AN EXPLORATORY STUDY OF THE INTERNAL CAREER ORIENTATION AND THE EXTERNAL CAREER PATTERN OF INFORMATION TECHNOLOGY WORKERS IN NIGERIA

A thesis submitted for the degree of Doctor of Philosophy

by

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ABSTRACT

This study sets out to explore the internal career orientations and the external career patterns of information technology (IT) workers in Nigeria. The theoretical framework guiding this research is that societal context (social structure and institutions) has an influence on the career orientations and career patterns exhibited by individuals (Derr and Laurent, 1989; Lam, 2000; Baruch, 2004). To date, understanding the development of mainstream career theory has focused more on individual choice and life-span development, than on the complex interplay between individuals and their environment. There appears to be a relative neglect of the influence of institutional and social structure in much of the career literature. In a departure from previous career studies, which have focused largely on the individual level of analysis in developed economies of North America and Europe, this research focused on exploring both the internal and external careers of IT workers in the context of a developing economy-Nigeria. This research adopted a two-pronged methodological approach, which involved the use of qualitative and quantitative methods in addressing the research questions raised in this study.

The result of this research shows that IT workers enact four different career patterns, which conform to the traditional view of careers as hierarchical and progressive, as well as to the recent models of the boundaryless careers. IT workers in Nigeria also hold six career orientations, which can be closely matched to Schein's (1978) career anchors and Derr's (1986) career success orientations. In addition, economic conditions, perception of educational qualification, sexual discrimination and ethnic allegiance were identified as the main societal factors that shape and constrain the careers of IT workers in Nigeria. Overall, the findings of this research support the notion that careers unfold through the interplay between individuals and larger societal structures (Baruch, 2004). The implication of the findings for human resource management and research is discussed.

TABLE OF CONTENT

CHAPTER 4: RESEARCH METHODOLOGY

CHAPTER 5: QUALITATIVE RESEARCH FINDINGS

CHAPTER 6: QUANTITATIVE RESEARCH FINDINGS

CHAPTER 7: SUMMARY, DISCUSSION AND CONCLUSION

APPENDIX

LIST OF TABLES

LIST OF DIAGRAMS

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF THE RESEARCH

Over the last few years, there has been an increased interest in the careers and career management of highly skilled workers in the context of what has become known as the 'new' knowledge-based economy (KBE). This economy is characterized by a rapid expansion of knowledge-intense industries and by a marked increase in the importance of creating and exploiting knowledge and information in all sectors of the economy. Many contemporary scholars argue that in the new KBE, much industrial work has become knowledge intensive, and that this change in the nature of work is directing workers towards more complex tasks that require thinking, understanding, assimilating new knowledge and problem solving. For instance, Barley (1996) in his ethnographic study of technicians in the workplace, argued that there are signs that we are entering a post-industrial age where the traditional emphasis on the production of material goods is being replaced by an emphasis on intangible goods such as information and knowledge. Barley observed that the proportion of people working in the production of information and knowledge has been steadily increasing since the beginning of this century. He also argued that blue collar and clerical work in all industrial societies have declined significantly since the 1950s, while managerial, service, professional and technical work have steadily grown.

In a similar vein, Davidson (2001) notes that in the new knowledge based economy, information technology (IT) is increasingly being conceptualised as a 'real' resource that can help improve the success of any organisation, by providing access to markets, creating product differentiation and providing cost efficiencies. He further points out that those industries that have previously appeared to be divorced from IT (such as catering and manufacturing) are gradually being affected by the new technology. Booking systems are increasingly automated, manufacturing levels and raw material requirements are determined using software programs, the number of human resource management (HRM) products such as computer-based psychometric tests and appraisal systems, is growing.

and supply chain logistics are generally managed with computers. IT refers to all computer-based activities that derive from the convergent disciplines of microelectronics, computing and telecommunications. These activities have been associated with the reorganisation of the processes of production and distribution in society.

As organisations develop greater dependency on IT, it is becoming increasingly important to have competent IT workers, and to effectively utilise, manage and retain these workers in an organisation. In this respect, IT workers are critical for successful implementation and use of IT infrastructures within organisations. In line with the growing importance of IT in the 'new' KBE, this study sets out to explore the career experiences of the highly skilled workers (IT workers) that manage IT infrastructures.

In the context of Nigeria, the term '*IT workers' is reserved exclusively for individuals with degree-level education or specialized technical training, primarily engaged in the creation and provision of IT capacity. Individuals in this category develop and enable the use of IT hardware, software, networks, systems and services. Their work usually involves fashioning the components described above, or integrating them into more complex systems and applications.* This contextual definition of IT workers excludes those who work primarily with end-user applications necessary for job functions. For example, most office workers use word processors and spreadsheets, but they would not be included in this definition. On the other hand, help-desk personnel and technicians who install computers, networks, and software applications are included.

1.2 DIVERGENT VIEWS ON THE CAREERS OF IT WORKERS

As pointed out above, there has been a growing interest in the careers of IT workers due to the strategic role they play in the success and competitiveness of organisations. Most studies in this area have addressed this issue from a psychological or sociological perspective. On the one hand, the psychological perspective suggests that it is each person's concept of who they are and what they seek from a career, that influences their career decisions. From this perspective, contemporary scholars (e.g. Ginzberg and

Baroudi, 1988; Igbaria et al, 1991; Wetherbe et al, 1999) have consistently argued that the key to the career management of IT workers is the design of a career management system that satisfies their individual career orientations. Scholars such as Schein (1978), Igbaria et al. (1995), Baroudi (1985) argue that an individual's career orientation influences career choices, affects decisions to move from one job to the other, shapes what is being looked for in life, determines the individual's view of the future, influences the selection of specific occupations and work settings and affects their reactions to work experiences. These scholars further argue that organisations that are unable to create opportunities for career fulfillment, are likely to find they will be unable to maintain an adequate supply of skilled employees to fill critical jobs, and that this may result in dysfunctional organizational outcomes (e.g. job dissatisfaction, reduced organizational commitment, intention to leave an organization).

On the other hand, the sociological perspective, which draws mainly from the field of industrial sociology, views a career as a 'social construction' in which the individual makes choices within a set of social expectations and institutional structures, about how to reconcile their personal objectives and values with the priorities and constraints of external (e.g. organisational) systems. From this perspective, contemporary scholars (e.g. Whalley, 1986; Derr and Laurent, 1989; Lee and Smith, 1992; Lam, 1994; 1996) argue that the careers and work attitudes of individuals are shaped by the broader structural and institutional factors prevalent in any national context. These scholars point out that the forms that societal institutions take, as well as their economic role, greatly influence the career patterns and career needs of individuals in that context. An institution is defined by its 'rules of the game', which involve the informal and formal structures, and enforcement mechanisms that humans 'impose upon one another' (North, 1991). These rules of the game are reflected in widely shared norms and practices that guide actions. The key societal institutions that shape the careers of individuals include the state, the legal system, the financial system, national systems of education and training, trade unions and professional bodies, class structure, family background, ethnicity, organisational characteristics, availability of jobs and economic opportunities. These societal institutions constitute the distinctive social organization of a country and its economy.

While both theoretical perspectives (psychological and sociological) have contributed to the understanding of the factors that influence the careers of IT workers, it can be argued that each of these two perspectives incompletely describe the factors that shape their internal career orientations and external career patterns. Focusing on either individual psychological factors or societal factors alone, would inevitably result in important relationships being omitted or obscured.

With this point in mind, a better theoretical understanding might be gained if one simultaneously considers both psychological and societal factors that shape the careers of IT workers. In a departure from previous studies that have focused largely on the internal career orientations of IT workers (e.g., Igbaria et al., 1991; Wetherbe et al., 1999), this study takes a more holistic approach by exploring the internal career orientations and external career patterns of IT workers in Nigeria. These two dimensions capture the essential psychological (choice and control) and sociological (path and context) factors contributing to career development. This research also explores the societal factors that shape and constrain the careers of IT workers in this context. In addition to these objectives, this study further examines the relationship between career orientations and career patterns as well as the relationship between demographic variables and career orientations of IT workers in Nigeria. The overall aims of this research are articulated below.

1.3 AIMS OF THIS STUDY

Despite the strategic importance of IT workers for the success and competitiveness of organisations, the HRM literature is relatively bereft of studies focusing particularly on the careers of IT workers in developing economies. As a result, we know comparatively little about the internal career orientations and external career patterns enacted by IT workers in Nigeria. There is also little understanding of the relationship between the career orientations and career patterns of IT workers in Nigeria. In addition, we do not know much about the societal factors that shape and constrain the careers of IT workers in this context. Given the lack of knowledge in this area and the need to improve our present understanding, this study aims to:

1. Explore the external career patterns exhibited by IT workers in Nigeria

2. Explore the internal career orientations of IT workers in Nigeria

3. Explore the societal factors that shape and constrain the careers of IT workers in Nigeria

4. Examine the relationship between the identified career orientations of IT workers in Nigeria and demographic variables such as age, gender, educational qualification

5. Examine the relationship between the identified career orientations of IT workers in Nigeria and their preferred career patterns.

1.4 OBJECTIVES OF THIS STUDY

In response to the growing interest in the careers of IT workers, the principal objective of this study is to provide a substantial contribution to knowledge in this area by contributing the Nigerian perspective and context to the wider discourse on careers and career management of highly skilled workers and more specifically, to our understanding of careers and career management of IT workers. Another objective of this study is to provide information for organizations that will assist them in the management of the careers of their IT workers. The findings of this study are also expected to further our understanding of the structural and institutional factors that moderate IT workers' perception of their career needs and aspirations in Nigeria. Although this study focuses on the careers of IT workers in Nigeria, comparisons will be made with findings on the careers of IT workers in other national contexts (from available literature) to highlight key similarities and differences.

1.5 RESEARCH QUESTIONS

As pointed out above, this study aims to develop an integrative analysis of the individual and societal factors that shape the careers of IT workers in Nigeria. This research further aims to examine the relationship between the career orientations and career patterns of IT workers identified in this study as well as the relationship between the identified career orientations and demographic variables. In essence, six research questions shaped this analysis. These consist of both qualitative and quantitative research questions. It is important to point out that the use of both qualitative and quantitative research questions in this study is in line with the mixed methods approach guiding this study, as discussed in section 4.2 of the methodology chapter. Contemporary researchers are increasingly supporting the use of mixed methods research questions in a particular study. For instance, Creswell (2003) argues that the use of mixed methods research questions and hypotheses in a single study can be advantageous in narrowing and focusing the purpose statements. However, he acknowledges the scarcity of models on which to base guidelines for writing research questions into mixed methods studies. In this case, what is required is creativity (on the part of the researcher) in the development and presentation of the research questions. The qualitative and quantitative research questions addressed in this research are outlined below in the next subsection.

1.5.1 THE QUALITATIVE RESEARCH QUESTIONS

1. Do the external career patterns exhibited by IT workers in Nigeria conform to the traditional view of career as hierarchical and progressive or to the recent models of the boundaryless career?

2. What are the internal career orientations of IT workers in Nigeria and to what extent do these orientations differ from the career orientations that have been found among IT workers in other national contexts (e.g. North America and Europe)?

3. What are the societal factors that shape and constrain the careers of IT workers in Nigeria?

1.5.2 THE QUANTITATIVE RESEARCH QUESTIONS

4. What is the relationship between the career orientations of IT workers in Nigeria and demographic factors such as age, gender and educational qualification?

5. What are the dominant career orientations of IT workers in Nigeria?

6. What is the relationship between the career orientations of IT workers in Nigeria and their preferred career patterns?

Research questions 4, 5 and 6 are reframed into testable propositions as outlined below:

Proposition 1: There will be meaningful difference in the pattern of career anchors held by male and female IT workers in Nigeria.

Meaningful difference in this context refers to differences in career orientation that have a practical implication for human resources management.

Proposition 2: The dominant career orientations of IT workers in Nigeria will vary with age

Proposition 3: Career orientations of IT workers in Nigeria will vary with educational qualification

Proposition 4: The dominant career orientations for IT workers in Nigeria are marketable skills and stability

Proposition 5: IT workers in Nigeria with stability, work and life balance, or managerial competence anchor will prefer the slow and steady career pattern.

Proposition 6: IT workers in Nigeria with independence, marketable skills, or technical challenge career anchor will prefer the explorer career pattern.

Proposition 7: IT workers in Nigeria with independence, managerial competence, work and life balance, or technical challenge career anchors will prefer the canvasser career pattern.

Proposition 8: IT workers in Nigeria with stability, marketable skills, technical challenges, independence, work and life balance, or managerial competence career anchors will find the zigzag career pattern suitable

Overall, while propositions 1, 2, 3 were developed from the literature review propositions 4, 5, 6 and 7 were contingent on the findings of the first phase of this research (discussed in chapter 5), which involved semi-structured interviews with IT workers in Nigeria.

1.6 JUSTIFICATION FOR THIS RESEARCH

Firstly, Nigeria was selected as a very timely and relevant country on which to base a study of this kind because the career management of IT workers has been identified as a major problem facing the IT industry in Nigeria (Ovaje and Ankomah, 2001).

The second justification for this study is that, given the strategic importance of IT workers, one would expect to find substantial literature on the external career pattern and internal career orientations of this unique occupational group. Regrettably, there is little research in this area. Nevertheless, the few studies on the career orientations of IT workers (e.g. Ginzberg and Baroudi, 1988; Igbaria et al, 1991; Wetherbe et al, 1999) have suggested that the career motives of technical workers (e.g., IT workers) appear to be different from non-technical professionals. According to Orlikowski and Baroudi (1989), IT workers form a distinct occupational group, possessing a high need for learning and development, and a strong desire for stimulating and challenging work. On average, IT workers have scored higher on growth needs compared to staff in other professions (Couger et al., 1994). Thus, the unique characteristics of IT workers imply that research findings on the external career patterns and the internal career orientations of other occupational groups, might not be generalised successfully to IT workers. For instance, Schein's (1978, 1990) career anchor model, which has informed much of the research on the internal careers of workers, was developed from a sample of managerial subjects in the United States. Thus, it is unlikely to reflect fully the career needs of IT

workers because IT workers form a distinct occupational group with career motives different from non-technical professionals. In this regard, Orlikowski and Baroudi (1989) call for increased research on IT as an occupation, especially the role and status of IT workers, and their career orientations and life interests. In response to this call, this study aims to explore the internal career orientations and external career patterns of IT workers in Nigeria. This understanding will improve theoretical knowledge, as well as assist organisations in the utilisation and career management of their valuable IT workers.

The third justification for this study is that most studies of the careers of IT workers have focused on an individual level analysis of factors that influence career orientations (e.g. Igbaria et al, 1991; Igbaria and McCloskey, 1996; Wetherbe et al, 1999), thus overlooking the structural and institutional factors which also shape career and work attitudes. As a result, there is limited understanding of the specific structural and institutional factors that shape and constrain careers of IT workers in developing economies such as Nigeria. This context is ideal for studying careers, because the structural and institutional factors that operate here are likely to differ from those of most western developed economies.

Contemporary career scholars have also called for more research that incorporates the broader societal dimension of careers possibly as a reaction to over-emphasis on the individual dimensions, as well as recognition of the structural and institutional factors that shape and constrain careers. Derr and Laurent (1989), for example, pointed out that understanding the meaning of career in different national cultures represents "*...virgin territory in the garden of career theory*". Thus, they call for more generalisable research that truly reflects the internal and external career aspirations of individuals from representative national samples. In response to this call, this study focuses on understanding careers as a contextualised experience, an experience not simply determined by societal (e.g. labour market) variables, nor purely a voluntary creation of individuals (career orientations), but rather, a combination of the two.

1.7 THE STRUCTURE OF THE THESIS

This research report is composed of seven chapters. Chapter One (as can bee seen above) presented the research background, aims, and objectives and the justification for this study. The remaining part of this research report is structured according to the following chapters. Chapter Two reviews the broader literature on careers, and then focuses on the literature relevant to understanding IT careers. It also outlines the overall research questions that this study seeks to address. Chapter Three locates the study within the Nigerian context by discussing the Nigerian social, economic and labour market environments, and how these contextual factors shape and constrain the careers of Nigerian IT workers. The chapter also discusses the structural features of the IT industry in Nigeria and presents a historical account of its development. Chapter Four discusses the research philosophy underpinning this study and presents the two–pronged methodological approach (qualitative and quantitative) that was used to address the research aims and propositions developed in this study. Chapter Five presents the findings from the first phase (qualitative) of this study. Chapter Six presents the findings from the second phase of this study, which involved quantitative analysis. Finally, chapter seven summarizes the findings of this study and discusses the implication of these findings for individuals and human resource practitioners. This chapter also suggests directions for future research and states the limitations and contributions of this study.

Chapter 2

LITERATURE REVIEW

2.1 INTRODUCTION

The purpose of this chapter is to discuss relevant concepts and theories in the general literature on careers, to improve our understanding of the careers of IT workers in Nigeria. The literature reviewed in this chapter helped inform both the research questions and the methodology adopted in this study. This chapter is arranged as follows: Section 2.2 pinpoints the theoretical framework underpinning this study and provides an analysis of the two dimensions of careers. Section 2.3 delves into the general literature on careers, which provides a much richer set of concepts than can be found in the IT career literature. This section also draws attention to the argument about the changing nature of careers. Section 2.4 provides an analysis of the distinct characteristics of IT workers and reviews some of the management strategies used by high-tech organisations in managing this unique occupational group. Section 2.5 focuses on the career orientations of IT workers. The section makes particular reference to Schein's (1978) career anchor theory in order to provide a good understanding of individuals' career orientations. Section 2.6 presents a summary of the theories and concepts discussed. Finally, Section 2.7 presents the identified research questions and propositions from the reviewed literature to be addressed in this study.

2.2 THEORETICAL FRAMEWORK

The theoretical rationale guiding this study is the notion that, a career is partly determined by the planning and skills of the individual, and partly by its occurrence within a particular socioeconomic context, influenced by social structures and institutions, such as the education system, labour market, organisational structure, gender and families. This notion has been widely expressed by contemporary scholars (e.g. Gerpott et al, 1988; Derr and Laurent, 1989, Bailyn, 1989, Weick, 1996, Arthur et al,

1999, Cadin et al, 2000). For instance, Derr and Laurent (1989) argue that careers are embedded in the cultural characteristics of social groups and institutions such as nations and organisations. They contend that the external career (job market, demographics, technology/skill obsolescence, opportunity structure) influences the internal career (career orientation), given that most people change aspects of their internal career to fit their perception of the requirements of pressures from the external career. In contrast, national culture critically influences both the internal and external career. Thus, they argue that a career has different meanings in different cultures and will therefore evidence different patterns of career dynamics across countries. According to Derr and Laurent:

"...National cultures have a significant impact on career dynamics in two major ways. First, national cultures shape the individual's self-definition of a career - the internal career - through fundamental ideas about self and work that the individual acquires from early experience in families and schools - the prime carriers and reproducers of culture. National cultures shape the cultural filters of individuals so that they perceive the world of work - the external career - through the same cultural lenses as their compatriots. Second, national cultures also shape the institutional context or design of work and the individual's perception of it -external career - through the norms, values and assumptions that the individual has already learned in the culture. Thus, careers link individuals to their cultures through their socialisation experiences in various institutions. This may help us understand that careers make people as much as people make careers" (p.466).

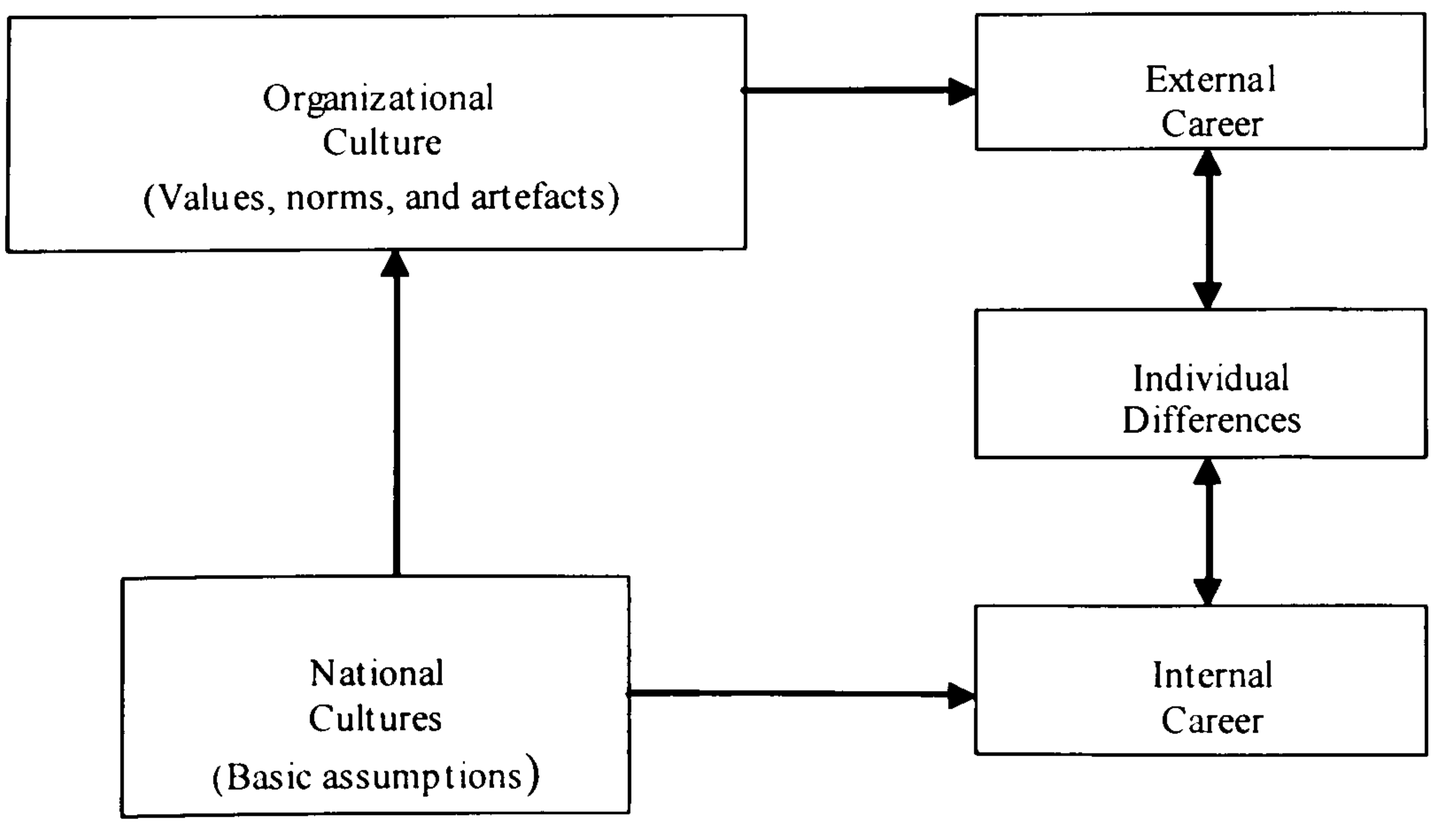


Diagram A: Derr and Laurent cultural model of Career

Following the above line of thought, Lam (2000) argues that the societal/institutional framework (e.g., internal and external labour markets and the nature of the employment relationship) plays a crucial role in determining the internal career orientations and external career path preferences of workers. In this sense, the structural and institutional factors prevalent in any societal context shape the career orientations and external career patterns exhibited by individuals in that context.

Along the lines of Derr and Laurent (1989) and Lam (2000), this study argues that studying careers out of context is as meaningful as '*studying a fish out of water'*, and that by doing so, a major part of the picture is overlooked because careers do not occur in a vacuum but instead swim in a contextual sea. It is against this theoretical background that this study seeks to explore the careers of IT workers in the context of Nigeria, and by so doing contribute the Nigerian context and perspective to the wider discourse on changing nature of careers and career management of IT workers.

This study also draws largely from both traditional and new career theories in facilitating our understanding of the internal career orientations and the external career patterns exhibited by IT workers. The theories discussed in this chapter include the organizational career theory (Kanter, 1989), the professional career theory (Dalton et al, 1982), the boundaryless career theory (Arthur and Rousseau, 1996), the spiral career theory (Brousseau et al., 1996), the intelligent career theory (Arthur, 1995), the career anchor theory (Schein, 1978) and the personality –environment fit theory (Holland, 1985).

2.2.1 THE INTERNAL CAREER AND EXTERNAL CAREER CONCEPT

The term 'career' broadly refers to an individual's sequence of experiences, roles, and relationships that develop in a work-related environment (Dalton, 1989). Since the 1960s, various scholars have expended much effort in exploring the concept of career, and this has resulted in differing perspectives as to what it constitutes. Hall (1976) discusses the four notable but distinct perspectives, which have dominated the discourse on career. First, Hall pointed out that a career is associated with advancement and can be represented by a sequence of promotions and other moves in a work-related hierarchy during the course of a person's work life. In this case, the underlying assumption is that

upward mobility occupies a central position in a career. Second, he observed that careers have been associated with the idea of profession. In this case, a career is conceptualized as a predictable regular progression from one position to another within an occupational category. Third, he noted that a career is also conceptualized as a lifelong sequence of jobs. Finally, Hall pointed out that a career is conceptualized as a lifelong sequence of role-related experiences. This is a highly subjective perspective which takes into account, not only jobs done in a work place, but also roles played outside the workplace that occupy significant amounts of time, such as community leader, spouse, or parent. Based on this synthesis, analysis and evaluation of these four different perspectives of careers, Hall defined career as "*individually perceived sequences and behaviours associated with work-related experiences and activities over the span of the person's life*" (Hall, 1976). Common to all of these definitions, however, are characteristics of work experiences occurring over some span of time.

While there is some divergence of opinion on what constitute a career, the key theme permeating most career studies is the notion that careers have an external as well as an internal dimension. Hughes (1937) refers to these two dimensions as the objective (external) career, and the subjective (internal) career. Specifically, Hughes defined the objective career as directly observable, measurable and verifiable by an impartial third party. As pointed out in section 1.2, the external career focuses on the objective, macro, institutional, or external realm. It concerns the series of positions of offices, which an individual holds, that is the career as perceived by external observers (Hall, 1976). The external career normally consists of job titles, promotions, and changes in working conditions, salary or status (Vardi, 1980). It also encompasses career stages, career development systems, patterns of career mobility and career planning models for organisations (Sparrow and Hiltrop, 1996). From this perspective, careers provide the link between individuals and social structures.

In contrast, the internal (subjective) career concerns internal values, interests and motives held dearly and closely by an individual. It involves the individual views of their own career experiences (Hughes, 1958). The internal career is typically conceptualised in terms of career orientations, career anchors, decisions between personal and professional life and progress through psychological life stages (Sparrow and Hiltrop, 1996). Hughes (1937) describes the subjective career as "*the moving perspective in which a person sees*

his life as a whole and interprets the meaning of his attributes, actions and the things that happen to him" (Hughes, 1937:404).

Hall (1976) views these two career dimensions as two facets of the same process. According to Hall, "*one aspect of career (the subjective career) consists of the changes in values, attitudes, and motivations that occur, as a person grows older. Another aspect (the objective career) is made up of the observable choices that one makes and the activities one engage in, such as the acceptance or rejection of a particular job*"(p.6). The table below outlines some of the characteristics of the internal and external career.

Table 1: Two frames of reference underpinning most career research and career management

Internal career	**External career**
▪ Assumes that people make careers	▪ Assumes that careers make people
▪ Examines careers from a psychological or personal point of view	▪ Examines careers from a sociological and organizational point of view
▪ Focuses on self–development within a career, career motivation, career orientation and the psychological transitions that take place	▪ Focuses on career paths and occupation streams, career stages within organisations, and the nature of occupations in society
▪ Key question: What do I want from work, given my perceptions of who I am and what is possible?	▪ Key question: What is possible and realistic in my organisation and occupation, given my perceptions of the world of work?

Source: Developed from Derr and Laurent (1989)

Overall, the central theme permeating much of the literature on careers is the notion that there is an external as well as an internal perspective. Most research and theory about careers has evolved around these two dominant views. However, these two approaches have their limitations. The objective career neglects the personal experiences of individuals, while the subjective career tend to underemphasise employment experiences and rarely reflects on existing contexts that influence and constrain the individual's experience (Watson et al, 2000). In this regard, Hall (1976) suggests consideration of both of these two interacting perspectives as an encompassing concept, to obtain a better

understanding of careers. In a similar vein, other scholars (e.g., Bailyn, 1989; Derr and Laurent, 1989) suggest that our conceptualization of careers needs to go beyond the internal–external duality and focus more on careers as a contextualised experience. Cadin et al (2000) also argue that the external and internal career dimensions should not be viewed as irreconcilable; rather they should be fused together and viewed as a dialectical relationship between the concrete level of situated interaction and the virtual level of institutions. Despite the fact that career scholars acknowledge the duality in the nature of careers, most of the empirical research on careers has focused on the external dimensions of career, while research on the internal dimension has been sparse. Further, although many career scholars have proclaimed the benefits of studying both the external and internal career dimensions, very little empirical research has taken an integrative approach and studied both. In order to have a holistic understanding of the careers of IT workers in Nigeria, this research explores the internal and external dimensions of the careers of IT workers in Nigeria as well as the contextual factors that shape and constrain the careers of IT workers in this context.

In doing so this research focuses on two important career constructs, career pattern and career orientation/anchor, because these constructs captures the external (sociological) and the internal (psychological) dimensions of career development. On the one hand, the external career pattern refers to the path or trajectory of work-related experiences engaged over one's life course (O'Neil et al, 2004). Super (1957) adapted the idea of career patterns from sociological studies of social mobility. He defined a career pattern as "the sequence of changes in occupational level or field made by an individual during his working lifetime" (Super et al., 1957). In essence, career pattern captures the important experiential and longitudinal features of the work career and it is useful in describing individual career mobility.

On the other hand, the internal career orientation refer to the constellation of self-perceived attitudes, values, needs and talents that develops over time, and which when developed, shapes and guides career choices and directions. In essence, career orientation influences career choices, affects decisions to move from one job to another, shapes what individuals are looking for in life, determines their views of the future, influences the selection of specific occupations and work settings, and affects their reactions to work

experiences (Schein, 1988). The external career patterns and the internal career orientations are discussed in more detail in section 2.3 and 2.5 respectively.

2.3. THE BROADER VIEWS ON CAREERS

2.3.1 THE BUREAUCRATIC / ORGANISATIONAL CAREER THEORY

In the traditional literature regarding career development, careers are conceptualised as unfolding primarily within organisational structures, evolving within the context of one or two firms. According to Arthur and Rousseau (1996), in such a traditional career structure, individuals progress in an orderly employment arrangement within organisations. The underlying assumption, on which this career model was developed, is the notion that an internal labour market exists within organisations. The hallmark of such an internal labour market includes internal recruitment (except at the entry level), structured promotion ladders and low staff turnover. In such an employment setting, the organisation defines the individual's career success. In this case, Arthur and Rousseau argued that career progress often involves doing exactly what the firm expects, and advancing means being grateful for the opportunity the firm has provided. This traditional notion of career is often referred to as the bureaucratic career (Kanter, 1989) or an organisational career, in the sense that it is structured around the ranks and grades within an organisation.

The bureaucratic career is identified by the rewards of salary and occupational prestige. According to Kanter (1989), the bureaucratic career pattern evolves within a sequence in a formally defined hierarchy of positions. This kind of career was dominant in the large bureaucratic organisations of the twentieth century, which operated in homogenous, stable, and predictable markets. Kanter proposed that the bureaucratic career is built on the logic of advancement and growth. In this context, advancement refers to progression within the organisational hierarchy, while growth refers to promotion to a position of higher benefits. She further listed the following points as being the assumptions behind the bureaucratic career pattern:

- A limited pool of competitors for higher positions, with the 'losers' accepting

their place, thus permitting a pyramidal distribution of people and maintenance of the legitimacy of hierarchy;

- Continuing organisational growth, so that opportunity can be offered through expanding the width of the pyramid;

- Continuing employment security, so that eventually, rewards foregone now would be received later, at higher ranks (p.510).

Kanter further remarks that in bureaucratic careers, all the elements of career opportunity (such as responsibilities, challenges, influence, formal training and development) are tied to the ranks within an organisation. This implies that each rank offers its own distinct incentives, opportunities and challenges. Invariably, the higher an individual climbs the corporate ladder, the more of these incentives, challenges and opportunities the individual will expect. Hence, Kanter defines the bureaucratic career as consisting of formal movement from job to job, changing titles, tasks and work groups in the process. Central to this definition is the notion that in a bureaucratic career structure, employees are expected to progress from one rank to another. Given this assumption, Kanter argues that the bureaucratic career discourages strong attachment to tasks or work groups, while encouraging strong attachment to the organisation, "since ultimate financial and political rewards will only come with striking it out longer" (p.509).

Furthermore, Adams (1991) notes that with the bureaucratic career, the single line of progression is well known, and employees are able to calculate the odds of promotion, and make their decisions accordingly. He explains that the bureaucratic career provides individuals with specialised knowledge, and facilitates the development of expertise. He contends that individuals who have progressed vertically are more likely to know their subordinates' jobs and understand the technical problems associated with their tasks. Adams points out that the main advantage of the bureaucratic career model from the employee's perspective is that they understand it and the effort required to achieve their objective. He explains that in the bureaucratic career, the logic behind promotion, demotion, job grades, plateauing and fast tracking are easily understood. In this case, individual career success is measured in terms of position in an organizational hierarchy, together with traditional symbols of success such as a large office, accountability for

many staff, and demonstrable power to influence other people (Brousseau et al., 1996). Much of the research on careers prior to the mid-80s was based on the bureaucratic career with the implicit notion that careers take place in (large) bureaucratic organisations.

In the context of IT workers, an organisational/ bureaucratic career is usually accomplished through the use of a dual career ladder strategy. The aim of the dual career ladder is to provide viable career paths for the technically inclined as well as managerially inclined personnel. Along the managerial career path, the individual progresses through a series of positions with increasing management or leadership responsibilities. On the other hand, the technical career path allows the individual to develop increasing levels of technical competence. Igbaria et al, (1991) points out that the idea underpinning the dual career strategy is the assumption that workers have two major career needs, technical and managerial. Thus, this strategy seeks to accommodate both of these needs by offering workers more flexibility in career paths, freedom, challenge, personal growth, and career advancement opportunities.

Having these two options is believed to be beneficial both to the organisation and to the individual. From the organisational perspective, the managerial ladder assures a supply of personnel to motivate and lead the department, while the technical ladder enables the organisation to continually build and renew its technical competencies. From the individual perspective, the dual ladder is perceived as offering workers more flexibility in career paths, freedom, challenge, personal growth, and career advancement opportunities (Igbaria et al., 1991).

2.3.2 THE PROFESSIONAL CAREER THEORY

Careers have also traditionally been associated with the idea of advancement from a humble beginning to more senior positions (Pahl, 1995) in a profession or occupational hierarchy. In this case, Hall (1976) suggested that career is conceptualised as progressing through a predictable regular movement, from one position to another, within an occupational category. This implies membership of a professional body that is independent of the employing organisation, and the requirement of commitment to the body's own codes of practice (Pearson, 1991). From this point of view, certain

occupations are seen as having a built-in advancement potential (such as the accounting, medical and legal professions) whereas others do not. Thus, any job within an occupational grouping, which does not offer occupants opportunity for advancement, is discarded as not constituting a career. Dalton, Thompson and Price (1982) described the four different stages that guide professional career advancement.

1 ***Apprentice*:** In this stage, the individual learns how to cope with organisational life, most cases working under an experienced senior colleague. This stage involves a high level of dependence.

2 ***Independent specialists*:** In this stage, the individual builds competence and reputation and is equipped to make independent contributions to organisational work.

3 ***Mentor:*** The individual manages the work and development of newcomers in the profession by acting as a facilitator.

4 ***Sponsor*:** In this stage, the individual becomes concerned with the goals of the organisation as well as the activities of subordinates. The individual exercises power and helps shape the direction of the organization.

In this regard, Kanter (1989) posits that for professionals, career growth involves the opportunity to practice their skills and ultimately the opportunity to engage in more important and demanding assignments, which challenge their skills and ability. Thus, the reward for a good job is the opportunity to do more jobs with their attendant rewards. Kanter pointed out that for professionals; 'upward mobility' involves reputation for greater skills. This implies that as professionals engage in more demanding and important assignments, their reputation grows as people review their work. Hence, professionals are important because of the skills and knowledge they possess and the reputation they acquire over the years.

Kanter further argues that one of the major benefits of a professional career as opposed to a bureaucratic career is that it does not depend on people retiring or moving to other positions for one to grow. She argues that for the professional careerist, there is less

relevance of grading according to age, or by an organisationally determined timetable, as compared to the bureaucratic career. She suggests that people are attracted to this form of career due to the potential for growth and success that is independent of other people moving out or retiring. Consequently, Kanter argues that professionals are more likely to engage in more inter-firm mobility than bureaucrats or entrepreneurs.

