the theory is the notion that social relationships consist of "unspecified obligations and the distribution of unequal power resources" (Blau in Cullinane and Dundon, 2006, p.114).

The concept of promises expressed, implied but unwritten in exchange for what each is obligated to provide is found to be somewhat of a misconception as far as knowledge workers are concerned. It raises questions regarding the transactional vs. relational theory behind the psychological contract (O'Donohue, Sheehan, Hecker and Holland, 2007).

Instead of employment security, employability is now considered to be the new form of psychological contract, but again some research also indicate that employers are not really taking up this approach (Baruch, 2001 and Clarke and Patrickson, 2008). These promises expressed or implied may therefore now



differ substantially in the perceptions of the organisation and the employee (Clarke and Patrickson, 2008).

2.4 CAREER CAPITAL

The idea of career capital as first presented by DeFillippi and Arthur is the concept of "cumulative career competencies" (DeFillippi and Arthur, 1994, p. 320). Myers and Pringle (2005, p.117) note that career capital as a metaphor is "emulating the financial accumulation of assets that can be carried forward for future use".

DeFillippi and Arthur (1994) put forward a model of career competencies based on a similar view on the firm and classified these relevant, applicable and career specific competencies into three interdependent forms of career competencies that can be accumulated in the intra-organisational but also in the interorganisational labour market of the boundaryless career. These are know-why, know-how and know-whom competencies and Inkson and Arthur (2001) apply this model to indicate how individuals can actively accumulate career capital for future use as described by Myers and Pringle (2005). The competency model is discussed in more detail under a separate heading.

Lamb (2007) describes career capital as the capital that is of value to the field of the career, were an individual would possess a particular set of competencies or capitals unique to that specific individual. Lamb further puts forward from research that the individual starts with a primary set of capitals that is his/her nature or temperament and then develops and accumulates along a career



path, while being influenced by personal, social, educational and organisational factors as well as the interactions between them.

Through the development of a *de facto* model of career capital formation Lamb presents career capital amongst other things as a process of development that takes place within a growing context from the individual then the organisational and then eventually the global context or knowledge economy. Within the broader individual context specific must-have capitals or competencies are identified and in the broader organisational and global context specific nice-to-have or differentiating capitals are identified.

2.4.1 THE CONCEPT OF CAPITAL

In the words of Bourdieu (1986, p.241) "capital is accumulated labour" that generally takes time to accumulate, but has the potential capacity to produce earnings and procreate itself. Capital increases through investments and there is normally a market that values the capital where it could be traded or sold. Opportunities in the market are not predetermined, but are open to those with capital and become available to individuals prepared to make the necessary investments. Anheier, Gerhards and Romo (1995) state that Bourdieu's concept of capital is broader than pure monetary and call it a "generalised resource" concept of capital.

To generalise, Bourdieu (1986) distinguishes between three general types of capital based on contents. To these he attributes different levels of certain



qualities such as liquidity, convertibility and loss of potential. They are as follows:

- Economic capital referring to monetary or financial resources and assets.
- Cultural capital referring to cultural habits, artefacts, education and training.
- Social capital referring to actual and potential resources locked up in social and professional networks.

A fourth less developed concept in his literature is that of symbolic cultural capital that is a part of cultural capital based more on artistic legitimacy as its currency than on recognition or prestige as the currency associated with cultural capital (Anheier, et al., 1995).

2.4.2 CAREER COMPETENCIES

DeFillippi and Arthur (1994) put forward a model of career competencies broadly based on literature about firm competencies and relate corresponding areas of career competencies to the firm's "culture, know-how and networks", (Hall in DeFillippi and Arthur, 1994, p.308). The corresponding career competency derivatives are:



- Know-why competencies relating to personal career motivation,
 meaning, awareness of values and identification for the worker.
- Know-how competencies relating to specific skills or occupation related knowledge and expertise the worker holds, both tacit and explicit.
- Know-whom competencies relating to relationships and network contacts that are of value to the workers career.

Inkson and Arthur (2001) apply this model to indicate how individuals can actively accumulate career capital for future career advancement and achievement. Suutari and Mäkelä (2007) are concerned about the current focus on the DeFillippi and Arthur (1994) competency-based model and point out that it is still relatively theoretical and that little empirical data on it exists. They still persist though and use it as a model in their own study on career capital in global careers.

2.4.3 CAREER CAPITAL DRIVERS

Lamb (2007) puts forward that the individual's career capital develops along a career path while being influenced by the following drivers:

- Personal drivers
- Social drivers
- Educational drivers
- Organisational drivers
- The interactions between these drivers.



Lamb (2007) also constructs a *de facto* model as the essential outcome to the empirical data obtained during in-depth interviews. Although no career capital drivers are explicitly presented in the *de facto* model, the multi-dimensionality thereof allows for some interpretation. Individual context (personal drivers), organisational context (organisational drivers) and global context / knowledge economy are identified as drivers from the model.

In the study of Suutari and Mäkelä (2007) on how international careers with multiple relocations influence the career capital of workers the following drivers of career capital are presented:

- The breadth of responsibilities typically involved with
- The nature of the environment
- High levels of autonomy
- Cultural differences
- Number or relocations
- Personal activity in networking.

It is possible to match these drivers up with those found by Lamb (2007), for example;



Suutari and Mäkelä (2007)		Lamb (2007)
Breadth of responsibility	\rightarrow	Organisational driver
The nature of the environment	\rightarrow	Organisational / social driver
High levels of autonomy	\rightarrow	Personal / Organisational driver
Cultural differences	\rightarrow	Social driver / Interaction
Number of relocations	\rightarrow	Social driver
Personal activity in networking	\rightarrow	Social driver

TABLE 3. ANALOGIES FOUND BETWEEN CAREER CAPITAL DRIVERS FOUND IN THE RESEARCH OF SUUTARI AND MÄKELÄ (2007) AND LAMB (2007)

Lamb (2007) finds that, when singled out, these factors and their impact are not easily predictable and controllable. Literature (Myers and Pringle, 2005, Dickmann and Harris, 2005 and Dickmann and Doherty, 2008) explains that these drivers are influential on career capital whilst simultaneously interacting with other drivers. Specific drivers mentioned that are of interest to this research are managerial support and serendipity (unintended good fortune).

2.4.3.1 MANAGERIAL INPUT

Baruch (2006, p.132) suggests that since organisations can never own their employees, career management is a "risk management" process instead. As organisations generally invest in workers for the long-term interest of the organisation, workers that are free to leave at any time are a risky investment for the company, especially if the investment is in the form of education.

Walker (1973) suggests that management support for individuals' careers could lead to stable talent attraction, development, performance and ultimately retirement. The outcome of such a stable career environment does not only offer advantages to the individual worker, but to the organisation in the form of "influencing the career behaviour" (Walker, 1973, p.65) as well. This could offer



a reduction in risk towards investments as well as to human resource management.

Renwick and MacNeil (2002) support the idea of management involvement and especially line management involvement in human resource work, specifically also worker career development. They do advise however that (although various benefits and cost saving come about) the ability, willingness and time allocation of line-managers are not always sufficient to carry this out.

2.4.3.2 SERENDIPITY

In a letter written by Horace Walpole on 28 January 1754 to his friend Horace Mann, the word serendipity was used for the first time (Taleb, 2007). He derived the word from the old name in the Persian language for Sri Lanka; *Serendip*. He was using it as he was writing to his friend about the fairytale of the three Persian princes who unintentionally kept falling upon finds they were not searching for, but were so fortunate for discovering.

Unintentional good fortune has played a role even in the career of Sigmund Freud (de Chumaceiro, 1999) and although little empirical studies specifically investigate this subject, it is believed to have impacted various careers. Literature though, does not generally reference serendipity as a driver of careers or career capital and since in the true sense of the word it is actually an example of external locus of control, as explained further down, the opposite is more regularly cited. (Lamb, 2007, Currie, *et al.*, 2006 and Suutari and Mäkelä, 2007).



2.4.4 CAREER CAPITAL ACCRUAL

Cappellen and Janssens (2005) state that career advances of managers are mostly linked to them achieving quantitative goals. Mayrhofer, et al. (2004) again argues that individuals work in many different professions and that discontinuity is built into careers and together in different combinations form a type of patchwork career. Clarke and Patrickson (2008) in their study of employability state that they have not found a widespread transfer of responsibility for employability from organisation to individual. They further mention that there is still the expectation from workers that organisations will manage their careers through training and development.

Myers and Pringle (2005, p.428) in their study on career capital accumulation find that 100% of their sample started a self-initiated foreign career experience without any focus towards career development. They do find that 60% developed a conscious towards career development during the experience. It raises the question again regarding the knowledge worker taking active steps to manage, and control his/her career. As mentioned by Suutari and Mäkelä (2007), the knowledge worker is confronted with inequalities in employability that is based purely on the ability to accumulate, apply and continuously adapt career specific knowledge and a career management strategy is needed that optimises the career of the knowledge worker through having specific relevant and applicable knowledge, skills and insights contributing towards employability (Lamb, 2007).



2.5 LOCUS OF CONTROL

Vecchio (2003) describes locus of control as a cognitive dimension that is based on the notion of control, while Rotter, who introduced the concept of locus of control in 1966, is quoted in Furnham and Steele (1993, p.444) as saying:

"When a reinforcement is perceived by the subject as ... not being entirely contingent upon his action, then, in our culture, it is typically perceived as the result of luck, chance, fate, as under the control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him. When the event is interpreted in this way by an individual, we have labelled this a belief in external control. If the person perceives that the event is contingent upon his own behaviour or his own relatively permanent characteristics, we have termed this a belief in internal control."

Lamb (2007) states that an internal locus of control is a necessary component of career capital and she is supported in this regard by Currie, et al. (2006) who highlight that knowledge workers have an internal locus of control regarding career management. Suutari and Mäkelä (2007) provide further light on the subject by suggesting that workers take charge of their own careers by actively looking for career opportunities that offer flexibility in terms of career progress, regular training and development as well as a large degree of personal management.