In the context of IT workers, this orientation would suggest that those interested in a professional career would be more involved with, and attached to, professional norms and ethics and the role of IT, than a specific project or employing organisation. Following this line of thought, Messmer (1998) argues that for the vast majority of IT professionals, loyalty is to the profession, not to their particular employers. He pinpoints that you can hardly hear an IT developer say they work for a bank (even though they may work on financial systems for a large bank). They will say either they are a programmer or that they work on computers. Messmer concludes that for IT professionals' identity, and motivation, can come from their professional association. In this sense, careers transcend vertical structures to occupational groupings.

In a similar vein, Von Glinow argues that IT workers generally tend to identify with other high-tech professionals rather than the organization for which they work, and therefore develop strong interpersonal networks that transcend organizational boundaries. He points out that IT workers share a sense of professionalism without formally being governed by a professional body. In this case, he argues that it may not be proper to consider IT workers as professionals in the traditional sense of the word 'professional'. Rather, the 'IT profession' should be considered an aspirant profession. The argument here is that traditionally, professionals are governed by a code of ethics, restricted access and constraints upon the organization from the professional community. In essence, Von Gilinow argues that it may not be strictly correct to use the term 'IT professional' when referring to IT workers, given that IT work is not governed by the set of principles as described above.

2.3.3 EXTERNAL CAREER DEVELOPMENT STAGES

Other traditional views about career also depict career development as progressing in vertical, hierarchical stages often referred to as career stages. These stages are typically defined as evolutionary phases of working life and are delineated by specific activities and psychological adjustments. They refer to the stages that individuals pass through in their working life. These stages in most cases correlate with age, as in Miller and Form's (1951) life-span model of career development. These scholars summarized five periods of career development. They refer to these periods as:

- ***Preparatory work period:*** This occurs in childhood and marks the introduction of the child to the world of work by the family, school, neighbors and others.

- ***Initial trial period*:** In this period, the young worker commences their work life by experimenting with part-time work as a foundation for future full-time work

- ***Trial period:*** This is the period between 16 and 25 years of age, and marks entry to the regular labor market and consequently the beginning of the first full-time work. This sets the stage for a more or less full-time position.

- ***Stable work period*:** This period begins around the mid-thirties and lasts until the late sixties. It marks the period of job permanence.

- ***Retirement period*:** In this stage, one withdraws from active work.

Similar to Miller and Form's (1951) traditional career development model, is Super's (1957) vocational career model, which describes how individuals implement their self-concepts through vocational choices. Super, views career development as progressing through five life stages taken from Buehler (1933):

- **Growth stage (Birth-14 years):** During this period, self-concept begins to form through identification with key figures in the family and school, and interest and capacities become more important with increasing social participation.

- **Exploration stage (15-25 years):** This period is characterized by self-examination, and 'reality testing', which is a process by which the individual tries out ideas of self on the environment, retaining those aspects of self-concepts that bring satisfaction while rejecting those that do not.

- **Establishment stage (25-45 years):** Having found an appropriate field, the individual puts forth efforts to consolidate their position in that area. There may be further experimentation early in this period, resulting in one or two shifts, but establishment may begin without a trial, especially in the professions.

- **Maintenance stage (45-65 years):** In this stage, the individual is more concerned with sustaining productivity while evaluating progress towards career goals. Little new ground is broken, and there is continuation along existing lines.

- **Decline stage (65 years - death):** In this stage, physical and mental powers decline, work activities change and in due course, cease.

The career developmental models (presented above) revolve around the notion that individuals pursue their career within the context of one or two organisations or within a professional occupation. These time –based career development models can be useful in predicting individuals career decision at each stage of their career, however, they are insufficient for understanding the multi-facet career of individuals as not all person's go through these stages in a similar fashion.

The proponent of one of these career development models, Miller and Form (1951) has noted the inherent limitation of these models. They point out that some individuals might not successfully progress through these stages in an orderly manner. They suggest that some individuals may experience unstable and multi –trial career pattern. In this case, an unstable career involves movement from a trial job to a stable job and then back to trial jobs again. On the other hand, in a multi-trial career pattern the individual never stays in a particular field long enough to get established rather the individual moves from one trial job to another. This kind of career path appears to reflect the career path of a growing

section of the workforce, especially the career path of information technology workers, as will be seen in the subsequent discussion that follows in this chapter.

2.3.4 THE CHANGING NATURE OF CAREERS

The current state of the general career development research reflects broadening and deepening understanding of our notions of career. A salient theme in most recent literatures on career is the notion that the employment landscape is undergoing fundamental changes, which has important implications for career management. Globalization, new technologies, industrial restructuring, demographic shifts and new occupations are all hastening this change. Thus, the traditional career models discussed above are increasingly being challenged in the recent career management literature, which is almost unanimous in describing how careers have undergone fundamental changes since the 1990s, due to the factors identified above. For instance, Hall (1976) observed that the traditional view of career as a linear progression of job responsibilities in one or a few organisations within a single, specific industry does not reflect the multi-faceted career pattern seen in contemporary society. He points out that there has been a significant change in the way career success is perceived, since the 1980s. He argues that, although in the past, the indices for assessing success were mainly external factors such as salary, position level and status; currently people are more likely to employ a personal criterion for assessing success. He suggested that in most cases this would center on self-fulfillment and happiness.

Other scholars have also noted the limited applicability and exclusivity of the traditional views on career. For instance, Defillippi and Arthur (1994) argue that the unidirectional, hierarchical framework characteristic of the traditional career is insufficient to describe the multi-dimensionality and turbulent dynamics of careers. In a similar vein, Waterman et al. (1994) points out that the traditional form of career based on bureaucratic hierarchies is now discredited as stultifying individual initiative and creativity, and promoting an unhealthy dependence on organisations for the conduct of one's working life. Thus, expectations for long-term employment in a single firm with regular upward progression appear to be under serious challenge. Given this scenario, Kanter (1989) suggests that careers can no longer be envisioned as upward progress through an

organisational or occupational hierarchy. Instead, they must be re-conceptualized as evolving in other diverse ways, more suited to the putative post-bureaucratic era. In essence, the more global, networked, and diverse nature of emerging organizational forms requires a reconceptualisation of the careers of the individuals who work in these new organizations. It is untenable to continue to frame career development as a vertical progression when the emergent organizational reality is increasingly horizontal and laterally directed.

The need to recast careers to reflect changing organisational forms has served as a catalyst for the emergence of current thinking about careers. Various contemporary authors have adopted different metaphors to describe this new thinking. These metaphors include the 'spiral career '(Brousseau et al., 1996), the 'intelligent career' (Arthur, 1995) and the 'boundaryless career' (Arthur and Rousseau, 1996). It is important to understand these new career patterns as they appear to reflect the career experiences and needs of many IT workers (as discussed in the next sub-sections). Some of the more recent conceptualisations of careers are reviewed briefly below.

2.3.5. THE BOUNDARYLESS CAREER THEORY

Increasingly, careers are being viewed as becoming boundaryless. The concept of the boundaryless career is seen as an alternative to the 'organisational career' perspective already described in subsection 2.3.1. Arthur and Rousseau (1996) define the boundaryless career as follows:

> *"Within the general meaning of boundaryless careers (as being opposite of organisational careers) lie in several specific meanings, or emphasis. The most prominent of these is the case of where a career, like the stereotypical Silicon Valley career, moves across the boundaries of separate employers. A second meaning occurs when a career, like that of an academic or a carpenter, draws validation - and marketability - from outside the present employer. A third meaning is involved when a career, like that of a real-estate agent, is sustained by external networks or information. A fourth meaning occurs when traditional organisational career boundaries, notably those*

involving hierarchical reporting and advancement principles, are broken. A fifth meaning occurs when a person rejects existing career opportunities for personal or family reasons. A sixth meaning depends on the interpretation of the career actor, who may perceive a boundaryless future regardless of structural constraints. A common factor in the occurrence of all these meanings is one of independence from, rather than dependence on, traditional organisational career arrangement" (Pg. 6).

The boundaryless career concept has attracted the attention of many scholars. For instance, Gunz et al. (2000) liken it to an employment strategy, which, in professional sports (e.g., football, basketball) is called 'free agency'. In this strategy, professional athletes seek to maximize their personal status and income by offering their individual talent to the highest bidder. Their sense of identity is to their profession, rather than to specific countries, organisations or sports clubs; they are professional athletes first, and a team member second.

In a similar vein, Saxenian (1996) has put forward evidence that IT workers in America are increasingly embracing the boundaryless career pattern. In her study of the open labour markets and learning in Silicon Valley, she pointed out that the boundaryless career is the dominant career pattern being adopted in the industry, in the sense that work in the industry is organized around projects and personal networks. In this case, people do not commit their life to working for one firm as in traditional organisations. Instead, people come together to work on a specific project, and disperse to other projects once that one is completed.

Similarly, Jones's (1996) research in the US film industry, suggests that the boundaryless career is the dominant career pattern being adopted in the film industry. Drawing on in-dept interviews and archival data from the film industry, Jones offers insights into how boundaryless careers are enacted in the industry. According to Jones, boundaryless careers evolve in the film industry through four distinct stages. She refers to these stages as, beginning the career, crafting the career, navigating the career and finally, maintaining the career. Encapsulated below is an overview of the four different career stages:

1 ***Beginning the career***: This involves getting access to the industry through interpersonal communication skills and perseverance.

2 ***Crafting the career*:** This involves learning a wide variety of technical skills and roles. There is also a need to assimilate industry culture, and demonstrate reliability and commitment

3 ***Navigating the career***: This involves building a reputation and creating contacts. These can be achieved by maintaining a profile of quality work, and expanding one's skills and competencies while developing and maintaining an informal network of personal contacts, which serve as agents for new project information.

4 ***Maintaining the career***: This involves extending the profession and balancing it with personal needs. It implies maintaining industry standards by coordinating events, and serving as a role model and mentor to newcomers. At this stage, it becomes crucial to balance one's professional and personal life.

Jones concludes that these stages are not just restricted to the film industry, but are applicable to other industries such as technology, fashion, music, and construction, as well as professions such as medicine, law and academia.

In the context of IT workers, Ettore's (1997) research on the careers of IT workers in the United States provides further evidence that IT workers are increasingly enacting boundaryless career. The finding of his study suggests that, "IT workers carry their pay checks in their heads, and they know it. They will move to different companies, different industries, and different locations if an offer makes sense to them. They are less interested in traditional trappings of success such as controlling large budgets, managing large groups of people, bearing impressive titles, etc. If they believe their work is not adding to their intellectual capital, they will go to work that does" (p.9). The findings of this study provide further insight into the nature of the careers patterns of IT workers in the United States.

In contrast to those studies which suggest the evolution of boundaryless careers (i.e. pursuance of a career unconstrained by a specific organisational structure), some scholars

argue that careers have not become boundaryless in any absolute sense. Rather, career boundaries have become more complex and multifaceted in nature. For instance, Gunz et al. (2000) remark that boundaries are labour market imperfections driven by a reluctance of selectors to allow certain kinds of people to make given moves, and the reluctance on the part of the careerist to move to certain kinds of jobs. In this sense, they argue that boundaries in career terms have both a subjective view and an objective view. On the one hand, boundaries can be in terms of the organisational limits of the firm, the limits of the industry, or geographical or professional boundaries. In this context, they point out that the individual may not test the reality of these limits, so that they become self-fulfilling boundaries to career movement.

On the other hand, from the objective perspective, they argue that barriers can be imposed on mobility by the nature of the territory that the careerist is traversing. In their more recent work, Gunz et al. (2002) further argue that career boundaries of some sort, are unavoidable given that boundaries can be imposed by specialisation, industry, the firm, occupation, educational level, experience, geography, professional qualification, organisational membership and to a lesser degree, (although nevertheless real), age, race, ethnicity, sex, and religion (p. 62). They further suggest seven institutional factors that can create career boundaries. These factors are as follows; contract of employment, external jurisdictions, social attitudes, labour organisation, organisational size and boundaries of inclusion. Few of these factors are briefly explained here, while a more detailed explanation can be found in their work (ch.4). In the case of contract of employment, they argue that firms may constrain technical specialist to sign employment contracts, which prohibits them from moving to competing firms. In the case of external jurisdiction, they remark that jurisdiction limits movement of highly qualified people from exploring career opportunities across national boundaries. From the social perspective, they suggest that social attitude such as negative stereotyping of women can constrain the career opportunities available to an individual. They further suggest that inclusion boundaries can separate the powerful and the less powerful in an organisation. Given the potential influence of the different factors mentioned above, they conclude that boundaries are becoming permeable and multifaceted but they still exist.

Jones (1996) has also observed the inevitability of boundaries in work organisations and even in project-based network industries. She points out that given the fluid nature of the project network industries (as discussed above), it may seem that individuals have unlimited opportunities to work on projects. However, she remarks that this is not the case, as credibility, skill level and experience create boundaries, and act to separate the powerful individuals from the majority. According to Jones, in spite of the large work force available in the film industry, only a minority enters and remains in the 'inner chamber' where the more challenging, high-paying and prestigious work occurs. Jones points out that the inner chamber accommodates only the highly experienced and skillful elites, who have and maintain a record of accomplishment of successful projects, with rich informal communication networks concerning jobs and opportunities. She further points out, that for an individual to remain in the inner core, they must consistently perform at a high standard, as the industry does not allow anyone to survive on past glory.

In summary, although careers are increasingly becoming boundaryless, different institutional and structural factors still operate to limit individual career aspirations and career movement. In addition, although the boundaryless career pattern can be advantageous to an individual, there cannot be a good response to available career opportunities if the individual does not have fundamental competencies, skills, or tools to employ when an opportunity presents itself (Lichtenstein and Mendenhall, 2001). Thus, in order to function effectively and have a successful boundaryless career, it is imperative that an individual acquires and possesses the qualities of knowing-why, knowing-how, knowing-whom and knowing-where. This underpins the intelligent career concept, as will be seen in subsection 2.3.7.

2.3.6 THE SPIRAL CAREER THEORY

In recent years, careers have also been conceptualised as evolving in a spiral form, and hence, the term 'spiral career' (Brousseau et al., 1996). In this spiral career, an individual periodically makes major moves across occupational areas, specialties or disciplines, allowing enough time to generate mastery in many fields over the life of the career. This

concept has been illustrated in a model created by Hall and Marvis (1996) to describe the non-proportional effects of learning on performance in each stage of the spiral career. In their model, they postulate that, as individuals move from one employment or one project to another, they experience four stages- exploration, trial, establishment, and mastery as they gain industry-specific competencies.

At the heart of their model is the notion that, as individuals move from one organisation to another, the knowledge and personal skills developed in their present organization is neither eliminated nor becomes irrelevant, but rather, is transferred to their next assignment. This implies that individuals do not necessarily start from a zero level of knowledge or skill base at the beginning of a new assignment, but that they carry with them their existing competencies and skills. Consequently, as individuals move around the spiral career, their knowledge simultaneously increases over time. This process is illustrated below in the diagram below developed by Hall and Marvis.

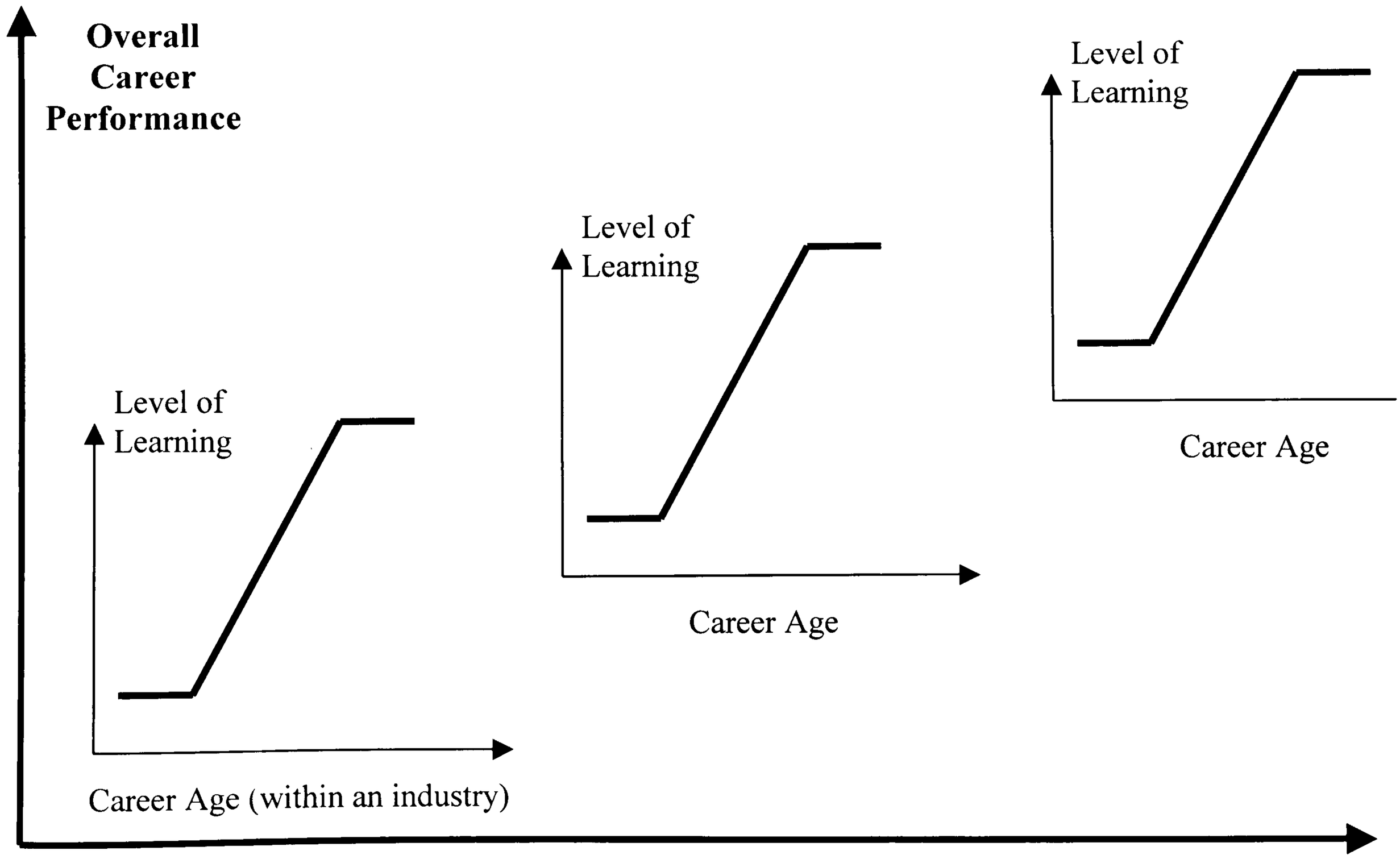


DIAGRAM B: SPIRAL CAREER CONCEPT-A SERIES OF LEARNING STAGES

According to Lichtenstein and Mendhill (2001), it is not in all cases that an individual will go through the spiral without experiencing a 'career plateau'. In some cases, an individual can experience a dysfunctional career. This can occur when an individual is stuck in a pattern of low success, but is not equipped with the ability to rise above his/her circumstances and move to another arena of work. It is interesting to note that while in the traditional model of career, a plateau is referred to as a stage of stability in which an individual is not climbing higher in position or status, in the new career thinking it could mean a stage where the individual is not learning anything-new (Sodergen, 2002). Similarly, a career milestone in the new career thinking could possibly refer to a point of an increase in competence, while a change in competence could also result in a change in job title (Weick, 1996).

In the context of IT workers, those individuals that enact a spiral career are likely to be mobile, moving from one organization to the other or from one industry to the other. Invariably, these workers will serve as a useful conduit for bringing new professional knowledge into the firm and a catalyst for helping to create new private knowledge through the fusion of professional knowledge with the firm's existing knowledge stocks. For instance, IT workers who have worked on specific development projects using concurrent engineering techniques subsequently may be able to articulate and transmit some of the knowledge related to concurrent engineering to other organizations.

2.3.7 THE INTELLIGENT CAREER THEORY

The intelligent career refers to sequences of work roles undertaken by an individual at their own discretion, and with personal goals in mind (Arthur, 1996). It focuses on the subjective interpretations of the careerist over objective interpretations of others. In the career literature, the intelligent career is conceptualised as unfolding through three 'ways of knowing', referred to as knowing-why, knowing-how and knowing-whom. Parker (2002) describes these three levels of knowing in the following way:

1. **Knowing-why:** This encompasses such issues as individual motivation, personal values, meaning, and identity. It also reflects personal attitudes to family, and

other life concerns, which can influence career choices, commitment, and adaptability.

2 **Knowing-how:** This reflects an individual's marketable skills and it provides the medium of exchange between the employee and employer. It involves developing competencies as one experiences different work opportunities, in order to enhance future career opportunities and employability.

3 **Knowing-whom:** This refers to the relationships that people maintain with a view to providing the required information, career support, building of reputation, etc. This network develops from family contacts, friends, alumni, and professional and social acquaintances. The three levels of knowing are illustrated in diagram C below:

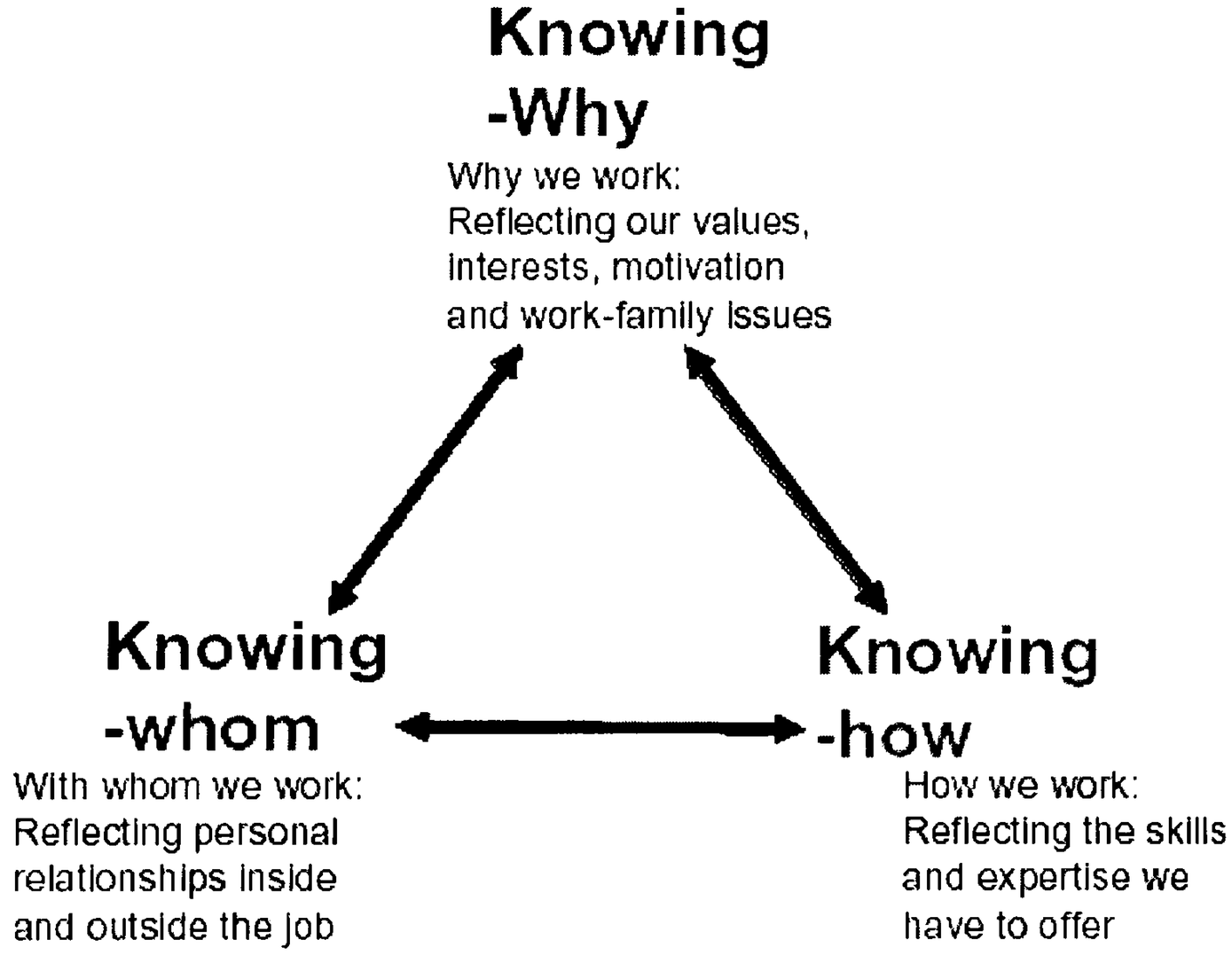


DIAGRAM C: CONCEPTUAL DIAGRAM OF THE INTELLIGENT CAREER CONCEPT

The intelligent career is directly opposed to the organisational career that relates a career to hierarchical, institutional, or status driven assumptions (Inkson, 1997). Instead, it emphasises the importance of individuals understanding their strengths and aspirations, and using them to further their career in view of the changing environment. In this case,

the acquisition of marketable skills is essential, enabling an individual to make use of opportunities available in the wider environment (Parker, 1996).

From this perspective, Bird (2001) refers to careers as accumulation of information and knowledge embodied in skills, expertise, and relationship networks acquired through an evolving sequence of work experiences over time. In line with the knowledge-based perspective on careers, Sodergen (2002) argues that in the current thinking about careers, individuals are more interested in the opportunity of learning and knowledge creation than formal positions, in terms of their perception of positive development of work. She asserts that learning possibilities, in some instances, could be more important than money, as people can defer present monetary gratification in order to acquire marketable skills. It is important to point out here that Sodergen's study was undertaken in Sweden, which has a healthy and stable economy. However, workers in developing economies such as Nigeria may not necessarily share this subjective definition of career success. Workers in developing economies are more likely to be motivated by extrinsic factors such as monetary reward, than intrinsic factors such as personal development.

Nevertheless, from the individual's point of view, the intelligent career will influence the career creator to view progress as the long-term result of multiple inputs into the system over time. The system in this context refers to the self-designed career path of the individual. This implies a focus on the numerous skills and knowledge being acquired at any point in time and consideration of how these skills can be applied in other contexts, rather than focusing on the socioeconomic status of a single job (Lichtenstein and Mendenhall, 2001).

In the context of IT workers, Couger et al. (1992) argue that IT workers have a strong need for growth and personal development compared to workers in other occupations. They possess a high need for learning and a strong desire to be challenged. The need for continuous learning is understandable given that IT workers increasingly face the risk of being made obsolete from erosion of skills in a rapidly developing industry.

In a similar vein, Sparrow (2000) argues that, "IT workers worry about their employability and will move to where there are interesting opportunities that afford growth and the development of new capabilities. They are always interested in skill

development and enhancing their knowledge, thus if they feel that such opportunities do not exist within an organization, they will leave to find opportunities elsewhere. Their loyalty is owed less to their employer than it is to their career. As a result they are highly mobile, lured by new jobs which offer technical challenges or opportunities for self-development" (p. 3). In this regard, Sparrow claims that the most plausible basis for a company to rebuild the psychological contract with their IT workers is to pay particular attention to continuous skill development. A psychological contract represents a perceived promise or obligation on the part of the organization, in exchange for performance. The individual is very conscious of this expectation, and is especially aware of the promise being broken (i.e., breach of contract). Sparrow points out that in a 'learning contract', both employee and employer commit to an ongoing investment in building individual capabilities, recognizing that if the company is no longer able to offer that person a job, these transferable skills will make it easier for the employee to find another position and remain in demand in the wider employment market.

Although much of the recent career literature is replete with theories and accounts of the transition to new career forms (as discussed above), some contemporary authors (e.g., Jacoby 1999; Cohen and Mallon, 1999) maintain that the traditional landscape of careers has not completely disappeared. Based on a close examination of broader institutional and structural factors, Jacoby argues that 'career jobs have not melted into thin air' (1999, 137) and employees and employers are still embracing the welfare capitalist framework established many decades before. He points out that the new career thesis is not supported by substantial labour market evidence and the continuing experience of long term employment in many public and private sector industries indicate that the long-term career is far from over. He concludes that the changes being experienced do not represent a fundamental change in the instituting nature of employment relations, but rather reflect more minor changes in the allocation of risk from employers to employees in light of changing economic conditions. Along the same line, Guest and Mackenzie Davey (1996) argue that the claims about the 'end of organisational careers' may be exaggerated. Based on the findings of their research they conclude that we must not write off the traditional career as their research showed that 'the rhetoric of the new organisation is some way removed from the reality' (1996: 25).

In summary, the broader literature on careers reviewed in this section suggests that individuals enact different career patterns. This includes the traditional organizational career path, the professional career path, and the boundaryless career path. However, there is mixed evidence about the changing nature of careers. While some commentators argue that traditional careers as we have known them are a thing of the past, others maintain that it is too early to say that traditional careers have fully disappeared. Despite the growing debate about new career forms and a new way of talking about career there is a dearth of empirical, qualitative studies that seek to understand how individuals in developing economies of Africa make sense of careers in a changing world of work. So far, most of the extant research on the careers of individuals has been limited to the career experiences of workers in developed economies such as those in North America and Europe. It is somewhat surprising that little scholarly attention has been focused on understanding the careers of IT workers in developing economies of Africa despite the role these workers play in the competitiveness and success of high tech organizations in developing countries. Because of the paucity of literature in this area, we do not know if IT workers in Nigeria follow the trajectories of traditional career paths such as bureaucratic career pattern or contemporary career patterns such as boundaryless careers. Given the dearth of literature in this area, one of the aims of this study is to explore the external career experiences of IT workers in the context of Nigeria. This study specifically aims to ascertain if the external career patterns exhibited by IT workers in Nigeria conform to the traditional view of career as hierarchical and progressive or to the recent models of boundaryless careers?

Research question 1: Do the external career patterns exhibited by IT workers in Nigeria conform to the traditional (hierarchical and progressive) view of career or to the recent models of boundaryless careers?

2.4 CAREER MANAGEMENT OF IT WORKERS

Although there has been a proliferation of studies focusing on the career management of highly skilled workers, little has yet been written about the career management of IT workers in varying national contexts. This is the case in spite of IT workers playing a crucial role in the success and competitiveness of high technology organisations

'globally'. Most studies of the career management of highly skilled workers have focused on research and development (R&D) personnel and engineers (e.g., Lee and Smith, 1992; Lee and Maurer, 1997; Lam, 1994; 1996).

Nevertheless, the little empirical research that has focused on IT workers (e.g. Ginzberg and Baroudi, 1988; Igbaria et al., 1991; Wetherbe et al., 1999) suggest that IT workers form a distinct occupational group with career motives that differ from non-technical workers. IT workers are generally described as 'gold-collar' workers who have a strong bargaining power when seeking to develop their careers inside the firm. Contemporary scholars such as Swart, Kinnie, and Purcell (2003) point out that IT workers tend to work exceptionally long hours, where commitment is related more to the nature of the work (designing an exceptional system) than to the organization. They have a strong sense of intrinsic motivation and are more interested in challenging work. These authors also point out that IT personnel demonstrate a higher level of turnover compared to other members of an organization.

Due to the unique characteristics of IT workers, it is increasingly recognized that IT workers cannot be managed in the same way as traditional employees. The inherent dilemma in attempting to manage technical professionals (especially IT workers) is that incentives, which appeal to others, (e.g., taking on management responsibilities or the prestige of job titles) may be less important than working on the applications of their technology. In this regard, Agarwal and Feratt (1999) argue that the traditional human resource management systems are inadequate for managing IT workers, because IT workers differ in key ways from the traditional employees on which organisation's HR (human resource) policies and practices were developed. They describe four different strategies that organisations use in managing IT workers to ensure their motivation and commitment, with each strategy embodying a specific set of managerial beliefs and values.

The four identified strategies are actualised through different emphases placed on a set of core human resource practices that include performance evaluation (the process by which IT workers' performance is appraised in order to allocate rewards and identify developmental needs); training and development activities provided by IT organisation to develop additional skills in current technologies; compensation and benefits (policies

that compensate IT workers for work, including setting basic compensation levels, incentive pay systems and bonus systems); reward and recognition mechanisms (systems that allow supervisors to recognise and reward outstanding or exemplary performance); and long-term career planning, such as training and development activities made available to IT workers that focus on developing business and leadership skills.

It is important to note that previous studies on the management of IT workers in other national contexts, for instance, the United States (Igbaria et al, 1991), Taiwan (Igbaria and McCloskey, 1996) and South Africa (Igbaria et al, 1995), suggest that of all the specific human resource strategies discussed above, an appropriate career management strategy is the key to effective utilisation and retention of IT workers in organisations. Career management strategies, from an individual perspective, refer to a lifelong process of learning about self, jobs and organisations, setting personal goals, and developing strategies for achieving the goals based on work and life experiences. On the other hand, from an organisational perspective, a career management strategy refers to activities designed by organisations to help their workers meet their career goals and consequently reduce staff turnover in the organisation. These dialectic views on career management suggest that career management is a joint responsibility of individuals and organisations.

Contemporary scholars such as Ginzberg and Baroudi (1988), Igbaria and McCloskey (1996), Wetherbe et al.(1999) suggest that the key to the development of an effective career management strategy capable of satisfying individual career goals is an understanding of individuals' career orientations. These scholars make a compelling argument that organisations that are unable to create opportunities for career fulfillment, are likely to find that they are unable to maintain an adequate supply of skilled employees to fill critical jobs, and that this may result in dysfunctional organisational outcomes.

In summary, the literature reviewed in this subsection suggests that IT workers form a unique occupational group, with career needs that differ from non-technical workers. This uniqueness in career motives underscores the need for a study of this kind that focuses particularly on the career needs of IT workers, because research findings from other occupational groups may not be successfully generalised to IT workers. The subsequent subsections focus on understanding the career orientations of IT workers,

given that previous studies in other national contexts (as pointed out above) suggest that the key to effective career management of IT workers is an understanding of their career orientations and the development of appropriate career management strategies to satisfy these orientations/career needs.

2.5 THE CAREER ANCHOR THEORY

A particular useful model for understanding the different career orientations that are held by workers is Schein's career anchor model. Based on his longitudinal 10-12 year study of 44 Masters of Business Administration (MBA) alumni of the Sloan School at the Massachusetts Institute of Technology, Schein (1978) argue that individuals have differing career interests, which he labeled 'career anchors'. Schein defines a career anchor as a cluster of self-perceived talents, motives, and values that form the core of a person's occupational self-concept (Schein, 1978). Derr and Laurent (1989) interpret this as meaning "*what do I want from work given my perception of who I am and what is possible?*" (p. 456).

Schein (1978) points out that career anchors evolve through the process of career development, which involves testing oneself in a variety of work settings and jobs until one has a clearer picture of one's talents, needs, and values. He described career anchors as consisting of three important components:

1 Self-perceived talents and abilities, based on actual successes in a variety of work settings;
2 Self-perceived motives and needs, based on actual experiences with a variety of job assignments;
3 Self-perceived attitudes and values, based on reactions to a variety of norms and values encountered in different work settings.

Schein (1987) further describes a career anchor as "that one element in our self-concept that we will not give up, even when forced to make a difficult decision" (p.158). He pointed out that all people develop some kind of picture of their work life and their own role in it. Derr (1986) and Igbaria and Baroudi (1993) assert that this work role focuses

on the individuals' self-concept and career values - the internal career. Career anchors are important elements of individuals' internal career. They are the result of their conscious educational, work and career decisions (Schein, 1990). In this context, the career anchor theory signifies non-monetary or psychological factors.

Schein (1978) original work on career orientations suggests that there are five major types of career anchors: (1) security and stability; (2) autonomy and independence; (3) technical/functional competence; (4) managerial competence; and (5) entrepreneurial creativity. In his more recent work, Schein (1990) has added three more career anchors, namely service or dedication to a cause, pure challenge, and life style. A brief description of each of these career anchors is set out below:

1. ***Technical Competence:*** The individual is primarily excited by the content of the work itself and prefers advancement only in his/her technical or functional area of competence.

2. ***Managerial Competence:*** The individual is primarily excited by the opportunity to analyze and solve problems under conditions of incomplete information and uncertainty, and enjoys harnessing people together to achieve common goals.

3. ***Job Security:*** The individual is primarily motivated by long-term attachment to one organization, is willing to conform and to be fully socialized into an organization's values and norms, and tends to dislike travel and relocation.

4. ***Entrepreneurialship:*** The individual is primarily motivated by the need to build or create something that is entirely their own project, becomes easily bored and prefers to move from project to project, being more interested in initiating new enterprises than in managing established ones.

5. ***Autonomy:*** The individual is primarily motivated to seek work situations which are maximally free of organizational constraints, prefers to set their own schedule and pace of work, and is willing to trade off opportunities for promotion to have more freedom.

6. ***Pure Challenge***: The individual is primarily motivated to overcome major obstacles, solves almost unsolvable problems, or wins out over extremely tough opponents; defines their career in terms of daily combat or competition in which winning is everything, and is very single-minded and intolerant of those without comparable aspirations.

7. ***Lifestyle***: The individual is primarily motivated to balance career with lifestyle, is highly concerned with such issues as paternity/maternity leave, day-care options, etc., and looks for organizations that have strong pro-family values and programs.

8. ***Service and Dedication to a Cause:*** The individual is primarily motivated to improve the world in some fashion, prefers to align work activities with personal values of helping society and is more concerned with finding jobs, which meet their values than their skills.

The main attribute, which drives Schein's model of career anchors, is congruence. Schein proposed with some supporting empirical evidence, that when individuals achieve congruence between their career anchor and work environment, they are more likely to achieve positive organisational outcomes, which includes job satisfaction, organisational commitment and intention to stay. On the other hand, incongruence can result in job dissatisfaction, reduced organisational commitment and an intention to leave the organisation. The importance of congruence between individual career anchor and career pattern/work environment is discussed in more detail in subsection 2.5.4.

In his more recent work on career orientations, Schein (1990) argues that individuals can only have one career anchor. He points out that after careful personal evaluation, if an individual is unable to recognize one particular career anchor, it is because "*the person has not had enough life experience to develop priorities that determine how to make those choices*" (Schein, 1990:34). He further posits that career anchors essentially do not change. While acknowledging that the empirical evidence is inconclusive, he notes that "the weight of the evidence is on the side of stability" (Schein, 1990: 34). However, Schein acknowledges that an individual may not always find a job that matches their career anchor. Thus, he argues that the availability of reasonable alternative jobs

moderates the relationship between career anchor congruence and career outcomes. In this regard, Schein argue that although individuals may be able to perform adequately and adapt to their circumstances, they do not necessarily feel that their real selves are engaged.

Despite the important contributions of Schein's ideas to understanding individual career decisions, his career anchor model has been criticised by some career scholars. For instance, Feldman and Bolino (1996) argue that the model is under specified from a theoretical point of view, and empirical tests using the model have been far from conclusive. They point out that although Schein insists that individuals have only one true career anchor, his own empirical study did not support that. They note that in Schein's (1978) empirical study of 44 MIT Sloan Fellows, 10 out of the 44 respondents stated that they had 2 equally strong career anchors, while 4 of the 44 held 3 career anchors equally strongly. Thus, Feldman and Bolino conclude that individuals can have multiple career anchors, as individuals are likely to have multiple important careers and life goals. Nonetheless, they posited that relative to individuals with one career anchor, individuals with multiple career anchors are likely to experience poorer career outcomes. They pointed out that because individuals with multiple career goals are trying to meld multiple career anchors, they are likely to make compromises to find careers that satisfy them, rather than maximise their career outcomes.

Furthermore, Feldman and Bolino maintain that not all career anchors are stable and durable. They remark that although it is possible for the majority of individuals to have one career anchor, it is also possible for individuals to have both primary and secondary career anchors. The notion that career orientations change with time, is related to the idea of *'career stages'* (discussed in subsection 2.3.3). The career stage of an individual is increasingly recognised as having an influence on career orientations and career decisions. The career stage models are useful in predicting stages an individual will go through during his or her lifetime and the likely career decisions at various point. Thus, Hughes (1958) argues that career stages are important shapers of attitudes, values, beliefs, identities and lifestyles.

Other contemporary scholars have also noted the influence of career stages on career orientations and career-related outcomes. For instance, Agarwal and Feratt (2000) argued

that individuals at Super's (1957) 'maintenance' stage are more likely to have developed greater organizational commitment and attachment. They suggested that this could arise "*because the employee has become vested in the organisation through benefit packages, because a network of relationships and ties has been developed over time, or because the responsibility and power associated with an advanced career stage renders and employment situation more attractive*" (p.162). In this case, it is likely that the employee will remain in the organization until retirement. On the other hand, they contend that individuals in an early career stage, are more focused on acquiring competencies and developing personal networks. Once these are developed, the individual may seek to move to another organization that offers better employment prospects and benefits. The career literature is replete with numerous published works on career stages (e.g. Hall, 1976; Levinson, 1978; White, 1995; Smart, 1998), and detailed discussion of these models is beyond the scope of this study. However, the important point to note is that work attitudes and career orientations may vary systematically, as an individual progresses in a career and acquires a range of occupational and life experiences. In this sense, career stages have an important effect on work attitudes, performance and career behaviour.

Despite a relative neglect of institutional factors on careers, Schein's career anchor model may help us understand individuals' career choices and the reaction of employees to various career development opportunities. In this regard, this study will draw largely from Schein's work on career anchors in exploring the internal career needs IT workers in Nigeria aspire to fulfil. Specifically, this study will adopt the research methods used by Schein to explore the internal career needs of IT workers in Nigeria. The next section reviews some of the previous studies that have focused particularly on the career orientations of high skilled workers such as IT workers.

2.5.1. THE CAREER ORIENTATIONS OF IT WORKERS

Empirical studies on the career orientations of IT workers have been guided by the work of Ginzberg and Baroudi (1988). From the practitioner and research literature, these scholars identified formal career planning, which involves the implementation of a dual career ladder strategy with managerial and technical career paths (as discussed in

subsection 2.3.1), as the most recommended management solution for managing the careers of IT workers.

Despite the inherent advantage of the dual career ladder strategy (as pointed out in subsection 2.3.1), it has been criticised as inadequate for accommodating the career needs of individuals and organisations. For instance, Igbaria et al. (1991) points out that the main shortcoming of the dual career ladder is that it assumes that only two options are sufficient. Therefore, it is ineffective, as individuals are likely to have a broader set of career needs and desires than can be satisfied by this strategy. Thus, the traditional dual career ladder strategy is increasingly being conceptualised as a partial and incomplete strategy for satisfying the multi-faceted career needs of IT professionals, given that individuals may have a wide variety of career interests, which extend beyond managerial and technical interests.

A number of recent studies have supported the notion that the dual career ladder is insufficient for satisfying the career needs of IT workers. For instance, Allen and Katz (1986) research on the career needs of engineers (which includes IT workers) suggest that IT workers are not all alike, but rather exhibit a variety of career needs. They point out that where clear preferences were expressed by individuals, the project-based career path was considered more advantageous than other career paths, such as managerial and technical. Their study estimated that 48% of all engineers follow a project-based career, 20% follow a technically based career and 32% follow a management-based career. Lee and Maurer (1997) described these three prototypical career paths as follows:

Project Engineers: These people are primarily project-oriented. Individuals in this group are more involved with, and attached to a specific project, than the profession of engineering or the employing organization. Individuals in this category are classified as 'free agents' because they often move across projects, companies and physical locations. The career pattern enacted by individuals in this category is akin to the boundaryless career pattern discussed in subsection 2.3.5.

Professional Engineers: These people are primarily professionally oriented. They are more involved with and attached to the professional norms, ethics and the role of engineering, than a specific project or employing organisation. In this case, they exhibit

stronger attachment to the profession of engineering than any specific project or employing organization.

Management Engineers: These people are primarily oriented towards a managerial career. Individuals in this category are more involved with, and attached to the role of manager than a specific project. They focus on career advancement prospects, which involve managerial progression.

In a similar vein, Baroudi's (1988) study on the extent to which the dual career ladder satisfied the career desires of information systems (IS) personnel, suggested that these people possess a wide range of career anchors, including technical competence, managerial competence, autonomy, sense of service, entrepreneurial creativity, security, variety and organizational identity. Among these anchors, variety and service were rated among the strongest while technical competence was one of the least important.

The notion that there is considerable diversity among IT workers' career orientations is further supported by research undertaken by Igbaria, Greenhaus and Parasuraman (1991) into the career orientations of IT workers. Their study which focused on the members of American Association for Computing Machinery (ACM) in Pennsylvania, Delaware and Southern New Jersey, found technical competence and managerial competence as the dominant anchors with nearly 50 percent of the sample holding these two career orientations as their dominant anchor. Their study also suggests that priorities vary among IT workers, so that for some, it is freedom, while for others it may be the intrinsic excitement of work, or security and work-life balance. The findings of their study further suggest that career anchors vary with demographic variables and geographical location. This implies, for instance, that career orientations of IT workers in the UK will differ from those of IT workers in Nigeria.

In contrast to Igbaria et al's research findings in the United States, Igbaria, Meredith and Smith's (1992) study of the career orientations of IT workers in South Africa, suggest that technical and managerial anchors are the dominant career anchors held by IT workers. The findings of this study, which used a variant of the career orientation instrument developed by Schein (1978), suggest that service, job security and geographical security orientations were the strongest career anchors among IT workers in

South Africa, while pure challenge, entrepreneurship and technical competence were the weakest.

A similar study on the career orientations of IT workers undertaken in Taiwan by Igbaria and McCloskey (1996) found managerial and technical competence to be a relatively unimportant orientation. The findings of this study suggest that job security, service and pure challenge were rated among the strongest anchors among IT workers in Taiwan while technical competence, autonomy, and entrepreneurship were rated as the weakest.

Furthermore, the study of Ginzberg and Baroudi (1992) on the career orientations of IS personnel in the United States using Schein's (1978) career orientation instrument, also suggests that IT workers possess a wide range of career anchors with neither management nor technical competence dominating. The findings of their study suggested that information systems workers rated challenge, job security and service highly, while organisational identity, technical competence and entrepreneurship were rated low. Management competence, autonomy and lifestyle integration fell in the middle of the range. Their study also found few meaningful differences in the patterns of career anchors across industry and geography.

These studies on the career orientations of IT workers in varying national and organisational contexts paint a somewhat mixed picture of the distribution of career orientations among IT personnel, and the capacity of the dual career ladder to address their career needs. A possible explanation of the differences in the results of these studies is that national culture and societal institutions shape the career orientations of IT workers. In summary, what is clear from the studies reviewed above, is that IT workers hold a wide range of career orientations, with the range and dominating influence of each anchor varying from one country to another. To the extent that this is the case, it is difficult to generalise the findings of the career orientations of IT workers in one national context to another.

Surprisingly, despite the strategic role IT workers play in high technology organisations in Nigeria, there has, as yet, been no empirical study of their career orientations. As a result, there is no understanding of the career orientations held by IT workers in Nigeria, or knowledge of their dominant career anchors. Thus, informed by Schein's research on

career anchors, this study aims to explore the career orientations of IT workers in Nigeria. This study specifically aims to find out the internal career orientations of IT workers in Nigeria and to what extent these orientations differ from the career orientations that have been found among IT workers in other national contexts (e.g. North America and Europe).

Research question 2: What are the internal career orientations of IT workers in Nigeria and to what extent do these orientations differ from the career orientations that have been found among IT workers in other national contexts (e.g. North America and Europe)?

The next subsection reviews some of the studies of career orientations and work attitudes of highly skilled workers in various national contexts, with a view to further buttress the need for a country-specific study that focuses on Nigeria.

2.5.2 NATIONAL DIFFERENCES IN CAREERS AND WORK ATTITUDES OF HIGHLY-SKILLED WORKERS

There has been a great deal of research interest in the influence of national culture and other societal factors on individual career behaviour and human resources management practices. Despite the proliferation of cross-cultural studies in this area, little has yet been written about the careers and career management of individuals in developing economies (Budhwar and Baruch, 2003). A notable exception is the edited work on human resources management in developing countries by Budhwar and Debrah (2001) which provided important insights into HRM practices (including career management) in developing countries of Africa, Asia and Middle East. In addition, Mekonnen and Mamman (2004) work on HRM in Ethiopia provided further insight on the impact of socio-political and economic environment on HRM practices. Although the work of the above-mentioned scholars provides an excellent overview of human resources management practices in developing countries, their work focused more broadly on human resources management practices rather than the careers or career management of individuals in developing countries.

While empirical research on cross-cultural differences in the careers of high skilled workers in developing countries is limited, there is considerable evidence that career preferences, social status and work attitudes, vary significantly from one country to another. This is due to differences in societal institutions, historical diversity in the experience of capitalism, and socioeconomic factors. For instance, Mamman (1997), in his review of the book 'Cultural Dimension of Development' argues that attitude and work ethics vary from one national context to the other. He further acknowledges that historical and cultural factors shape the way individuals in a particular society view structures, systems and processes of development. Implicit in this view, is that societal context shapse individuals' interpretation of issues and influences individuals' behaviour in different national contexts. This subsection reviews some of the studies which argue that career goals and work attitudes of highly skilled workers (e.g. technical workers and engineering professionals) are framed by certain presupposed expectations and the national context.

First, Lee and Smith's (1992) cross-national research on the career structure, values and work attitudes of engineers in different industrial and institutional contexts suggests that engineers are trained and organised quite differently in differing national contexts. They point out that, compared to other European countries, the term 'engineer' is used very loosely in Britain, being used to describe a diverse realm of technical activities ranging from semi-skilled manual to highly skilled "professional" work.

Lee and Smith further argue that British engineers, compared to their continental counterparts, are closely identified with manual labour, poorly paid, endowed with an ambiguous social identity, unionised along occupational lines, lack credential power and are poorly placed in the managerial hierarchy. Until recently, they have been confined to largely technical specialist or support roles at the expense of full participation in the management decision-making arena. They observe that until the 1960s, engineers in Britain entered the engineering profession through premium apprenticeships and part-time study, as opposed to engineering education acquired through university training. In summary, Lee and Smith argue that many of these weaknesses can be attributed to the failure of engineering to cut the Gordian knot from its craft origins.

In contrast to British engineers, Meiksins and Smith (1992) observe that American engineers are relatively secure in their 'middle-class' status and are perceived by society as important employees (high-status professionals). They note that American employers have structured managerial hierarchies so that engineers are integrated into management, and thus American engineers experience less status ambiguity than their British counterparts. They also note that the American system emphasises university training as a prerequisite for engineering practice, unlike the British system, which stresses technical apprenticeship.

Another account of the influence of societal institutions on the attitudes and careers of engineering professionals has been provided by Lawrence (1992) in his study of the work orientations and careers of German engineers. He discussed differences in the career orientations, work attitudes and work organisation of German and British engineers, and pointed out that Germany's unique educational system, cultural values and economic system shapes the careers and work design of German engineers. He describes German engineers as being well educated, well-organized, highly unionised and highly regarded in the society. In his view, the German manufacturing industry is structured in such a way that engineers are not required to give up their technical activities to take on management roles. Hence, German engineers often rise to management positions especially in manufacturing organisations, unlike their British counterparts. Lawrence attributes Germans' perception of the engineering profession to their educational system, which has a multi-system design with technical and university alternatives, with the two routes having equal status. In this case, engineers have equal status to their counterparts in other professions.

Furthermore, Lam's (1994, 1996) comparative study of the utilisation and work roles of engineers in British and Japanese electronic industries, demonstrates the influence of societal factors on the utilization, careers, work attitudes, skill development and motivation of high-skilled workers (engineers). She points out that the Japanese form of work organisation emphases collective sharing of knowledge and the involvement of engineers in all phases of product development. By so doing, Japanese firms encourage strategic job rotation and elimination of rigid job demarcation. Lam also observed that Japanese firms have a high degree of professional control so that it is common practice for Japanese firms to take full responsibility for on-the-job training, specific-skill training

and continuous development of their engineers. As a result, Japanese engineers often have long-term stable employment with a single employer (i.e. a job for life).

In contrast, Lam points out that in British firms, tasks are much more individualised and functionally segmented, with the system making less demand on engineers to share their knowledge. In this case, collective learning and the sharing and dissemination of knowledge across functional boundaries are limited, unlike the situation in Japanese firms. Thus, Lam concludes that the differences in work organization between British and Japanese firms influence the skill requirements and shape the career orientations of the engineers in each type of organisation.

In a similar vein, Whalley's (1986) analysis of the organisation of technical work in France, Britain and the United States suggests that technical work is socially organised and varies significantly in different societal contexts. He argues that there are distinctive national configurations in the structure and class location of technical workers. He pointed out, for instance, that British engineers are generally products of recruitment and training systems strongly controlled by employers. British employers often rely on apprenticeships, on-the-job training and promotion within, to secure the needed technical workforce. On the other hand, American engineers are largely the products of vocational engineering schools located in universities, and American employers allow the university system to pre-select 'engineers' to be placed immediately in responsible positions. In contrast, although French engineers are products of engineering schools which are separate from the university system, they are highly regarded by society. In his study, Whalley discussed differences in the perception of engineering work, status of engineers, work attitudes and careers of engineers in Britain, America and France, and concluded that these differences are the outcome of each nation's particular historical experiences in the 'production', 'consumption' and 'exchange' of technical labour power.

In summary, the empirical studies reviewed in this section provide various examples of the influence of societal and organisational factors on the status, work attitudes and careers of highly skilled workers. These studies suggest that the role, work attitudes and careers of technical workers vary considerably with the socioeconomic and cultural context of each country. However, although these studies provide insight into the nature of technical work and national differences in the work, management systems, careers and

work attitudes of highly skilled workers, their analyses are limited, given that they all focus on the status, work attitudes and careers of highly skilled workers in developed economies.

It is somewhat surprising that little research has focused on understanding the careers of IT workers in developing economies. The dearth of literature in this area has resulted in a lack of understanding of the societal factors that shape careers of IT workers in Nigeria. Given that the empirical studies reviewed above suggest that careers are embedded in the cultural characteristics of social groups and institutions, it is unlikely that IT workers in Nigeria will have the same career needs or exhibit the same career patterns as their counterparts in developed economies. Thus, one of the aims of this study is to explore the contextual factors that shape and constrain the careers of IT workers in Nigeria.

Research question 3: ***What are the societal factors that shape and constrain the careers of IT workers in Nigeria?***

2.5.3 THE INFLUENCE OF DEMOGRAPHIC FACTORS ON CAREER ORIENTATIONS

This section focuses on the relationship between career orientations and demographic factors. Much of the extant research on the career orientations of high skilled workers in different national context discussed in subsection 2.5.1 suggest that career orientations vary with demographic variables. In this regard, this section reviews some of the demographic factors that have been identified in previous studies as potential correlate of career orientations. These factors are age, gender and educational qualification.

GENDER

Previous research by Igbaria et al (1995) on the career orientation of IS workers in South Africa (as discussed in subsection 2.5.1) found that gender correlates with career orientation, with females IT workers being less oriented to job security than their male counterparts. Similarly, Crook et al (1991) reported gender differences in career

orientation, with women found to be more lifestyle-oriented than men. On the other hand, men were found to be more technically and managerially orientated than women. Another study by Igbaria, Kassicieh and Silver (1999) on career orientation and success among research and development and engineering (RD&E) professionals, also suggested that there was a significant gender difference in career orientation. Their study suggested that male IT workers had higher orientation to managerial competence and pure challenge, while female respondents had a high lifestyle orientation.

To date, no research has considered the influence of gender on the career needs and interests of IT workers in Nigeria. However, given the findings of the studies reviewed above one would expect to find meaningful differences in the pattern of career anchors held by male and female IT workers in Nigeria. It is likely that that female IT workers in Nigeria would have a higher lifestyle orientation (i.e., seek work environments that enable them to have time for their children, homes and husbands), than men. In this regard, this study posits that there will be meaningful difference in the pattern of career anchors held by male and female IT workers in Nigeria. As pointed out in section 1.5.2, *meaningful difference* in this context refers to differences in career orientation that have a practical implication for human resources management.

AGE

Previous studies of the career orientations of IT workers in various national contexts have also identified the age of an individual as one of the demographic factors that influence career orientations. For instance, a study undertaken by Allen and Katz (1986) in the United States found that age was related significantly to career orientation. Their study suggested that managerial orientation peaks in the late twenties and declines steadily thereafter, while there is a proportional relationship between project orientation and age.

Similarly, the study mentioned above by Igbaria, Meredith and Smith (1995), of the career orientation of 112 IS (information systems) employees from the Computing Society of South Africa (CSSA), suggested that there is a significant relationship between career orientation and age. The findings of this study provided evidence that job security is positively related to age and geographical security, while pure challenge is negatively

related to age. This research was further supported by the findings of Igbaria, Kassicieh and Silver (1999) regarding career orientation and career success among 78 RD&E professionals in the United States, which also demonstrated that career orientation correlated with age. Their results showed that age was highly correlated with job security and managerial orientation, and also suggested that older RD&E professionals have a greater orientation to job security than those who are younger.

The relationship between age and career orientations has also received empirical support from Biddle and Roberts's (1993) research on the careers of private sector scientists and engineers. The findings of their study suggested that as engineers get older, they are increasingly likely to hold managerial positions, whereas younger engineers tend to be employed in technical capacities. However, they pointed out that it was by no means clear that interest in management increased with age. They proposed that as technology evolves quickly, it is possible that the management path is viewed as a means of countering the obsolescence of technical skills and expertise which increases with age, while simultaneously benefiting from better work conditions. To date, no research has examined the relationship between age and career orientations of IT workers in the Nigerian context. However, based on the findings of previous studies in this area, it is likely that the career orientations of IT workers in Nigeria will vary with their age. In this regard, this study posits that career orientation of IT workers in Nigeria will vary with their age.

EDUCATIONAL QUALIFICATION

Some studies on the career orientation of high skilled workers also suggest that educational background strongly influences the formation of values or career orientation. For instance, Allen and Katz (1992) found that R&D professionals with a PhD were more likely to prefer research work and to be interested in scientific and technical accomplishment, than in gaining promotion within their organisations. In other words, individuals with a higher education level were more likely to have a technical orientation, while those with a lower education levels preferred to pursue other career goals. Their research also suggested that people with higher education levels, through longer and more intensive professional socialization, tended to place higher value on the creation of science and technology and preferred to work on projects they were interested in.

Consistent with this was the study by Igbaria et al (1995) of the career orientation of IS employees in South Africa, which suggested that there was a significant relationship between education and career orientation. They found that a significant relationship existed between education and the average scores of managerial competence, autonomy and service career anchors, such that while educated IS employees scored higher on autonomy and managerial competence, they had lower service scores. To date, no study has examined the correlation between career orientations and educational qualifications of IT workers in Nigeria. However, based on the findings of previous studies, it is likely that career orientation of IT workers in Nigeria will be influenced by their educational qualification. Thus, this study posits that career orientation of IT workers in Nigeria will vary with their educational level.

Overall, the studies reviewed above suggest the examination of age, gender and educational qualifications as potential correlates of career orientations. It is important to point out that the individual factors discussed above are those that have received the most attention in the literature on career orientations of IT workers. It is possible that some other individual factors (not discussed above) still influence the careers of IT workers. However, based on the findings of the studies reviewed above which suggests that career orientations are influenced by demographic variables (e.g., age, gender and educational qualifications) this research seeks to explore the relationship between career orientations and these demographic variables in the context of Nigeria.

Research question 4: What is the relationship between the career orientations of IT workers in Nigeria and demographic factors such as age, gender and educational qualification?

The research question is reframed into testable propositions as follows:

Proposition 1: There will be meaningful difference in the pattern of career anchors held by male and female IT workers in Nigeria.

Proposition 2: The dominant career orientations of IT workers in Nigeria will vary with age

Proposition 3: Career orientations of IT workers in Nigeria will vary with educational qualification

The next section focuses on examining the relationship between career orientations and career patterns given that several studies (e.g., Schein, 1990) suggested that career orientation influences career-related behaviour and career strategies.

2.5.4 THE RELATIONSHIP BETWEEN CAREER ORIENTATIONS AND CAREER PATTERNS

There has been a growing interest in the relationship between individual vocational orientations and the occupation environment. This interest is partly because of the notion that congruence between individual's career orientation and their work environment (that is, putting a square peg in a square hole) leads to job satisfaction increased commitment and intention to remain in an organization for a long time. As pointed out in section 2.5, it is this notion of congruence that drives Schein's model of career anchors. This section therefore discusses the person-environment (P-E) fit theory with a view to justify the importance of understanding the relationship between individual's career orientations and career patterns.

One of the classic models of person-environment fit is Holland's (1985) vocational orientation model. Holland's P-E fit theory suggests that 'people search for environments that will let them exercise their skills and abilities, express their attitudes and values, and take on agreeable problems and roles' (Holland, 1985: 4). The theory is anchored in the premise that individuals are more effective, more satisfied and more committed to their job when their personal attributes match, align or are congruent with the attributes of their environment. In essence, this theory posits that individuals seek out vocations that have an environment that matches their career interests. According to Holland, both the individual and occupational environment is characterized by the RIASEC typology. The

model prescribes the vocational orientation towards six types of occupations, namely realistic (e.g. electrician, cook), investigative (e.g., architect, mathematician), artistic (e.g. artist and designer), social (e.g. politician, social worker), enterprising (e.g. journalist and manager) and conventional (e.g. clerks and accountant). This 'matching model' suggests that there is an interaction between personality and one's vocational choices, so that people tend to move into careers that are congruent with their personal qualities. In essence, realistic people seek realistic environments; social people seek social environments and so forth.

The relationship between individual personality and the desired work environment is supported by cognitive dissonance theory (Festinger, 1976). This theory posits that it is a natural human propensity to seek to reduce a dissonant state and withdraw in circumstances where values and motives are incompatible with the prevailing environment. The central idea here is that individuals seek job opportunities that reinforce their self-concept rather than challenge it.

Although Holland's P-E theory has received empirical support in numerous studies as being valid (e.g., Caplan, 1983, Tinsley, 2000), the model has equally been criticized as being static rather than dynamic. For instance, Ryan and Kristof-Brown (2003) argue that while some characteristics of a person and the environment are stable other characteristics may be more changeable. They point out that although both personality and values are considered relatively stable, values are less stable than personality and susceptible to the variety of changes in the society and influences of new environments. In essence, they argue that while fit in terms of personality similarity maybe relatively stable, fit in terms of value congruence may change over time.

Despite a relative neglect of the dynamic nature of individual's personality and career needs, Holland's personality-fit theory illuminates the importance of congruence between individual career motives and work environment. Holland's work on person-environment fit is relevant in this study, because of the notion that mismatch between individual career anchors and work environment can result in negative consequences such as dissatisfaction, de-motivation and high turnover. In the context of this study, the person-environment fit is reflected by the extent to which the demand and requirements of a

career pattern are compatible with an individual's career orientation. To date, there has not been any empirical examination of the relationship between the career orientations of IT workers in Nigeria and their career pattern preference. Thus, one of the aims of this research is to examine the relationship between the career orientations of IT workers in Nigeria and their career pattern preference.

Research question 5: What is the relationship between the career orientations of IT workers in Nigeria and their preferred career pattern?

In order to explore the above research question, this study will develop testable propositions by matching the career orientations held by IT workers to (suitable) career patterns based on the common characteristics between the career orientations and the career patterns that will be identified in this research.

2.6. SUMMARY

This chapter discussed relevant concepts and theories from the general career literature in order to improve our general understanding of careers, particularly the careers of IT workers. A summary of the most salient issues is presented below:

- Careers have two main perspectives, the external (objective career) and the internal (subjective career). The objective career focuses on the progression of an individual through a series of positions in an organization or occupation. In contrast, the subjective career refers to individuals' view of their own career experiences.

- Careers comprise a combination of structural opportunities and individual choice and ability. In the broadest sense, individual careers are the outcome of structural opportunities made available to an individual, for example the size of the industry, organisational structure, and knowledge specificity, and also human ability and ambition. In one sense, the structural opportunities in an industry provide the

framework for an occupation, while individual ability and ambition determine how people make choices within these structural opportunities.

- The reviewed literature suggest that organisational restructuring, technological advances, globalization, intense competition, and emerging career issues such as work-life balance, have all prompted a review of what constitutes a career. Traditionally, careers were conceptualised as advancement within a profession or occupation, made possible within an organisation by the provision of a cradle-to-grave (life-long) employment philosophy (Sparrow and Hiltrop, 1996). By contrast, in the new career thinking, the ownership of a career is placed in the hands of individuals rather than institutions, with individuals being expected to manage their careers in a more autonomous fashion to ensure personal satisfaction. However, there are claims and counter claims about the existence of the new career forms and the extent to which individuals are embracing it. Thus, one of the aims of this research is to explore the career experiences of IT workers in Nigeria, and in so doing find out if it conforms to or differs from the existing career models found in the western career literature.

- The reviewed literature also suggests that, of all the specific human resource management strategies used in the management of IT workers, an appropriate career management strategy is the key to effective utilisation and retention of IT workers in organisations. These studies also suggest that the key to development of an effective career management strategy capable of satisfying an individual's career values, interests and motives is an understanding of the career orientation of individuals. Thus, this study will draw largely from Schein's (1978, 1990) work on career anchors to explore the career orientations of IT workers in Nigeria.

- The reviewed literature further suggests that the careers and work attitudes of high-skilled workers vary significantly from one country to another, due to differences in societal institutions, historical diversity in the experience of capitalism, and socio-economic factors. This view is in concordance with the

theoretical rationale underpinning this study, which is the notion that societal factors shape and constrain the careers of individuals.

- Overall, the literature review helped inform both the research questions and methods adopted in this study. Further references to the career literature would be found in the results and discussion chapter of this thesis as "supplementary validation" (Strauss and Corbin, 1990), either in support of or in contrast to the empirical findings of this study.

2.7. RESEARCH QUESTIONS

Based on the reviewed literature, the primary research questions that this study aims to answer are:

1. *Do the external career patterns exhibited by IT workers in Nigeria conform to the traditional view of career as hierarchical and progressive or to the recent models of boundaryless careers?*

2. *What are the internal career orientations of IT workers in Nigeria and to what extent do these orientations differ from the career orientations that have been found among IT workers in other national contexts (e.g. North America and Europe)?*

3. *What are the societal factors (e.g. labour market structure) that shape and constrain the careers of IT* workers in Nigeria?

4. *What is the relationship between the career orientations of IT workers in Nigeria and demographic factors such as age, gender and educational qualifications?*

Research question four is reframed into testable propositions as follows:

Proposition 1: There will be meaningful difference in the pattern of career anchors held by male and female IT workers in Nigeria.

Proposition 2: The dominant career orientations of IT workers in Nigeria will vary with age

Proposition 3: Career orientations of IT workers in Nigeria will vary with educational qualification

5. *What is the relationship between the career orientations of IT workers in Nigeria and their preferred career pattern?*

Research question five will be examined by testable propositions that will be developed from the qualitative interview findings of this research on the career orientations and the career patterns of IT workers in Nigeria.

Chapter 3

THE RESEARCH CONTEXT

3.1 INTRODUCTION

The purpose of this chapter is to build on the previous chapter on career development, and provide the context within which this study is set. The overriding argument of this chapter is that careers are to some extent, shaped through the planning and skills of the individual, but that this takes place within a particular socioeconomic context, influenced by social structures and institutions. The chapter is arranged as follows: Section 3.2 presents an overview of the Nigerian economy. Section 3.3 discusses the likely effect of Nigerian economy on the careers of IT workers. Section 3.4 presents a historical account of the development of the IT industry. Section 3.5 discusses the structural features of the IT industry in Nigeria. Finally, Section 3.6 presents a summary of the issues discussed in this chapter.

3.2 OVERVIEW OF THE NIGERIAN ECONOMY

Nigeria is the most populous country in Africa, representing about 20 per cent of the entire sub-Saharan African population, and the second largest economy in sub-Saharan Africa after South Africa. The most recent census taken in November 1991, estimated the population of Nigeria to be 88.5 million persons. Based on a growth rate of 2.83 per cent, the population of Nigeria was 120 million in 1999. It is a richly endowed country with abundant human and natural resources, being blessed with a variety of mineral deposits including petroleum, natural gas, uranium, tin, coal, precious metals and gemstones.

As with other parts of West Africa, the areas that eventually became part of Nigeria had long-established traditional societies. Agriculture using shifting cultivation and simple implements was mainly for subsistence although there was some exchange of surplus in local markets, while handicraft industries produced the usual array of consumer goods. At the time of political independence from colonial rule in 1960, the Nigerian economy,

similar to many other sub-Sahara African economies, relied heavily on the production and export of a few primary products such as livestock, forestry, fishing and cash crops.

Gbosi (1996) has pointed out that prior to the mid-1960s, there were few structural changes in the Nigerian economy and it remained heavily rural and agricultural. The bulk of government revenue continued to come from the foreign sector via import duties, export duties and marketing board surplus. There was also an inflow of foreign resources in the form of official aid and private capital investment. The country depended heavily on foreign resources and expertise for the construction and development of infrastructure.

However, the discovery of oil in 1958 and the overwhelming importance of oil production in the last three decades have led to a steep decline and apparent neglect of agriculture in Nigeria. According to Ovadje and Ankomah (2001), in 1962-63 agriculture alone contributed 61.8 per cent to GDP, decreasing to 38 per cent in 1972-73. During the period 1990 to 1994, the average contribution of agriculture to GDP was 30.2 per cent. On the other hand, the contribution of the oil sector to export earnings has increased since the 1960s. Its contribution in the 1960s was trivial, but rose to 85.6 per cent of export earnings in 1974, to 93.5 in 1984 and to 97.2 per cent in 1992. Thus, agriculture, which in the 1960s was the mainstay of the economy, suffered a considerable decline in the 1970s and early 1980s as a result of expansion of the oil sector.

Since the oil boom of the 1970s, the Nigerian economy has been dominated by the mining and quarrying sector, mainly oil. Nigeria is currently ranked as the 10th largest producer of crude oil in the world at 2.1 million barrels per day. Presently, oil sales account for 95 per cent of the nation's total foreign-exchange earnings, and therefore is the main source of funds that Nigeria puts into its multi-faceted development programmes (Gbosi, 1986). Due to this substantial contribution of oil to the economy, Nigeria could be described as an oil-based monocultural economy. The implication of this overdependence on oil (the only real source of export earning), is that the country's fortunes often rise and fall with the price of oil.

Despite the oil windfall of the 1970s and the continued high earning from oil exports, Nigeria remains a nation with big debts. The inflation rate has continued to increase with the purchasing power of the Naira, the Nigerian national currency, declining steadily over

the years. Thus, the current economic climate in Nigeria is generally characterised by uncertainty, insecurity, high inflation rates, huge external debts, high unemployment level and lack of social welfare scheme.

In order to address the serious imbalance in the Nigerian economy, the Federal government of Nigeria in July 1986 introduced the Structural Adjustment Programme (SAP). The adoption of the constituent macro-economic policies of the Structural Adjustment Program, by the Nigerian government necessitated cuts in government expenses in the area of social services, including health, housing, and education. Gbosi, (1989) summarises the major objectives of the Structural Adjustment Programme as follows:

- To restructure and diversify the productive base of the economy in order to reduce dependence on the oil sector and on imports;
- To achieve fiscal and balance of payments viability over the period;
- To lay the basis for a sustainable non-inflationary growth;
- To lessen the dominance of unproductive investments in the public sector, improve the sector's efficiency and intensify the growth potential of the private sector.

The main elements of the Structural Adjustment Programme are:

1. Strengthening of the hitherto strong demand management policies;
2. Adoption of measures to stimulate domestic production and broadening the supply base of the economy;
3. Adoption of a realistic exchange rate policy;
4. Further rationalization and restriction of the tariffs;
5. Trade and payments liberalization;
6. Reduction of administrative (government) controls and a great reliance on market forces;
7. Adoption of appropriate pricing policies; and
8. Rationalization and privatization of public sector enterprises.

The core policies involved actions to correct the serious overvaluation of naira; overcome the observed public sector inefficiencies; relieve the debt burden and attract a net inflow of foreign capital. Crystallised, the major objectives of the structural adjustment programme was to restructure and diversify the productive base of the Nigerian economy. It was also designed to establish a realistic and sustainable exchange rate for the Naira. These objectives were to be achieved through the main instruments of SAP which included trade and payments liberalization, and tariff reforms (Gbosi, 1989). While it is beyond the scope of this study to give a full evaluation of the success or failure of the Structural Adjustment Programme in the previous years, it is however evident, that the pace of recovery has been relatively slow, in spite of the expectations of Nigerians regarding the benefits of the reform programme.

In summary, the slow economic growth of Nigeria can be attributed to political uncertainty, poor governance and corruption. However, the transition to a democratically elected government on May 29, 1999, after a long period of corrupt military dictatorship that mismanaged the economy marked the beginning of a new era for Nigerian political and socioeconomic development. The new civilian government, headed by Chief Olusegun Obasanjo, aims to fight corruption; ease the infrastructure bottlenecks, particularly for power and petrol; improve education, health, and other basic public services; accelerate privatization, and re-establish government institutions that serve the public. The government also aims to promote private investment, revive the economy, and reduce unemployment while restoring macroeconomic stability. In achieving this, the country has relaxed most restrictions on current and capital transfers, introduced tax relief for those multinationals willing to invest in the country, and improved access to foreign exchange at near-market rates. The government has also initiated a massive privatization campaign of public institutions, in order to promote competition and efficiency, and to attract foreign investment with the hope that this will lead to increased economic activity and bring in much-needed revenue. The next subsection discusses the effect of Nigerian economy on the careers of IT workers.