2.6 CONCLUSION

Literature suggests a minefield of confusion for the knowledge worker regarding:

- A new more flexible and adaptable landscape of organisations (Dickmann and Doherty, 2008).
- A portfolio of career possibilities needed in this new landscape (Mayrhofer, et al., 2004).
- Competencies needed to accumulate relevant and applicable career capital for these careers (DeFillippi and Arthur, 1994).
- The right amount of awareness towards drivers of career capital (Lamb, 2007 and Suutari and Mäkelä, 2007).
- As well as a combination of internal locus of control versus preparedness for serendipitous events (Currie, et al., 2006 and de Chumaceiro, 1999).

For the knowledge worker concerned about his/her career the disintegration of intra-organisational career growth opportunities does not translate into a total lack of career opportunities as value is locked up in the complexity of employability, the boundaryless career and the new psychological contract.

Knowledge workers can unlock this value by understanding the drivers, identifying the relevant, applicable and career specific competencies, accumulating these in the most effective way (which might include some sequence) and by having the right combination and level of internal locus of control versus preparedness for fortunate events.



CHAPTER 3: RESEARCH QUESTIONS

The study continues the current search for more understanding in the field of career capital management for knowledge workers by specifically exploring the career capital attributes developed, accumulated and leveraged by knowledge workers towards recognisable career capital. Essentially the research identifies, puts in sequence and ranks components of career capital for knowledge workers. The study explores this through the following qualitative questions:

3.1 RESEARCH QUESTION 1:

What are the components of career capital formation for knowledge workers?

This research question is intentionally asked to provide a basis of data for the questions that follow. It is foreseen that the data collected with this question during the interviews will generally support existing literature including that of, but not exclusive to, Lamb (2007).

3.2 RESEARCH QUESTION 2:

What is the sequence in which the components are generally developed and/or accumulated?

This research question provides insight into the process of developing career capital specifically by investigating the sequence in which knowledge workers



pursue the development, accumulation and leverage of the components of career capital in their careers.

3.3 RESEARCH QUESTION 3:

What is the order of perceived importance of the following list of career capital components?

- Yourself
- Network
- Formal education
- Daily scope of work
- Work outside your daily scope of work
- Your manager
- Good fortune

This research question ranks a predetermined list of components of career capital from the literature in order of perceived importance. This offers insight into which components are perceived to have better leveraged the careers of the respondents.

3.4 RESEARCH QUESTION 4:

What role do managers play in career capital formation?

This research question explores the perceived influence of managers as an unintentional but possibly impacting component in career capital accrual.



3.5 RESEARCH QUESTION 5:

What role does serendipity (unintended good fortune) play in career capital formation?

This research question explores the perceived influence of serendipity (or unintended good fortune / a higher command) as an unintentional but possibly impacting component in career capital accrual.



CHAPTER 4: RESEARCH METHODOLOGY

4.1 INTRODUCTION

This chapter discusses the research methodology that was used for the study in terms of strategy, approach, data collection and analysis. A three-stage successive approach was followed and could be described as:

- A literature review of current research on career capital, including that of Lamb (2007).
- Collection of data through the use of face-to-face narrative style interviews followed by analysis of the data through content analysis and basic statistical measurements in an attempt to answer the research questions.
- Data interpretation and compiling of a roadmap of career capital accrual for knowledge workers.

4.2 RESEARCH STRATEGY

The overall approach adopted was that of an exploratory study that could be described in the words of Saunders, Lewis and Thornhill, (2003, p 98) as to "seek new insights" in the field of career capital. The aim was to provide information rather than to "uncover conclusive evidence" (Zikmund, 2003, p 55) and consequently the study followed a qualitative methodology.



4.3 RESEARCH DESIGN

The field of research, career capital, is comparatively new and the information and literature found was relatively limited. The selection of the knowledge workers themselves as an additional source of information was an effort to make use of more readily available sources of information (Zikmund, 2003). The underlying idea of the qualitative methodology was that it offers interpreted perspectives from the viewpoint of those interviewed (Hyde, 2000).

4.3.1 INTERVIEWS

Given the exploratory approach seeking new insights, data collection was done by utilising face-to-face narrative style interviews. Saunders, *et al.* (2003, p 245) described an interview as a "purposeful discussion" that could gather valid and relevant data. Using a multi-style approach each interview was approached in a semi-structured style, but each question (general topic) in the interview was then explored in depth, thereby allowing the subject to talk freely about events, activities, experiences and learnings. This multi-style approach was found to work well and to be very beneficial.

There are many advantages to both styles of interviews according to Zikmund (2003), with one of the main advantages being the possibility of two-way communication that is more flexible and versatile. Saunders, *et al.* (2003) argued that a major advantage of using multi-style interviews is that different methods could be used for different purposes in a study and that it further provides a form of triangulation or midway verification of the data obtained.



4.3.2 POPULATION

The target population of this study was the specific group of knowledge workers consisting of either graduate engineers or qualified information technology knowledge workers. The population was defined to these two groups of knowledge workers in an effort to limit the scope of the research and to remove the effect of variation of differences in career capital in different functional areas.

4.3.3 SAMPLE

The sample did not take racial group, gender, sexual orientation or religion into account, but was focussed in the Gauteng area due to accessibility for the face-to-face interviews. Due to time limits on this research project and the specific population of interest, it was not feasible to statistically select a sample at random where the probability of each case being selected could be established (Saunders, *et al.*, 2003). Consequently non-probability sampling was used as it offers alternative techniques based on subjective judgement (Zikmund, 2003), where data validity, especially in the case of qualitative data, is more as a consequence of the data collection and analysis skills than the size of the sample (Saunders, *et al.*, 2003).

Saunders, et al. (2003) state that in certain cases one can still generalise from non-probability samples about the population, but not on statistical grounds. To attempt answering the questions they propose that the researcher undertake an in-depth study on a very small sample. Such a research methodology offers an



"information-rich" (Saunders, et al., 2003, p.170) case to collect data from in an attempt to answer the research questions.

The sampling technique used was selected as judgement sampling and for the following reasons:

- It was not as extremely prone to bias and influencing as convenience sampling.
- It functioned as a pre-interview selection process that potentially saved large amounts of time.
- Since the population was quite specific and individuals fitting the profile
 were generally not geographically conglomerated, logistical issues at
 hand were of concern. One example was travel time, an average of one
 hour was spent driving to an interview and an additional hour driving
 back afterwards.

The feasible sample size concluded on was 13 members and the characteristics used for the selection of the sample were as follows (also view Appendix D and E, the interview request letters which clearly stipulated the sample characteristics, if more detail is required):

Engineering respondents had to:

- Work in the field of Engineering
- In a professional position, with some promotion track record
- Have between 5 to 20 years of working experience



- Have studied and/or qualified by completing a university or Technikon degree
- Have ±45 minutes they could forgo for a discussion
- Be prepared to discuss their career path in general terms.

Information technology respondents had to:

- Work in the field of IT
- Be in a professional position, with some promotion track record
- Have between 5 to 20 years of working experience
- Have studied and/or qualified but not necessarily by completing a university degree or Technikon (multiyear) qualification
- Have ±45 minutes they could forgo for a discussion
- Be prepared to discuss their career path in general terms.

4.3.4 UNIT OF ANALYSIS

The unit of analysis was the perception of the knowledge workers interviewed regarding:

- Skills developed
- Experiences and learnings accumulated
- The importance and sequence of these attributes.



4.3.5 INTERVIEW DESIGN

Saunders, et al. (2003, p 247) advised the use of unstructured interviews when "exploring in depth a general area" of interest. They also argued for major advantages when using multi-style interviews. The interview was therefore developed according to a schedule (resonant of a semi-structured style), but each question was around a general topic that was explored in depth (resonant of an in depth style). This allowed the subject to talk freely and in depth about specific career capital attributes.

An active attempt was made to conduct each interview under exactly the same circumstances, the following precautions were taken:

- Each interview had exactly the same opening
- Each interview started with exactly the same introduction to the necessary literature background
- Each interview contained the same 7 questions
- For each interview the 7 questions followed the same sequence
- The interview was pretested on two occasions on other members of the population.

The interview questions were structured in such a way that they attempted to address the research questions, see Appendix B for the interview schedule indicating the actual interview flow and Appendix C for the interview matrix signifying the linkage between the interview and research questions. The



subject was given the opportunity to talk freely about career events, activities, experiences and learnings within the context of interview questions 1 - 4.

Interview question 3 was added in, specifically to obtain information rich qualitative data from the respondents on their perceived career capital accrual process and this was done in an unusual way. Respondents were asked to draw their careers on a blank piece of paper in the form of a set of stairs or a ladder representing a time-line of their careers. They had to indicate significant events, activities, experiences and learnings on this drawing.

Question 5 offered a predetermined list of career capital attributes from literature and the subject had to rank these according to the perceived value in his/her personal career. Questions 6 and 7 again offered the subject the opportunity to talk freely about his/her individual career, but on the influence of a single predetermined career capital attribute respectively.

4.3.6 DATA COLLECTION

All the interviews were conducted in a confidential and private manner, with most interviews taking place at the knowledge worker's work-place behind closed doors and over lunch time. Some interviews were conducted in a coffee-shop environment; these were generally after working hours. All interviews were digitally recorded for further data capturing, all the respondents were asked beforehand and none of them objected. The average interview lasted one hour, the shortest interview lasted exactly 45 minutes and the longest interviews up to 2 hours. The first 4 questions were typically the bulk of the interview in terms of



time utilisation as the data of interest from these questions were generated, as described by Hyde (2000), purely from the viewpoint and perceptions of the respondents being interviewed.

4.3.7 DATA ANALYSIS AND CODING

The data was analysed in an effort to reduce it into interpretable sections of information. The objectives for each research question and mapping it to the relevant interview question as indicated in Appendix C were constructed to investigate the relevant complexities of career capital accrual for the knowledge worker.