3.3 THE EFFECT OF THE NIGERIAN ECONOMY ON CAREERS OF IT WORKERS

Despite the adjustments in Nigerian economic policies, brought about by the transition to a democratic elected government, the Nigerian economy is still struggling to stabilize because of high levels of past government expenditure patterns, corruption, misguided government policy and mismanagement of the economy. As pointed out by Ovadje and Ankomah (2001), the government is a significant player in the Nigerian economy, being the largest employer of labour and regulator of most businesses, and thus its policies and actions have a huge impact on the private sector. For instance, salary increases in the public sector often trigger agitation for salary reviews in the private sector. Such increases in the public sector have consistently had a ripple effect in all sectors of the economy, as other business concerns often adjust the prices of their products and services to reflect the salary increase. The result has always been inflation.

The present state of the Nigerian economy also exerts negative pressures on the labour market environment. One main effect of the economic decline in Nigeria is the reduction in the number of job opportunities and intense competition for the few available jobs (Ovadje and Ankomah, 2001). Unfortunately, there are no up-to-date national statistics on the labour market situation, because hiring decisions by Nigerian firms are typically uncoordinated and in many cases unannounced. In addition, analysis of the labour market situation is a problem because there is no systematic, regular collection of labour market data in Nigeria. Labour market demands are generally inferred from secondary data such as international manpower surveys (e.g. those undertaken by International Labour Organisation), repetitive job vacancies advertisement in the newspapers, or employers reporting difficulties in recruiting particular types of workers. Given this scenario, there are variations in the estimation of the level of unemployment in Nigeria, depending on the source and definition of unemployment and underemployment. Recent reports by the United Nations Development Programme (1996, 1997) suggest that the general unemployment figure may be as high as 50 per cent. Because of the high unemployment rate, individuals have to compete intensely for the few available jobs in the country.

Despite the high unemployment levels, the current economic realities in Nigeria appear to accentuate the attraction of some companies as opposed to others. This is due to wide variations in wages offered by organisations and a lack of a national welfare scheme. In the case of wage differences, Ovadje and Ankomah (2001) point out that although government legislation prescribes a National Minimum Wage for workers, many private companies do not adhere to the rules because of lack of strict government enforcement. In addition, the Labour Act, which came into effect in August 1971, does not cover persons in administrative, executive, technical and professional positions, which includes IT workers. These categories of employees are expected to negotiate individually with their employers. Thus, pay and employment conditions differ significantly among the various types of employers in Nigeria (especially in the private sector) and this has some consequences for the quality of work, life and careers engendered by these employers (Fajana, 1991). Companies that offer better employment conditions in terms of career development, salary and fringe benefits are often the multi-national oil companies (e.g. Shell, Chevron, British Petroleum), foreign IT companies operating in Nigeria and the new generation banks.

In the case of a national welfare scheme, there is no established social security system (as is obtainable in developed economies) to guarantee the survival of individuals and their families in periods of unemployment and misfortune. Thus, individuals aspire to earn as much money as possible to be able to meet personal and family obligations. It is important to point out that an individual's family obligations in Nigeria usually involve financial support for his/her children, retired parents and extended family members such as cousins, nephews, brothers, sisters and uncles. Working class persons are normally expected to send money regularly to assist in the education and welfare of non working members of their family. The implication is that IT workers are more likely to remain in an organisation that offers an externally competitive welfare package and good career prospects-that is, organisations that offer good pay and institute policies and practices that ensure quality of life and support during 'raining season' (e.g. birthday and wedding celebration) and 'dry season' (e.g. burial ceremony of relatives). This notion is supported by Fajana's (1986) study of the economic challenges in Nigeria. The findings of his study suggest that organisational pay is the most significant factor in the work motivation of Nigerian people. The preoccupation of Nigerian workers with making money is partly influenced by the social status that comes with being perceived as a 'comfortable' person

in Nigeria. As noted by Richardson (2000:208), "Enabling the moneyed Nigerian to fulfil his family obligations is, in itself, a testimony of his success and power and therefore legitimises his candidature to office".

Put together, the current economic climate in Nigeria is likely to shape the career strategies and career directions of Nigerian workers. On the one hand, it is likely that Nigerian workers will prefer to remain with a stable organisation due to high unemployment levels; in this case, workers will exhibit more intra-organisation mobility as opposed to a boundaryless career pattern, which is characterised by portable skills, knowledge, abilities across multiple firms and individual responsibility for career management (Arthur and Rousseau, 1996). On the other hand, the economic situation in Nigeria appears to be quite favourable to the development of a boundaryless career given that individuals are sensitive to career development opportunities outside the confines of their present organisation. Given this scenario, one can conclude that there is likely to be variations in how different occupational groups and individuals perceive pay and labour market conditions. As pointed out in section 1.5, one of the aims of this study is to explore the external career patterns exhibited by IT workers in Nigeria.

The next sub-section focuses on the historical development of the IT industry in Nigeria.

3.4 THE INFORMATION TECHNOLOGY INDUSTRY IN NIGERIA

The IT industry in Nigeria refers to those organisations concerned with the furtherance of computer science and technology, design, development, installation, and implementation of information systems and applications. The findings of the research by Longe (1980) on the evolution of IT in Nigeria suggests that the electronic digital computer made its first appearance in Nigeria in 1963, in connection with the analysis of the 1962/63 national census data. The findings of his study further suggest that between 1963 and 1973, the total number of computers in the country was 20-25, with approximately 6 of these being associated with multinational companies. By 1977, the total number had grown to approximately 70. Longe observed that by this time, many universities, government departments, and parastatals, including the West African Examinations Council (WAEC), the Joint Admissions and Matriculation Board (JAMB), the National Electric Power

Authority (NEPA), the Nigerian Ports Authority (NPA), and the Federal Office of Statistics, as well as many banks and commercial firms, began to show an interest in computers.

A similar study of the evolution of the IT industry in Nigeria by Osuji (1986) suggests that prior to 1977, there were only three computer vendors in Nigeria (JCL, IBM, and NCR) all of which were local subsidiaries of overseas computer manufacturers dealing almost entirely with mainframes and minicomputers. Osuji pointed out that the government promulgation in 1977 of the indigenization decree, which set apart some categories of industrial activity exclusively for participation by Nigerian nationals while stipulating a minimum of Nigerian interest in others, resulted in IBM (one of the three original vendors), pulling out of the country rather than complying with the decree.

Osuji further noted that the decree had two other important effects. Firstly, there was an influx of indigenous vendors into the computer business. Secondly, the keener competition in the industry led to more aggressive marketing policies. As a result, the number of computers in the country rose sharply. Whereas 39 computers were installed in 1975-1977, 1978-1980 witnessed the addition of 197 new installations. There were 149 new installations in 1981-1983, and a further 99 in 1984-1986.

Nigeria has continued to witness an increase in investment in the IT sector, mainly by the growth of computer usage. In 1988, apart from in-house departments, more than 200 registered companies offered computer-related services in Nigeria (Nwachukwu, 1989). However, by 1994, there were more than 500 registered computer companies and their activities centered mainly on computer sales and maintenance services, software development and information buildings, computer education and training, word processing, bureau services, and marketing and economic research, amongst others (Alabi, 1994). The bulk of computer installations are in the Lagos metropolis, which is the business hub of Nigeria. The pioneer computer users were mainly banks, the oil industry, government ministries, government-owned companies and educational institutions (Korpela, 1994).

In March 2001, the Federal Executive Council of Nigeria approved a national IT policy, which aimed to make Nigeria an IT-capable country in Africa and a key player in the

Information Society by 2005. Implementation began in April with the establishment of the National Information Technology Development Agency (NITDA), which was charged with the responsibility of implementation. The policy recognises the private sector as the driving engine of the IT sector. NITDA aims to enter into strategic alliances, collaboration and joint ventures with the private sector for the actualisation of the IT vision, which is intended to make Nigeria an IT-capable country, as well as using IT as a driver for sustainable development and global competitiveness. IT is also to be used for education, job creation, wealth creation and poverty eradication.

In summary, the development of the IT industry in Nigeria has passed through three distinct phases, namely, an early phase from 1963 to about 1975, a period of rapid growth from 1977 to 1982, and a period of relative stagnation from 1982 to 1986. Currently, there is a new upsurge in the acquisition and use of IT in many sectors of the economy, particularly oil, pharmaceuticals, textiles, food processing, flour milling, and cement, as well as vehicle assembly plants, tire manufacturing plants, financial institutions (particularly banking), and businesses. Considerable IT activity is also taking place in universities, other tertiary institutions and research institutes. There has also been an increase in the number of IT exhibitions around the major cities of Nigeria especially in Lagos, the commercial centre of Nigeria. These are often supported by one or more of the IT multinational companies such as Microsoft and Compaq. Whilst their main function has been to raise IT awareness in the general population, they have also helped to stimulate IT consumption in the country and have even provided a means for some IT workers to update their skills and knowledge.

3.5 THE STRUCTURAL FEATURES OF THE INFORMATION TECHNOLOGY INDUSTRY IN NIGERIA

The organisations that employ IT workers in Nigeria can be easily classified based on the nature of their IT business. From this perspective, five types of organisations employ IT workers in Nigeria. They are namely software companies, hardware companies, total IT solutions providers, training companies and internet service providers. The nature of the IT business being undertaken by these companies is described briefly below:

1. **Software companies** These companies write and customize software for local requirements and the specific needs of corporate entities such as banks. They are also involved in reselling existing software packages and are in some cases agents/representative of international software companies such as Microsoft. Where this is the case, they install and configure the foreign software to the specific needs of the customer. These companies are also involved in training the people that use the software. The specific requirements of Nigerian legal, government and business practices provide a continuing 'natural protection' for the local software companies in a way that does not apply to hardware, because western software packages cannot be transferred directly to most Nigerian companies. Moreover, the process of economic transition contributes to this natural protection because it creates an ever-changing legislative environment in which benefits, tariffs, taxes, etc. keep altering. Thus, local software is continually being modified to keep up with these changes.

2. **Hardware companies** Companies in this category assemble computers in Nigeria. They also serve as hardware vendors selling computers, scanners, printers etc., as well as computer accessories and consumables and are involved in computer services such as installation, repairs and maintenance of computers and computer accessories. IT companies that focus only on the assembling of computer hardware, rely mainly on government contracts for survival because most private companies prefer to buy foreign made computers.

3. **Total IT solutions providers** These companies provide IT solutions for a wide range of IT services including network solutions and software and hardware needs. They also offer IT consultancy services.

4. **Training Companies** Companies in this category focus on training private individuals, governmental functionaries and company workers, in IT skills. In recent years, there has been a rapid increase in the number of IT training firms in Nigeria. There are two main types: those that focus on training almost exclusively, and those that use training as a way of increasing their income when their other activities (often software development or selling foreign software

packages), do not generate sufficient revenue. IT training courses are in high demand, particularly among school and university leavers, because they are seen as a means of increasing the chance of getting a job. Parents are therefore willing to pay the high charges levied, in the hope that such training will bestow an advantage in the crowded labour market. These IT training companies provide both basic and advanced courses in IT and IT-related areas. Their IT offerings are typically PC-oriented and cover package skills (especially the use of MS Office) and programming courses. Other PC-related skills courses are available according to demand. Courses in 'management' topics such as Management Information Systems (MIS) and systems analysis and design, are also provided.

5. **Internet service providers** These companies are involved in the provision of internet access to individuals and corporate bodies. They are also involved in the building and maintenance of websites.

The companies that employ IT workers in Nigeria can further be classified as consisting of two main types of companies - macro and micro companies. The macro companies consist of multi- national companies such as Microsoft and Compaq. Typically, such macro organisations often have a formal HR department, responsible for the management of the careers of their IT workers. Nigerian society refers to these organisations as imported and foreign and typically ascribes distinguished status to those who work in such establishments (Anekwe, 2002). The macro companies also include some indigenous IT companies such as Zinox technology and Computer Warehouse Group. Some of these indigenous IT companies serve as technical partners for foreign IT companies in Nigeria. In contrast, the micro companies (often-referred to as small and medium size enterprises) consist of local companies owned and managed exclusively by Nigerians. In this case, the owner-manager often carries out the HR functions in these companies.

The main differences between the macro and micro companies are in size and in the level of formality of activities. However, micro companies often experience more problems because of the economic downturn, as well as undercapitalization with difficulty in accessing bank credit and other financial products. Thus, the macro companies offer

better remuneration and career development opportunities making them more attractive to IT workers than the micro companies.

In recent times, there has been a huge upsurge in the demand for high skilled IT workers in Nigeria because of the general upsurge in the acquisition and use of IT in many sectors of the economy, particularly oil, pharmaceuticals, textiles, food processing, flour milling, vehicle assembly plants, financial institutions (particularly banking) and businesses. In addition, the Federal Government of Nigeria policy on IT has also contributed in escalating the demand for high skilled workers. The policy on IT aims to encourage local production of IT products and government patronage of these products. In line with this policy, the Nigerian government recently approved some made in Nigeria computers and IT equipments for its establishments' patronage. With this development, it is expected that all government agencies and parastatals will begin to order for locally built computers in droves. Thus, many entrepreneurs are increasingly investing in the IT industry by setting up their own IT businesses in order to benefit from the government policy on IT. This has resulted in increased demand for high skilled IT workers that will be the technical backbone for these 'home' companies to survive.

In response to the growing demand for IT workers, more students are enrolling in computer science departments of different Nigerian universities. Private computer training institutes that offer IT certification courses (some with government recognition) have also grown rapidly in response to growing demand. Studies in these institutions lead to degrees and diplomas in computer science. Although more people are undertaking IT training to alleviate the shortage of skills in the industry, demand continues to grow for high skilled IT workers. This is because, there is a big demand for IT infrastructures and the workers that can produce and manage these infrastructures in all sectors of the economy. Both the macro and micro companies are involved in intense competition for the few available IT workers. Thus, the retention and career management of IT workers have become a major issue for IT managers and HRM managers in Nigeria IT industry (Ovadje and Ankomah, 2001).

3.6 SUMMARY AND CONCLUSION

A summary of the key issues that emanated from the discussion in this chapter is presented below:

- Firstly, the reviewed literature in this chapter suggests that the prevailing economic and labour market environment shape the careers and work attitudes of IT workers in Nigeria. For instance, it was observed that due to the poor state of the Nigeria economy, workers are likely to aspire to earn as much money as possible, to enable them to meet personal and family obligations. Invariably, IT workers are likely to remain in organisations that offer an externally competitive compensation package that can guarantee their personal and family survival.

- Secondly, the reviewed literature suggests that pay and employment conditions differ significantly among the various types of employers in Nigeria and this influences the ability of the companies to recruit and retain IT workers and invariably the quality of work life and careers engendered by these employers.

- Thirdly, the reviewed literature suggests that the use of computers in Nigeria is expanding rapidly both quantitatively and qualitatively, due to pressure on the management of industrial and business concerns to adopt more efficient production methods. The upsurge in the acquisition and use of computers in Nigeria is also a result of the removal of import restrictions and foreign exchange controls.

- Fourthly, the reviewed literature suggests that the IT industry in Nigeria is a diverse and dynamic industry and typically consists of two types of companies, macro and micro companies. Macro companies consist of multinational companies such as Microsoft and Compaq, while micro companies, often referred to as small and medium-sized enterprises, consist of local companies owned and managed exclusively by Nigerians.

- Finally, this chapter concludes that the prevailing economic situation in Nigeria appears quite favourable to the development of both organizational and boundaryless careers. In the first case, it is likely that Nigerian workers will prefer to remain with a stable organisation due to high unemployment level. On the other hand, workers who feel that their expectations are not been met are likely to move from one organization to the other in search of better economic circumstance. In any case, there is likely to be variation in how different occupational groups and individuals deal with the economic and labour market constraints in constructing their careers.

Chapter 4

RESEARCH METHODOLOGY

4.1. INTRODUCTION

The objective of this chapter is to present the two–pronged methodological approach that has guided this research. To do so, it will be necessary to outline the research philosophy, strategy, data collection methods and data analysis methods used in meeting the research objectives. Therefore, this chapter is arranged as follows: section 4.2 discusses the research philosophy adopted and explains the rationale behind the qualitative and quantitative approach applied throughout this study. Section 4.3 gives a detailed discussion of the qualitative approach used in the first phase of this study. Section 4.4 gives a detailed discussion of the quantitative approach used in the second phase of this study. And, finally, section 4.5 presents the summary of the main issues discussed within this chapter.

4.2 PHILOSOPHICAL OVERVIEW

This section attempts to present the philosophical stance/ theoretical orientation of the researcher. There are two main research philosophies namely positivism and phenomenology. It will be necessary to discuss them briefly to help highlight the approach taken in designing and carrying out this research. Firstly, the positivist philosophy is based on the approach used in the natural sciences, which assumes that social reality is independent of human perception, existing regardless of our awareness of it. This approach holds that there are facts about the social world that can be collected and analysed independently of the people from which the facts were obtained (May, 1993). Research in this tradition commonly, but by no means exclusively, seeks to quantify variables of interest and the quality of research is commonly assessed in terms of statistical measures of reliability and validity and through rigour with which quantitative analyses are conducted including sampling considerations, researchers objectivity and correctness with which statistical techniques are applied (Guba and Lincoln, 1994). The positivist approach seeks the facts or causes of social phenomena, with little regard paid

to the subjective state of the individual (Hussey and Hussey, 1997). Positivists generally assume that reality is objectively given and can be described by measurable properties, which are independent of the observer, or researcher, and his or her instruments.

The positivist philosophy is normally associated with a quantitative research approach. Quantitative research "seeks to explain and predict what happens in the social world by searching for regularities and causal relationships between its constituent elements" (Burrell and Morgan, 1979, p. 5). This approach is concerned with testing hypotheses derived from theory and/or being able to estimate the size of a phenomenon of interest. Thus, quantitative methodology is appropriate when collecting data related to the frequency of occurrence of a phenomenon or variable, and it is also useful when testing the existence of relationships between variables of interest based on hypotheses derived from theory or making inferences about the quantity of specific attributes in a population based on measurements derived from a sample.

In contrast to the positivist paradigm, a phenomenological approach is concerned with understanding human behaviour from the participant's own frame of reference. It assumes that social reality is in our minds, and, therefore, the act of investigating reality is viewed as having an effect on that reality. It follows that considerable regard is paid to the subjective state of the individual (Hussey and Hussey, 1997). Focusing on the meaning that research subjects attach to social phenomena is a characteristic of the phenomenological approach. An attempt by the researcher to understand what is happening and why it is happening is fundamental.

This approach has been termed 'anti-positivist' (May, 1993) in the sense that it rejects the key assumptions of the positivist philosophy that permanent laws exists in the social systems and that these laws can be extracted and analysed in isolation from the social system itself. The essence of phenomenological approach is that attitudes and behaviour are determined by their social setting, that is, they are 'socially constructed', and hence it follows that the researcher should seek to understand and explain phenomena in a particular localised setting, rather than seek universal laws that attempt to explain them free of any context. Phenomenological philosophy is normally associated with a

qualitative research approach. A qualitative approach involves examining and reflecting on perceptions in order to gain an understanding of social and human activities (Hussey and Hussey, 1997). Crossley and Vulliamy (1997) claim that qualitative methodology:

> *"provides descriptions and accounts of the processes and social interactions in 'natural' settings, usually based upon a combination of observation and interviewing of participants in order to understand their perspectives. Culture, meanings, and processes are emphasised, rather than variables, outcomes, and products. Instead of testing pre-conceived hypotheses, much qualitative research aims to generate theories and hypotheses from the data that emerge, in an attempt to avoid the imposition of a previous, and possibly inappropriate, frame of reference on the subjects of the research". (*p. 6)

In a similar vein, Kaplan and Duchon (1988) point out that:

> *"Immersion in context is a hallmark of qualitative research methods and the interpretive perspective on the conduct of research. Interpretive researchers attempt to understand the way others construe, conceptualise, and understand events, concepts, and categories, in part because these are assumed to influence individuals' behaviour. The researchers examine the social reality and subjective meanings held by subjects by eliciting and observing what is significant and important to the subjects in situations where the behaviour occurs ordinarily. Consequently, qualitative methods are characterised by (1) the detailed observation of, and involvement of the researcher in the natural setting in which the study occurs, and (2) the attempt to avoid prior commitment to theoretical constructs or to hypotheses formulated before gathering any data". (p. 572-573)*

Inductive logic is a common approach in qualitative methodologies. In inductive logic, categories emerge from informants rather than being identified *a priori* by the researchers. This emergence provides rich context-bound information that leads to theories with an ability of explaining a phenomenon (Creswell, 1994). In sum, a

qualitative research design is appropriate when the proposed research is exploratory and the variables and theory base are unknown.

The philosophical orientation guiding this study is the *pragmatic / mid-range research* philosophy. The pragmatic research philosophy derives from the work of Pierce, James, Mead and Dewey (Cherryholmes, 1992). This research philosophy has received support from contemporary scholars (e.g., Cherryholmes; 1992; Creswell, 2003). The pragmatic research philosophy employs the thinking of both the positivist and the phenomenologist. It applies a practical approach, integrating different perspectives to help collect and interpret data. While acknowledging the importance of the pragmatic research philosophy to our understanding of knowledge claims, Creswell (2003) points out that this philosophy is still developing in form and substance and "*knowledge claims arise out of actions, situations, and consequences rather than antecedent conditions (as in positivism)" (*p.11). He further points out that the pragmatic researcher is sensitive to the social, historical, and political context from which inquiry begins and considers morality, ethics, and issues of social justice to be important throughout the research process. He concludes that pragmatism is not committed to any one system of philosophy. In this case, truth is "what works for now" "What works for now" may not reflect reality, but it should to the extent that it can.

Howe (1988) further notes that the pragmatic research philosophy falls in-between the two opposing research philosophies, positivism and phenomenology, and involves the use of whatever philosophical and/or methodological approach that best suits a particular research problem. He points out that pragmatism is appealing for three key reasons that can be explained as follows:

1. It gives us a paradigm that philosophically embraces the use of mixed methods and mixed model designs.
2. It eschews the use of metaphysical concepts (Truth, Reality) that have caused much endless (and often useless) discussion and debate.
3. It presents a very practical and applied research philosophy.

In essence, the pragmatic research philosophy emphasises the practical problems experienced by people, the research questions posited, and the consequences of inquiry. The pragmatic research philosophy is normally associated with the triangulation research approach. Hussey and Hussey (1997) define triangulation as the use of different research approaches, methods and techniques in the same study. They argue that the main reason underpinning the use of triangulation in research studies is the notion that it can offer a broader and often complementary view of the research problem or issue and overcome the potential bias and sterility of a single method approach.

Following the above line of thought, in order to achieve the aims of this study, as outlined in section 1.3, this research has avoided what may be characterised as methodological monism (i.e. the insistence on using a single research method). This is not due to an inability to fully evaluate the merits and demerits of the various alternatives. Rather, it is based on the belief that two research methods can be employed in such a way that they complement each other and thereby lead to a better understanding of the issues being explored. In this case, this research is not rooted solely in either of the two main philosophical stances, but, rather, it is guided by the pragmatic philosophical approach.

The adoption of a pragmatic philosophical approach in this study involved the use of a two-phase research design consisting of both qualitative and quantitative methods. In the first phase, a qualitative method, which involved semi-structured interviews, was adopted to address the research questions that emerged from the review of extant literature on the careers (external and internal) of individuals and the societal factors that shape and constrain careers. The findings from the qualitative semi-structured interviews helped in the subsequent design of an appropriate instrument used in examining the propositions that were developed in this study. The two methods adopted in this study are discussed in detail in the subsequent sections of this chapter.

4.3 PHASE 1 – QUALITATIVE METHOD

The first phase of this research addressed the following research questions:

1. Do the external career patterns exhibited by IT workers in Nigeria conform to the traditional view of career as hierarchical and progressive or to the recent models of boundaryless careers?

2. What are the internal career orientations of IT workers in Nigeria and to what extent do these orientations differ from the career orientations that have been found among IT workers in other national contexts (e.g. North America and Europe)?

3. What are the societal factors that shape and constrain the careers of IT workers in Nigeria?

In order to explore these research questions, it was necessary to conduct an exploratory, inductive research into the nature of the internal and external careers of IT workers in Nigeria and the societal factors that shape and constrain the careers of these workers. A qualitative, rather than a quantitative approach was best suited for the exploration of the internal career anchors and external career patterns exhibited by IT workers in Nigeria for the following reasons. Firstly, there have not been any previous studies directly addressing career patterns and career orientations of IT workers in Nigeria; similar studies have focused on different national contexts. Thus, there is a lack of understanding of the nature of the careers of IT workers in Nigeria. Secondly, little is known about the societal factors that shape and constrain the careers of IT workers in Nigeria; clearly, a paucity of research exists in this area. Thirdly, a qualitative research approach was adopted because previous research had traditionally explored the internal career anchors and external career paths of individuals using a qualitative approach (e.g., Anderson and Sommer, 1980; Grsywacs, 1982) or a combination of qualitative and quantitative methodologies (Alberini, 1982; Applin, 1982; Schein, 1990, Derr and Laurent, 1989). Thus, the approach used in this study is consistent with the work of previous researchers in this area.

4.3.1 THE QUALITATIVE SAMPLE

Following other recent qualitative studies on the careers of individuals (e.g., Schein, 1990; Nordvick, 1991; Lepine, 1992; Lyness and Thompson, 2000) that utilised small sample sizes. Detailed in-depth information from a relatively small sample was collected. Moreover, the size and complexity of the IT industry in Nigeria meant that several hundred participants would be needed if a fully representative sample were to be achieved. This was not realistic in the timeframe allowed for this research project. Thus, in order to select a representative sample of the population of IT workers, as well as to avoid any systematic bias inherent in a single organisation, participants were randomly selected from the membership list of the Nigerian Computer Society (NCS). The NCS is the umbrella organisation of all IT workers in Nigeria. Strict rules govern full membership and stipulate that an applicant should have a computer-related qualification ranging from a professional certificate in computer science to a postgraduate degree.

Members of the NCS are located in all Nigerian states. However, due to paucity of finance it was not possible to travel outside Lagos state (the headquarters of the association) in order to interview IT workers. Because all IT workers that participated in this phase of the study were located in Lagos, the sample is indicative rather than fully representative of the population of IT workers in Nigeria. However, it includes a wide cross-section of IT workers with different demographic characteristics and career histories. Forty-five IT workers from the membership list of the association were randomly selected, taking into consideration five key criteria: age, gender, IT role, educational qualification and tenure in the industry. An invitation was emailed to the selected IT workers (see Appendix 2: Professional IT workers invitation). Of the forty-five IT workers contacted, twenty responded positively and were included in the first phase of the study.

In addition to the above number of respondents, ten IT workers were also identified and selected from the researcher's personal network (friends and associates were contacted to obtain their referral to potential participants through a snowballing process). A combination of these two sampling designs encouraged a broader coverage of a cross-section of IT workers working in the IT industry and incorporated IT workers with

different backgrounds. A summary of the qualitative sample demographics is reported in table 4.1 below. The average age of the subjects was 33 years. The sample consisted of 21 male and 9 female IT workers. The average length of time that participants had worked in the IT industry was approximately 7 years.

Table 2 Demographic characteristics of respondents

CASE ID	GENDER	AGE	EDUCATIONAL QUALIFICATION	TENURE IN THE INDUSTRY	IT ROLE
1	Female	26	B.Sc, IT certification	5	IT Consultancy
2	Male	35	B.Sc	7	Networking
3	Female	32	B.Sc	7	Networking
4	Male	38	B. Sc, M.Sc	8	Software, Networking, Consultancy, VoIP, Telecom
5	Male	30	Certificates courses	5	Software
6	Female	26	Certificate courses	4	Networking(LAN,MAN,WAN:ISP), Programming
7	Male	40	B. Sc, M.Sc	7	Hardware, Telecoms, Training, Networking
8	Male	38	M.Sc	8	Training, Networking
9	Male	30	B.Sc	7	Training, Networking
10	Female	29	Certificate courses	7	Software Quality Assurance
11	Male	32	B.Sc	8	Software Development
12	Female	30	B. Sc, M.Sc	6	IT Consultancy, Training
13	Male	34	B.Sc	8	IT Consultancy, Training
14	Male	38	B.Sc	7	Hardware, Software, Consultancy, System Integration,
15	Male	27	B.Sc	7	IT hardware
16	Male	25	Diploma	6	IT consultancy

17	Male	30	B. Sc,	8	Training, Networking, Web
18	Female	40	B. Sc, M.Sc	8	IT Park & Software Solutions, Web, Consultancy, Training
19	Male	29	Diploma, B.Sc	5	IT, Consulting, Software
20	Male	40	B. Sc, M.Sc,	8	IT consultancy
21	Female	36	B.Sc	7	Software & Web Development
22	Male	35	B.Sc	8	Network (Cisco), Servers (Microsoft), Software dev
23	Male	37	B.Sc	6	Networking
24	Female	29	IT Certificate courses	5	Networking
25	Male	40	B. Sc, M.Sc,	8	Web Developer, Consultancy, Training
26	Female	36	B.Sc	9	Software Analyst/Developer
27	Male	35	B.Sc	7	IT, Database Software, Advance Networking Systems.
28	Male	37	B.Sc	6	IT hardware
29	Male	31	Professional IT Certificate courses	7	IT consultancy
30	Male	35	B.Sc	8	Training, Networking, Web

4.3.2 DATA COLLECTION

A qualitative semi-structured (face-to-face) interview was used as the data collection method during the first phase of this study. The semi-structured interviews allowed for a deeper pursuit of emergent topics and themes than the initial planned questions would have allowed. The author considered using both the structured interview and the unstructured interview methods in this study. However, the decision was taken to focus

on method because of inherent limitations. In the first instance, a structured interviewing technique, in which the precise line of questioning is predetermined, would have been inappropriate for addressing the research aims of this study because such a method pre-supposes the existence of theories and relationships which can be tested by specific questioning. At the other end of the scale, a totally unstructured interview, in which no guidance at all is given to the respondents, was not adopted because of the difficulty that would have arisen when analysing unstructured interview data, especially when synthesizing across respondents.

The semi-structured interviews with IT workers were conducted between February and April 2004. Each interview commenced with an introduction about the researchers personal background along with an outline of the aims and objectives of the research and issues of confidentiality. The interviews were conducted in-person at various locations. Locations were chosen depending on the subject's choice of venue (this included coffee shops and the subjects' place of work). In cases where the interviews were conducted at the subjects' place of work, they were done in private offices or conference rooms. The interviews lasted between one hour and two hours thirty minutes. They focused on exploring and identifying the internal career orientations and the external career patterns exhibited by the workers. They also focused on identifying the contextual factors that shape and constrain the careers of IT workers in Nigeria.

The interviews were designed on the principles of work biography in order to provide a detailed career history of the respondents. The interviews were designed to facilitate memory recall. The main criterion for the design of the interview was that questions needed to start with an individual's first job and work to their present job. I specifically asked each of the participants to take me through their career and life histories, noting important considerations, transitions and factors that may have shaped their career strategy and career decisions. Particular attention was paid to the objective components of their career (number of employers, type of employing organisations) and the subjective aspects (explanations of the logic for their chosen career pattern). The participants were also asked to identify the different factors that have influenced their career strategies and career directions.

An interview protocol was adapted from Schein's (1990) career anchor interview to guide the interviews. The interview protocol consisted of the following (repeated) series of questions:

1. What was your next major change in job or organisation?
2. How did this come about? What motivated the change?
3. How did you feel about the change? How did it relate to your goals?

The interview also contained questions dealing with overall career goals and life plans. Representative of these types of questions are:

1. As you look over your career and life so far, can you describe some times that you especially enjoyed (did not enjoy) and what made them enjoyable(not enjoyable)?
2. As you look ahead in your career, what things do you look forward to (want to avoid)?
3. As you think over the answers you have given, what patterns or themes do you see?

A sample of the interview script used in this research is attached as appendix 3.

Prior to conducting the individual interviews, which were the primary means of data collection a brief career history questionnaire was emailed to each prospective participant. Prospective participants were asked to complete the questionnaire and bring it along to the interview (see Appendix 4: Career-in-Life Story Survey). This survey was adapted from Boyatzis' (1996) Career and Life History Questionnaire and consisted of a demographic form and instructions for drawing lifelines and noting salient career transitions. IT workers who did not complete the survey prior to the interview were given a demographic form to complete at the time of the interview. In order to maximise participants` description and to minimise researcher imposition, the career story survey was developed in an intentionally free-form manner. It was hoped that drawing these lifelines would serve as a way to ground the conversation in each participant's unique career development journey and to allow them to articulate the salient transitions and career choices that had occurred over the course of their lives.

Thus, the completed Career-in-Life Story Survey was the starting point for the interviews. It was used as a vehicle for discussing participants' life stories in terms of their careers. Each participant talked through their Career-in-Life story using his or her previously prepared lifelines. Prior to the interviews, all participants were given a consent form to read and sign declaring their willingness to participate in the study (see appendix 5: Consent Form). To facilitate the process of analysis, all interviews were tape-recorded (with the permission of the interviewee) and transcribed verbatim (with the help of a research assistant). In addition to tape-recording, careful notes were made about career history, the reasons for movement, attitudes, and values. After each interview, a Contact Summary Form was used to summarise the main themes, concepts, issues or questions arising from the interview. The use of this form allowed for adjustments to the interview protocol, as new themes emerged as data was collected. A sample of the Contact Summary Form is attached as appendix 6. I also followed Taylor and Bodgan's (1998) advice that the process of data analysis should be iterative and, therefore, begin with the first interview. In order to satisfy this goal, I spent time analysing (after the first six interviews) which questions were working and which were not. Based on the preliminary analysis a decision was taken to redesign interview questions and discontinue some line of questioning, while looking to explore others in more depth. Thus, the design of the semi-structured interview was flexible and iterative.

Overall, the interviews consisted of key questions, probes and follow-ups (Rubin and Rubin, 1995). The *main questions* created a framework for the interview; they were designed to address the specific research questions and to link what is asked in individual interviews to the overall design. The *probes* were used to clarify and complete the answers, making them understandable and signalling to the interviewees the expected level of depth. The purpose of the *follow-up* questions was to pursue newly discovered avenues, elaborate the context of answers, explore the implications of what was said and to test and modify emerging themes (Rubin and Rubin, 1995).

After a number of interviews, a data pattern emerged enabling further data collection to be predictable. Glasser and Strauss (1967) refer to this point as 'saturation'. At this stage, it was perceived that an adequate amount of interviews had been conducted, and that any further interviews would be likely to add nothing to the information already gathered. The concept of saturation was pivotal. If saturation had not occurred, interviewing would

have continued along with the identification properties of the ongoing emerging categories (Glasser and Strauss, 1967).

4.3.3 QUALITATIVE DATA ANALYSIS PROCEDURE

In order to obtain a holistic sense of the substance and the spirit of each participant's career story, each transcript was read in detail while concurrently listening to the audiotape. In particular, listening to the audio provided an overall sense of the effect of each conversation. This allowed for an understanding of each interview as a whole before reducing it to discrete segments for analysis. During the initial reading of the transcripts, notes were taken regarding individual career patterns, career motives and the factors that shape careers in Nigeria. Themes that emerged in these initial readings were helpful in providing future directions for organising a framework for approaching a deeper level of data reduction and analysis. Data from the interviews was transcribed throughout the interview period and for two months afterwards.

After post-interview transcription, individual interview documents were returned to each interview respondent. These were hand delivered in person to ensure confidentiality. Interview respondents were provided with the opportunity to review their statements and return any comments relating to misrepresentation of their views. This was completed approximately three months after the interviewing phases and during the very early stages of coding. No comments were received requiring the raw data to be altered.

In organising and managing the data analysis process, the decision was made to break down each interview into three separate sections:

1. lifeline conversation (external career pattern)
2. responses to the interview questions about career anchors
3. responses to the questions concerning contextual factors that shape careers.

The split between the career pattern, the internal career anchor and the contextual factors became an obvious way to organise the data during the initial reading of transcripts. The lifeline conversation reflected progressive stories in regards to paths taken and choices made. Answers to career anchor questions reflected the values, beliefs and motives that guided the career choices and career decisions of the participants. In addition, answers to the contextual factors questions reflected the factors (influences) that shaped and constrained the careers of the participants. Thus, analysis of the qualitative data involved the physical separation of sections of transcripts which where then categorised and filed under appropriate headings.

After organising the data and splitting it into three sections for analysis, the second step was to begin the coding process. In order to do this, I adopted the grounded theory approach (Glasser and Strauss, 1967). This approach aims to avoid contaminating existing theoretical frameworks by discovering theories, concepts, hypotheses and propositions that are 'grounded' in the collected field data. Emphasis is on generating theory rather than verifying it and, more particularly, generating theory that will be relevant to the research being undertaken. The application of the grounded theory approach evolved through four different phases, listed below:

1. Identifying critical instances – This stage involved highlighting key passages of transcripts.

2. Open coding – This stage involved identifying, naming, categorising and describing phenomena found in the text. It was necessary to carefully work through all transcripts and to divide the data into meaningful categories. These categories were based on a theme or variable that isolated information given by the informant. The units of coding were individual statements given by the informants regarding their internal and external careers as well as contextual factors that shape and constrain their career. Each statement in the interview data was individually coded and built into common themes. If at least two cases were found that resembled each other and that could not be fitted into the existing categories, new categories were created. At this stage, patterns were discovered involving both commonalities and differences in career motivation and individual

work histories. Whilst individual career histories and career motives were interesting in their own right, the career patterns and individual career orientations became pronounced when they were considered collectively.

3. Axial coding – This stage involved refining the initial list of categories, deleting and then amalgamating some. It was necessary to make connections between the categories and to define their properties. By so doing, some categories emerged with high frequency. These were in turn connected to many of the other emerging categories.

4. Selective coding – Finally, a few different categories were chosen as core categories. Thereafter all other smaller categories were related to the core ones. The essential idea here was to develop a framework around which everything else is draped. Thus, three frameworks were developed. The first framework encapsulated the career patterns exhibited by IT workers in Nigeria; the second framework encapsulated the factors they are not willing to give up even when forced to make a difficult decision-career anchor; while the third consisted of factors that shaped and constrained the workers' careers.

4.3.4 VALIDITY

Internal validity in qualitative research is concerned with the accuracy of the information and whether it matches reality (Merriam, 1988). From this perspective, relying on a single interviewer's coding is highly problematic and creates significant problems for assessing the reliability and validity of the data. On the other hand, external validity, or generalisation, is the judgement that the study's results can be generalised to a larger population (Lee, 1998). One way to enhance the internal validity of a qualitative study is to invite another researcher to examine the audit trail of the key decisions made during the research process and to validate there accuracy and usefulness. Thus, decisions about data collection and data analysis were reviewed with two colleagues and with my supervisor during the course of this research. The reliability of the categories developed in the data analysis was further measured by having others read the interview transcripts to see if they would classify them in the same way. By this criterion, the results are considered to be reliable in that two independent readers, both familiar with this research and with significant past experiences in applying qualitative coding procedures, agreed

with most of the coding and themes. The identified points of differences were discussed and resolved. The validity of the research findings was further enhanced by allowing interviewees to give feedback on the transcripts (as pointed out in subsection 4.3.3).

4.4 QUANTITATIVE APPROACH (2ND PHASE OF THE RESEARCH)

In the first phase of this study, six career anchors held by IT workers in Nigeria were identified. In addition, four career patterns, exhibited by workers were also identified. It seems improbable that IT workers in Nigeria place equal weighting on the different career anchors. It was therefore necessary to carry out a further study with a larger sample in order to investigate the strengths of the different career anchors found among IT workers. Thus, the second phase builds on the findings of the first phase of the study by examining the relationship between age, gender, educational qualifications and career anchors. In addition, the relationship between the different career anchors and career patterns were also investigated. The different propositions examined in this study are outlined below.

Proposition 1: There will be meaningful difference in the pattern of career anchors held by male and female IT workers in Nigeria.

Proposition 2: The dominant career orientations of IT workers in Nigeria will vary with age

Proposition 3: Career orientations of IT workers in Nigeria will vary with educational qualification

Proposition 4: The dominant career orientations for IT workers in Nigeria are marketable skills and stability

Proposition 5: IT workers in Nigeria with stability, work and life balance, or managerial competence anchor will prefer the slow and steady career pattern.

Proposition 6: IT workers in Nigeria with independence, marketable skills, or technical challenge career anchor will prefer the explorer career pattern.

Proposition 7: IT workers in Nigeria with independence, managerial competence, work and life balance or technical challenge career anchors will prefer the canvasser career pattern.

Proposition 8: IT workers in Nigeria with stability, marketable skills, technical challenges, independence, work and life balance, or managerial competence career anchors will find the zigzag career pattern suitable

To achieve the goals of the second phase of this study (as outlined above), a quantitative method was chosen. The rationale behind this decision was that a quantitative method is more appropriate when a research aims to collect data relating to the frequency of occurrence of a phenomenon or variable, and it is very useful when testing the existence of relationships between variables of interest. The quantitative approach is also helpful if the research aims to make inferences about the quantity of specific attributes in a population based on measurements derived from a sample (Hussey and Hussey, 1997). One further reason for choosing the quantitative method for the second phase of this study is that it has been one of the generally and traditionally accepted approaches used in similar studies on the career orientations of IT workers in other regions (e.g. Igbaria et al., 1991; Ginzberg and Baroundi, 1992; Igbaria and McCloskey, 1996).

4.4.1 SELECTION OF QUANTITATIVE SAMPLE

To achieve the aims and objectives of this study, a sample was required that could be considered representative of subjects across the IT industry. In order to accomplish this, respondents were randomly drawn from three groups:

1. IT workers working for organisations that are technological driven with IT at the heart of their business such as software and hardware companies (72 respondents).

2. IT workers working for organisations that have an in-house IT department but whose core products or services is unrelated to IT such as the major banks, oil companies (85 respondents).

3. Participants of the 2004 IT Symposium held at the Golden Gate restaurants, Ikoyi, Lagos, (this was a two-day seminar organised by the Nigerian Computer Society (NCS) from 2-3 April 2004. IT workers that participated in this symposium were drawn from IT service companies and IT departments of different organisations in Nigeria. Participants also included self-employed IT consultants (179 respondents).

4.4.2 DATA COLLECTION METHOD

The data collection for this phase of the study took place from March to April 2004. Questionnaires were used to gather responses from subjects (IT workers). The rationale for using questionnaires was that they elicit a greater degree of candid and objective replies from respondents. The reason for this is directly related to the high sense of impersonality that is achieved, and by utilising standardised questions an efficient and uniform recording of the observations is achieved (Osuala, 1993). Additionally, the use of a questionnaire was considered appropriate for this phase of the research because of its ease of administration, being simple to score and to code. In addition, questionnaires can easily be reused, and they provide an objective way of comparing responses over different groups, times and places.

The questionnaires were either administered to IT workers on site or were delivered to a contact person in each company. IT workers on site voluntarily met at prearranged times and were given the questionnaire by the researcher. Others received envelopes in which to seal responses and forward to the contact person in their company (usually the human

resource manager). It is important to note that in order to get responses fro
second group in the sample, the human resource managers in these organi
in encouraging their IT workers to complete and return the questionnaires. How
participation was voluntary and participants where assured of the confidentiality of their responses. No inducements were offered to either the participants or the organisation who assisted in the research and all work required by participants was kept to a minimum to ensure that completion would not prove to be burdensome.

In the case of the third group (participants in the IT seminar), questionnaires were distributed on the first day of the seminar. Assistance was sought from the seminar organisers to distribute the questionnaires and to encourage participants to complete and return them. Altogether, 500 questionnaires were distributed in this study. Of that number 340 usable questionnaires were returned, 4 questionnaires were excluded because of incomplete information. In total 336 questionnaires were used for statistical analysis.

4.4.3 RESEARCH INSTRUMENT

The questionnaire used in this study is divided into three sections. The first section focused on assessing the career orientations of the respondents. The second section focused on assessing the external career pattern exhibited by the respondents while the final section focused on demographic variables. A brief discussion concerning the component of each section is provided below.

In the first and second sections, the items that assessed the career anchors of IT workers were mainly developed from the findings of the qualitative study undertaken in the first phase of this study. However, some of the items were culled and modified from existing literature on the career anchors of individuals (e.g., Schein, 1990).

The first and second sections of the questionnaire, was structured in Likert-type scales. The main reason for using Likert-type scales as opposed to single items in assessing the career anchors and external career patterns of the respondents was that individual items have considerable random measurement error when measuring psychological attributes

(i.e. they tend to be less reliable, less accurate, and less valid). In this case, measurement error is averaged out when individual scores are summed when obtaining a total score (Nunnaly and Bernstein, 1994).

Another reason for using a likert-type scale was that it had been the traditional approach used in assessing the career orientations of workers from different occupational groups (e.g., Schein, 1990; Igbaria et al, 1995). McIver and Carmines (1981) describe the Likert scale as follows:

> *"A set of items, composed of approximately an equal number of favourable and unfavourable statements concerning the attitude object, is given to a group of subjects. They are asked to respond to each statement in terms of their own degree of agreement or disagreement. Typically, they are instructed to select one of five responses: strongly agree, agree, undecided, disagree, or strongly disagree. The specific responses to the items are combined so that individuals with the most favourable attitudes will have the highest scores while individuals with the least favourable (or unfavourable) attitudes will have the lowest scores" (pp. 22- 23).*

The table below shows the different career anchors and career patterns that were assessed in this study and the item numbers that were used to examine these factors. Four items each were used to assess the individual factors, as can be seen in table 3 and table 4 below. Responses to each of the items in a factor were averaged to create the measures for the examined variables. This approach is similar to the one employed by Schein (1990). For instance, to develop the managerial competence factor, responses to each of the four items was averaged to produce the factor score.

Table 3 Career Anchors Inventory

Slow and steady	1	5	10	14
Canvasser	6	2	9	15
Zigzag	3	7	12	13
Explorer	8	4	11	16

Table 4 Career Patterns Inventory

Technical challenges	24	15	20	5
Independence	7	17	19	21
Managerial competence	1	2	9	12
Stability	4	13	18	22
Work/life balance	8	10	16	23
Marketable skills	3	6	14	11

The third section of the questionnaire focused on demographic variables such as age, gender, educational qualification and tenure in the industry. Previous research has pinpointed the relevance of demographic variables in this type of study (Allen and Katz, 1992). Overall, precise instructions were given to respondents to help them complete the questionnaires accurately. A cover letter (see appendix 7) was also attached to the questionnaires to enable the respondents to be aware of the purpose of the study and the university affiliation of the researcher. The letter also assured respondents of total confidentiality at all times and they were informed that all feedback would be based on the findings of the whole sample rather than of their own organisation. This was done to improve the chances of respondents answering the questions honestly.

4.4.4 VALIDATION OF THE RESEARCH INSTRUMENT

Content validity refers to whether a scale representatively measures the concepts it is intended to measure. The questionnaires used in this study were submitted to a panel of 10 IT experts in Nigeria for validation. The panel was asked to review the content of the items in the questionnaire and to determine whether the items were within the linguistic capabilities and understanding of IT workers in Nigeria. The panel was also asked to eliminate items or questions that they found to be irrelevant and to make suggestions on how best to simplify the items that were ambiguous. The experts independently and unanimously recommended the use of the instruments for this study with slight modification. The panel also indicated that the instruments were appropriate as measures of the factors identified in this study.

The reliability of the four items that measured each career anchor and career pattern was further assessed by applying the formula 'coefficient alpha', recommended by Cronbach (1951). Coefficient alpha is a formula widely used for scale reliability. It is based on measurements of the internal consistency of the responses to questions designed to represent a construct. A summary of the result obtained from SPSS analysis of the reliability scale coefficients is presented in table 5 below, while the detailed report is attached as appendix 8.

Table 5 Cronbach's Alpha Reliability Coefficients

CAREER ANCHOR AND CAREER PATTERNS	RELIABILITY (ALPHA)
Managerial competence	.86
Independence	.83
Stability	.81
Marketable skills	.73
Technical challenge	.76
Work/life balance	.82
Slow and steady	.75
Explorer	.74
Canvasser	.72
Zigzag	.67

(All scales include 4 items)

From the table above, it can be seen that almost all the scale reliabilities are above the 0.7 level (except the zigzag career pattern) which Nunnaly (1978) and Cronbach (1951) suggest as acceptable for basic research. The zigzag career pattern had a reliability scale of .67; this implies that the items that were used for assessing the zigzag career pattern slightly falls below the acceptable level. However, the items were retained because of its nearness to .70 (the acceptable level).

4.4.5 QUANTITATIVE DATA ANALYSIS AND PRESENTATION METHOD

The data generated from this study was analysed using statistical package for social science (SPSS). Data from all useable questionnaires were entered into an SPSS file. When all data had been entered, each case (a case represents data for each respondent) was double-checked and during this stage a small number of corrections was made. Descriptive statistics, including maximum and minimum values, were examined for each variables as a further check that a value did not breach the range of values that could be taken. The data analysis was completed using descriptive statistics as well as inferential statistics (SPSS), such as:

- Frequency analysis
- Mean scores
- Factor analysis
- ANOVA
- Chi-square

A brief explanation of these different methods is given in the subsequent sub-section.

Frequency Analysis

The frequency scores were most valuable as a means of describing the research population. Through the scores, it was possible to know the gender, age group, educational qualification distribution of the sample and other related information. Frequency distribution tables and bar charts were used in presenting the data. The use of frequency distribution tables enabled patterns and relationships to be discerned which

were not apparent in the raw data. Glasser and Strauss (1967) have highlighted the usefulness of this approach. They note, "If quantitative data is handled systematically by theoretical ordering of variables in elaboration tables, the analysts will indeed find rich terrain for discovering and generating theory". Similarly, bar charts were used in presenting the data in this study because of their usefulness in summarising frequency data and conveying information precisely.

Mean Scores

In addition to using frequencies, mean scores were used to supplement and summarise the large volume of data. Means scores were easier to digest. Given that we were working with a 5-point scale, we could expect a mean score, for each question range between 1 and 5, where 1 is the lowest value and 5 the highest.

Factor Analysis

Factor Analysis is a statistical technique that takes a large number of variables and puts them into a small number of 'factors' (groups) with each variable being related to the other. Given that the factor structure of the career orientation inventory and the career pattern formulated in the first phase of this study had not been firmly established, two series of factor analyses (one for career anchors and another for career patterns) were performed. This was done to determine whether the six career anchors and the four career patterns, identified from the qualitative study, were empirically distinct and independent from each other. The factor analysis was performed using varimax rotation. The reason for using varimax rotation was to achieve simple structure, that is, high factor loadings on one factor and low factor loadings on all others. A varimax rotation yields results, making it an effective tool for identifying each variable with a single factor.

The results of the factor analysis (principal component) produced six factors for the career orientations and three factors for the career patterns. This suggests that a six-factor career anchor and a three-factor external career pattern framework are appropriate for this study. All the six career anchor factors and the three external career pattern factors extracted had eigen values greater than 1.0. The criteria that was used to identify and interpret factors was that a given item should load 0.50 or higher on a specific factor and

have a loading no greater than 0.50 on other factors. The pattern of factor loading largely confirms that each factor represents the career anchors and career patterns developed in the first phase of this study. That is, the four items hypothesised to make up a factor (career anchors and career patterns) loaded heavily on a single factor and did not load heavily on any other factor.

However, there were some notable exceptions. In the first case, the four items comprising the stability career anchors did not load as expected. Three of the items loaded together, and appear to represent the stability career anchor. Whilst the remaining one item from the stability factor did not load strongly on stability, rather it loaded more heavily on the managerial competence anchor. This suggests some overlap between the stability and managerial competence career anchors.

On the other hand, for the external career pattern, three factors were extracted instead of four factors. The items that were expected to load on the zigzag career pattern loaded on the other three factors. This suggests some overlap between these anchors. The result of the principal component analysis of the 24-career anchor inventory is attached as appendix 9 while the result of the 16-career pattern inventory is attached as appendix 10. From the rotated component table attached as appendix 9, the pattern of loading suggests that factor 1 represents technical challenge, factor 2 represents marketable skills, factor 3 represents stability, factor 4 represents work life balance, and factor 5 represents managerial competence while factor 6 represents independence. In the case of career patterns (appendix 10), the pattern of loading suggests that factor 1 represents explorer career pattern, factor 2 represents canvasser career pattern and factor 3 represents slow and steady career pattern.

ANOVA

The statistical Analysis of Variance (ANOVA) was used in assessing the relationship (correlation) between personal variables such as gender, age, educational qualifications, and the average scores of career orientations. ANOVA was extremely helpful for uncovering the 'main effect' and 'interaction effects' of categorical independent variables on the interval dependent variable. A main effect is the direct outcome of an independent

variable on a dependent variable. In contrast, an 'interaction effect' is the joint effect of two or more independent variables on the dependent variable.

The key statistic used for assessing the ANOVA is the F-test of difference of group means. This statistical tool assesses the means of the groups formed by values of the independent variable, or combinations of values for multiple independent variables occurring by chance. If results show that the group means does not differ significantly, then it is inferred that the independent variable, or variables, does not have an effect on the dependent variable. On the other hand, if the F test shows that overall the independent variable is related to the dependent variable, then multiple comparison tests of significance are used to explore which value groups of the independent variable have the most to do with the relationship. The decision rule (i.e. level of significance) used for data analysis was the accepted convention of $p < .05$, or $p = .05$ and $p < .001$ or $p = .001$.

Chi-square

Chi-square is a non-parametric test of statistical significance for bivariate tabular analysis. In the context of this study, Pearson's chi-square procedure was used to text the hypothesis of association between career anchors and career pattern. A chi-square probability of .05 or less is commonly accepted as justification for rejecting the null hypothesis that the row variable is unrelated (that is, only randomly related) to the column variable.

4.5 SUMMARY AND CONCLUSION

The purpose of this chapter was to present a detailed outline of the research philosophy and research approaches adopted in addressing the aims and objectives of this study. The chapter presented a justification of the qualitative and quantitative approaches, as well as an explanation of how the two methodological approaches were combined in order to achieve the aims and objectives of the research. Overall, this chapter provided a two-pronged methodological foundation for the research study and presented details of the sample, data collection and data analysis procedures. The next chapter focuses on the findings from the first (qualitative) phase of this study.

CHAPTER 5

QUALITATIVE RESEARCH FINDINGS

5.1 INTRODUCTION

This chapter presents the findings from the first phase of this study. As pointed out in chapter four, the first phase of this study involved collecting data through semi-structured interviews with IT workers in Nigeria about their career experiences and the contextual factors that shape and constrain their careers in this context. The chapter is organised as follows: Section 5.2 describes the six career orientations/ anchors identified from the interviews with IT workers in Nigeria. These career anchors are being stable (stability), being marketable (marketable skills), being challenged (technical challenge), being independent (independence), being balanced (work/life balance) and being in-charge (managerial competence). Section 5.3 discusses the four career patterns exhibited by IT workers in Nigeria. The four career patterns identified from the interviews are slow and steady career pattern, explorer career pattern, canvasser career pattern and zigzag career pattern. Section 5.4 focuses on the key aspects of Nigerian context identified from the interview that influence/constrain the careers of IT workers. The main contextual factors are economic conditions, sexual discrimination, ethnic allegiance and perception of educational qualification. Section 5.5 presents a summary of the findings of this study by highlighting the key findings of this first phase of the study. In addition, this section presents an outline of the research propositions developed from the analysis of the qualitative data. It is important to note that this chapter focuses more on presenting an analysis of the qualitative data without making reference to the conclusions of other researchers in the field. The implications of the result drawn from this chapter are discussed in detail in chapter 7.

5.2 FINDINGS ON CAREER ANCHORS OF IT WORKERS IN NIGERIA

This section of the research findings discusses the findings on the career orientations of IT workers in Nigeria. As pointed out in section 2.5 of the literature review, a career anchor provides the basis for an individual's career choices because a person is likely to make job selections that are consistent with his/her self-image. If an individual moves into a work environment which fails to meet his/her needs or which compromises his or her values, the individual will be 'pulled back' into something more congruent – hence the metaphor of 'anchor'. A career anchor therefore functions as a set of driving and constraining forces on a person's career decisions and choices, serving to guide, constrain, stabilise and integrate one's career choices (Schein, 1978). The findings of the 30 semi-structured interviews revealed the existence of six common themes (career anchors) among IT workers in Nigeria. In classifying the responses obtained into six different career anchors, consideration was taken of any statement made by the interviewed IT workers on what they were looking for in their work, their explanation for job change or organisational change and their view of their future career aspirations. The six career anchors identified are stability, marketable skills, technical challenge, independence, work/life balance and managerial competence. These different career orientations/ anchors are discussed below:

1 BEING MARKETABLE (MARKETABLE SKILLS)

The data obtained from the interviews suggest that thirteen of the IT workers were primarily interested in the development of IT marketable skills in order to enhance future career opportunities and remain employable. This career anchor was labelled 'being marketable'. The IT workers in this category are primarily interested in working for organisations that offers extensive IT training and development opportunities. The IT workers in this group attributed their desire to be employable to two main reasons:

- The socio-economic factors prevalent in Nigeria
- Personal interest in being technically competent and knowledgeable

In the first case, a number of the interviewed IT workers pointed out that they wanted to remain marketable because of the intense competition for highly skilled IT workers in the industry and because of the need to take care of their personal and family obligations. As pointed out in section 3.3 of the research context, high unemployment is a big problem among Nigerian workers and there is intense competition for a limited number of positions. Thus, due to the current labour market situation in Nigeria (discussed in section 3.3), a number of the interviewed IT workers were interested in remaining marketable to be able to continually earn money and meet personal and family obligations (this includes providing education, shelter, money to immediate and extended family members). This family responsibility is quite different from what is obtainable in most developed economies where there is established social security and welfare systems to assist individuals. For instance, some of the interviewed IT workers pointed out as follows:

> *"My motivation for improving my IT skills is to become a more marketable professional. There are only few well paid jobs available in the industry and this jobs demands substantial experience and a wide range of IT skills. I first started working five years ago. I had few options available to me, and basically had to take whatever came my way. This is a pretty common situation for many people. I realised quite on time that if I don't improve my skills, my skills will become obsolete and I will find it difficult to get a job if I happen to lose my job. I am always seeking for organisations that will pay me well and train me in newer technologies" (Tony).*

> *"If I continue developing my IT skills I'll be constantly approached by head-hunters and I will be able to earn more money. I'm not interested in improving my skills for the benefit of my present organisation, though they will benefit from the final outcome. They are actually the least of my considerations. My target is to keep up to date with IT skills needed by organisations and put myself in a vantage position in case a better paying job comes my way"(Ahmed).*

A number of the IT workers reasoned along the same lines. They pointed out that they were interested in avoiding IT skill obsolesce. They were interested in keeping up to date

with the skills that are recognised in the IT industry. For instance, one of the IT workers pointed out as follows:

> "*The dynamic nature of the IT industry in Nigeria demands that I keep up-to-date with the latest technologies in my technical area. IT skills get eroded quickly in the industry and IT personnel who do not upgrade their skills are not likely to progress in their job. I look at my job as a learning process. My primary consideration while taking any job has always been –will it extend my IT skill portfolio" (Sam).*

In a similar vein, a number of the IT workers in this category pointed out that the opportunity to continually develop marketable IT skills is very important to them in choosing an organisation to work for because IT companies in Nigeria reward individuals based on skills and experience. A number of the IT workers were interested in continuous IT training and development in order to remain employable and be able to provide for themselves and their family. For instance, one of the IT workers pointed out as follows:

> *"The more I know the more I'll get paid, and the better I'll be able to take care of my family. I always put into consideration the training and development opportunities available in an organisation before taking up a job. Likewise, I consider the monetary incentives available because I need to take good care of my family. When I was growing up my family didn't have much, we just managed to survive. Now that I have my own family, I don't want them to face the same challenges that I faced when I was younger. The more training I get the more opportunities that will open for me and the more likely that I will be getting good jobs that will enable me meet my personal and family obligations"(Andy).*

From a slightly different perspective, a number of the IT workers that were interested in marketable skills attributed their desire to personal interest in being technically competent in order to be able to work on interesting and stimulating IT projects. The participants in this category pointed out that they were primarily interested in training and development because of an innate desire to develop their technical competence to the highest possible level. Many of the workers in this group did not just break into the IT sector in search of better economic circumstance rather they had from the onset, studied

appropriate courses at university leading to a career in IT. In this case, money and promotion do not matter as much as the opportunity to consistently develop their IT skills. For instance, one of the IT workers pointed out as follows:

> *"I've always been good with analysing technical problems and creating things from childhood. As a child I was always used to dissembling and assembling technical components. I was always curious about understanding how electrical appliances and gadget work. This curiosity has continued unabated till date. My present job allows me to understand how these things are created and I am able to constantly improve my technical skills, and I enjoy working as a result. At the moment, I'm not really worried about advancement or high salary. Money will come when it will come. I am more interested in putting my natural abilities to good use and enjoying the work I do" (Steve).*

The IT workers that are being propelled by the need to remain employable were generally concerned with developing a wide range of marketable IT skills to be able to provide total IT solutions to meet the IT needs of wide variety of organisations. That is to say, they are primarily interested in developing a portfolio of IT skills that can be applied to different organisational contexts. Their work is usually project based or cross functional. Thus, they are extremely mobile and always consider training and development opportunity as the major criteria when choosing an organisation to work for.

In sum, IT workers in this category were primarily driven to get as much IT training as possible to make them more technically competent and marketable in the IT labour market. Their identities were more professional than organisational in the sense that they prefer to be referred to as IT professionals (e.g. web developer, software programmer), rather, than being linked to or attached to a particular organisation. By having a portfolio of marketable IT skills they are able to move across projects, companies, and physical locations easily. The core tasks of IT workers that fall into this category include systems analysis, software design, programming and testing software. Their work also involves IT training, installation of IT systems, negotiations with users and problem-solving following implementation of a system and the maintenance and repair of computer hardware.

2. BEING INDEPENDENT (INDEPENDENCE)

Five of the participants made it clear that their primary motivation was to be on their own and work at their own pace and with a flexible schedule. They need to do things their own way and cannot tolerate rigid rules and strict procedures. This career motive was labelled 'being independent'. Thus, the being independent career anchor is characterised by a strong desire to be autonomous. The participants that fall into this category have the tendency of becoming technical entrepreneurs. Their overriding career interest is the opportunity to be on their own and implement their own technical ideas which may involve starting-up and growing technology-intensive companies. A number of IT workers in this category pointed out that they enjoy taking risks and enjoy working in work situations where they can create new IT products and services.

A number of the IT workers that share the need to be independent pointed out that they chose to work for other organisations (at the moment) to enable them gain experience and to develop solid personal networks which will help them in growing their own IT business in the future. Thus, while working for an organisation they are also scanning the environment for an opportunity to become independent and establish their own IT business or take over existing IT businesses (in this case reshape them to meet their specifications). Some of the workers that desired to be independent pointed out that they are constrained to be dependent on their employer because of the lack of ability to raise money for a new venture. For instance, some of the participants in this category pointed out as follows:

> *"I have always dreamt of setting up my own IT business because I prefer being left alone to do my work. Just tell me what you want, when you want it and just leave me to it; that is the way I enjoy working. I like taking my own decisions, being proactive and taking risk. That's how I succeed. I have always considered this factor whenever I had to apply for a new job" (Mark).*

> *".....I find my present organisation quite restrictive and I am seriously considering moving out to set up my own small IT consultancy firm. My main problem is how to raise my initial capital, I am discussing with my bank for*

assistance. I particularly look forward to the sense of achievement that comes with setting up one's own business and seeing it grow" (Paul).

In a similar vein, a number of the interviewed IT workers that are primarily concerned with being independent pointed out that they want to put their destiny in their own hands. They find it difficult accepting instructions by people who do not understand fully the nature of their job. For instance, two of the participants interested in being independent pointed out as follows:

"I really don't approve of the way management runs things around here. They often turn down good proposals. I don't like people that don't know as much as I do telling me what to do. I want to be on my own and manage things my own way. When I came to work for this company, I thought I will be given a free hand and enough financial support to develop my technical ideas. It has not really worked out that way. I earnestly desire to be on my own and do things the way I want to without seeking approval" (Ken).

"……..from my experience in different companies, I have discovered that many of the existing IT companies are owned by people without a strong technical background. They are just interested in making quick money and not what the men on the ground think. My ultimate goal is to learn as much as I can here and then move out to set up my own IT training company. I'll need a network of people to rely on and I am working on building that up here as well" (Claret).

Generally, the IT workers with the independence career anchor were interested in becoming their own boss and becoming successful IT business magnates. They constantly seek new creative outlets and the opportunity to make things happen. They want to create something of their own and run it. They want to become proprietor of IT businesses. They are focussed with the need to create and will become easily bored and frustrated if their ideas and input are rejected by management.

3. BEING CHALLENGED(TECHNICAL CHALLENGE)

Eight of the interviewed IT workers pointed out that they have a strong desire to work on challenging and exciting IT projects. They primarily consider the challenging nature of an IT job or IT project before taking up a job. The participants in this category are restless by nature and are willing to take risks and overcome insurmountable obstacles and solve complex IT problems. They prefer to work for organisations that offer successive challenging IT projects and are willing to move on to other organisations if their current job is no longer challenging.

The workers in this category pointed out that they are willing to sacrifice high pay in order to work on challenging and interesting projects. Some of the respondents in this group pointed out that they view challenge as invigorating. Thus, they have in the past rejected high paying job in IT department of some organisations because of the mundane nature of work in some of the organisations. A number of the interviewed IT workers pointed out that staying in an organisation that does not offer successive challenging IT projects will constrain their creativity and reduce their bargaining power in the industry in the event of a job loss. Thus, by working for different challenging IT projects and organisations their knowledge, skills, experience, personal network and creativity is enhanced. For instance, some of the interviewed IT workers pointed out as follows:

> *"Good pay and benefits can get me to take up a job, but will not generate the attitudinal commitment for me to remain in a company that does not offer challenging work assignments. If I had to do the same thing over and over again, I will quit, I don't want to limit myself. I need to have the chance to express myself in a variety of ways. My career plan is to go to the most interesting and challenging project, regardless of which company owns the projects" (Victor).*

> *"…… I don't mind taking a job at lower pay levels to work on a cutting edge IT project. I know that at the long run the sacrifice will pay off. I enjoy working in a challenging environment and keeping abreast with technological advances in my area" (Ugo).*

"I will always prefer to move to any organisation that offers me variety in terms of job content and challenging IT projects rather than committing myself to working in an organisation that offers no challenging IT project. I always seek jobs that are challenging and rewarding" (Francis).

The above statements by some of the participants suggest that there are some IT workers that are not ready to trade off interesting and challenging IT projects which extend their skill base in order to gain more money. In sum, the workers in this category pointed out that they seek work situations that expose them to new challenges and technological advancements in their specific IT area. Their primary interest is to work in interesting and challenging IT projects and become IT experts. They prefer to work for IT service companies because of the opportunity to get exposed to different challenging projects which extends their skill base and enhances their creativity. They job hop essentially to maximise their opportunities to work in challenging IT projects.

3. BEING STABLE(STABILITY)

Nine of the participants expressed a strong need to remain in a stable organisation that offers job security and reliable pension scheme. IT workers in this category have a prevailing concern for a career which is stable and secure and in which future developments are predictable. They are primarily concerned with financial security (that is maintaining a decent and stable income) and less concerned with work content and rank in an organisation. Many of the IT workers that were interested in this career anchor were female IT workers and older male IT workers (35 years and above).

The IT workers that fall into this category pointed out that they consider the reputation of an organisation and the ability of the organisation to pay their salary on time as the most important factor when choosing an organisation. They pointed out that they were principally motivated to commit their career to one stable organisation because of the current state of the Nigerian economy. Some of them pointed out that with an unemployment rate of up to 50%, any worker that can find reliable and steady work especially in a multinational company is considered very lucky because he/she will be in a good position to continually meet personal and family obligations.

A number of the participants pointed out that they prefer working for well-established companies that offer good pay and are sensitive to their welfare (as discussed in section 3.3 of the context chapter). For instance, one of the IT workers pointed out as follows:

> *".....given that we do not have any established social security or welfare scheme to guarantee the survival of individuals and their families in the country it is common for individuals to aspire to earn as much money as possible to be able to meet personal and family obligations. Most of the small IT companies can hardly offer job security, on time payment and pension schemes and this makes them the more unattractive compared to the big companies. I always seek to work for an organisation that offers an externally competitive compensation package and good career prospects" (Charles).*

A number of the participants expressed concern about the ability of some of the new IT companies to survive for a long time. They pointed out that given that the IT industry in Nigeria is still a new industry they prefer to work for well-established organisations that will stand the test of time and offer them job security and a pension scheme. For instance, one of the workers pointed out as follows:

> *"You just never know what is going to happen. It's hard enough finding a good job, why mess with something good when you have it? I was underemployed for quite some time before getting my present job in this company. I accepted this job because this organisation has a solid work history of paying workers on time and keeping dedicated employees. They also offer pensions scheme if you work here for 10 years. They have not downsized for the past 10 years rather they are growing and diversifying" (Ralph).*

A number of the IT workers in this category pointed out that they are expected to adhere strictly to what is required of them by their employers in order to maintain their job security, a decent income, and a stable future. Most of the workers in this category pointed out that they have little interest in setting up their own organisation or moving out of their present organisation.

In sum, the workers with the stability anchor value organisations that provide them with job security. They consider the reputation and stability of a company as a major factor in their career decision. The interest of some of the respondent on job security and personal welfare is understandable given that there is no established welfare scheme to cater for the unemployed workers in Nigeria.

5. *BEING IN-CHARGE (MANAGERIAL COMPETENCE)*

Five of the participants were primarily interested in organising people and resources. They usually strive for vertical mobility within firms. That is to say, they are interested in moving upward into administrative and management positions in their respective organisation. The IT workers in this category seek natural progressions upward and gain satisfaction from carrying out managerial activities. This includes controlling, influencing and supervising others towards achieving set tasks.

The participants in this category need and want control over work and want to be recognised for achievements. If they were to work for a small IT firm, they will desire to have responsibilities and if possible become the head of the department / organisation. The desire to manage people and other resources sometime causes them to pass up strict specialisation in any specific IT area. They are more interested in seeking recognition from other members of the organisation than in building their own professional reputations in a specific IT area. For instance, some of the IT workers pointed out as follows:

> *"I have always wanted to be in a managerial position. When the company was looking for regional sales director I applied because I felt this was the opportunity I have been dreaming for. The first one they did was internal advertisement, I put my name. The Managing director did not understand. He asked me, you want to leave IT? I said, will I die in IT? I want the opportunity to manage different departments in the organisation in order to be able to manage any organisation" (Bob).*

"……I want to be in front, I've always been in the backyard. They just remember you when the network is having problems. That is the problem of IT men. When you are in charge of sales, you are in charge of customers and when sales improve, they say, this man works very hard. But to us everything is perfect, its like saying, okay, the sun is there everybody is seeing it, but you didn't put it there. I want to be at the top where I can influence decisions and get recognised for my work. Being up there will also give me the experience I need when I set up my own IT firm in the future" (Gloria).

"I answered an advert in the newspaper for my first job, which was a Network support officer. I interviewed got the job and they offered me 30 Thousand Naira monthly (salary) and it was a really good experience, but after five years I realised that if I wanted to move up I would have to move out of the organisation. So I interviewed with Y (another company) with an IT department of 25 people. This was significantly larger than my previous organisation and they offered me 60 Thousand Naira monthly (salary) which was staggering. From there I managed an IT network project and then became the Network project manager. I enjoy the opportunity this organisation offers me to supervise large group of people and I see myself still working for this organisation in the foreseeable future if I continue getting ever- bigger promotions and salary increases (Peter)".

In sum, the workers with the managerial competence career anchor were concerned with maximising their chances for achieving promotions, higher pay and greater power within the organisation. They were interested in management more than specialising in a particular IT area and were motivated by opportunities for additional responsibilities and higher earning.

6. BEING BALANCED (WORK/LIFE BALANCE)

Six of the IT workers pointed out that they desire to work for organisations that accept and promote work/life balance. They aspire to work for companies that recognise their work/personal needs equitably. This career anchor represents a commitment to work and non-work activities. The workers with this orientation pointed out that they wish to

balance their professional and personal lives. They are primarily motivated to work for companies that allow them to integrate individual, family and career needs. They are happy to work for a long period within an organisation that offers flexibility of the kind desired. The term 'flexibility' for the IT workers in this category implied part time work, shift work, contract work and reduced work hours. The participants with this orientation were mostly female IT workers. Family commitment was of central importance to most of the female IT workers in this study. Most of these workers prioritized family over career. The statements below from some of the female IT workers capture the importance attached to personal fulfilment, family and flexibility.

> *"I grew up in a family where both my parents worked all the time and were gone most of the day. We never had a chance to spend enough time together, and I think our relationship (parents/child) suffered because of it. Due to my past experience I always make a conscientious choice when selecting my career to choose a job that would allow me the opportunity to support my family. I will always want to be a good and supportive wife and mother for my husband and children" (Kate).*

> *"I do not joke with my family responsibilities. I have to give enough attention and care to my husband and children. That is very important to me. So, in other words, I only seek job that would accommodate my life as opposed to my life accommodating my work. It means having work that fits into my bigger goals" (Susan).*

> *"I find it difficult to take time away from work to take my child to hospital. My boss shows his displeasure anytime I have to go off. I do not want to stay here for a long time. I need to find a more conducive work environment" (Lucy).*

Most of the female IT workers were interested to seek career paths that are compatible with family responsibilities for which they are largely responsible and for those who already were mothers, with the deep sense of meaning they derive from spending time with their family. Some of the female IT workers had modified, or planned to modify, their careers as a result of having children—through reduction of hours worked, flexible

scheduling, changing to (or initially selecting) jobs they identified as more compatible with raising school-age children, or putting on hold their careers. For some of the participants, this commitment to modify their career was driven by strongly held values regarding childcare, including the importance of staying at home to raise children and an opposition to hired childcare. Those women who worked full-time or part-time reported some struggle with this issue, including stress due to managing competing responsibilities and feelings of loss when leaving children to go to work or when pausing a rewarding career. Put together, the IT workers that were interested in work/life balance seek jobs that allow them to keep a balance between family, leisure and other activities, so that none is sacrificed for the sake of the other. They desire to have enough time for themselves, reduce the strains resulting from work and have more time for their family.