Most of the interview questions presented qualitative data and was analysed through using the content and frequency analysis technique. This technique identifies common themes in the data in an effort to reduce the primary data (Miles and Huberman, 1994) and group them into constructs. Research question 1 (regarding the components of career capital formation for knowledge workers) was the most demanding to analyse as its data consisted purely of narrative feedback from two research questions asked to the respondents.

The constructs served as a categorisation that was used to analyse the frequency of certain themes occurring throughout the data. The content analysis was performed utilising an Excel® spreadsheet where all the interview data could be captured. All the interviews were lined up next to one another and common themes were identified in the data (Saunders, *et al.*, 2003). As the interview process advanced the researcher had to regularly extend the



constructs list and verify previous analysis, as a consequence the content analysis process was eventually discarded for the duration of the interviews and restarted after completion of the interview phase.

The outcome of the data analyses was organised per research question and typically presented in a rank ordered table. Whilst thirteen respondents were include in the process, the total count in the frequency column typically reflected higher values for the top constructs as there were multiple inputs from each respondent.

Research question 2 (regarding the sequence in which the components of career capital are generally accumulated) followed the same analysis system as research question 1, but had more information hidden in the qualitative data as respondents had to draw a graphical representation of their careers. The graphic representation had additional information and basic statistical values were calculated as the data was (as per methodology selected) not statistically significant. The values analysed were within the context of further understanding and interpretation, as presented in Chapter six of this report.

Research question 3 (regarding perceived importance of a list of career capital components) used a fixed sum instrument and the data was statistically analysed as an aggregate from all thirteen respondents. Similar to research question 2 only basic statistical values were calculated as the data was (as per the methodology selected) not statistically significant. Both research questions 4 and 5 regarding the influence of managers and serendipity in career capital formation were analysed using content and frequency analysis.



4.4 LIMITATIONS OF THE RESEARCH

With any research there are limitations and this study was no different:

- The study was exploratory and the sample was small, no inferences could therefore be made outside the sample and data could purely be reported to co-exist.
- The research only looked at the population of knowledge workers consisting of engineers and information technology workers, no conclusion could therefore be made outside these groups.
- Face-to-face interviews do have the disadvantage of not being fully anonymous. A limitation of the research was therefore the amount of trust that could be established between interviewer and subject in the short time available during the interview.
- The respondents did not always quickly grasp the full concept of career capital and as a result did not always easily identify components in their careers straight away.
- Subjectivity could be influenced by the editing of the qualitative data obtained (Zikmund, 2003). The quality of the systematic procedure that was followed was therefore invaluable in trying to eliminate subjectivity.

4.5 CONCLUSION

The three stages successive approach that was followed provided a systematic approach to develop the roadmap of career capital this research initially set out to do. The exploratory and consequent qualitative methodology employed



provided valuable information as it offered interpreted perspectives from the viewpoint of those interviewed.

The multi-style interview approach offered a rich contextual environment for the respondents that enabled them to share within the two-way communication style of the interview their own perspectives and perceptions. This methodology and style were seen as fundamental to the success of the research.



CHAPTER 5: RESULTS

5.1 INTRODUCTION

This chapter discusses the second stage of the research namely that of the data collected through the use of face-to-face narrative style interviews. A total of 13 face-to-face narrative style interviews were conducted with knowledge workers, nine with engineers and four with information technology workers. Literature on career capital refers to the relevant, applicable and career specific competencies accumulated during the career of a worker. For the knowledge worker concerned about his/her career, career management opportunities are locked up in the complexity of employability, the boundaryless career and the new psychological contract. Knowledge workers can unlock value by understanding the drivers, identifying the relevant, applicable and career specific competencies and by accumulating them in the most effective manner and sequence.

The interview matrix (Appendix C) was created prior to conducting the interviews and indicates the linkage between objectives constructed from literature, the research questions and the interview questions. The objectives were constructed to investigate the relevant complexities of career capital accrual for the knowledge worker and the interview questions were ultimately derived from these objectives. The mapping of the interview questions to the research questions as from the interview matrix was as follows:



- Research Question 1 (Components of career capital): Interview questions 1 and 2
- Research Question 2 (Sequence of components): Interview questions 3
 and 4
- Research Question 3 (Order of perceived importance of career capital components): Interview question 5
- Research Question 4 (Role of managers): Interview question 6
- Research Question 5 (Role of serendipity): Interview question 7.

5.2 FINDINGS FROM THE INTERVIEWS

Most of the interview questions presented qualitative data and the data collected was analysed through using the content and frequency analysis technique. This technique identifies common themes in the data and allows for these themes to be grouped together into constructs. The constructs serve as a taxonomy to the researcher, which is used to analyse the frequency of certain themes occurring throughout the data. The frequency value presented in the rank ordered tables, further down in this chapter, is this particular number and was ranked from highest to lowest in each table. This typically offered the researcher an idea of the perceived importance respondents attributed to a specific construct or theme.

The content analysis was performed utilising an Excel® spreadsheet where all the interview data could be captured. All the interviews were lined up next to one another and common themes were identified in the data. These common



themes were derived with the literature in mind, but in some cases directly from the data itself as no direct relation to specific literature could at the time be identified for some newly observed constructs. As the interview process advanced the researcher had to regularly extend the constructs list and verify previous analysis, as a consequence the content analysis process was eventually discarded for the duration of the interviews and restarted after completion of the interview phase.

The results from the data analysis are organised and reported here per research question and are typically presented in rank ordered tables or basic statistical values. Whilst thirteen respondents were include in the process, the total count in the frequency column typically reflects higher values for the top constructs as there were multiple inputs from each respondent.

5.3 RESULTS FOR RESEARCH QUESTION 1

What are the components of career capital formation for knowledge workers?

The results obtained for research question one are derived directly from aggregating interview questions one and two across the whole sample of respondents. The following rank ordered table (Table 4) demonstrates the main constructs after some related constructs were collapsed and aggregated to remove theme overlapping and to reduce the complexity of the table.

The results were as follows:



	Components of career capital identified by respondents	
Rank	Constructs	Frequency
1	Awareness of, adaptability to and management of context	29
2	Past working experience	22
3	Formal education and qualification	18
4	Technical ability	17
5	People relation management	14
6	Business acumen	12
7	Strategic thinking	10
8	Knowing and understanding self	9
9	Driving execution and delivery	8
10	Ongoing self-improvement and enlightenment	7
11	Having a time line for your career	6
12	Demonstration of high levels of motivation, energy and drive	4
12	Networking	4
14	Creative and innovative solutions	2

TABLE 4. THE COMPONENTS OF CAREER CAPITAL IDENTIFIED BY RESPONDENTS

5.4 RESULTS FOR RESEARCH QUESTION 2

What is the sequence in which the components are generally developed and/or accumulated?

The results obtained for research question two are derived directly from interview questions three and four across the whole sample of respondents. As respondents had to draw a graphic representation of their career paths to answer interview question three, customised rank ordered tables as well as basic statistical measures were used to analyse this alternative form of qualitative data into meaningful results.

Meaningful results were obtained and are presented here on career activities including:

 The starting points selected by respondents for the graphic representation.



- Career movements by respondents, both when moving between employers (i.e. boundaryless career moves) and career moves made inside employers (i.e. promotions, geographical relocations or lateral moves).
- Main career activities indicated by respondents for the interval before and after career movement.
- Significant accumulated career activities in intervals of the career.

5.4.1 ALL CAREER ACTIVITIES

For further comparison purposes all career activities, identified out of the graphic representation of each respondent, are presented here in rank ordered table form:

C	Career path activities indicated by respondents in their graphic representations		
Rank	Constructs	Frequency	
1	Accrual of working experience	54	
2	Formal education (functional and general)	41	
3	Accrual of industry knowledge	30	
4	Accrual of technical knowledge	29	
5	Moved between organisations	24	
6	Moved inside organisations	23	
7	Accrual of people knowledge (working with and understanding)	21	
7	Accrual of general business knowledge	21	
9	Accrual of knowledge of managing people	17	
10	Building a network	11	
11	Knowing why (Generally followed on an understanding of oneself)	10	
11	Accrual of project management experience	10	
11	Building a legacy	10	
14	Accrual of product specific technical knowledge	6	
15	Accrual of firm specific knowledge	5	
16	Performed national service (previously compulsory in South Africa)	3	
17	Specialist to generalist move	2	
18	Layed off	1	
18	Entrepreneurial	1	

TABLE 5. CAREER ACTIVITIES EXHIBITED BY RESPONDENTS IN GRAPHIC REPRESENTATIONS OF THEIR CAREER PATHS



5.4.2 CAREER STARTING POINT

Respondents had to select a starting point for the graphical representation of their careers, the following rank ordered table lists and ranks the starting points selected by respondents:

Career starting points selected by respondents		
Rank	Constructs	Frequency
1	A sense of identification and direction	5
2	First job	3
3	Formal education towards functional role	3
4	Compulsary national service - In service training	1
5	Entrepreneurial mindset	1

TABLE 6. CAREER STARTING POINT SELECTED BY RESPONDENTS

5.4.3 CAREER DURATION

At the end of drawing the graphical representation respondents were asked to indicate the date that they started to work as well as the duration in years of study that preceded it. The following data set presents the career lengths calculated from the data:

Career length of respondents				
Career length	Median of length per respondent	Range of length per respondent	Sum of lengths for all respondents	
Career length including upfront full-time study	15 years	11 - 26 years	207 years	
Career length exluding upfront full-time study	12 years	6 - 26 years	167 years	

TABLE 7. BREAKDOWN OF CAREER LENGTH OF RESPONDENTS



5.4.4 CAREER MOVES

The following data sets present the career moves made by respondents and typical activities exhibited by respondents before and after these career moves. The first table exhibits a summary of the career movements by respondents, both when moving between employers (i.e. boundaryless career moves) and when moving inside employers (i.e. promotions, geographical relocations or lateral moves):

Career moves made by respondents				
Median of moves per Range of moves Sum of moves for Career move respondent per respondent all respondents				
Between employers	2	0 - 6	25	
Inside employer	2	0 - 3	23	