Overall, this section has reviewed the different career anchors found among IT workers in Nigeria. These anchors were illustrated with some of the most representative statements from the interviewed participants. Analysis of the data obtained from the interviews suggest that 13 of the participants were concerned with marketable skills, 5 were concerned with independence, 5 were concerned with managerial competence, 9 participants were concerned with stability, 8 were concerned with technical challenge while 6 participants were concerned with work life balance. The total sum of participants expressing interest in the different career anchors appears to be more that 30 because in some cases, some of the participants had more than one career anchor. Thus, this finding does not support Schein's (1978) postulation that individuals can only have one career anchor. However, the existence of multiple career anchors supports Fieldman and Bolino's (1996) assertion that it is possible for individuals to have both primary and secondary career anchors because individuals may be trying to meld multiple career goals and interests. Due to the existence of multiple career anchors, the second phase of the study aims (among other issues) to find out the order of importance attached to these career anchors. Overall, this initial analysis suggests that marketable skill (13 participants) is the dominant career anchor, followed by stability (9 participants) and technical challenge (8 participants). On the low side are work life balance (6 participants), independence (5 participants) and managerial skills (5 participants). Based on this analysis, this study posits that while IT workers in Nigeria will possess a wide variety of career orientations, the dominant orientations exhibited will be marketable

skills and job security. This proposition will be examined further in the next (quantitative) phase of this study.

Proposition 4: The dominant career anchors for IT workers in Nigeria are marketable skills and stability.

5.3 TAXONOMY OF CAREER PATTERNS EXHIBITED BY IT WORKERS IN NIGERIA

A career pattern is defined as the path or trajectory of work-related experiences engaged over one's life course (O'Neil et al, 2004). This section presents taxonomy of the career patterns that emerged from my analysis of the 'work history' information collected from IT workers in Nigeria. The findings of the career patterns exhibited by IT workers in Nigeria suggest that three of the career patterns fit with established career models such as the organisational career and the boundaryless career. However, one of the career patterns did not fit into these two career patterns. The taxonomy comprises four categories: Route A, Route B, Route C, and Route D. The characteristics of these four categories are discussed below, illustrating them with the most representative cases. This section also attempts to match the four career patterns identified with the six individual career anchors discussed above (in section 5.2) and subsequently develop propositions that will be used to assess the correlation between the career anchors and career patterns in the second phase of this study. The rationale behind matching career anchors with career patterns is that for an individual IT worker to be motivated, satisfied and committed to his/her job/organisation there must be congruence between such an individual's career needs and job setting/work environment.

ROUTE A: SLOW AND STEADY CAREER PATTERN

The slow and steady career pattern involves slow and consistent upward career movement within the confines of one or a few organizations. It is characterised by stable, predictable movement through organisational hierarchies. This career pattern involves long term strategic planning and advancement along a predictable career path, with few

inter-organisational transitions. Seven IT workers (representing 23.3% of the participants) enacted this career pattern. The IT workers that enact the slow and steady career pattern work mainly for non-IT companies because their hierarchical organisational structure supports this kind of career path. Most of the IT workers that enact the slow and steady career pattern were found in the IT department of large enterprises such as banks and multi-national oil companies. They were involved in managing the internal IT operations of such companies, which involves managing their IT database systems, maintaining existing organizational software, writing software packages for the needs of the company and acting in an advisory role for IT issues.

The slow and steady career pattern encourages employees to depend on an organization for career advancement. Thus, the IT workers that enact this career pattern follow a well-defined career track within structured organisational environment. A number of the workers that follow this career pattern pointed out that they hardly experience radical changes into unfamiliar environment; rather they experience safe and smooth professional transitions. That is to say, when they change job it is usually within the boundaries of their organisation. However, they sometimes move from one geographical area to the other (different branches of the organisation in different geographical area).

The workers that exhibit this career pattern also pointed out that the nature of their work can be repetitive and routine. That is to say that they usually do the same kind of job for an extended period. In this case, the slow and steady career pattern may have a negative impact on the development of new skills by IT workers in this career path given that they usually work within tightly specified job descriptions. Many of the participants that enact the slow and steady career pattern pointed out that their expertise is organisation specific (they have competence in the particular IT system their organisation is using). The IT workers that enact this career pattern are often considered not to be close to technological advancement in the IT industry given that they usually focus on the technical skills that are needed by their organisation.

A number of personal and external factors influenced the career path of the IT workers that enact the slow and steady career pattern. They were mainly attracted to this career pattern because of the prospect for internal career advancement opportunity, job security, reliable pension scheme and flexibility. For instance, one of the female IT workers

pointed out that she had to settle for this career pattern because she could not get a job in IT service firms after several trials. She pointed out that most IT service companies usually discriminate against women in employment because they feel they cannot offer the long hours and the mobility required in the job. She further pointed out that she is not prepared to seek jobs in the small IT service companies because companies in this category are not willingly to offer family friendly polices. She explained that the small IT service companies are reluctant to employ female IT workers because of the cost of maternity leave, sick leave, etc. According to Esther (fictitious name):

> *"I am not ready to be travelling from one project to the other or from one client's house to the other. I see what my friends that works for IT service companies do. They are always on the move. They have little time for their family. They are always working. That's not what I want to do. Moreover, my husband wouldn't allow me to stay late out in the field in the name of doing IT project while he is left to take care of the children at home. I have been working for this company for 7 years and I am happy here because the company provide a flexible environment and social support for me to meet my personal needs".*

Most of the IT workers that follow this career pattern started their career from the basic entry-level position in their respective organisation because of the assumption that nobody can manage an IT department or project unless he or she has learned the basic skills and technology that is used in the organisation. A number of the participants that follow this career pattern also pointed out that they opted out for this career pattern because of job security.

A typical example of an IT worker that has followed the slow and steady career pattern is Jay (fictitious name), a 40 year old IT worker who started his career in the IT department of a multi-national beer making company in Nigeria in 1994 after studying computer science at university. He started his career in the company as a trainee programmer. Thereafter he was promoted to become an analyst programmer, then to chief programmer before moving to the position of assistant manager. Presently, he is the IT manager having worked for the organisation for 10 years. He intends to spend most of his career life in the company because he sees the company as one of the best organisation to work

for in the country in terms of remuneration, job security and career development. Jay described his career in the organisation as follows:

> *"You know, up until the last couple (of years) I would have said whirlwind, because it was. As soon as I got in and through a learning curve I really was hungry for more. And, the minute I started asking questions, like, "well, why does this work like this?" Or, "what does it all mean?" Or...phew, into the next one. And, each of them is, for the most part, really different kinds of roles and responsibilities, and some I liked more than others. But, it was... you know overall, hold on and it'll change. And, I think I'm okay with where I'm at, because I'm sure there's opportunities to move up. I'll make them. I will find them. They are there. It is just a matter of taking one step at a time".*

Another example of a slow and steady career pattern is Ruth's (fictitious name) description of her process of starting her career out of college:

> *"I started my career in this organisation in May 1996. Firstly, I interned here for a full year. During that year, my line manager told me about a future opening in the organisation. I got interested and was interviewed for this job at the end of my internship. It turned out that I was accepted for the position. Therefore, I finished off my internship and then transitioned right into a full time position, which was really nice. I have been working here ever since then. I have gradually moved from one position to the other and I have been transferred to virtually all the department in this company. The good thing I enjoy about working here is that I have job security. I have also received some recognition and increased benefits over the years".*

In sum, the IT workers that exhibited the slow and steady career pattern generally preferred to follow this career pattern because of the attraction of job security and the reputation that comes with working for a well-recognised company that can guarantee a predictable future. They were also attracted by the financial security and career advancement opportunities available within such companies. Given the characteristics of

the slow and steady career pattern one can argue that it will fit the career needs of IT workers whose career orientations are stability, work/life balance, or managerial competence. It appears not to be particularly suited for IT workers that are interested in marketable skills, independence and technical challenge. In this regard, it is proposed that IT workers in Nigeria with the stability, work/life balance, or managerial competence career anchors will prefer to follow the slow and steady career pattern.

Proposition 5: IT workers in Nigeria with the stability, work/life balance or managerial competence anchor will prefer the slow and steady career pattern.

ROUTE B EXPLORER CAREER PATTERN

Another career pattern that was discovered among the IT workers in Nigeria is the 'explorer' career pattern. The explorer career pattern is characterised by a series of job moves between organisations and between IT projects. Eleven IT workers (representing 37% of the participants) enacted this career pattern. The IT workers that enact the explorer career pattern normally move in and out of the labour market and generally see job mobility as a way to find work that is appealing, challenging, and rewarding both in personal skill development and in remuneration. This is to say, the IT workers that follow this career pattern are mainly motivated to job-hop because of the prospects of a wage increase or by a wish to extend their skill base or widen their experience. The IT workers that enact the explorer career pattern move around the industry with a portfolio of marketable technical skills which gives them access to work in challenging and interesting IT projects.

Unlike the slow and steady career pattern which is characterised by internal career advancement within the context of one or a few organisations, the IT workers that enact the explorer career pattern are always mobile and rely on their marketable technical know- how, diverse experience and personal networks to survive and fulfill their career needs. They are primarily interested in working on successive and challenging IT projects.

The IT workers that enact this career pattern generally considered themselves more technically exposed and competent than their counterparts in Route A given that they face different challenges on daily basis. Their counterparts in Route A follow a more or less established procedure in their daily work. They generally feel that committing their life to a slow and steady career pattern will stultify their individual technical initiative and creativity. For instance, one of the IT workers pointed out as follows:

> *"My career has been very serendipitous. Nothing planned. It was just taking advantage of the situation that was in front of me. My plan has always been to move on at the end of each project. I don't know if I can operate under a planned career path, I really don't. Looking back that is not who I am. I am very ad hoc, spontaneous to a certain extent; being able to say in five years I will be promoted to this-what is the point? If it is going to be automatic, where is the learning process for me? Where is the passion? If I am going to sit here and over time, I am going to be promoted to this, this and this. No. I enjoy the challenge of working in successive IT projects. Things are always changing in the industry, moving around gives me the opportunity to experiment with latest technologies. I like work that is challenging not boring" (Claret).*

Although the explorer career pattern provides no real progression and is not defined by formal guidelines it seems to be the preferred career path of most of the IT workers. The IT workers in this group were generally young (between the ages of 23-35years). This career pattern was most prevalent among IT workers who have just entered the labour market. However, the data from the interview suggest that job mobility is not unusual for workers of any age or experience in the IT industry where new jobs and job roles are created regularly as a result of technological advances.

A number of the IT workers in this group pointed out that they prefer this career pattern because length of tenure within a single organisation is by no means a mark of competence in the industry. But rapid movement between firms is an outward signal to potential employer that the individual is versatile, knowledgeable and able to adapt quickly and easily to technological advances. However, a number of the respondents pointed out that movement from one organisation to another can be emotionally stressful especially when it involves movement from one geographical location to the other.

The responses from the interviews shows that most of the IT workers that follow the explorer career pattern usually rely on their personal network to access information on job and career opportunities available in the industry. They rely on friends, family, mentors and associates for career support and information. A number of the IT workers that enact the explorer career pattern pointed out that because of the diverse nature of the IT industry in Nigeria it is important for them to maintain a solid personal network. This will enable them keep up to date with current development in the industry especially those that concern employment opportunities, skill developments and technological advances. Thus, the IT workers that enact this career pattern are usually interested in participating in IT exhibitions, conferences, social events, etc. They use such forums to network with fellow professionals in the industry, mainly for the purposes of career development and employment information.

Given the characteristics of this career pattern one can argue that it is well suited for IT workers that are interested in independence, marketable skills and technical challenge career anchors. In the first case, IT workers that are interested in being independent can enact this career pattern to enhance their skills and get substantial experience before setting up their own IT firm. Similarly, IT workers interested in marketable skills are likely to enact this career pattern as they move around in the industry in search of organisations that offer skill development opportunities. Finally, the IT workers interested in technical challenge are also likely to enact this career pattern as they move around in the industry in search of challenging IT projects. In this regard, it is proposed that IT workers with the independence, marketable skills and technical challenge career anchors will prefer the explorer career pattern.

Proposition 6: IT workers in Nigeria with the independence, marketable skills or technical challenge career anchor will prefer the explorer career pattern.

ROUTE C: CANVASSER CAREER PATTERN

A number of the IT workers opted out to be self-employed and work in an autonomous fashion. Seven IT workers (representing 23.3% of the participants) enacted this career pattern. IT workers that enact this career pattern usually opt to start their own IT company or run a franchised IT firm after gaining experience in someone else's IT firm. However, a number of the participants entered the IT industry by creating their own job without previously working for any person. This career path was labelled 'canvasser' career pattern because the individuals that enact this career pattern have to solicit for IT jobs and IT contracts to survive.

Most of the IT workers that enact the canvasser career pattern have diverse social contacts and political connections, which assist them in getting IT contracts from government and non-governmental organisations. Some of the IT workers in this group opted for this career path because they felt their employers were just using them to make money without giving them a fair share of the income they generate. Some others opted for this career route because they felt frustrated that their managers did not understand the nature of their work; hence, they often turned down interesting and viable IT ideas and proposals. The IT workers in this group were also motivated to set up their own IT service company because of a number of other reasons, namely:

- Inability to get the kind of IT work that they really want
- Dissatisfaction with the job they are doing in other companies
- A strong need for autonomy and interest in growing one's own business

A number of the IT workers that enact this career pattern are involved in IT training services and IT consulting services (because this does not require much capital to set up). A number of the IT workers that enact this career path serve as marketing agents and support contractors for ISP companies and software companies. For instance, Kene (fictitious name), a 30 year old IT worker in Nigeria who worked as a software programmer for X company, resigned from his well paid job so he could pursue his

dream of setting up a software consulting company. He teamed up with three of his old course mates from university to set up a small software consulting company. Kene together with his partners provides installation support and software management services to companies that are adopting IT to increase their efficiency. Kene pointed out that:

> *"I simply had trouble finding a job that I truly enjoyed. Time and time again I found myself dissatisfied with the position I had accepted at a company. It doesn't take long for me to get bored and dissatisfied with a position. At the moment, I am not making good money like I use to in my former job, but I feel really good that I am working for myself and doing what I like".*

A number of the female IT workers preferred this career path because it enabled them to work at their own pace, manage family, and work responsibilities easily. For instance one of the female IT workers pointed out as follows:

> *" The birth of my son and a growing desire to have more control over family time and choices in professional work project propelled me to set up my own IT firm. I needed to have the flexibility to take time off when I need to and manage work and non-work affairs. I can do that now. I have a number of workers that can carry on even when I am not in the office. I source the jobs with my contact in the government and give it to my workers to deliver. My husband has been very supportive and helpful in introducing me to his associates. I simply work at my own pace and I have enough time for my family which I really enjoy".*

Another reason propelling IT workers to opt for this career pattern is the Nigerian government policy of encouraging local manufacturing of computers and other IT equipment. As pointed out in section 3.5 of the context chapter, the Nigerian government policy on IT aims to encourage local production of IT products and government patronage of these products. Thus, some IT workers are teaming up to set up small IT outfit to benefit from this policy.

Given the characteristics of the canvasser career pattern, one can argue that it appears to be well suited for IT workers with the independence, work/life balance, managerial competence or technical challenge career anchor. In the first case, the canvasser career pattern will enable an IT worker with the independence career anchor to become his/her own boss and thereby become autonomous. It will also offer an IT worker with a managerial competence career anchor the opportunity to set up his/her own IT company and thereby occupy a managerial position, which will enable the individual to control and supervise the activities of others. Similarly, it will offer the IT worker with the work/life balance career anchor the needed flexibility to work at their own pace and meet personal and work responsibilities. Finally, it will offer an IT worker with the technical challenge career anchor the opportunity to pursue stimulating and challenging IT projects.

Proposition 7: IT workers in Nigeria with the independence, managerial competence, work/life balance or technical challenge career anchors will prefer the canvasser career pattern.

ROUTE D: ZIGZAG CAREER PATTERN

While analysing the interview data it became apparent that some of the IT workers had not followed primarily any of the career patterns discussed above, rather their career pattern comprised elements and incidents from the three career patterns discussed above. Thus, the 'zigzag career pattern' was included after carefully examining the transcript and observing that some IT workers experiments with a range of career pattern (Route A-C described above) without opting for a definitive career path or an irreversible career direction. Five IT workers (representing 16.7% of the participants) enacted this career pattern.

The zigzag career pattern involves both sequential and concurrent movement between the different careers routes discussed above. The IT workers that enact this career pattern pursue career paths, not limited by precedent and traditions, but in response to changing needs and changing contexts. The data from the interview suggest that some IT workers started their career with the slow and steady career pattern by working for a long period

for one large organisation, before moving to the explorer career pattern by working for different organisations for short periods. Some have gone further to set up their own IT firms while still maintaining part-time or contract employment with a number of firms. The IT workers in this category are very flexible in terms of their choice of career path. They use a contingency approach while taking a career decision. This implies that their personal circumstance and environmental circumstances tend to dictate their career direction and they are flexible and willing to move around the different career paths in line with changing circumstances.

The zigzag career pattern involves interruptions for non-career activities, unexpected twists and turns. The IT workers that enacted this career pattern pointed out that they always leave their career option open. This pattern is usually designed by the individual career actor to accommodate aspects of one's life other than traditional work. For instance, one of the female IT workers pointed out as follows:

> *"After working for six IT companies in five years, I took out four years to raise my children and build my family. I just started working recently. No definite plan about my long-term career, I am very flexible with my career. I live one day at a time and take opportunity as they come." (Nena).*

Another case in point is John's (fictitious name) description of his career in the IT industry.

> *"'Um...I would say it's somewhat successful but disjointed. So far I think I've done a good job in the jobs that I've done. And if I were to look at it from an external perspective.....I mean someone looking at my CV, I'd probably say, "well, he.....You know, he's had some good jobs". But disjointed, because it doesn't all fit together. Like, there's...skills that have carried me through, but it's very .....its random kind...it's kind of a random career. It's not exactly a career; it is more like a series of jobs".*

A number of the IT workers that enact the zigzag career pattern view it as a way to maintain other sources of income outside their main job or to accommodate other personal interests. For some IT workers, this career pattern involves having one full time job (main job) concurrently with different part-time jobs. Thus, the zigzag career pattern is principally motivated by the need to survive and meet personal and family obligations. An example of a zigzag career pattern is as follows:

> *"Apart from working for X (present organisation) as a network supervisor, I teach computer courses during the weekend at two computer institutes for extra cash so I could...you know have money for my family. I mean, I struggle a lot. And I do not glamorise it" (Philip).*

This career pattern is usually enacted by IT workers that work for IT service companies. As they go into their client organisation to deliver IT services, they try to establish contact by creating social relationship through interactions with their clients. This is done by being responsive to the clients' problems. One of the IT workers pointed out that:

> "To *achieve this, you need to develop a good personal relationship with your clients and make sure they understand who you are (what you can do and what you want) and ensure that you keep contact with them. Thus, whenever there is a job vacancy within the organisation that meets your requirement, they will always reach for you first before calling others. In this way you will be able to work for your organisation and also be able to earn extra cash from side jobs" (Ben).*

Some of the IT workers that follow this career pattern work as IT instructor for IT training companies and also work on short term contracts for software exporters and IT consultancy firms. The IT workers that enact this career pattern typically work full time in one big organisation and have their own small IT outfit or render IT services. Some of the IT workers in this category also work as independent contractors for a specified length of time and then move on to another career pattern. Some other IT workers in this category are involved in full time work for one organisation and a variety of part-time work with other organisations. In this context, career development involves setting up horizontal networks of business partnerships around specific contracts.

Given the characteristics of the zigzag career pattern, one can argue that it is likely to be suitable for IT workers in Nigeria with any of the career anchors discussed in section 5.2. This is because the zigzag career pattern involves flexibility and experimentation with a range of career pattern (Route A-C described above). In this regard, it is proposed that the zigzag career pattern will be suitable for IT workers with the stability, marketable skills, technical challenge, independence, work/life balance and managerial competence career anchors.

Proposition 8: IT workers in Nigeria with the stability, marketable skills, technical challenge, independence, work/life balance or managerial competence career anchors will find the zigzag career pattern suitable

TABLE 6 CHARACTERISTICS OF THE CAREER ANCHORS AND CAREER PATTERNS

Career Patterns	Group Characteristics	Suitable Career Anchor
Route A Slow & Steady	• Emphasis on specialisation of skills Characterised by loyalty to organisation in return for lifelong steady growth and development • Demonstrate minimal responsibility for career management • Stable and predictable movement through organisational hierarchies • Few inter-organisational transitions	• Stability • Work life balance • Managerial competence
Route B Explorer	• Little loyalty to any organisation • Interest in developing a portfolio of marketable IT skills • Acceptance of near total responsibility for career management • Life-long learning and development • Emphasis on life-style issues	• Marketable skills • Work life balance • Independence • Technical challenge
Route C Canvasser	• Inability to get the kind of IT work that they really want • Dissatisfaction with the job they are doing in other companies • Interest in growing their own business • Self reliance and independence • Diverse social contacts and political connection	• Independence • Managerial competence • Work/life balance • Technical challenge
Route D ZigZag	• Not committed to an irreversible career direction • Experiment with a range of career pattern (Route A-C described above) • Interruptions for non-career activities, unexpected twists and turns • Interested in balancing work with personal life	• Managerial competence • Marketable skills • Work life balance • Independence • Technical challenge • Stability

5.4 KEY ASPECTS OF NIGERIAN CONTEXT THAT INFLUENCE AND CONSTRAIN CAREER DECISIONS OF IT WORKERS

The theoretical framework guiding this study is that societal context shapes careers of individuals. In the context of this study, societal context refers to the impact of key aspects of Nigeria society (such as labour market structures) on the career choices and decisions of IT workers. The participants in this research identified some contextual factors present in Nigeria that influenced their career aspirations, career decisions and career strategies. These factors are economic conditions, ethnicity, sexual discrimination and perceptions of educational qualifications. Each of these factors is discussed below:

1. ECONOMIC CONDITIONS

Many of the IT workers view the current economic condition in Nigeria as a significant societal factor that has influenced their career strategies and decisions. This notion reinforces the discussion presented in section 3.3 of the context chapter that the current state of Nigerian economy is likely to exert a strong influence on the careers of individuals in Nigeria. Many of the IT workers pointed out that the adoption of the constituent macro-economic policies of the Structural Adjustment Program (SAP), by the Nigerian government in the mid-1980s has resulted in high inflation, food shortages, hikes in tuition fees and high costs of medical care. The implication is that IT workers have to seek for the best employers in terms of remuneration to enable the individual meet personal and family obligations. There were cases of individuals who studied non-technical courses in the university digressing to the IT industry and taking IT courses. Such individuals were principally interested in advancing their career in the IT industry because of the prospect of better wages to take care of their personal and family responsibilities. For instance, some of the IT workers pointed out as follows:

> *"As I told you earlier, it is not all about personal career satisfaction. In Nigeria, it is all about economic factors. There is no established welfare scheme in this country to guarantee the financial security of individuals in the country or assist in periods of unemployment. There are also no credit facilities to assist*

individuals in emergencies. Because of this, one has to prepare for the 'rainy day' by maximising earnings. I am always on the lookout for the highest bidder" (Irene).

"In the university, I studied history but when I graduated, I found out that there are no much opportunities to earn good money in this area. I had to digress to the IT industry in search of better economic circumstance. You see the IT industry is still an emerging industry and there are many opportunities to make money here. I started by doing a 6 months Microsoft certification course which I passed. Ever since then I have done one course or the other and the pay has been good. I do not regret the move to the IT industry because I have to support my family members financially. This includes my children, my retired parents, and my extended family members like my cousins, nephews, brothers, sisters and uncles. *I have to send them money regularly to assist in their education and welfare. I cannot afford to stay where I will not have the opportunity to make good pay" (Fredrick).*

"Economic consideration comes first and it comes really first. The problem is that the economy is bad and it is difficult to earn good money. If you do not make enough money, you will be frustrated in the country because the culture is that you have to spend money to get what you want (tips/kick back). Even in the IT industry, there is very little you can do without money. For you to do Oracle Certification, you need about 300, 000 Naira or more, for you to do MCSE and CISCO. This is a lot of money. You need a high paying job to be able to afford this. In fact, in most cases, you look at money first because of the bad economy before thinking of the long term career prospect" (Tony).

The findings from the interviews suggest that IT workers are quite sensitive to the opportunities for advancement outside their present organisation. For instance, a number of the IT workers pointed out that most of the small IT companies can hardly offer significant career advancement opportunities, reliable pension schemes and this makes them unattractive compared to the big companies. They pointed out that in most cases IT workers in the lower paying companies aspire and make conscientious effort to work for the reputable high paying companies. This often results in frequent job-hopping in the

industry. Some of the participants also pointed out that that in some cases, the high skilled IT workers migrate to the western world with their international certificates in search of 'greener pastures' and many choose to stay rather than return.

2. SEXUAL DISCRIMINATION

Another factor that was identified from the female IT workers that influence their career strategies and decisions is sexual discrimination (females are not accorded the same status as males). The findings from the interview with female IT workers in Nigeria suggests that there is a general lack of acceptance of women occupying top management positions or strategic technical positions, even when they are well qualified for such positions. The interviews revealed a dominant view that no matter how highly qualified; a woman is not seen to be 'as good as a man' for most jobs. Such claims are used as justification for denying women access to job ladders that lead to the top in organisations and from obtaining employment in strategic IT projects.

Some of the female IT participants reported that during recruitment they were asked whether they were married and how many children they have. This is because the presence of children is interpreted to cause instability and lack of dedication to the job. A number of the female participants reported that their job is often at risk for the following reasons: maternity leave, days off to visit clinics or time off to attend to sick children or nurse other members of the family. Some of the female participants reported further that in most cases the male IT workers were offered all the exciting assignments and are preferably sent to different clients' sites while female IT workers are prevented from executing tasks, which are seen as 'strenuous'. This in essence means that the females have little or no opportunity for professional growth. The statements below from some of the female IT workers buttress the effect of sexual discrimination.

> *"It was very uncomfortable carrying my pregnancy while at work. I was prevented from site once my pregnancy became visible and I have been kept off site work ever since... Yes. even years after I had my baby" (Felicia).*

"You know we are looked at as 'weaker sex' in Nigeria. Because of the technical and sometimes tedious nature of IT work, many companies are unwilling to employ women. I am very lucky to have got the job I am doing in this company. It is very easy to lose an opportunity for the mere fact that you a woman more especially if you are a mother. Many of the high tech companies are quite reluctant to employ female IT workers. I was surprised when I was invited for interview for my current job. I became even more surprised when I got the job. Now that I have a job with a good, solid company, I plan to stay here for a long time. I will only leave my present organisation if I get a better offer in a company that have family friendly policies like the one obtainable here" (Val).

Some of the female IT workers further pointed out that the societal perception in Nigeria is that a woman's role is in the home. Thus, women are generally expected to give support to their husbands and enhance their career progress rather than pursue their own full time career. According to one of the female IT workers:

"It is the woman who must adjust her life and programme to meet the employment demands of her husband. If the man's employment involves movement from one location to the other, it is the woman that is expected to give up her job no matter how promising or fulfilling" (Janet).

In sum, although there is an official labour policy in Nigeria on equal opportunity in securing employment and in career progression, for most Nigerian women the reality is very different. They are often discriminated against with respect to employment and promotion, and are often stereotyped as homemakers with less commitment than men to jobs and careers. Negative stereotyping of women such as the one pointed out above affect the attitudes of female IT workers about the potential for success in careers that have been stereotyped as masculine. It also inhibits female IT workers from experiencing new career opportunities or pursuing their career to its zenith.

3. ETHNIC ALLEGIANCE

A number of the IT workers pointed out that ethnic allegiance influence the careers of IT workers in Nigeria. It is important to point out that Nigeria is made up of numerous ethnic nationalities-the Hausas in the North, the Ibos in the East central and the Yorubas in the Southwest – and minority groups in the middle belt and southern parts of the country.

A number of the participants pointed out that the impact of ethnic allegiance on individual career opportunities in Nigeria can easily be experienced at the point of recruitment, in the sense that employers tend to recruit people who are related to them or come from the same clan or ethnic group. Such individuals become their 'eyes and ears' in the organisation. Some of the IT workers pointed out that, although this recruitment practise is not as pronounced in the IT industries (companies in the industry lay more emphasis on technical competence) as it is in other sectors of Nigerian economy, it nevertheless exist. In the IT industry, ethnicity is balanced by a pragmatic evaluation of skill, education and competence. The following statements from some of the IT workers highlight the influence of ethnic allegiance on career opportunities available to IT workers:

> "*Over the years, this crazy idea has been transferred to recruitment processes in telecommunication companies where a Yoruba, Hausa or Ibo (different ethnic groups in Nigeria) is in charge of recruitment or employment. Either of them is likely to fill any openings in their respective organisation with a member of their tribe or ethnic region not minding whether the person is qualified for the post or not. For instance, the IT department of my company is headed by a Yoruba guy (another ethnic group in Nigeria), now what it means is that if you come to my company, the IT department is predominately dominated by the Yorubas, that is how ethnicity come in to it. This is because the first, two, three people hired, were Yoruba's and the Yoruba's managers naturally had to hire, subordinates. Now the benefit is that they are empowering their people. If you employ people from your own ethnic group what will happen is that those guys will of course watch your back, before an individual from another ethnic group can get a stone, thrown to you and get you, one of those guys under there, will catch the stone*

before it gets to you, that is the benefit. It helps the big guys to be protected by his people" (Tom).

In a similar vein, another IT worker pointed out:

"About two years ago when our company started in Nigeria, they picked some able hands. Mr X was made the chairman and look at it. Mr X (an Ibo man) has now brought his son as the Executive Director(Ed); we all know that his son is not the most qualified person to be the Ed. His son as the (Ed) has now recruited some Ibo IT engineers to be in charge of strategic points in the company. This is not to suggest that they do not hire people from other ethnic groups. We are all human beings , if I work into your office and I say Nna, kedu Ije' (this means how are you in Ibo language), you automatically know that I am an Ibo man; when a Yoruba man work in there he is going to start laying down, bowing down, "Kabiesi o" (Yoruba's traditional greeting style). Once you do that, you are already a step ahead of other potential employees" (Harry).

The implication of the above statements is that, Nigerians will generally prefer to work for organisations where they have relatives (or people from the same ethnic groups) that can mentor them (ensure their rapid advancement within the organisation) and 'watch their back' (protect their interest). Loyalty, trust, and allegiance at work are strongly affected by these relationships. Ethnicity is not only a barrier to getting a job; it is also a factor in getting IT contracts. Some of the self-employed IT workers pointed out that without having your people at strategic places, it is practically impossible to obtain IT contracts.

"I have strong interest in setting up my own IT consulting firm because of my diverse experience and academic qualification. However, I will not be able to do that now because I do not have connection with people that are well placed in government. Therefore, I am unlikely to be patronised by the government agencies that are among the main potential clients. It can be frustrating venturing into IT consulting without solid personal network. Those companies/firms that have highly connected people on their board are always given contract either by

government agencies or government ministries while others keep wondering what is going on even when they quoted less for the contract" (Ernest).

In sum, ethnic allegiance in Nigeria is supported by Nigerian cultural values and practices, which include strong family attachment, cooperation between family members, and preserving the family name and honour. In this context, a family member could be a brother or sister, a relative, distant cousin or someone from one's village or ethnic group. Situations like those described above can limit the movement of highly qualified IT workers from exploring different career opportunities.

4. PERCEPTION OF EDUCATIONAL QUALIFICATION

A number of the IT workers pointed out that the perception of the educational qualification/ technical certification that an individual possesses influences the career opportunities available to such individuals in Nigeria. They pointed out that strong emphasis is placed on certifications and educational qualifications. Thus, the selection and recruitment of IT workers is often based on the possession of relevant certification/educational qualifications. The influence of educational qualification and certification in the IT industry comes in two ways:

1. Superiority of university qualifications to polytechnic qualifications
2. Higher standard of foreign educational qualification and training to locally obtained degrees and certificates

Firstly, university education is much more valued in Nigeria than polytechnic (technical) education. A number of the participants pointed out that there is a general perception of polytechnic graduates as being inferior and of lower social status to university degree holders. This can be attributed partly to the nature of the course contents and the entry requirement set by polytechnics and universities. For instance, the universities in Nigeria expect students to have at least credits in five subjects in their school leaving certificate examination in order to secure entry whereas polytechnics allow students with credits in three subjects to enroll. As a result, individuals with lower academic performance are more likely to enroll in polytechnics as opposed to universities. Anecdotal observation

suggests that it is easier for individuals with university degrees to get good jobs and advance into managerial positions than their polytechnic counterparts because of the societal perception that polytechnics are inferior to universities. For instance, one of the IT workers pointed out that:

> *"Educational qualification is used as one of the main criteria in promotion to good paying managerial jobs in many organisations. If you just have a degree from a polytechnic and you don't augment it with substantial experience and other industry certification you are likely to end up in production doing the less fancied jobs"(Chuks).*

> *"In Nigeria today if you have a degree from a university you already have an edge over an individual with a polytechnic degree because of the notion that polytechnics are inferior to universities. Individuals that have been to university have a higher probability of getting managerial jobs than those who have been to a polytechnic or other vocational school. Educational qualification also plays a role when considering IT workers to be promoted to managerial positions. However, this practice is not pronounced in the IT industry given that IT service companies are generally more interested in the skills and abilities of an individual"(Ray).*

From a slightly different perspective, there is a general perception that university degrees and IT certification awarded by some foreign countries are superior to the ones obtained locally in Nigeria because of the perceived decline in the standards of education in the country. The implication is that it is easier for individuals with international IT certification and degrees to get jobs than their counterpart that have obtained similar qualifications in Nigeria. Some of the IT workers pointed as follows:

> *"Any IT worker you touch today will tell you I will rather go to company that will train me well. When I say training, it is not just locally organised IT training. My desire is to work for a company that will be sending me for international IT courses. If you ask any of my colleagues to choose between going to America, UK or Canada for 2 weeks training and being trained everyday of the week for one year locally. I am sure they will rather go abroad for training, because there*

are a lot of other things that follow these training. First of all, after going for training abroad it will be easier to get visa in the future if I want to travel out of the country. Secondly, I will be able to develop good connection and market myself to employers. Thirdly, it will be easy to get an IT job any day with such international IT certificates" (Stanley).

In sum, the institutionalised relegation of technical education and its products in Nigeria affects to some extent the career prospects of IT workers with such educational qualifications while seeking entry or career progression within some organisations. In a similar vein, the societal perception of international degrees and certificates as superior to the locally earned certificates also plays a significant role in shaping the career opportunities available to IT workers with certain qualifications.

The discussion presented above has highlighted the main factors identified from the interviews that shape the careers of IT workers in Nigeria. However, it appears that two factors stand out as the over arching factors that shape and constrain the careers of IT workers in this national context. These factors are (1) individual's socio-cultural obligations and (2) the economic situation in Nigeria. These two factors are discussed further below.

In the first case, the socio-cultural context of Nigeria consists essentially of the value system and a wide array of social and cultural institutions which regulate and sustain the nation's distinctiveness. Despite the cultural differences among Nigeria's diverse ethnic groups, the socio-cultural factors (especially, extended family system) are largely the same in all parts of the country. Thus, the influence of the extended family system on careers as discussed here is largely of general application across the country, subject to local variations.

Nigerians generally attach great importance to the extended family system in which parents, children, their spouses, grandchildren and other relatives form a social network of relationships that is based on mutual dependence. Within the framework of this family structure, every member of the family is expected to care and share the resources, hopes and aspirations of one another, for the benefit of themselves and of the larger society. The ties of the extended family can be very strong to the extent that one's obligation towards

members in an extended family system can be as close knit as that of the nuclear family in the modern western society. The extended family system provides social security for every member of the family in need of care and support at all stages of their life, even in death. It encourages values such as sharing, adherence to social obligations, good social and personal relations. In essence, it is an effective institution for the survival of individuals in Nigeria due to lack of an established welfare scheme.

It is a common notion in Nigeria that the child belongs to the extended family, and not to his immediate family. A close knit of relatives commonly shares the costs of rearing children, in terms of emotion, time, finance and other material support, since all children together comprise the strength of the lineage. In essence, responsibility for the upbringing of a child is shared by every member of the extended family, and not limited to the parents. On the other hand, the sick, the old, the orphaned, the infirm and the retired members of the family are also assured of long-term care within the extended family system. They are not taken to Old Peoples Home rather they live in the homes of their children or are taken care of in their own homes by their children and relatives. These practices are in marked contrast to what is obtainable in the West, where individuals are largely dependent on their 'nuclear family' and the State for their upkeep and survival. The socio-cultural practices described above is likely to have a strong influence on the careers of IT workers in Nigeria given that these individuals are most likely to make career choices taking into consideration the obligations and commitments they have as a result of their membership of the extended family institution. This is to suggest that IT workers are likely to make career decisions that will enable them meet their personal and extended family obligations and commitments.