TABLE 8. BREAKDOWN OF CAREER MOVES MADE BY RESPONDENTS

The following two tables relate specifically to career movements by respondents between employers (i.e. boundaryless career moves): The first table lists main career activities indicated by respondents for the interval before moving between employers:

Activities listed before career moves between employers			
Rank	Constructs	Frequency	
1	Accrual of people knowledge	5	
2	Accrual of industry knowledge	4	
3	Accrual of working experience (often the first working experience)	3	
3	Formal education	3	
3	Accrual of technical knowledge	3	
3	Building a network	3	
7	Knowing why	2	
8	Layed off	1	

TABLE 9. CAREER ACTIVITIES BEFORE CAREER MOVES BETWEEN EMPLOYERS, LISTED BY RESPONDENTS



The following table indicates main career activities indicated by respondents for the interval after moving between employers:

Activities listed after career moves between employers		
Rank	Constructs	Frequency
1	Accrual of technical knowledge	9
2	Accrual of industry knowledge	5
3	Accrual of working experience	3
3	Formal education	3
5	Accrual of knowledge of managing people	2
6	Accrual of product specific technical knowledge	1

TABLE 10. CAREER ACTIVITIES AFTER CAREER MOVES BETWEEN EMPLOYERS, LISTED BY RESPONDENTS

The following two tables in turn relate to career movements by respondents inside employers (i.e. promotions, geographical relocations or lateral moves):

The first table lists main career activities indicated by respondents for the interval before moving positions inside their employer:

	Activities listed before career moves inside employers		
Rank	Constructs	Frequency	
1	Accrual of general business knowledge	4	
2	Accrual of working experience	3	
2	Building a network	3	
4	Accrual of people knowledge	2	
4	Accrual of knowledge of managing people	2	
4	Building a legacy	2	
7	Formal education	1	
7	Accrual of industry knowledge	1	
7	Accrual of technical knowledge	1	
7	Knowing why	1	
7	Accrual of product specific technical knowledge	1	
7	Accrual of firm specific knowledge	1	
7	Specialist to generalist move	1	

TABLE 11. CAREER ACTIVITIES BEFORE CAREER MOVES INSIDE EMPLOYERS,
LISTED BY RESPONDENTS



The following table indicates main career activities indicated by respondents for the interval after moving positions inside their employer:

Activities listed after career moves inside employers		
Rank	Constructs	Frequency
1	Accrual of working experience	4
1	Accrual of general business knowledge	4
1	Accrual of knowledge of managing people	4
4	Accrual of project management experience	3
5	Formal education	2
5	Accrual of people knowledge	2
5	Accrual of firm specific knowledge	2
8	Accrual of industry knowledge	1
8	Building a network	1

TABLE 12. CAREER ACTIVITIES AFTER CAREER MOVES INSIDE EMPLOYERS,
LISTED BY RESPONDENTS

5.4.5 MAIN ACTIVITIES IN DISTINCT CAREER INTERVALS

For the second part of research question two, respondents had to answer interview question four, in which they were asked to group their accumulated career activities into intervals of 0-5 years, 6-10 years, 11-15 years and 16+ years. Not all respondents had careers of 16+ years and the frequencies typically decrease towards the later intervals. The following rank ordered tables present the various results obtained.

For the first interval, respondents had to group accumulated career activities in the interval 0-5 years into their careers, the data from that is as follows:



Col	Components of career capital identified by respondents, Interval 0-5 years		
Rank	Constructs	Frequency	
1	Formal education	9	
2	Accrual of technical knowledge	7	
3	Accrual of knowledge of managing people	2	
3	Accrual of working experience	2	
3	Knowing why	2	
6	Accrual of general business knowledge	1	

TABLE 13. CAREER CAPITAL COMPONENTS IDENTIFIED BY RESPONDENTS FOR THE INTERVAL 0 – 5 YEARS INTO THE CAREER

For the second interval, respondents had to group accumulated career activities in the interval 6 - 10 years into their careers, the data from that is as follows:

Components of career capital identified by respondents, Interval 6-10 years		
Rank	Constructs	Frequency
1	Application of knowledge	8
2	Accrual of general business knowledge	7
3	Accrual of knowledge of managing people	4
3	Accrual of technical knowledge	4
5	Formal education	2
6	Building a legacy	1
6	Knowing why	1
6	Team work	1

TABLE 14. CAREER CAPITAL COMPONENTS IDENTIFIED BY RESPONDENTS FOR THE INTERVAL 6 – 10 YEARS INTO THE CAREER

The third interval respondents had to group accumulated career activities for the interval 11 - 15 years into their careers, the following table present the data from the third interval:



Components of career capital identified by respondents, Interval 11-15 years					
Rank	Constructs				
1	Accrual of knowledge of managing people	5			
1	Managing various stakeholders	5			
3	Accrual of general business knowledge	4			
4	Accrual of corporate knowledge	2			
4	Accrual of technical knowledge	2			
4	Formal education	2			
7	Accrual of working experience	1			
7	Building a legacy	1			
7	Entrepreneurial	1			
7	Strategic thinking	1			

TABLE 15. CAREER CAPITAL COMPONENTS IDENTIFIED BY RESPONDENTS FOR THE INTERVAL 11 – 15 YEARS INTO THE CAREER

The fourth and final interval that respondents had to group accumulated career activities for was the interval 16+ years, only 3 respondents fall into this category and had the following results:

Components of career capital identified by respondents, Interval 16+ years				
Rank	Constructs	Frequency		
1	Accrual of corporate knowledge	2		
2	Strategic thinking	1		
2	Accrual of technical knowledge	1		

TABLE 16. CAREER CAPITAL COMPONENTS IDENTIFIED BY RESPONDENTS FOR THE INTERVAL 16+ YEARS INTO THE CAREER

When aggregating the results for all intervals and presenting the top two constructs from each interval, the components accumulated and listed as most significant over the careers of the respondents are:



Components of career capital identified by respondents, All intervals					
Interval	Rank	Constructs	Frequency		
0 - 5 years	1	Formal education	9		
0 - 5 years	2	Accrual of technical knowledge	7		
6 - 10 years	1	Application of knowledge	8		
0 - 10 years	2	Accrual of general business knowledge	7		
11 - 15 years	1	Accrual of knowledge of managing people	5		
11 - 15 years	1	Managing various stakeholders	5		
16+ years	1	Accrual of corporate knowledge	2		
101 years	2	Strategic thinking	1		

TABLE 17. TOP TWO COMPONENTS OF CAREER CAPITAL FOR ALL CAREER INTERVALS

5.5 RESULTS FOR RESEARCH QUESTION 3

What is the order of perceived importance of the following list of career capital components?

The results obtained for research question three are derived directly from interview question five. In answering research questions three respondents had to divide a hundred marks between seven pre-selected components of career capital according to the value each offered towards his/her accumulated career experience. The components of this fixed sum instrument were selected from literature, not purely because of perceived importance, but also because of particular interest for this study. The results were as follows:



Perceived order of career capital components as identified by knowledge workers							
Rank	Component	Median	Range	Mean			
1	Yourself	20	10 - 40	24.4			
2	Formal education	15	8 - 35	16.5			
2	Scope of work	15	5 - 45	15.9			
4	Work outside scope of work	10	2 - 20	10.6			
4	Your network	10	0 - 50	13.9			
6	Manager	8	5 - 25	10.6			
6	Serendipity	8	2 - 20	8.1			
				100.0			

TABLE 18. THE PERCEIVED ORDER OF CAREER CAPITAL COMPONENTS

The data obtained was statistically analysed as an aggregate from all thirteen respondents and only basic statistical values were calculated and are provided here. Since the sample is small, outlier values tend to skew the mean value towards it, the median (value of the middle observation) is therefore calculated as it is not affected by outlier values.

The median here indicates the relative importance of each component as perceived and selected in aggregate by the respondents. The range indicates the amount of disagreement amongst the respondents on their selections for each component.

As per the definition of a fixed sum instrument the total of all values attributed to components must sum up to a particular value. For this instrument the value was selected as 100 and although the mean is not used for statistical measurements, it is included in the table as a control measure. The sum of the means always has to be the same value as the fixed sum of the instrument and will only be different if one or more of the respondents made a calculation error.



5.6 RESULTS FOR RESEARCH QUESTION 4

What role do managers play in career capital formation?

The results obtained for research question four is derived directly from interview question six across the whole sample of respondents. In answering research question four respondents had to consider and discuss the influence of good or bad managers as a possible influence of career capital. Responses were narrative and the data was qualitative, through coding of the data it was grouped into the following scale:

- Has no influence
- Has some influence
- Has an influence
- Has a strong influence

The results were as follows:

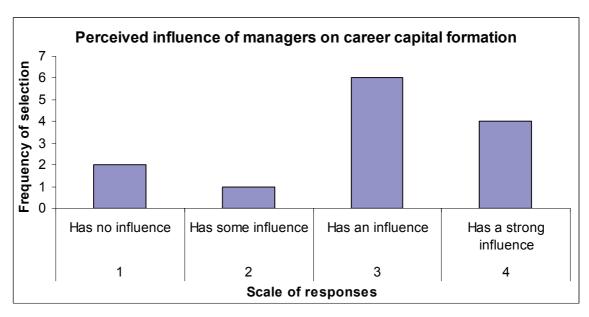


FIGURE 2. THE PERCEIVED ROLE OF MANAGERS IN CAREER CAPITAL FORMATION



5.7 RESULTS FOR RESEARCH QUESTION 5

What role does serendipity (unintended good fortune) play in career capital formation?