The above discussion is consistent with a growing body of research which suggest that unique institutional environment in Africa have a profound influence on individual behaviour and management practices in the continent. A number of authors (e.g., Munene, 1991; Carroll and Huo, 1986, Kiggundu, 1989) have identified an array of contextual factors (e.g., economic uncertainty, political instability, poor infrastructure, corruption, poor governance) which influence individual behaviour and management of organisations in Africa. While acknowledging that Africa is characterised by a high degree of diversity. Kamoche (1997) argues that these factors appear to be wide spread and provide the rationale and motivation for individual behaviour in Africa. From a

slightly different perspective, scholars such as Kohn and Austin (2000); Onyango (2000) and Fashoyin (2000) have questioned the tendency to borrow management practices indiscriminately from the West, proposing instead the development of more contextual approaches that take cognisance of the peculiarities of African socio-cultural milieu. These scholars argue that all organizations function within a specific culture, and it is important that managers and other organisational practitioners develop an understanding of their cultural settings. This perspective on contextual influence on human behaviour and management practices resonate the notion that individuals are products of their environment and as such their environment influence their behaviour and career decisions.

In terms of the economic situation, Nigeria is currently the world's seventh-largest oil exporter (as noted in section, 3.2) and Africa's most populous nation, representing about 20 per cent of the entire Sub-Saharan African population. Despite this wealth in human capital and natural resources (oil), Nigeria is among the world's 20 poorest countries based on GNP per capita (Economic intelligence Unit report on Nigeria, 26th March 2004) and remains African biggest debtor owing about $31 billion to members of the 19-nation-strong Paris Club. More than one third of Nigeria export income is used annually to service this debt (Financial Times, London, Special Report on Nigeria, April 26, 2005). The high level of debt (caused by misguided economic policies and corruption) has focused government attention to debt servicing at the expense of providing basic social welfare services, creating wealth and employment for the nation. As a result, the Nigerian economy is largely characterised by high rate of unemployment, uncertainty, low wages and poor working conditions.

Further, due to the over dependence of the Nigerian economy on oil sales, which accounts for more than 95% of the national earning, as pointed out in section 3.2, the average Nigeria has become very sensitive to oil and all the variables surrounding it, to the extent than any development in the international oil markets invite almost instantaneous reaction from domestic agents and policy makers alike. For instance, in the last six years, Nigeria has witnessed seven massive protests and general strikes in reaction to incessant increase in the pump prices of petrol and its antecedent economic hardship. Given the present economic reality in Nigeria, it is logical to expect that IT workers in Nigeria will make career decisions taking into consideration the prevailing

economic condition in the country. In essence, an IT worker's concern about the prevailing economic situation in the country will always mediate the relationship between the individual's internal career goals and 'rationale' career choices.

Overall, the main implication of the factors discussed above on the careers of IT workers in Nigeria is that IT workers will not always be free to act in ways consistent with their personal career preferences. They are likely to make career decisions taking into consideration the prevailing economic situation in Nigeria and their socio-cultural obligations. While there is reason to believe that these two factors have become relatively more significant factors shaping and constraining the careers of IT workers in Nigeria, it is important that future studies use a quantitative approach to examine the relative strength of the four identified societal factors on the career choice of IT workers in Nigeria in order to validate or refute the conclusions presented here.

5.5 SUMMARY OF QUALITATIVE FINDINGS

This chapter has presented the results of the qualitative findings of the first phase of this research. The main findings in this section are encapsulated below:

- IT workers in Nigeria hold six career anchors namely being marketable, being challenged, being in- charge, being balanced, being stable and being independent. It was observed that some of the participants had more than one career anchor.

- IT workers exhibit four career patterns namely slow and steady, explorer, canvasser and zigzag career patterns.

- The key societal factors that shape and constrain the careers of IT workers in Nigeria are educational qualifications, sexual discrimination, ethnic allegiance and economic conditions.

5.5.1 AN OUTLINE OF THE RESEARCH PROPOSITIONS

Proposition 1: There will be meaningful difference in the pattern of career anchors held by male and female IT workers in Nigeria.

Proposition 2: The dominant career orientations of IT workers in Nigeria will vary with age

Proposition 3: Career orientations of IT workers in Nigeria will vary with educational qualification

Proposition 4: The dominant career orientations for IT workers in Nigeria are marketable skills and stability

Proposition 5: IT workers in Nigeria with stability, work and life balance, or managerial competence anchor will prefer the slow and steady career pattern

Proposition 6: IT workers in Nigeria with independence, marketable skills, or technical challenge career anchor will prefer the explorer career pattern

Proposition 7: IT workers in Nigeria with independence, managerial competence, work and life balance, or technical challenge career anchors will prefer the canvasser career pattern

Proposition 8: IT workers in Nigeria with stability, marketable skills, technical challenges, independence, work and life balance, or managerial competence career anchors will find the zigzag career pattern suitable

CHAPTER 6

QUANTITATIVE RESEARCH FINDINGS

6.1 INTRODUCTION

The purpose of this chapter is to present in a narrative and tabular form the quantitative data collected in the second phase of this study. The chapter is organised as follows: section 6.2 presents the demographic characteristics of the sample. Section 6.3 examines the propositions developed from the first phase of this research. Section 6.4 summarises the findings of the 2nd (quantitative) phase of this research. It is important to note that this chapter is restricted to presenting an analysis of the quantitative data without drawing general conclusions or comparing results to those of other studies discussed in chapter 2 of this thesis. The implications of the results drawn from this chapter are discussed in detail in chapter 7.

6.2 DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLE

The following tables (Table 6.1 to 6.4) depict the descriptions of the 336 respondents that participated in the second phase of this research by their demographic variables. The data presented in Table 6.1 below shows that out of the 336 respondents that participated in this study, 233 of the respondents (69.3%) were male while 103 of the respondent (30.7%) were female.

Table 6.1 Gender of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	233	69.3	69.3	69.3
	Female	103	30.7	30.7	100.0
	Total	336	100.0	100.0	

The data in table 6.2 indicates that 149 (44.3%) of the respondents were single, 172 (51.2%) of the respondents were married while 14 (4.2%) were divorced. The table also shows that one of the respondents did not specify his or her marital status.

Table 6.2 Marital status of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	149	44.3	44.3	44.3
	Married	172	51.2	51.2	95.5
	Divorced	14	4.2	4.2	99.7
	No Response	1	.3	.3	100.0
	Total	336	100.0	100.0	

The data presented in table 6.3 below shows that 33 of the respondents (9.8%) were aged between 18-25 years, 172 of the respondents (51.2%) were aged between 26-35 years, and 103 of the respondents (30.7%) were aged between 36-45, while 24 of the respondents (7.1%) were aged between 45 years and above. The table also shows that 4 of the respondents (1.2%) did not specify their age range. The overall data suggest that most of the IT workers that participated in this study were aged between 26-35years old.

Table 6.3 Age of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25	33	9.8	9.8	9.8
	26-35	172	51.2	51.2	61.0
	36-45	103	30.7	30.7	91.7
	45 and above	24	7.1	7.1	98.8
	No Response	4	1.2	1.2	100.0
	Total	336	100.0	100.0	

Table 6.4 below shows the highest level of education of the respondents. From the table it can be seen that 1 of the respondent had only primary education (.3%), 16 of the respondents (4.8%) had secondary education while 200 of the respondents (59.5%) had bachelors degree. The table further shows that 85 of the respondents (25.3%) had masters degree, 5 of the respondents (1.5%) had doctoral degree while 27 of the respondents (8.0%) had other educational qualifications not mentioned above. The table also shows that 2 of the respondents did not specify their educational qualification.

Table 6.4 Highest level of education of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Primary	1	.3	.3	.3
	Secondary	16	4.8	4.8	5.1
	Bachelor's degree	200	59.5	59.5	64.6
	Master's Degree	85	25.3	25.3	89.9
	Doctoral Degree	5	1.5	1.5	91.4
	Others	27	8.0	8.0	99.4
	No Response	2	.6	.6	100.0
	Total	336	100.0	100.0	

The data contained in table 6.5 below shows the number of years the participants in this study have worked in the IT industry. From the table, it can be seen that 34 (10.1%) of the respondents have worked for less than 2 years, 162 (48.2%) of the respondents have worked for 2-5 years, 108 of the respondents have worked for 6-10 years while 27 of the respondents have worked for 11 years and above. The table also shows that 5 of the respondents did not specify the number of years they have worked in the ICT industry.

Table 6.5 Number of years respondents have worked in the ICT industry

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 2 years	34	10.1	10.1	10.1
	2 - 5 years	162	48.2	48.2	58.3
	6-10 years	108	32.1	32.1	90.5
	11 years and above	27	8.0	8.0	98.5
	No Response	5	1.5	1.5	100.0
	Total	336	100.0	100.0	

6.3 EXAMINATION OF THE RESEARCH PROPOSITIONS

Proposition 1: There will be meaningful difference in the pattern of career anchors held by male and female IT workers in Nigeria.

In order to address this proposition, analyses of variance (ANOVA) were conducted to examine the relationship between gender and the average scores of the different career anchors. The main point of interest to test this proposition is the interaction between group (individual career anchors) and gender, which would indicate significant differences between genders across the career anchors. The results of the analyses are presented in table 6.6 and 6.7 respectively.

Table 6.6

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Independence * Qc1 Gender of respondents	Between Groups	(Combined)	.053	1	.053	.090	.765
	Within Groups		195.900	334	.587		
	Total		195.952	335			
Managerial Competence * Qc1 Gender of respondents	Between Groups	(Combined)	6.413	1	6.413	12.909	.000
	Within Groups		165.918	334	.497		
	Total		172.330	335			
Marketable Skills * Qc1 Gender of respondents	Between Groups	(Combined)	.840	1	.840	1.848	.175
	Within Groups		151.720	334	.454		
	Total		152.560	335			
Technical * Qc1 Gender of respondents	Between Groups	(Combined)	.265	1	.265	.654	.419
	Within Groups		135.437	334	.406		
	Total		135.702	335			
Stability * Qc1 Gender of respondents	Between Groups	(Combined)	.119	1	.119	.295	.587
	Within Groups		134.521	334	.403		
	Total		134.640	335			
Work/life Balance * Qc1 Gender of respondents	Between Groups	(Combined)	89.164	1	89.164	55.963	.000
	Within Groups		532.157	334	1.593		
	Total		621.321	335			

Table 6.7 Relationship between Gender and Career anchors

Report

Qc1 Gender of respondents		Independence	Managerial Competence	Marketable Skills	Technical	Stability	Work/life Balance
Male	Mean	3.84	4.05	4.10	3.91	4.16	2.75
	N	233	233	233	233	233	233
	Std. Deviation	.78	.64	.65	.63	.61	1.32
Female	Mean	3.86	3.75	3.99	3.84	4.20	3.86
	N	103	103	103	103	103	103
	Std. Deviation	.74	.84	.72	.65	.69	1.13
Total	Mean	3.85	3.96	4.07	3.89	4.18	3.09
	N	336	336	336	336	336	336
	Std. Deviation	.76	.72	.67	.64	.63	1.36

As shown in tables 6.6 and 6.7 above, the managerial competence career anchor was found to be significantly associated with gender. Upon closer examination of each anchor it was found that male IT workers in Nigeria have higher orientation in managerial competence than their female counterpart (4.05 vs. 3.75, $F=12.9$, $p<0.05$). In a similar vein, work life balance was also found to be significantly associated with gender. In this case, female IT workers were found to have higher orientation in work life balance than their male counterpart (3.86 vs. 2.75, $F=55.9$, $p<0.05$). ***Overall, these results are supportive of proposition 1, which states that there will be meaningful difference in the pattern of career anchors held by male and female IT workers in Nigeria.***

Proposition 2: The dominant career orientations of IT workers in Nigeria will vary with age

In order to address this proposition, analyses of variance (ANOVA) were conducted to examine the relationship between age and the mean scores of the different career anchors. The main point of interest to test this proposition is the interaction between career anchors and age, which would indicate significant differences between age groups across the career anchors. The results of the ANOVA analysis is presented in table 6.8 below. Further representation of these results is provided in table 6.9 indicating the preferred career anchors by age group.

Table 6.8

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Independence * Qc3 Age of respondents	Between Groups	(Combined)	5.040	3	1.680	2.922	.034
	Within Groups		190.912	332	.575		
	Total		195.952	335			
Managerial Competence * Qc3 Age of respondents	Between Groups	(Combined)	65.753	3	21.918	41.171	.000
	Within Groups		176.744	332	.532		
	Total		242.497	335			
Marketable Skills * Qc3 Age of respondents	Between Groups	(Combined)	.927	3	.309	676	.567
	Within Groups		151.633	332	.457		
	Total		152.560	335			
Technical * Qc3 Age of respondents	Between Groups	(Combined)	.053	3	.018	.043	.988
	Within Groups		135.649	332	.409		
	Total		135.702	335			
Stability * Qc3 Age of respondents	Between Groups	(Combined)	.995	3	.332	.824	.481
	Within Groups		133.645	332	.403		
	Total		134.640	335			
Work/life Balance * Qc3 Age of respondents	Between Groups	(Combined)	94.399	3	31.466	16.321	000
	Within Groups		640.098	332	1.928		
	Total		734.497	335			

Table 6.9 Preferred career anchor by age group

Report

Qc3 Age of respondents		Independence	Managerial Competenc	Marketable Skills	Technica	Stability	Work/life Balance
1	Mean	3.89	3.04	4.09	3.87	4.15	2.49
	N	47	47	47	47	47	47
	Std. Deviation	.81	1.04	.75	.68	.66	1.38
2	Mean	3.70	3.88	4.04	3.89	4.12	2.65
	N	138	138	138	138	138	138
	Std. Deviation	.77	.66	.64	.71	.69	1.27
3	Mean	3.99	4.13	4.01	3.90	4.26	3.62
	N	82	82	82	82	82	82
	Std. Deviation	.78	.70	.69	.58	.60	1.50
4	Mean	3.93	4.54	4.16	3.87	4.20	3.72
	N	69	69	69	69	69	69
	Std. Deviation	.67	.63	.68	.51	.53	1.48
Total	Mean	3.85	3.96	4.07	3.89	4.18	3.09
	N	336	336	336	336	336	336
	Std. Deviation	.76	.85	.67	.64	.63	1.48

As shown in table 6.8 above, age was found to be statistically significant with managerial competence career anchor ($F=21.9$, $p<0.001$) and with work life balance ($F=16.3$, $p<0.001$). In table 6.9, group 1 represents IT workers between 18-25 yrs, group 2 represents 26-35 yrs, group 3 represents 36-45 yrs and group 4 represents 45 yrs and above. Upon closer examination of the mean scores of each of the career anchors that have significant association with age, it was found that the interest in managerial competence and work life balance increase with age. In the case of managerial competence, IT workers in the first age group (18-25 yrs) rated it lowest (3.04) while IT workers in the last age group (45 yrs and above) rated it highest (4.54). Similarly, in the case of work life balance, IT workers in the first age group (18-25 yrs) rated it lowest (2.49) while IT workers in the last age group (45 yrs and above) rated it highest (3.75). ***Overall, this result partially supports proposition 2, in the sense that only two career anchors (managerial competence and work life balance) out of the six identified career anchors was found to be significantly associated with age.***

Proposition 3: The career anchors of IT workers in Nigeria will vary with their educational qualification

In order to address this proposition, analyses of variance (ANOVA) was carried out to assess the relationship between educational qualification and the mean scores of the

different career anchors. The main point of interest to test this proposition is the interaction between career anchors and educational qualification, which would indicate significant differences between educational qualifications across the career anchors. The results of the ANOVA analysis are presented in table 6.10 and 6.11 respectively.

Table 6.10

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Independence * Qc4 Educational qualification of respondents	Between Groups	(Combined)	4.316	4	1.079	1.864	.116
	Within Groups		191.637	331	.579		
	Total		195.952	335			
Managerial Competence * Qc4 Educational qualification of respondents	Between Groups	(Combined)	.732	4	.183	.353	.842
	Within Groups		171.599	331	.518		
	Total		172.330	335			
Marketable Skills * Qc4 Educational qualification of respondents	Between Groups	(Combined)	2.186	4	.547	1.203	.309
	Within Groups		150.373	331	.454		
	Total		152.560	335			
Technical * Qc4 Educational qualification of respondents	Between Groups	(Combined)	1.838	4	.460	1.136	.339
	Within Groups		133.864	331	.404		
	Total		135.702	335			
Stability * Qc4 Educational qualification of respondents	Between Groups	(Combined)	4.344	4	1.086	2.759	.028
	Within Groups		130.296	331	.394		
	Total		134.640	335			
Work/life Balance * Qc4 Educational qualification of respondents	Between Groups	(Combined)	11.760	4	2.940	1.597	.175
	Within Groups		609.561	331	1.842		
	Total		621.321	335			

Table 6.11 Career anchor preference by educational qualification

Report

Qc4 Educational qualification responden		Independence	Managerial Competence	Marketable Skills	Technical	Stability	Work/life Balance
2	Mean	3.56	3.75	4.00	4.00	4.19	3.00
	N	16	16	16	16	16	16
	Std. Deviatio	.73	1.00	.89	.63	.66	1.26
3	Mean	3.86	3.96	4.10	3.91	4.17	2.99
	N	201	201	201	201	201	201
	Std. Deviatio	.76	.72	.67	.62	.66	1.37
4	Mean	3.79	3.98	3.97	3.79	4.10	3.36
	N	87	87	87	87	87	87
	Std. Deviatio	.73	.63	.62	.67	.53	1.29
5	Mean	3.60	4.00	3.80	3.60	3.80	3.80
	N	5	5	5	5	5	5
	Std. Deviatio	.55	.71	1.30	.55	1.10	1.64
6	Mean	4.15	3.96	4.22	4.00	4.52	2.93
	N	27	27	27	27	27	27
	Std. Deviatio	.86	.81	.58	.68	.51	1.47
Total	Mean	3.85	3.96	4.07	3.89	4.18	3.09
	N	336	336	336	336	336	336
	Std. Deviatio	.76	.72	.67	.64	.63	1.36

The results from the analyses above show that none of the career anchors was found to be significantly associated with educational qualifications. A breakdown of the result shows that the independence career anchor was not found to be statistically significant (F= 1.86, p= 0.12). The managerial competence career anchor was also not significantly associated with educational qualification (F=.35, p=0.84). The relationship between marketing skills career anchor and educational qualification was not significant (F=1.20, p=0.31). The relationship between technical challenge career anchor and educational qualification was also not statistically significant (F=1.13, p= 0.34). In a similar vein, the relationship between stability career anchor and educational qualification was also not statistically significant (F= 2.76, p=0.028). The relationship between work life balance career anchor and educational qualification was also not found to be statistical significant (F= 2.94, p=0.18). **In sum, these results are not supportive of proposition 3, which states that the career anchors of IT workers in Nigeria will vary with their level of education.**

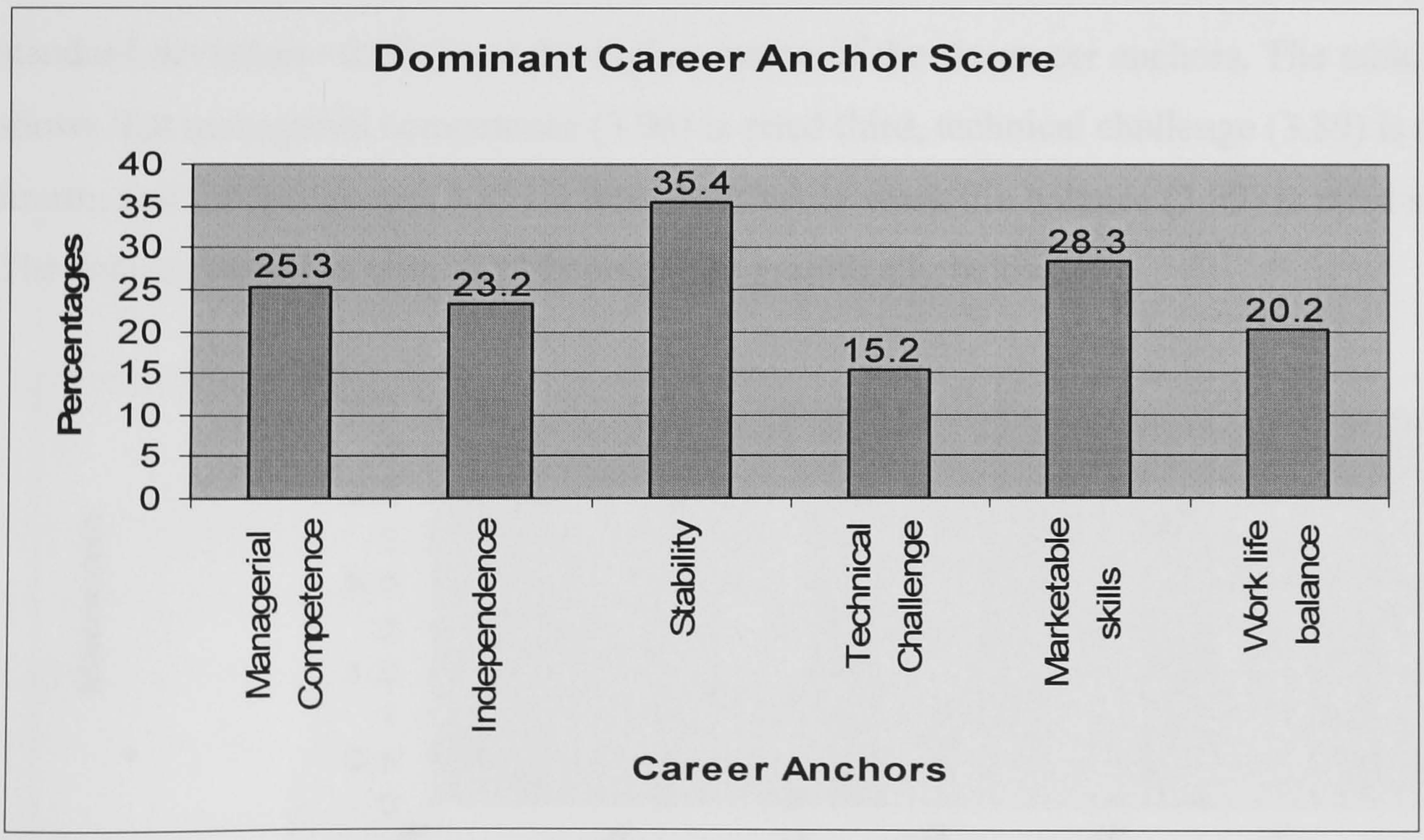
Proposition 4: The dominant career anchors of IT workers in Nigeria are marketable skills and stability

There are two main ways of characterising the strength of various career anchors in a group of people (Aryee and Leong, 1991; Ginzberg and Baroudi, 1992; Hair et al, 1992). One way is the distribution of dominant anchor (i.e., for each person the single anchor or anchors if scores are tied rated highest) and the second way is to calculate the average score given to each anchor by all members of the group. In this case, the factor with the highest relative score is assigned as the dominant anchor of an individual. In the context of this study, these two main approaches were utilised in analysing the dominant career anchors of IT workers in this study. The result of the data analysis using both approaches is presented in Table 6.12 and table 6.13 below. The results are further presented graphically in figure 6.1 (Dominant anchors by frequency) and figure 6.2 (Average anchor score) respectively. The detailed result of this analysis showing the frequency distribution and the mean score of the different career anchors is attached as Appendix 11.

Table 6.12: Strength of career anchors using the first method (frequency distribution)

N=336	Dominant Anchor (%)
Managerial Competence	25.3
Independence	23.2
Stability	35.4
Technical Challenge	15.2
Marketable skills	28.3
Work life balance	20.2

FIGURE 6.1 : DOMINANT ANCHOR SCORE- PERCENTAGE



To obtain the strength of the career anchors specified in the table above, each IT worker was assigned to a dominant career anchor based on the anchor that received the highest score among five dimensions (1-5). This method is in line with the approach used by Allen and Katz (1986) in assessing the career anchors of R&D professionals. As can be

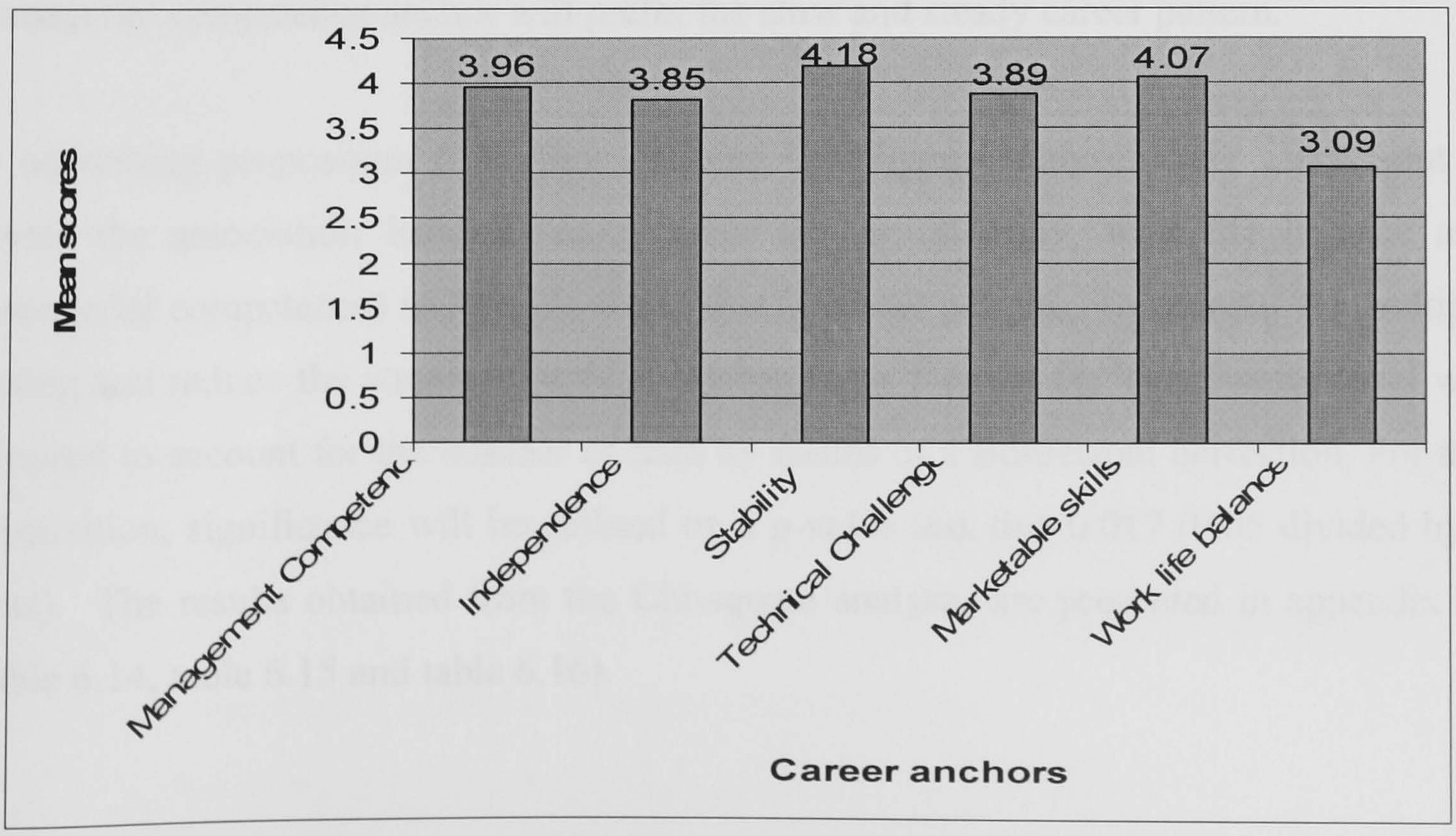
seen from table 6.6 above, stability career anchor (35.4%) and marketable (28.3%) skills were rated highest. On the other hand, work life balance (20.2%) and technical challenge (15.2%) were rated lowest, fifth and sixth respectively. Managerial competence (25.3%) and independence (23.2%) were rated third and fourth respectively. The sum of the percentages rating each anchor highest exceeds 100% because some of the respondents had ties for their highest rated anchors. This suggests that some of the respondents have multiple dominant career anchors.

Table 6.13: Strength of career anchors using the second method (mean scores)

Statistics

		Independence	Managerial Competence	Marketable Skills	Technical	Stability	Work/life Balance
N	Valid	336	336	336	336	336	336
	Missing	0	0	0	0	0	0
Mean		3.85	3.96	4.07	3.89	4.18	3.09
Std. Deviation		.76	.72	.67	.64	.63	1.36

Table 6.13 shows the mean scores of the different career anchors. From the table above it can be seen that stability (4.18, standard deviation=0.63) and marketable skills (4.07, standard deviation =0.67) have the highest mean of the six career anchors. The table also shows that managerial competence (3.96) is rated third, technical challenge (3.89) is rated fourth, and independence (3.85) is rated fifth while work life balance (3.09) is rated sixth. The data contained in table 6.13 is presented graphically below.



Overall, the result of the two methods of assessing the distribution of career anchors shows that on the one hand, the average scores for each of the six career anchors range from 3.09 (work life balance) to 4.18 (stability skills). On the other hand, the percentages of the sample rating each of the career anchors as most important range from 15.2% (technical challenge) to 35.4% (stability). A closer look at the results shows that although there are some specific differences in the results between the two methods of characterising the strength of the various career anchors in this sample, the overall picture presented is much the same. For instance, two career anchors (stability and marketable skills) are consistently rated high in both methods. Managerial competence falls in the middle by either method of rating the anchors. Only three anchors- independence (rated fourth in the first method and rated fifth in the second method), work life balance (rated fifth in the first method and rated sixth in the second method) and technical challenge (rated sixth in the first method and rated fourth in the second method) are somewhat different across the two methods of presentation. However presented, the results from the two approaches suggest that IT workers in this sample possess a wide variety of career anchors with stability and marketable skills being the dominant anchors. ***Consequently, these results are supportive of proposition 4, which states that the dominant career anchor held by IT workers in Nigeria will be stability and marketable skills.***

Proposition 5: The IT workers in Nigeria with the stability, work/life balance or managerial competence anchor will prefer the slow and steady career pattern.

In addressing proposition five, three separate Chi Square analyses were carried out to assess the association between each career anchor (stability, work/life balance and managerial competence) and the slow and steady career pattern. To account for multiple testing and reduce the chance of a false finding (type 1 error) the significance level was adjusted to account for the number of tests by means of a Bonferroni correction. For this proposition, significance will be defined by a p-value less that 0.017 (0.05 divided by 3 tests). The results obtained from the Chi-square analyses are presented in appendix 12 (table 6.14, table 6.15 and table 6.16).

The result of the Chi-square analyses shows that the stability career anchor was found to be significantly associated with the slow and steady career pattern (χ^2(12 d.f.)= 37.91, p<0.0001). No significant association was found between work life balance and the slow and steady career pattern (χ^2(16 d.f.)= 13.4, p=0.64). Likewise, no significant association was found between managerial competence and the slow and steady career pattern (χ^2 (12 d.f.)= 18.24, p=0.10). This implies that IT workers with the stability career anchor are likely to enact the slow and steady career pattern. **Thus, the overall result partially supports proposition 5, in the sense that only, one career anchor (stability) out of the three career anchors proposed was found to be significantly associated with slow and steady career pattern.**

Proposition 6: The IT workers in Nigeria with the independence, marketable skills or technical challenge career anchor will prefer the explorer career pattern.

Three separate chi-square analyses were carried out to assess the association between each career anchor and the explorer career pattern. To account for multiple testing and reduce the chance of a false finding (Type 1 error), the significance level was adjusted to account for the number of tests by means of a Bonferroni correction. For this proposition, significance will be defined by a p-value less than 0.017 (0.05 divided by 3 tests). The results obtained from the Chi-square analyses are presented in appendix 12 (tables 6.17, table 6.18 and table 6.19).

The independence career anchor was found to be significantly associated with the explorer career pattern (χ^2(12 d.f.)= 84.9, p<0.0001) as was the marketable skills anchor (χ^2(12 d.f.)= 52.5, p<0.0001). On the other hand, technical challenge was not found to be significantly associated with the explorer career pattern (χ^2(12 d.f.)= 11.5, p=0.49). This result implies that IT workers with the marketable skills or independence career anchor are likely to prefer the explorer career pattern. **Thus, the overall result partially supports proposition 6, in the sense that only, two career anchors (independence and marketable skills) out of the three career anchors proposed was found to be significantly associated with the explorer career pattern.**

Proposition 7: The IT workers in Nigeria with the independence, managerial competence, work/life balance or technical challenge career anchors will prefer the canvasser career pattern.

Four separate chi-square analyses were carried out to assess the association between each career anchor (independence, managerial competence, work/life balance, technical challenge) and the canvasser career pattern. To account for multiple testing and reduce the chance of a false finding (Type 1 error), the significance level was adjusted to account for the number of tests by means of a Bonferroni correction. For this proposition, significance will be defined by a p-value less than 0.0125 (0.05 divided by 4 tests). The results obtained from the Chi-square analyses are presented in appendix 12 (tables 6.20, table 6.21, table 6.22 and table 6.23).

A break down of the result of the analyses between the four different career anchors and the canvasser career pattern shows that the independence career anchor was found to be significantly associated with the canvasser pattern (χ^2(12 d.f.)= 84.6, p<0.0001) as was the managerial competence anchor (χ^2(12 d.f.)= 53.5, p<0.0001). On the other hand, work life balance was not found to be significant associated with canvasser (χ^2 (16d.f.)= 20.0, p=0.22). The technical challenge was also not found to be significantly associated with canvasser (χ^2 (12 d.f.)= 27.0, p=0.008). This result suggests that IT workers in Nigeria with the independence and managerial competence career anchors are likely to enact the canvasser career pattern, unlike the IT workers with technical challenge and work life balance career anchors. **The overall result partially supports proposition 7, in the sense that only, two career anchors (independence and managerial competence) out of the four career anchors proposed were found to be significantly associated with the canvasser career pattern.**

Proposition 8: The IT workers in Nigeria with the stability, marketable skills, technical challenge, independence, work/life balance or managerial competence career anchors will find the zigzag career pattern suitable

In order to address proposition 8, six separate chi-square analyses were carried out to assess the association between each career anchor (the stability, marketable skills, technical challenge, independence, work/life balance and managerial competence) and the zigzag career pattern. To account for multiple testing and reduce the chance of a false finding, the significance level was adjusted to account for the number of tests by means of a Bonferroni correction. For this proposition, significance will be defined by a p-value less than 0.008 (0.05 divided by 6 tests). The results obtained from the Chi-square analyses are presented in appendix 12 (tables 6.24, table 6.25, table 6.26, table 6.27, table 6.28, table 6.29).

The results of the analyses show that all the career anchors were found to be significantly associated with the zigzag career pattern. A breakdown of the result shows that the stability career anchor was found to be significantly associated with the zigzag pattern (χ^2(12 d.f.)= 42.2, p<0.0001) as was the marketable skills anchor (χ^2(12 d.f.)= 48.4, p<0.0001), the technical skills anchor (χ^2(12 d.f.)= 60.0, p<0.0001), the independent skills anchor (χ^2(12 d.f.)= 68.0, p<0.0001), and the managerial competence anchor (χ^2(12 d.f.)= 56.4, p<0.0001). Finally, the work life balance career anchor was found to be significantly associated to zigzag career pattern (χ^2 (12 d.f.)= 57.3, p<0.0001). This implies that IT workers in Nigeria with any of the career anchors have a high tendency of enacting a zigzag career pattern. **In this regard, these results are supportive of proposition 8, which states that the IT workers in Nigeria with the stability, marketable skills, technical challenge, independence, work/life balance or managerial competence career anchors will find the zigzag career pattern suitable.**

6.4 SUMMARY OF QUANTITATIVE FINDINGS

A summary of the key issues that emanated from the findings of the second phase of this study are presented below.

- Firstly, the results of the analysis suggest that there is a statistically significant relationship between demographic variables (age and gender) and the career anchors (managerial competence and work life balance). However, no statistically significant relationship was found between educational qualifications and the career anchors. The next chapter will discuss the implications of these findings.

- Secondly, IT workers in Nigeria possess a wide variety of career anchors with stability and marketable skills being the dominant anchors.

- Finally, a statically significant association was found between stability career anchor and the slow and steady career pattern. A statistically significant association was also found between independence, marketable skills career anchor and the explorer career pattern. In a similar vein, the independence, managerial competence career anchors was found to be statistically associated with the canvasser career pattern. All the career anchors were found to be statistically associated with the zigzag career pattern.