The results obtained for research question five is derived directly from interview question seven across the whole sample of respondents. In answering research question five respondents had to consider and discuss the influence of serendipity as a possible influence of career capital. The qualitative data was coded and responses were grouped into the following scale:

- Has no influence
- Has some influence
- Has an influence
- Has a strong influence

The results were as follows:

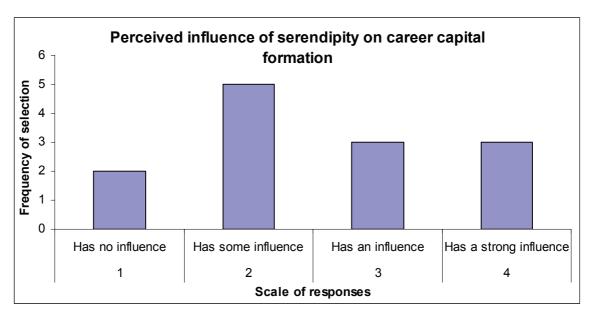


FIGURE 3. THE PERCEIVED ROLE OF SERENDIPITY IN CAREER CAPITAL FORMATION



5.8 CONCLUSION

The results generated through analysing data from the 5 research questions have significant value for this research. The results are simultaneously unexpected and fresh, but supportive to a large extent of the literature studied and described in Chapter two around the new organisational landscape, career management and career capital.

In Chapter six these results, together with the literature review are discussed in significant detail. The literature offers some understanding of the results obtained while putting some questions towards not only the knowledge worker, but the new organisation as well.



CHAPTER 6: DISCUSSION OF RESULTS

6.1 INTRODUCTION

This chapter forms part of the third stage of the research namely that of discussing and interpreting the results distilled from the data in Chapter five in more detail. All five research questions and the seven consequent interview questions were derived from literature as discussed in Chapters two and three respectively. As a result the relationship between the results and the literature is revisited and investigated here in an attempt to close the academic circle.

The methodology as described in Chapter four was to:

- Have a literature review of current research on career capital.
- Collection of the data through the use of face-to-face narrative style interviews with data analysis through content analysis and basic statistical measures.
- Data interpretation and the compiling of a roadmap of career capital accrual for knowledge workers.

The results obtained through analysis in Chapter five have significant value for this research. The content analysis technique allowed for the aggregation of themes in the data, offering significance and clarity towards the accrual of career capital components accumulated by knowledge workers throughout their careers.



Career capital is not a brand new concept any longer, still the research results discussed in this chapter offers an enhanced and fresh perspective towards literature which has been published to date on the topic. This chapter aims to show the relevance of the study by exploring the results in the context of the literature.

6.2 RESEARCH QUESTION 1:

This question aims to identify the components of career capital formation for knowledge workers in the new world of work. The question was intentionally asked to provide a basis of data for deeper understanding of the further research questions in this report.

6.2.1 SUPPORTING LITERATURE

As was predicted in the discussion of Chapter three, there is strong support found in the data of research question one, specifically towards the study of Lamb (2007). A similar methodological approach was followed by the Lamb study and aggregated results were also analysed through content analysis and listed in rank ordered tables. Take note that the Lamb (2007) study as part of the literature reviewed for this research, played a noticeable role in construct formulation due to the similar nature of the first research questions.



The results of research question one indicates the top four ranked constructs (see Table 4) to be:

- Ranked 1st Awareness of, adaptability to and management of context
- Ranked 2nd Past working experience
- Ranked 3rd Formal education and qualification
- Ranked 4th Technical ability.

Lamb (2007) identifies qualities and skills that should be actively focused on in developing career capital and lists, under the top five qualities and skills in her results, three of the four components mentioned above in closely resembled constructs:

	Ranked in	
	research	Ranked by
Construct	question 1	Lamb (2007)
Awareness of, adaptability to and management of context	1	1
Past working experience	2	3
Formal education and qualification	3	5
		Combination of
Technical ability	4	4 & 8

TABLE 19. SIMILARITIES FOUND BETWEEN RESEARCH QUESTION 1 AND RESULTS FROM LAMB(2007)

6.2.2 AWARENESS OF, ADAPTABILITY TO AND MANAGEMENT OF CONTEXT

Based on the frequency of the aggregated counts, this theme was mentioned by respondents as the most significant component of career capital, as shown in



Table 4. During the interviews respondents regularly introduced the concept of being aware of the context, being able to adapt to the context, but most of all being able to manage oneself and one's career within this dynamic context. One respondent said: "you need to constantly develop your gut-feel for the environment". Another mentioned: "know what facets affect your day-to-day operations, it might be financial aspects, economic aspects or facets of business you never have to deal with directly". One particular respondent said: "know the vocabulary in and around your industry ... listen out for those words ... be sensitive to them and know the times in which they have meaning".

Literature supports this component as Dickmann and Doherty (2008) state that the organisational landscape is becoming more flexible and adaptable. Becker and Haunschild (2003) for example indicate that boundaryless careers are a direct result of organisations loosing the ability to provide stable environments for internal careers. DeFillippi and Arthur (1994) explain that the career opportunities of knowledge workers stretch across the boundaries of a single employer where workers develop the ability to adapt and manage the context of their careers.

6.2.3 PAST WORKING EXPERIENCE

Ranked as the second most significant component of career capital by respondents is the accumulated past working experience of the knowledge worker, see Table 4. The working experience of the knowledge worker consists of various components including amongst others, "time in the seat" as referred



to by one respondent, variety of responsibilities, size of projects, impact of decisions, speciality of knowledge obtained, complexity of technology implemented and monetary value managed. Respondents typically referred back to the learnings involved in past experience and the value of that towards future career moves and not very often towards to the particular success or longevity of experiences.

As Inkson and Arthur (2001) explain, careers are the repositories of knowledge, where the accumulated experience is career capital to the individual. As individuals move between organisations they take specific knowledge with them which might benefit both the individual, the organisation and the industry, depending on the particular situation. Hillage and Pollard in Clarke and Patrickson (2008) also agrees that individuals integrate past working experiences into their career capital which actualise future employability.

6.2.4 FINDINGS FOR RESEARCH QUESTION 1

In summary, significant components of career capital identified by respondents are supported by literature in general and discussed in particular on the two higher aggregated count components above. Significant components identified by respondents are:

- Context awareness, adaptability and management
- Past working experience
- Formal education and qualification
- Technical ability



• People relation management.

6.3 RESEARCH QUESTION 2:

This question aims to provide insight into the process of developing career capital specifically by investigating the sequence in which knowledge workers pursue the development, accumulation and leverage of the components of career capital in their careers. The results obtained from the graphical representation of career paths and grouping of the significant components and activities by respondents contribute towards the understanding of knowledge worker career management in the new organisational landscape.

6.3.1 CAREER PATH ACTIVITIES

Data analysis similar to that followed for research question 1 resulted in a similar rank ordered table for career path activities. These activities are not necessarily career capital components, but were indicated by respondents to be relevant in managing their careers. Based on the frequency of the aggregated counts the top five career activities out of eighteen identified are:

- Ranked 1st Accrual of working experience
- Ranked 2nd Formal education (functional and general courses)
- Ranked 3rd Accrual of industry knowledge
- Ranked 4th Accrual of technical knowledge
- Ranked 5th Career movement between organisations.



Interesting to note is that context awareness, adaptability and management which is the top ranked component of career capital according to research question 1 is not even in this list. The other career capital components listed and discussed above are well presented though, see the following table:

Construct	Ranked in research question 1	Ranked in research question 2
Awareness of, adaptability to and management of context	1	-
Past working experience	2	1
Formal education and qualification	3	2
Technical ability	4	4

TABLE 20. SIMILARITIES FOUND BETWEEN RESULTS FROM RESEARCH
QUESTION 1 AND RESEARCH QUESTION 2

6.3.1.1 FORMAL EDUCATION AND QUALIFICATION

Ranked as the second most utilised career activity here (and the third most mentioned component of career capital in research question 1) formal education includes various forms of formal and some forms of informal training. The differentiating factor is that the training always leads to some form of specialised knowledge. As Drucker (1994) suggests the knowledge career is somewhat of an elusive career to the non-knowledge worker since, amongst others, knowledge workers acquire admission to their jobs through formal education.

6.3.1.2 ACCRUAL OF INDUSTRY KNOWLEDGE

The data shows that the third most performed career activity is the accrual of industry knowledge. This activity generally fell under the same construct as past working experience in research question 1, but was specifically kept apart for



this research question. Inkson and Arthur (2001) support the idea of careers being repositories of knowledge, where individuals accumulate experiences that they carry with them when moving careers between employers. They explain that if firm specific knowledge is accumulated everyone loose out with boundaryless career moves. When functional or specialist knowledge are accumulated, the knowledge worker and his new employer find value in the boundaryless move, but when industry knowledge or generally applicable functional and specialist knowledge are accumulated the whole industry benefits from aggregated boundaryless career moves in the medium to long term.

6.3.2 CAREER STARTING POINT

Deviating somewhat from the typical rank ordered table mentioned up to this point, this career path activity was ranked by itself in a rank ordered table as each of the thirteen respondents had to select his/her own starting point for the graphical representation of their careers. Although no career capital component as such could be distilled or isolated from this exercise alone, it offers valuable information regarding locus of control of the respondents.

The data show (see Table 6) that the starting point identified as the highest ranked is a sense of identification and direction, clearly according to the definition of Vecchio (2003) an internal locus of control scenario as respondents believe they took active control of their careers at that point in time. The starting



point identified as the second highest ranked is the respondent's first job. In contrast this is an external locus of control perspective.

In aggregate, out of the thirteen respondents, nine indicated an internal locus of control starting point (the constructs ranked 1st, 3rd and 5th, see Table 6), while four respondents indicated an external locus of control starting point (the constructs ranked 2nd and 4th, see Table 6) to their career

6.3.3 CAREER MOVES

By investigating the career movements indicated by respondents on the graphic representations of their careers, some interesting data is uncovered. Moving between employers (i.e. boundaryless career moves) and when moving inside employers (i.e. promotions, geographical relocations or lateral moves) are indicated in Table 8. The table presents that twenty-five career moves were indicated between employers, while twenty-three career moves were indicated inside employers.

The range of moves for each of these is interesting as well, career moves between employers varied between 0 and 6 moves per respondent while career moves inside employees varied between 0 and 3 moves per respondent. As described in Table 7, these moves all took place in careers of the respondents ranging in length between 11 and 26 years, including time spent in formal education.



In the context of the literature it raises interesting questions, as various literature on boundaryless careers are at one that the traditional organisation is disappearing and that new organisations are unable to offer, or even promise long-term job outlooks (Clarke and Patrickson, 2008, Inkson and Parker, 2005 and DeFillippi and Arthur, 1994). It is evident from the results that respondents were still able to make career moves inside companies, but marginally to a lesser degree. In the light of these results, one has to agree with Baruch (2006) who argues that while many organisations have shifted, many have stayed relatively stable and still apply well established career management and planning strategies maintaining the traditional career system.

A further point of interest here is the typical career activities the respondents indicated before and after career moves. The following significantly ranked activities were identified regarding career moves between employers:

Rank	Activities before	Activities after
1	Accrual of people knowledge	Accrual of technical knowledge
2	Accrual of industry knowledge	Accrual of industry knowledge

TABLE 21. ACTIVITIES INDICATED BEFORE AND AFTER CAREER MOVES
BETWEEN EMPLOYERS

Although no specific literature was found regarding this interesting observation, it is of value to indicate that activities before career moves between employers were of value to a broader organisational setting than for example activities after the moves. This idea supports the literature of DeFillippi and Arthur, 1994 as well as Lamb (2007) who refer to having specific relevant and applicable knowledge, skills and insights contributing towards employability.



The following significantly ranked activities were identified regarding career moves inside employers:

Rank	Activities before	Activities after
1	Accrual of general business knowledge	Accrual of working experience
2	Accrual of working experience	Accrual of general business knowledge

TABLE 22. ACTIVITIES INDICATED BEFORE AND AFTER CAREER MOVES INSIDE EMPLOYERS

What is of interest here is that accrual of working experience is present as a significant career activity before and after career moves inside organisations, but is more significant after career moves than accrual of general business knowledge.

6.3.4 ACTIVITIES IN DISTINCT CAREER INTERVALS

For this section of research question two, the aim was specifically to provide insight into the sequence of career activities followed by knowledge workers. The results were obtained from respondents grouping together accumulated career experiences into the intervals of 0 - 5 years, 6 - 10 years, 11 - 15 years and 16+ years. The most constructive way to look at the outcome of this part is to view it in a time line, since that is exactly what it is (see Tables 13 - 16 if more detailed information is needed on each interval).



Interval	Construct ranked 1st	Construct ranked 2nd
_		
0 - 5 years	Formal education	Accrual of technical knowledge
6 - 10 years	Application of knowledge	Accrual of general business knowledge
	Accrual of knowledge of managing	
11 - 15 years	people	Managing various stakeholders
16+ years	Accrual of corporate knowledge	Strategic thinking

TABLE 23. CAREER INTERVAL ACTIVITIES

The time line indicates the top two ranked constructs for each interval to gradually migrate from learning functional know-how to general know-how (DeFillippi and Arthur, 1994) and from accumulating knowledge, to applying knowledge and to sharing knowledge.

Literature supports this notion with Suutari and Mäkelä (2007) stating that the knowledge worker is confronted with inequalities in employability resulting from the ability to accumulate, apply and continuously adapt career specific knowledge. Lamb (2007) also discusses how the individual starts with a primary set of capitals that is his/her nature or temperament and then develops and accumulates along a career path, while being influenced by external drivers.

6.3.5 FINDINGS FOR RESEARCH QUESTION 2

In summary, considerable insights have been gained through analysing the data from research question 2 and are supported by literature as discussed here. Respondents in aggregate were found to:

 Present specific career activities aligning with career capital components from literature.



- Select career starting points aligning to an internal locus of control (Vecchio, 2003).
- Present career moves indicating both traditional and boundaryless career moves (Baruch, 2006).
- Indicate activities before boundaryless career moves associated with employability (DeFillippi and Arthur, 1994).
- Accumulated career experiences echoing literature suggesting a continuous learning culture along a specific career path (Suutari and Mäkelä, 2007).

The answers to research question 2 has therefore agreed, contributed and offered new insights to existing literature in the field of career capital accrual for knowledge workers.

6.4 RESEARCH QUESTION 3:

This research question sought to offer insight into which components are perceived to have better leveraged the careers of the respondents. In answering the question respondents had to divide a hundred marks between seven pre-selected components of career capital according to the value they offered towards their specific accumulated career experience. The median value calculated for each component indicates the relative importance of the specific component as perceived by the respondents in aggregate.

The sequence of most important to least important selected by respondents is as follows:



- Yourself (the knowledge worker him/herself)
- Formal education
- Scope of work
- Work outside scope of work
- Your network
- Manager
- Serendipity.

6.4.1 YOURSELF

Based on the statistical median obtained from the analysis (Table 18), this component was allocated the most aggregated marks by the respondents with a median of 20 marks per respondent. The range was relatively large with values given between 10 and 40. The specific component refers to the knowledge worker him/herself and to the influence they have on building, controlling or affecting their own career capital accumulation.

Again the input from respondents indicates a career capital component that is in the control of the knowledge worker themselves. This outcome is therefore also supporting an internal locus of control perception from the respondents (Vecchio, 2003), as also discussed in the findings of research question 2 regarding the career starting point selections.



6.4.2 FORMAL EDUCATION

This component was allocated the second most aggregated marks by the respondents with a median of 15 marks per respondent. The range was relatively large with values attributed ranging between 8 and 35. Ranked in both research questions 1 and 2 as important components of career capital, the results are resonant to literature on knowledge careers and boundaryless careers. As discussed, literature states that knowledge careers are characterised by a formal learning period followed by an application of knowledge period (DeFillippi and Arthur, 1994 and Drucker, 1994).

6.4.3 SCOPE OF WORK

In a close third place with a median of 15 marks per respondent as well, but a lower range of 5 to 45, was scope of work. This component included both past working experience already highlighted in research question 1 and 2 as a very important component of career capital as well as current work responsibilities resulting in accrual of knowledge through functional activities. Table 5 discussed in the analysis of research question 2 indicates various functional activities resulting in knowledge accrual, amongst others working on projects, managing projects, managing people or managing the business.

6.4.4 OTHER COMPONENTS

The lower indicated components all received below average marks from respondents, those included:



- Work carried out outside the normal scope of work, with a median of 10
- The influence of the network of the respondent, with a median of 10
- The manager, or past managers of the respondent, with a median of 8
- Serendipity or unintended good fortune, with a median of 8.

6.4.5 FINDINGS FOR RESEARCH QUESTION 3

In summary, research question 3 has been to a large extent confirming the importance of components identified in research question 1 and 2. See the following table for a comparison of the first 3 components:

Construct	Ranked in research question 3	Ranked in research question 2	Ranked in research question 1
Yourself	1	3, 4 & 7	1
Formal education	2	2	3
Scope of work	3	1	2

TABLE 24. SIMILARITIES FOUND BETWEEN RESULTS FROM RESEARCH QUESTION 1, 2 AND 3

The following graph provides the perceived relative value that respondents attributed to the seven components. Note that respondents attribute more than half (nearly 60%) of the value these components have offered towards their accumulated career experience, to the top three components.



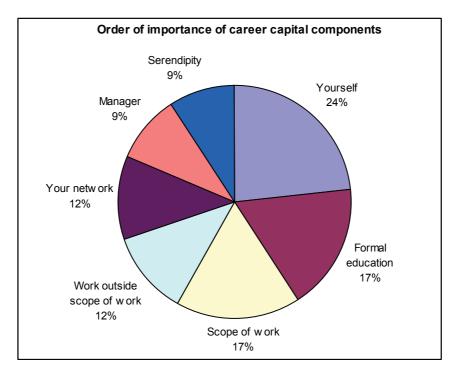


FIGURE 4. PERCEIVED RELATIVE IMPORTANCE OF CAREER CAPITAL COMPONENTS

The manager, or past managers of the respondent and serendipity, although rated the lowest out of the seven provided by respondents, were attributed substantial credibility considering their external locus of control nature and especially on serendipity its lack of supportive literature.

6.5 RESEARCH QUESTION 4:

This research question explores the perceived influence of managers as an unintentional but possibly impacting component in career capital accrual. The results obtained from interview question 6 in the form of narrative qualitative discussions were coded and grouped into a scale measuring attitudes with an ordinal categorical variable (similar to the Likert scale often used for measuring



attitudes). Figure 2 depicts that ten out of the thirteen respondents said that managers have an influence or a strong influence on career capital formation.

In defence of this result one should remember that Renwick and MacNeil (2002) support the idea of management involvement in human resource work, they suggest that especially worker career development should be an active focus area for line managers. Respondents, from their perspective, answered research question four by stating that the influence of managers on career capital accrual is undeniable.

6.6 RESEARCH QUESTION 5:

This research question explores the perceived influence of serendipity (unintended good fortune or viewed by others as a higher command) as an unintentional but possibly impacting component in career capital accrual. The results obtained from interview question 7 in the form of qualitative data were coded and grouped into a similar scale as research question 4, i.e. measuring attitudes with an ordinal categorical variable.

Results presented in Figure 3 suggest the general feeling of respondents is that serendipity has at least some influence on career capital accrual with five from thirteen selections made in this category. Six respondents indicated that they feel serendipity either has a definite or a strong influence on career capital formation. Only two respondents indicated that serendipity has no value as component of career capital.



These are valuable findings as nearly half the respondents (six out of thirteen) feel that serendipity strongly influences career capital formation as a component thereof. This implies some component of external locus of control being present in the respondents. Although respondents convincingly reasoned during earlier interview questions that they actively take control of their careers, they admit here that some component of career capital is out of their control and that they could only hope to be prepared for some situations when they presents itself.

This result tends to give context to the outcome of research question 3 where respondents attributed at least nine percent of the marks to serendipity.

6.7 A ROADMAP OF CAREER CAPITAL ACCRUAL

6.7.1 DEVELOPMENT

Significant insights gained from answering the research questions have appealed towards the formulation of an integrated model or roadmap of career capital accrual. Some characteristics and components have been identified through the empirical process that should be presented as integral to the sequence of events of career capital accrual:

- Awareness of, adaptability to and management of context
- Accrual of working and technical knowledge and past working experience



- Formal education, functional and often general curriculums at a later stage
- Internal locus of control
 - Strong at the career starting point
 - Eroding somewhat during mid-career capital accrual
 - Rebuilding again in mature career phases
- Accrual of industry knowledge, supporting employability
- Career movements, both between and inside organisations
- Typical career activities before and sometimes after career moves
- Recognisable career interval activities
 - Early stage Typically formal education and accrual of technical knowledge
 - Second-stage Typically Application of knowledge and accrual of more general business knowledge
 - Third stage Typically accumulation of knowledge in managing people in cross-functional environments
 - Fourth stage Typically accumulation of corporate knowledge and strategic thinking
- Knowing self phase with outcomes not the same for all knowledge workers: some decide to grow careers into new phase, others stay put and still others fall back to earlier phases and start over again.
- Continuous learning culture
- Managers affecting employees at all career levels with various degrees of effectiveness and influence



 Serendipity influencing employees at any career level at no particular time.

In summarising these findings the roadmap of career capital accrual for knowledge workers was created as illustrated below:



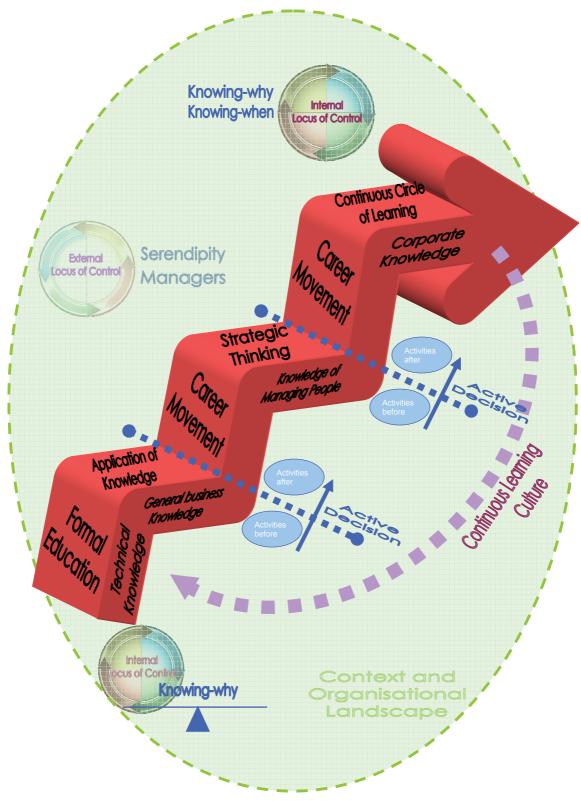


FIGURE 5. A ROADMAP OF CAREER CAPITAL ACCRUAL FOR KNOWLEDGE WORKERS



6.8 COMPONENTS OF THE ROADMAP

This roadmap of career capital accrual for knowledge workers presented here is based not only on literature, but also on the empirical research performed. To interpret the integrative nature of the roadmap the following explanation is provided:

The roadmap represents the career of the knowledge worker and the red stepping arrow is the career advancement seen from the eyes of the worker. For the knowledge worker the career starts somewhere low and progresses upwards through time. This process of progression is not linear and phases of lateral growth, or near stagnation from the perspective of career advancement do exist. Other phases of sudden advancement are equally evident and are normally perceived by the knowledge worker as the intervals around career movements.

To begin to understand the model it is important to view that the process happens inside a particular context. For the knowledge worker this context is the new organisational landscape. As the new organisational landscape is flexible and dynamic it is presented here as a stretched circle figure, with a perforated border, symbolising its constant change and adaption to more systemic drivers such as globalisation.

The knowledge worker often has a perception of him/herself (knowing why capital) at the start of the career which offers an anchor point as well as some direction to the career. This is indicated in the roadmap through the pair of



scales showing personal balance affecting career direction. This starting point of the career is considered an internal locus of control phase.

During this first stage of the career, formal education has a particularly prominent place in the career as most knowledge workers start of by accumulating knowledge. The knowledge accumulated is typically technical knowledge and functional by nature. The next phase in the career is when knowledge could be applied to create economical value which in turn creates an awareness of general business knowledge.

In this phase knowledge workers typically experience their first personal reflection stage which is generally instigated by the changes brought along with career movements. Knowledge workers make active decisions regarding career moves and align and focus on developing specific activities to make these moves. Not all knowledge workers decide to move across these invisible career gates, but those who do typically loose short-term career capital development in an effort to increase their knowledge based for long-term career capital accrual. Activities after career moves typically involve company specific knowledge accumulation in the short-term, but normally results in diversification of skills in the longer-term.

For the knowledge worker advancing through the career gate, the second stage echoes the first stage to a large degree and generally only differs in type of knowledge and resulting career capital accumulated. Knowledge is accumulated and applied, formal education is often attended, and the stage eventually leads to another career gate.



Some workers will keep on moving through these career gates and accumulate knowledge that is less and less functional and specialised but more industry and corporate focussed. Knowledge workers at this stage of their careers generally achieve high levels of employability as their careers start to produce results across industries.

All knowledge workers including those continuing to the corporate knowledge stage again reach a stage of internal locus of control where career decisions are based on knowing-why and knowing-when. As mentioned by one respondent during the interview: "I knew from the beginning I was not ready for the new role, but the boss left and I was the best candidate to take his job ... I eventually left for another company as I had to go back down the ladder again and gain more knowledge"

All along this road as described above, the career of the worker is being influenced by factors out of the control of the knowledge worker, serendipity was investigated and found to be one of them. Managers were also researched, one can not control his/her actions, but there is some form of control in selecting him/her.

It is the knowing-how career capital of the knowledge worker (skills, knowledge, formal education and competencies), influenced by the knowing-why career capital (career motivation, meaning, awareness of values and identification) creating an environment of preparedness or awareness towards these external, but influencing factors.



It leaves the knowledge worker with an interesting find, know-how career capital one can control, manage and develop, knowing-why capital is mostly as a result of personality which, one could shape to some extent, but rarely change. To fully capitalise on these events is therefore a combination of preparedness, awareness and fit, a process of pursue and let go simultaneously.

6.9 CONCLUSION

The roadmap of career capital accrual for knowledge workers is an integrated model showing the practical side of career capital progression. The model is based on, but not limited to literature presented and is adding a new dimension to it. For the knowledge worker concerned about developing his/her career the model offers a key to unlock value by understanding the drivers, sequences and career gates involved in career capital accrual.

The research objectives as defined by the research questions in Chapter three have therefore been met, specifically the sequence in which the career capital components are accumulated.



CHAPTER 7: CONCLUSION

7.1 INTRODUCTION

This chapter makes up the final section of the third stage of the research

namely that of highlighting the findings described in Chapter six and discussing

the results distilled from empirical data. Recommendations for knowledge

workers and organisations employing knowledge workers are offered and some

recommendations for future research are discussed.

7.2 RESEARCH APPROACH

This research report was approached in three stages, firstly a review of existing

literature on career capital, secondly an empirical study of career capital accrual

in knowledge workers and thirdly analysing, interpreting and discussing the

results.

The study was aligned to continue the current search for more understanding in

the field of career capital management for knowledge workers by focusing

specifically on career capital activities developed, accumulated, leveraged and

a possible sequence in which the components are acquired, accumulated and

developed.

This directly maps into the research questions discussed in Chapter three.



7.3 RESEARCH FINDINGS

The research findings presented in Chapter six were derived from literature and enriched through empirical data and therefore link back directly into existing literature, whilst contributing to the dimensionality thereof. The contributions to existing literature include:

- Careers take place inside a context that is changing, dynamic whilst simultaneously containing old and new components of careers.
- Knowledge workers often have a perception of themselves at the start of the career offering a career anchor and direction.
- The new organisational landscape promotes internal locus of control, but some elements affecting careers, for example serendipity, introduce a partial external locus of control.
- Literature (Drucker, 1994) indicates that knowledge careers are characterised by a formal learning period, an application of the knowledge period, as well as a period of continuous adaptation to the organisational settings. This study is offering insight into the sequence and synthesis of these events.
- Career movements often create career gates due to the changes involved. Not all knowledge workers enter through these gates as some prefer to keep the status quo while others move downwards again as part of the continuous culture of learning.
- These career gates often act as career stage identifiers as knowledge accumulated differ before and afterwards. This is a result of career



movements having particular career activities associated with them, both before and afterwards.

 Careers are also influenced by factors out of the control of the knowledge worker and capitalising on these factors requires a combination of preparedness, awareness and fit.

7.4 RECOMMENDATIONS FOR KNOWLEDGE WORKERS

The empirical data presents knowledge workers with high levels of career capital not only in the top-end of the career path, but also in front of various career gates where these individuals prefer to stay and create value for themselves and their organisations. The individuals advancing through these career gates are typically characterised by more general, business and corporate skills. Some individuals preferring to stay in front of a specific career gate are typically characterised by accumulating more specialist and focused technical knowledge and skills.

Given these findings, knowledge workers can have a better understanding of the complexity of careers and can unlock career capital value by understanding the drivers, identifying their preferred career stages and by an awareness and preparedness for certain external factors that might unintentionally advance their career development. Some practical examples would be:

 Careers can be viewed as banking accounts, you have to put capital in before you can take capital out.



- Career capital has increasing returns and not decreasing returns, capital invested will therefore not deplete if nurtured and looked after.
- Being in the corporate stage described in the roadmap model is not a ticket to career success for all as career capital accrual for knowledge workers is a relative concept with each worker identifying his/her own unused career gate. Knowledge workers can create immense economic value by understanding themselves and finding their optimal career stage.

7.5 RECOMMENDATIONS FOR ORGANISATIONS

The new organisational landscape is an aggregated attempt by organisations to survive the fundamental shifts in global business practices. This landscape is generally not employee focussed as the employee has purely become a resource. Knowledge workers have retaliated by building valuable, applicable and career relevant knowledge that they carry with them in an attempt to be valuable and needed.

Organisations value the knowledge accumulated by knowledge workers and can create long-term mutually beneficial relationships with knowledge workers by offering career, industry and general knowledge gaining experiences in return. By understanding career capital accrual for knowledge workers, organisations can offer knowledge workers an alternative to the psychological contract which is scarred by the new organisational landscape and in such a way retain valuable talent.



7.6 RECOMMENDATIONS FOR FUTURE RESEARCH

During the process of this research a large amount of energy was focussed towards literature and understanding the field of career capital. Because career capital management is still a relative new field of research the feeling of enlightenment was not always shared by the respondents during the interviews. This sometimes resulted in a lack of breadth during the in-depth qualitative discussions. It is proposed that future research in this area be approached as qualitative research offering respondents additional information through information rich, detailed questionnaires.

Some themes for future research branching out of the literature explored and data analysed:

- How do activities before and after career moves correlate to the reasons knowledge workers provide for moving?
- How the first working experiences (environment, manager, corporate culture) correlate to knowledge worker career capital management and accrual.
- How career guidance experiences at school influence career capital management and accrual in knowledge workers
- A more focused study towards the influence of serendipity at different stages in career management
- A quantitative confirmatory study
- A more focused study towards the influence of different networks on career capital formation (social versus business networks)



• Graduate versus unqualified and its influence on career capital.

7.7 CONCLUSION

This study has contributed to the research literature on career capital by offering a different perspective on the accrual of relevant and applicable competencies in a practical and applicable approach. The research findings have revealed valuable insights into the career capital accrual of knowledge workers and have complimented literature through broad support of the constructs found during the literature review.

The roadmap of career capital accrual for knowledge workers is adding a new dimension to the literature and offers a key to unlock value in the careers of knowledge workers, even in the new organisational landscape.



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APPENDICES



APPENDIX A: REGISTER OF CANDIDATES

#	Research sample	Candidate name	Candidate company	Candidate posision
1	Graduate Engineer	André du Bruyn	SKF SA	AEO Manager
2	Graduate Engineer	David Stanford	Atlas Copco SA	Product Manager
3	Graduate Engineer	Johan Pretorius	VGI Consulting	Director
4	Graduate Engineer	Sharnie Malan	VW SA	Service Manager
5	Graduate Engineer	Pieter Pretorius	ATS	Director
6	Graduate Engineer	Werner Misselhörn	ATE	Mechanical Engineer
7	Graduate Engineer	Schalk Piek	VW SA	Regional Sales Manger
8	Graduate Engineer	Bernard Behrens	Nanoteq	Development Manager
9	Graduate Engineer	Graeme Campbell	ECO Lab SA	Engineering Manager
10	Graduate IT	Carel Burger	Clover SA	Systems Analyst
11	Non-graduate IT	Sharon King	Keysteps	Director
12	Non-graduate IT	Peter Meyer	Johnson & Johnson	IT consultant
13	Non-graduate IT	Ernie Coetzee	EDS	Systems administrator



APPENDIX B: INTERVIEW SCHEDULE

Introduction

- A word of thanks for taking part. Confirmation of confidentiality of data and anonymity if required.
- Interview type Narrative, experience (qualitative) with pictures and fixed sum questions
- Title of research A roadmap of career capital accrual for knowledge workers

Background theory

Global competition, technology, etc. have been impacting the **organisational landscape** in recent years. More and more traditional organisations have shifted towards the need to be flexible and adaptable and in the process become unable to offer or promise long-term job outlooks.

Knowledge workers rely on knowledge as their main resource of work and not traditional or industrial skills. Knowledge careers are characterised by;

- A formal learning period
- An application of the knowledge period
- A period of continuous adaptation to organisational settings and consequently
- A continues learning culture.

Competition is unavoidable and the knowledge worker is faced with inequality of **employability** that is purely based on the ability to accumulate, apply and continuously adapt career specific knowledge.



Career capital is the concept of "cumulative career competencies" that are of value to the field of the individuals career. Literature indicate that individuals generally starts with a primary set of capitals from their nature or temperament and then develop and accumulate along a career path, while being influenced by personal, social, educational and organisational factors.

Objective

Continue the current search for more understanding in the field of career capital management by looking at the components of career capital, search for a possible sequence of events, search for more important influences and investigate some specific influences.

Research questions 1: What are the components of career capital formation for knowledge workers?

- Q1: What are some of the main characteristics / qualities you actively focus on developing in your career?
- Q2: How do these components mentioned come across in your CV?

Research questions 2: What is the sequence in which the components are generally developed and/or accumulated?

- Q3: Thinking of your own career, please draw a graphic representation of your career, indicating time on the x-axis and career development on the y-axis. Indicate the significant events / activities / experiences / learnings graphically by magnitude and duration.
- Q4: Group accumulated career experiences in 0 5 years, 6 10 years,
 11 15 years and 16+ year intervals by indicating for each time period the most significant events / activities / experiences / learnings.



Research questions 3: What is the order of perceived importance of the following list of career capital components?

 Q5: I give you a hundred marks to divide in any quantities between the following activities according to the value it has offered towards your accumulated career experience, which are those and what are the quantities?

Career components

- Yourself
- Network
- Formal education
- Daily scope of work
- Work outside your daily scope of work
- Your manager
- Good fortune

Research questions 4: What role do managers play in career capital formation?

 Q6: Consider and discuss the influence of a good or a bad manager as a possible component of career capital.

Research questions 5: What role does serendipity (good fortune / a higher hand) play in career capital formation?

Q7: Consider and discuss the influence of serendipity (good fortune) as a
possible component of career capital. Serendipity is sometimes referred
as "An accident happening in front of a prepared mind".

Closing

- Any final comments or questions from the interviewee?
- Thank you very much for the participation



APPENDIX C: INTERVIEW MATRIX

Research question	Interview question	Objective
Question1: What are the components of career capital formation for knowledge workers?	stion1: What are the conents of career capital ation for knowledge ers? 1. What are some of the main characteristics / qualities you actively focus on developing in your career?	
	How do these components mentioned come across in your CV?	
Question 2: What is the sequence in which the components are generally developed and/or accumulated?	 Thinking of your own career, please draw a graphic representation of your career, indicating time on the x-axis and career development on the y-axis. Indicate the significant events / activities / learnings graphically by magnitude and duration. Group accumulated career experiences in 0-5y, 6-10y and 11-15year groupings by indicating for each time period the most significant events / 	Rank components and formation process chronological
	activities / learnings.	
Question 3: What is the order of perceived importance of the following list of career capital components?	5. I give you a hundred marks to divide in any quantities between the following activities according to the value it has offered towards your accumulated career experience, which are those and what are the quantities? Yourself Network Formal education Daily scope of work Work outside your daily scope of work Your manager Good fortune	Rank components and formation process in order of perceived importance.
Question 4: What role do managers play in career capital formation?	6: Consider and discuss the influence of a good or a bad manager as a possible component of career capital.	
Question 5: What role does serendipity (good fortune / a higher hand) play in career capital formation?	7: Consider and discuss the influence of serendipity (good fortune) as a possible component of career capital. Serendipity is sometimes referred to as "An accident happening in front of a prepared mind".	Identify serendipity's influence on career capital accumulation



APPENDIX D: INTERVIEW REQUEST - ENGINEERING SAMPLE



Dear potential participant,

2008/08/22

Thank you very much for taking the time to read this request and possibly assist me with this academic research project where I am assessing the career building activities and experiences of a group of professionals. The full title of my study is as follows: A roadmap of career capital accrual for knowledge workers.

I am utilising the following style of data collection:

- Face-to-face interviews
- Informal but confidential
- Narrative in style

I am particularly searching for candidates falling into the following category:

- Work in the field of Engineering

- Have studied and/or qualified by completing a university or Technikon degree
- ♦ Have ±45 minutes they could stand off to me before 26 Sept 2008
- Are prepared to discuss their career path in general terms.

The purpose of the interview is to assess the candidate's personal experience regarding career building activities of their own career, record their opinion and preference and study the data from all participants to see if any patterns exist.

I would hereby like to request that if you fall into the above mentioned category you please support me in my research. Your contribution will be highly appreciated and will enable me to complete my research as part of my thesis that will be submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master in Business Administration.

Thank you once again for taking the time to read this request. I truly hope that you will take part in this very interesting research project.

Please reply by any means to me if you would be prepared to assist me. I will contact you soon afterwards to discuss the arrangements.

Best regards Sarel Froneman 082 211 6206



APPENDIX E: INTERVIEW REQUEST - IT SAMPLE



Dear potential participant,

2008/08/22

Thank you very much for taking the time to read this request and possibly assist me with this academic research project where I am assessing the career building activities and experiences of a group of professionals. The full title of my study is as follows: A roadmap of career capital accrual for knowledge workers.

I am utilising the following style of data collection:

- Face-to-face interviews
- Informal but confidential
- Narrative in style
- Lasting approximately 45min.

I am particularly searching for candidates falling into the following category:

- Work in the field of IT
- In a professional position, with some promotion track record
- ♣ Have between 5 to 20 years of working experience
- Have studied and/or qualified but not necessarily by completing a university degree or Technikon (multiyear) qualification
- Are prepared to discuss their career path in general terms.

The purpose of the interview is to assess the candidate's personal experience regarding career building activities of their own career, record their opinion and preference and study the data from all participants to see if any patterns exist.

I would hereby like to request that if you fall into the above mentioned category you please support me in my research. Your contribution will be highly appreciated and will enable me to complete my research as part of my thesis that will be submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master in Business Administration.

Thank you once again for taking the time to read this request. I truly hope that you will take part in this very interesting research project.

Please reply by any means to me if you would be prepared to assist me. I will contact you soon afterwards to discuss the arrangements.

Best regards Sarel Froneman 082 211 6206



APPENDIX F: RESPONDENT FEEDBACK ON INTERVIEW QUESTION 3