CHAPTER 7

SUMMARY, DISCUSSION AND CONCLUSION

7.1 INTRODUCTION

This chapter discusses the findings of this research, presented in chapters 5 and 6 of this thesis. The primary purpose of this research was to explore the career experiences of IT workers in Nigeria, with particular reference to their external career patterns and internal career orientations. The theoretical framework guiding this research is that a career is partly determined by the planning and skills of the individual, and partly by its occurrence within a particular socioeconomic context, influenced by social structures and institutions, such as the education system, labour supply and demand, organisational structure, gender and families. To address the aims and objectives of this research, this study was divided into two phases: qualitative and quantitative. The findings of both phases are discussed fully in this chapter.

The chapter is organised as follows. In section 7.2, the findings for each research question and proposition are discussed and explained within the context of this research. Relevant literature is also introduced where appropriate, as points of comparison and contrast to the findings. Section 7.3 outlines the implications of the findings for human resource management in organisations. Section 7.4 presents a summary of the substantive findings of this research. The section also presents the conceptual framework that was developed from the qualitative and quantitative findings of this research. Section 7.5 presents the conclusion of this research and outlines the contributions of this research to career literature. Finally, Section 7.6 outlines the limitations of this research and recommends potential areas for future research.

7.2 DISCUSSION OF RESEARCH QUESTIONS AND PROPOSITIONS

7.2.1 RESEARCH QUESTION ONE

Do the external career patterns exhibited by IT workers in Nigeria conform to the traditional view of career as hierarchical and progressive, or to the recent models of boundaryless careers?

As explained in subsection 2.2.1, a career pattern is the path or trajectory of work-related experiences engaged over one's life course (O'Neil et al., 2004). The findings of this study, presented in section 5.2 indicated the existence of four distinct career patterns exhibited by IT workers in Nigeria. These career patterns are categorised as follows: Route A - slow and steady career pattern, Route B - explorer career pattern, Route C - canvasser career pattern, and Route D - zigzag career pattern. A closer look at the findings suggests that all the identified career patterns share some common elements with the established career models found in traditional and new career literature. The elements characterising each of these patterns, and the similarity between the identified career patterns and the traditional and new career models are discussed below.

ROUTE A- THE SLOW AND STEADY CAREER PATTERN

The slow and steady career pattern (discussed in section 5.3) is characterised by slow and consistent upward career movement within the confines of one or a few organisations. The fundamental element of this pattern is that individuals enacting this career pattern are often loyal to a single employer, and engage in little or no inter-organisation mobility. The slow and steady pattern is akin to the traditional organisational career model (Kanter, 1989) discussed in subsection 2.3.1 of the literature review. In the organisational career pattern, the organisation (as opposed to individuals working within the organisation) defines career progression and success.

It is interesting to note that the slow and steady career pattern was one of the main career routes enacted by IT workers in the sample. The finding from the interviews showed that seven IT workers (representing 23.3% of the participants) enacted this career pattern. The

quest for this career pattern is understandable in Nigeria given the economic situation - generally characterised by uncertainty, insecurity, high unemployment level and the lack of a social welfare scheme. In the face of high unemployment levels (about 50% of the population are unemployed according to the United Nations Development Program, 1996-1997); it is not surprising that unlike their Western counterparts, a number of Nigerian IT workers appeared to exhibit more intra-organisation mobility. Individuals in this context are more concerned with holding onto their job, rather than risk their career by moving into the labour market without a guarantee of getting a job.

As the findings from the interviews suggest, the IT workers that exhibited this career pattern were mainly attracted to this career route because of the prospect of internal career advancement opportunity, job security, a reliable pension scheme and the reputation that comes with working for a well-recognised company that can guarantee a predictable future. The appeal in sticking to a stable organisation that can guarantee job and economic security is in accordance with the discussion presented in section 3.3 of the research context chapter, on the likely effect of the Nigerian economy on the careers of individuals in Nigeria.

In addition, individuals may be willing to commit their working life to a stable and reputable organisation with the hope that the organisation's brand name will add value to their own 'personal brand' and mark them out from the crowd. This notion is supported by Anekewe's (2002) observation that Nigerian society typically ascribes distinguished status to those who work in reputable and high paying organisations. Overall, the existence of this career pattern in Nigeria provides additional support to the observation of contemporary scholars (e.g., Guest and Mackenzie-Davey, 1996; Jacoby, 1999; Cohen and Mallon, 1999; McDonald, Brown and Bradley, 2005), that traditional career patterns have not completely disappeared.

ROUTE B - THE EXPLORER CAREER PATTERN

Another career pattern that was identified from the qualitative data is the explorer career pattern. The explorer career pattern is characterised by a series of job moves between organisations and between IT projects. The IT workers enacting this career pattern move

around the industry with a portfolio of marketable technical skills which gives them access to work on challenging and interesting IT projects. The explorer career appears to shares some common elements with the boundaryless career pattern (Arthur and Rousseau, 1996) discussed in subsection 2.3.5 of the literature review. Arthur and Rousseau describe the boundaryless career as being characterised by high mobility, transferable skills and knowledge, abilities across multiple firms and individual responsibility for career management.

The explorer career pattern appeared to be the most preferred route for IT workers in the sample, given that eleven IT workers (representing 37% of the participants) enacted this career pattern. The prevalence of the explorer career pattern among IT workers in Nigeria reinforces the findings of Saxenian's (1996) study of the labour market in Silicon Valley. The findings of her study discussed in subsection 2.3.5 of the literature review suggests that IT workers are notoriously mobile and that the boundaryless career is the most common career pattern exhibited by IT workers in the industry.

However, the main difference between the findings of this study and Saxenian's research is in the factors propelling individuals to the boundaryless career pattern. In the case of Silicon Valley, the nature of the industry is the main factor propelling individuals to enact a boundaryless career. Work in this industry is organised around projects, which means that at the end of each project individuals have to move on. In addition, the boundaryless career in Silicon Valley is enhanced by the open nature of the labour market in the region (as discussed in subsection 2.3.5). In contrast, the inter–organisation mobility exhibited by IT workers in Nigeria is engendered by the need to find work that is appealing, challenging and rewarding both in personal skill development and in remuneration. In essence, the main factors propelling Nigerian IT workers to 'job hop' is the need for better economic circumstance to meet personal and family obligations (as discussed in Section 5.2) and the need to keep up-to-date with marketable skills.

The desire of IT workers in Nigeria to engage in inter-organisation mobility rather than stay in one organisation can also be partly explained by a Nigerian adage, which states, *'You do not watch a masquerade from one point'*. If you want to get the best, you have to

move around. Because by moving around an individual can gain a wide variety of experience and different perspectives about issues. This variety of experience can be beneficial to the individual (personal growth and development), as well as to the organisation (it creates opportunity for diversity of ideas and by so doing creativity is unleashed and maximised). Overall, the existence of the explorer career pattern suggests that IT workers in Nigeria are also experiencing the new forms of career pattern widely acknowledged in the literature as zeitgeist.

ROUTE C- THE CANVASSER CAREER PATTERN

The canvasser career pattern is characterised by independence, self-employment and contracting. Seven IT workers in the sample (representing 23.3% of the participants) enacted this career pattern. As pointed out in section 5.3 of the qualitative research finding, IT workers in this category pay particular attention to the development of extensive social networks and political connections which assist them in securing government and private IT contracts.

This career pattern appears to be similar to the self-employment career pattern, which has received little scholarly attention in the extant career literature. One reason for the paucity of literature and research in this area is that self-employed contractors are highly mobile, and their lack of strong ties with any particular organisation renders them nearly invisible and difficult to study (Peel and Inkson, 2004). Due to the sparse research in this area, there is limited information about the factors that propel individuals to engage in self-employment in different national contexts.

However, the findings of this research suggest that the primary factors propelling IT workers in Nigeria to enact this career pattern are inequitable income/profit shares, a strong need for autonomy, in growing one's own business, frustration with management, inability to get the kind of IT work desired and dissatisfaction with the nature of the job they are doing in other companies. In addition, the Nigerian government policy of encouraging local manufacturing of computers and other IT equipment are all engendering this career choice.

Some of the factors influencing IT workers in Nigeria to become self-employed are embedded in the socio-economic and political context of Nigeria, for example Nigerian government encouragement and patronage of locally made IT products. However, others conformed to the broad conceptualisation of factors that have been identified in previous studies that have focused on exploring the factors that influence individuals to seek self-employment. For instance, in examining the literature on why people choose to become self-employed, Kolvereid (1996) identified the following factors: economic opportunity, authority, autonomy, challenge and self-realisation. In a similar vein, Peel and Inkson's (2004) explorative research on workers' choice to become self-employed in Newzealand identified autonomy, income and security, personal development, change and involvement as the key factors.

Overall, the determinants of self-employment constitute a complex whole, which varies from one national context to another. Thus, this study provides important insights on factors propelling individuals to seek self-employment in the Nigerian context. The factors identified here are by no means comprehensive or exhaustive. Empirical work with a larger sample will be required to further elucidate this career pattern and the factors influencing individuals to seek this pattern.

ROUTE C- THE ZIGZAG CAREER PATTERN

The zigzag career pattern is characterised by flexibility and changing career direction (unexpected twists and turns) in response to changes in personal and environmental circumstances. The term 'zigzag' was adopted from Gersick and Kram's (2002) exploratory research of high achieving women. The findings of this research presented in section 5.3 shows that five IT workers (representing 16.7% of the participants) enacted this career pattern. IT workers enacting this career pattern are flexible, and alter career directions to suit their changing circumstances. In doing so, they experience a variety of career patterns without opting for a definitive career path or an irreversible career direction.

The zigzag career pattern conforms largely to the hybrid career pattern proposed by Bailyn (1989) in her research on managing individuals that work in R&D laboratory. The hybrid career pattern encompasses aspects of all possible career routes and involves

regular changes between seemingly unrelated careers. Like the hybrid career, the zigzag career pattern involves discontinuous chunks and interruptions. The zigzag career pattern also reflects the current thinking on the need for individuals to exhibit career resilience. Collard et al. (1996) defines career resilience as "the ability to adapt to changing circumstances, even when the circumstances are discouraging or disruptive" (p. 33). This emphasises self-management of one's career.

The quest for the zigzag career pattern can be partly explained by the economic instability in Nigeria which prompts individuals to change career direction in order to survive and meet personal and family obligations. As pointed out in Section 5.3, this career pattern is quite attractive to individuals who are struggling to survive, and individuals who seek to maintain other sources of income outside their main job. In addition, individuals desiring flexibility to accommodate other personal interests also enact this career pattern. In essence, the zigzag career pattern is representative of the new forms of careers 'outside' organisations discussed by Arthur and Rousseau (1996). This involves changing career fields and organisations and unplanned job changes in line with changing needs and contexts.

SUMMARY AND CONCLUSION OF RESEARCH QUESTION ONE

The present research provides important insight into the nature of the career patterns exhibited by IT workers in Nigeria. The findings provide evidence that hierarchical and progressive traditional careers are still very relevant, especially in the Nigerian context. While the slow and steady career pattern may seem unfashionable in modern Western society (where individuals are encouraged to be self reliant and proactive), evidence from this research shows that the traditional career path is still one of the preferred career routes for IT workers in Nigeria. The findings of this study also offer echoes of the new career discourse that encourages self-reliance, individual management of career and continuous learning. In essence, while there is evidence of the new career themes in the career patterns exhibited by IT workers in Nigeria, the findings of this study show that traditional career forms are not yet over, as is largely claimed in the new career literature (Arthur and Rousseau, 1996; Hall, 1996; Cohen and Mallon, 1999). This finding is consistent with the findings of McDonald, Brown and Bradley's (2005) research on the

career paths of senior managers in Australia, which suggest that that contrary to much existing literature, which proposes that all careers have been fundamentally altered, the traditional career is still the dominant career model in some organisations.

Overall, based on the evidence presented in this research, one can conclude that the external career patterns exhibited by IT workers in Nigeria conform to the traditional view of careers as hierarchical and progressive, as well as to the recent models of boundaryless careers. Although the findings of this research suggest the careers of IT workers in Nigeria conform to the existing careers found in Western literature, some peculiar contextual (socio-economic) factors were also identified, which shape and constrain the career choice of IT workers in the Nigerian context. These factors are discussed in subsection 7.2.3.

7.2.2 RESEARCH QUESTION TWO

What are the internal career orientations of IT workers in Nigeria and to what extent do these orientations differ from the career orientations that have been found among IT workers in other national contexts (e.g., North America and Europe)?

As pointed out in subsection 2.2.1, an individual's career orientation refers to the overriding concern or need that operates as a genuine constraint on career decisions. A career anchor is that interest/need that an individual will not give up if she or he is forced to make a choice (Schein, 1990). The findings of this research (presented in section 5.3) revealed six distinct career orientation/anchors held by IT workers in Nigeria. These career anchors are being stable (stability), being marketable (employability), being in-charge (managerial competence), being independent (independence), being balanced (work life balance) and being challenged (technical challenge). Most of these career anchors can be closely matched to Schein's (1978) career anchors (discussed in section 2.5) and Derr's (1986) career success orientations (getting free, getting ahead, getting balanced, getting secure, getting high) with the exception of the being marketable career anchor which appears to be largely specific to this research.

It is important to point out that the findings of the quantitative phase (2nd phase) of this research on the strength of each individual career anchor will be adopted, rather than the findings of the qualitative phase (first phase). The reason is that, the first phase focused more on identifying the individual career anchors, while the second phase examined the strength of each of the anchors with a larger sample. The difference in the order of ranking between the qualitative and quantitative findings of this research can be attributed to the relatively small sample size of the qualitative sample and the demographic profile of the sample.

BEING STABLE (STABILITY)

The being stable career anchor is characterised by the desire to remain in a stable organisation that offers job security and a reliable pension scheme. The IT workers holding this career anchor are primarily concerned with financial security (maintaining a decent and stable income) and less concerned with work content and rank in an organisation. The being stable career anchor is akin to Schein's (1978) security career anchor and Derr's (1986) getting secure orientation Derr's orientation refers to an individual's need to have a solid position within an organisation which provides tenure, has the reputation of avoiding layoffs and that has the image of being strong and reliable.

The result of this research showed that 35.4% of the sample had an overriding career need for stability. This made it the most dominant anchor held by IT workers in Nigeria. The importance of stability to IT workers has received mixed evidence from previous research on the career orientations of IT workers in different national contexts. While the research findings of Baroudi (1988) and Igbaria, et al. (1991) in the United States found job security a relatively unimportant (lowly rated) career anchor, the findings of Igbaria, Meredith and Smith`s (1995) research in South Africa and Igbaria and McCloskey‘s (1996) research in Taiwan suggest that IT workers value job security highly.

A possible explanation for this disparity is that the studies that found job security unimportant were undertaken in the United States of America (a developed economy), while the studies that found job security as important were undertaken in the developing economies of Taiwan and South Africa. The differences in the findings of these studies

lend support to the notion that careers unfold through the interplay between individuals and larger societal structure (Baruch, 2004). On the one hand, due to economic stability and solid social welfare systems, individuals in developed economies do not need to be so concerned about possible job loss, given that the government will be able to take care of their family during that period. On the other hand, individuals in developing economies are more likely to have a heightened need for stability given the economic instability prevalent in most developed economies and the lack of a solid welfare system that can cushion the effect of job loss.

The prevalence of the being stable career anchor in the findings of this research can also be interpreted in light of Hofstede's (1980) cross-cultural research findings, which suggest that Nigeria is largely a collectivist society. Hofstede defines collectivism as a society in which people from birth onwards are integrated into strong, cohesive in-groups, which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty. The collectivist tendencies of Nigerians are evidenced by the strong family attachment and cooperation between family members (as highlighted in section 5.4). In this setting, individuals are expected to take care of their elderly parents while individuals in gainful employment are expected to provide financial support for the education, shelter and welfare of the immediate and extended family members (distant cousin or someone from one's village or ethnic group). Those individuals who do not conform to these expectations are looked down on and referred to as self-centred persons. Such individuals find it hard to gain support during periods of misfortune and trying moments. In essence, the collectivist nature of Nigerian culture encourages individuals to aspire to achieve stable economic circumstance in order to provide support to members of their internal and external family and to meet socio-cultural expectations.

BEING MARKETABLE (EMPLOYABILITY)

The being marketable career anchor is characterised by the desire to have relevant skills that ensure continuous employment in the industry. IT workers that held this career anchor were primarily concerned with continual learning, training and development. The result of this research showed that 28.3% of the respondents had an overriding career need for marketable skills. This made it the second most dominant career anchor held by IT workers in Nigeria.

The being marketable career anchor appears to be largely unique to this research. There is little evidence to suggest that this anchor has been identified in any previous study on the career orientation of IT workers. However, the quest for marketable skills supports Sodergen's (2002) assertion that knowledge workers (which includes IT workers) are more interested in the opportunity of learning and knowledge creation than formal positions (in terms of their perception of positive development of work). Other empirical studies (e.g., Couger et al., 1992) have also identified IT workers as having a strong desire for knowledge and learning compared with workers in other occupations. Interestingly, Schein (1996) also called for the replacement of employment security with 'employability security'. In addition, Baruch (2004) suggested the inclusion of employability and spiritual purpose as career anchors in a rapidly changing world.

Although the above-mentioned studies have noted the need for continuous learning, knowledge and employability among knowledge workers, this research represents one of the few studies to provide concrete evidence based on empirical data that IT workers have a strong desire for the development of marketable skills. Some of the previous recommendations are based on intuitive assumptions of the effect of the changing nature of work. A possible explanation for the high importance attached to the being marketable skills career anchor is that due to rapid technological advances, IT workers increasingly face the risk of being made obsolete from erosion of skills. In this case, there is a need for continuous learning in order to remain marketable in the labour market. In addition, some of the IT workers in the sample (especially male IT workers) suggested their interest in being marketable stems from their responsibilities in the family and wider society. In this case, they want to have a job (but not necessarily within one organisation) and to be able to continually earn money and meet personal and family obligations (as discussed above). In essence, rapid technological advances as well as socio-cultural expectations propel IT workers to attach high importance to marketable skills.

BEING IN-CHARGE (MANAGERIAL COMPETENCE)

The being in-charge career anchor is characterised by the desire to control, influence and supervise others towards achieving set tasks. IT workers that hold this anchor are interested in achieving promotions, higher pay and greater power within the organisation.

This anchor is akin to Schein's (1978) management competence anchor (discussed in subsection 2.5) and Derr's (1986) getting ahead orientation, which focuses on individuals' need for advancement to higher levels within an organisation.

The being in-charge anchor was rated as the third most important career anchor among IT workers in Nigeria. While this anchor has also received high rating in the United States (Ginzberg and Baroudi, 1992) and South Africa (Igbaria, Meredith and Smith, 1995), it was rated lowly in Taiwan (Igbaria and McCloskey, 1996). The differences in the importance attached to this anchor in these studies may be due to difference in national contexts as well as differences in demographic composition of the respective studies. A possible reason why IT workers in Nigeria rated this anchor highly may be due to the benefit that can accrue from holding a high position of authority. Such benefits include power advantage, high pay, prestige and social status. For instance, it is a popular saying in Nigeria that *'big man talk to big man'*. This implies that to have access to people in influential positions and to command respect you need to be influential in your own right. In other words, Nigerian society pays particular attention to status and this can propel individuals to aspire to hold a position of authority.

BEING INDEPENDENT (INDEPENDENCE)

The being independent career anchor is characterised by a strong desire to be autonomous (self-governing). IT workers who hold this career anchor want to be free from organisational constraints and to implement their own technical ideas. This may involve starting up and growing technology-intensive companies. They want to decide when to work, on what to work, or how hard to work. The being independent career anchor is similar to Schein's (1990) entrepreneurial creativity anchor (discussed in subsection 2.5) and Derr's (1986) getting free orientation, which entail a sense of autonomy and self-direction in one's work.

The result of this research shows that 23.2% of the sample had an overriding career need to be independent. This made it one of the lower rated career anchors among IT workers in Nigeria. The findings of this research are consistent with the research findings of

Igbaria and McCloskey's (1996) research in Taiwan and Igbaria, Meredith and Smith's (1995) research in South Africa. However it diverges from the findings of Igbaria, Kassicieh and Silver's (1999) research in the United States which suggests that IT workers value independence highly. This leaves a somewhat muddled picture of the importance of independence to IT workers in different national contexts. The differences in the findings may be due to the influence of societal factors on careers.

One possible explanation for the low rating given to this anchor by IT workers in Nigeria is that the current economic condition in the country (characterised by high interest rates, instability in the system and unavailability of venture capital) may discourage individuals who want to set up their own company. With the prevailing economic uncertainty, it is likely that individuals will tend to take fewer risks as there are no guarantees that a business venture would survive or succeed. Another possible explanation is that the technical nature of many information technology projects demands working in teams (as opposed to working alone), where various forms of knowledge can interact in complex and intricate patterns to achieve a set objective. In this case, individuals may prefer to stick to an organisation that offers them an opportunity to work with the best brains in the industry, rather than move out to start something of their own.

BEING BALANCED (WORK LIFE BALANCE)

The being balanced career anchor is characterised by the desire to balance work and non-work commitment. The IT workers that hold this career anchor were primarily concerned with working for organisations that recognise individuals' need for work/life balance. This career anchor is analogous to Schein's (1978) lifestyle career anchor (discussed in subsection 2.5) and Derr's (1986) getting balanced orientation, which involves attaching equal or greater value to non-work activities.

The overall findings of this research shows that IT workers gave a low rating to the being balanced anchor (20.2%), making it the second lowest anchor observed in the quantitative sample. A possible explanation for the low rating of the being balanced anchor is that the samples consisted of more male than female IT workers. Thus, the gender imbalance in the sample may have generally affected the rating of this anchor, given that the majority

of participants that rated this anchor highly in the quantitative study were female IT workers.

The importance attached to work life balance in this study diverges from the findings of previous studies on the career orientations of IT workers in the United States (Ginzberg and Baroudi, 1992; Igbaria, Kassicieh and Silver, 1999), South Africa (Igbaria, Meredith and Smith, 1995) and India (Kumar and Srinivasan, 2001). The above-mentioned studies generally identified work life balance as one of the strongly held career anchors of IT workers in those national contexts. However, the importance attached to work life balance varied slightly in these studies. However, lifestyle orientation was rated lowly in Taiwan (Igbaria and McCloskey, 1996).

The differences in the importance attached to work and non-work commitment in this research and those of other studies mentioned above can be partly explained in light of Hofstede's (1980) cross-cultural research findings, which suggest that Nigeria is largely a masculine society as opposed to a feminine society. According to Hofstede, 'masculinity pertains to societies in which social gender roles are clearly distinct (i.e., men are supposed to be assertive, tough, and focused on material success whereas women are supposed to be more modest, tender, and concerned with the quality of life); femininity pertains to societies in which social gender roles overlap (i.e., both men and women are supposed to be modest, tender, and concerned with the quality of life)' (p. 82-3).

This notion of masculinity reinforces the discussion presented in section 3.5 of the context chapter that Nigerians typically regard individuals that have achieved financial success highly and rarely celebrate the achievement of individuals with little economic power. This recognition is readily seen in the preferential treatment accorded to successful individuals at social events and in wider society. In recent years, many Nigerian musicians have also been involved in eulogising the achievements of successful individuals in their songs. It is a popular saying in Ibo (a tribe in Nigeria) that there must be a special reason why the ceremonial flautist calls a particular person by his flute for public recognition and acknowledgement. Those that are called by the flautist are typically those that have 'arrived', that is individuals who have achieved economic success. The implication is that many individuals who have not achieved 'success' (high

earning and acquisition of possessions) aspire to achieve it by working very hard and in most cases sacrificing non-work activities.

The focus on work rather than balancing work and non-work commitment also suggests that the traditional proxies of assessing career success such as pay and promotion (Greenhaus, 2003) are still prevalent in Nigeria. This study contradict, to some extent much of the recent career research findings, that suggest that most individuals are increasingly redefining career success by focusing on less tangible, subjective outcomes such as work-life balance (Feingold and Mohrman, 2001), as well as a sense of meaning (Wrzesniewski, 2002). Overall, the low importance attached to the being balanced career anchor in this research can be attributed to the money-oriented nature of Nigerian society which push people to work hard to achieve a reasonable level of comfort and recognition.

BEING CHALLENGED (TECHNICAL CHALLENGE)

The being challenged career anchor is characterised by a strong desire to work on challenging and exciting IT projects. IT workers who hold this anchor have a strong need for participating in work that involves new challenge and technologies. The IT workers in this category pointed out they are willing to sacrifice high pay in order to work on challenging and interesting projects. The being challenged anchor is akin to Schein's (1978) pure challenge anchor (discussed in section 2.5) and Derr's (1986) getting high orientation, which entails craving for challenge and excitement. It is also analogous to Allen and Katz' (1986) project orientation, which refers to the desire to work in challenging projects.

This research shows that IT workers in Nigeria rated this anchor as the least important (15.2%). This result is consistent with the findings of Igbaria et al. (1995) in South Africa, which rated the pure challenge anchor low. However, this result diverges from the findings of Ginzberg and Baroudi (1992) in the United States and Igbaria and McCloskey's (1996) research findings in Taiwan. The differences in the findings of these studies further highlight the influence of national contexts on the career orientations of individuals. It is unsurprising that IT workers in Nigeria rated the being challenged

anchor low, given that it may involve sacrificing high pay in order to work on challenging and interesting projects.

A possible explanation for the low importance attached to this anchor is that IT workers in Nigeria are motivated more by extrinsic factors (for example money) rather than intrinsic factors (such as personal fulfilment). This can further be explained in light of the present economic conditions in Nigeria (as discussed in section 3.3), which influence individuals to gravitate towards seeking better economic circumstance in order to meet up with their personal and family obligations, rather than seeking job satisfaction or other intrinsic motives.

SUMMARY AND CONCLUSION OF RESEARCH QUESTION TWO

Firstly, the findings of this research revealed six distinct and independent career anchors held by IT workers in Nigeria. These anchors are being stable (stability), being marketable (employability), being in-charge (managerial competence), being independent (independence), being balanced (work life balance) and being challenged (technical challenge). The identification of different anchors held by IT workers in Nigeria is consistent with the findings of previous research (e.g., Allen and Katz, 1986; Aryee, 1992; Badawy, 1995) on the career needs of highly skilled workers, which suggest that highly skilled workers are not all alike, but rather exhibit a variety of career needs. Some of the identified career anchors in this research correspond to the career anchors identified by Schein (1978, 1990) and the career success orientations identified by Derr (1986).

Secondly, while organisations continue to be more flexible in how they manage the careers of IT workers, the dominant career management strategy have been the dual career strategy. The aim of the dual career ladder is to provide viable career paths for the technically inclined as well as managerially inclined personnel (as discussed in subsection 2.3.1). The findings of this research support the notion that the dual career ladder strategy is very limited and not an effective device for managing IT workers (Allen and Katz, 1986). The majority of the IT workers in this study did not score highly on the being challenged (technical) or being in charge (managerial competence) career

anchors, which are the career orientations that underpin the dual career model. Rather, the dominant career anchors in this research were stability (35.4%) and marketable skills (28.3%). The implication of this result for human resource managers is discussed in section 7.3 of this chapter.

Thirdly, while IT workers in this research held some similar career anchors to the ones that have been identified in other national contexts, there were some points of difference in the importance attached to the anchors in the different national contexts. These differences were attributed to national contexts, in the sense that career orientations are likely to be affected by societal factors, since they are embedded in personal perceptions and values on career. Thus, it is important that human resource managers and future studies take a more contextualised approach and not assume that the importance attached to a career anchor in one national context will reflect the importance of such an anchor in all national contexts.

Finally, there was no evidence of the existence of some of the career anchors previously identified by Schein (1978, 1990), for example service and dedication to a cause. Instead, a new career anchor 'being marketable' was identified. The revision of the traditional career anchors identified by Schein and the adding of new anchors is consistent with Schein's (1978) view of the career anchors model as dynamic with anchors being added and deleted over time. Although Schein's eight traditional career anchors have received validity in a number of studies, it is important that future studies in this area take a qualitative approach and explore the career orientations of individuals in different professions and in different national contexts. This is important to discover whether there are still undefined career orientation categories among specific samples. This has become crucial given the changes that have taken place in contemporary society due to globalisation, organisational restructuring and technological advances.

7.2.3 RESEARCH QUESTION THREE

What are the societal factors that shape and constrain the careers of IT workers in Nigeria?

As pointed out in section 2.2, the theoretical rationale guiding this study is the notion that a career is partly determined by the planning and skills of the individual and partly by its occurrence within a particular socioeconomic context, which is influenced by social structures and institutions. Thus, one of the primary aims of this research was to explore the societal factors that shape and constrain the careers of IT workers in Nigeria. In the context of this research, societal factor refers to aspects of the Nigerian environment that shape individual behaviours and actions.

Although several contextual factors converge to shape the careers of IT workers in Nigeria, four societal factors were identified in section 5.4 of this thesis that primarily interfere with the process of turning career interests into choice goals and goal-directed behaviour. These factors are economic conditions, ethnic allegiance, sexual discrimination and perception of educational qualifications.

In the first case, the economic condition is characterised by uncertainty, insecurity, high unemployment level and lack of a social welfare scheme. In this case, individuals make their career decisions taking into consideration the prevailing economic condition in the country. This may involve job-hopping due to the prospect of a wage increase, or staying in one organisation for an extended period due to instability in the system. Secondly, ethnic allegiance in this context refers to preferential treatment in recruitment, promotion and privileges based on ethnic affiliation. Thirdly, sexual discrimination involves, but is not restricted to making it difficult for qualified female IT workers to work in a company by restricting opportunity in recruitment, advancement and training. In this case, female IT workers make career decisions around the role they are expected to play in the family; many of the barriers that they face in the workplace reflect the perceptions of Nigerian society on women's secondary income-earning role. Finally, perception of educational qualifications refers to the perceived superiority of university qualification to polytechnic qualification, and the perceived superiority of international certificates to locally obtained certificates.

The finding of this research on the influence of societal factors on careers is consistent with a number of previous studies that have explored the interplay between career and environment. For instance, Cadin et al's (2000) exploratory study of careers in France suggests that culture, labour market and educational system shape and constrain the careers of individuals in that context. In a similar vein, Gunz et al. (2002) identified contract of employment, external jurisdictions, social attitudes, labour organisation, organisational size and boundaries of inclusion as institutional factors that can shape and constrain an individual's career actions (these factors were discussed in subsection 2.3.5). In addition, Lawrence's (1992) study of the work orientations and careers of German engineers (discussed in subsection 2.5.2) suggest that Germany's unique educational system, cultural values and economic system shape the careers and work design of German engineers.

A possible reason for the slight differences in the contextual factors identified in these studies that shape careers can be explained by Hollenbeck and McCall's (2003) observation that countries differ substantially in their power structures, taxation systems, economic and social stratification, markers of status and norms of saving. These differences in effect shape the careers of individuals within those contexts.

Overall, the finding of this research supports the theoretical premise underpinning this research that is beyond the individual career interest, individual career actions and decisions are shaped and constrained by societal factors embedded in the context in which careers are enacted. In essence, we should not think of career development as primarily driven by individual choice, rather we should take into consideration the wider contextual factors that create opportunities and barriers for individual career development.

7.2.4 RESEARCH QUESTION FOUR

What is the relationship between the career anchors of IT workers in Nigeria and demographic factors such as age, gender and educational qualification?

This research question was reframed into testable proposition as discussed below:

Proposition 1: There will be meaningful difference in the pattern of career anchors held by male and female IT workers in Nigeria

The result obtained from proposition 1 show that gender is significantly associated with career orientations. However, of the six career anchors that were examined for possible relationships with gender, only the being in-charge and being balanced career anchors were significantly associated with gender. Specifically, the result shows that male IT workers in Nigeria had higher orientation than female IT workers in being in-charge, while the female IT workers had higher orientation than their male counterparts in being balanced.

This result is consistent with recent research that found that women, when identifying their interest and career needs, prioritised home life over work life (e.g., Igbaria, Kassicieh and Silver, 1999; Igbaria et al., 1995; Crook et al., 1991). These studies reported gender differences in career orientations, with women found to be more lifestyle-oriented than men. The gender divide in the dominant career anchors of IT workers in this research is supported further by the findings of Simpson's (2000) research on the perception of career benefits from an MBA degree. The findings of her study of 221 MBA graduates in the UK suggested that female MBA graduates were more satisfied with intrinsic outcome (increase in confidence and credibility) while male graduates are more satisfied with extrinsic outcome (increase in pay and status).

A possible explanation of significant differences in the dominant career anchors of male and female IT workers in this research is that Nigeria ranks highly in masculinity in Hofstede's (1980) national culture model. As noted in section 7.3.2, masculinity focuses on the degree a society reinforces the traditional masculine work role model of male

achievement, control, and power. According to Hofstede, a high masculinity ranking indicates that the country experiences a high degree of gender differentiation. In essence, the prevalence of the being balanced career anchor among female IT workers in Nigeria can be attributed to the societal perception in Nigeria that a woman's role is in the home (homemaker and primary childcare provider).

In this case, women who have chosen to be career focused must also resolve to combine the responsibilities of keeping their homes as well as meeting the challenges of the work environment. On the other hand, the prevalence of the being in-charge career anchor among IT workers in Nigeria is consistent with the societal notion that men should focus on acquisition of wealth and providing for their family. Overall, the result obtained from this proposition suggests that career theorists should be more cautious about making similar assumptions regarding the career needs of male and female IT workers. Further recommendations are highlighted in section 7.3, which focuses on the implication of this research for human resource management.

Proposition 2: The dominant career orientations of IT workers in Nigeria will vary with their age

The result presented in section 5.3, shows that of all the career anchors, it was only the being in-charge anchor and the being balanced anchor that were found to be significantly associated with age. Thus, proposition 2 was only partially supported in this research.

In the case of being in-charge, IT workers in the first age group (18-25 yrs) rated it lowest, while IT workers in the last age group (45 yrs and above) rated it highest. Similarly, in the case of being balanced, IT workers in the first age group (18-25 yrs) rated it lowest while IT workers in the last age group (45 yrs and above) rated it highest. This suggests that older IT workers are more concerned with being in charge and being balanced than younger IT workers. This result is consistent with previous research (e.g., Igbaria, Kassicieh and Silver, 1999; Biddle and Roberts, 1994), which suggests that age influences individuals' career orientation.

One possible explanation for the heightened interest in being in-charge for the older IT workers is that most of the young IT workers have just started their IT careers and are

likely to be more passionate about being creative and dynamic in terms of sourcing for ideas and increasing their technical competence. Invariably, having made their mark in the industry, older IT workers are likely to be interested in non-work activities such as health and fitness issues, as well as planning for retirement (which requires more commitment to non-work activities).

Additionally, as individuals get old in Nigeria it is expected that they contribute more to community service, mentoring the young ones and taking care of family members. These activities demand more time to non-work commitment. On the other hand, the heightened interest of older IT workers in the being in-charge career anchor may be due to the benefits that can emanate from being in charge of an organisation, or holding a position of authority (such as a managerial position) in Nigeria. The benefits of occupying such a position include higher recognition in society and higher pay. The need in Nigeria for higher pay is likely to increase, as an individual is getting older due to the need to save some money for retirement, which is important given that most pension schemes are not reliable.

Another possible explanation is that older IT workers may increasingly aspire to be in-charge (hold a management position) in order to counter the obsolescence of their IT skills (which increases with age) as technology evolves quickly, while allowing them to benefit from job security and more advantageous work conditions. Overall, the result of this proposition supports the notion that an individual's career stage influences his/her career orientation (Agarwal and Feratt, 2000; Baruch, 2004). This shows that individuals' career orientation can change as they move through different life stages, given that people in different age groups attach importance to different career anchors. The implication of the influence of career stage on individuals career needs for human resource managers is discussed in section 7.3 of this chapter.

Proposition 3: The career anchors of IT workers in Nigeria will vary with their educational qualification.

Contrary to the proposition advanced in this research, the result of this research shows that none of the career anchors was found to have a statistically significant association

with educational qualification. In essence, this result failed to support the proposition that the career orientations of IT workers will vary with educational levels. This result diverges from research findings (e.g., Allen and Katz, 1992; Igbaria et al., 1995; Kim and Cha, 2000), which suggest that career orientations are influenced by educational qualification. The findings of the first phase (qualitative interviews) of this research may lend some insight into the results of this proposition. The result suggests that perception of educational qualification is an important factor that constrains the career mobility and career advancement of IT workers in Nigeria. Thus, it appears that what really shape and constrain the careers of IT workers in Nigeria is where the certificate or degree was obtained rather than the level of educational attainment.

In the present study, the educational qualification variable was assessed with items that focused exclusively on educational level in terms of highest educational certificate obtained, rather than where it was obtained. Thus, it appears that the measure did not sufficiently capture the dimensionality of the construct. Given that the educational qualification scale used in this research had no significant effect on career anchors, future research may need to refine the scale and investigate other dimensions of educational levels. This may involve using a scale that includes not only the level of education but also where the qualification was obtained (international or local). This might increase variability of responses and possibly improve correlation.

7.2.5 RESEARCH QUESTION FIVE

What is the relationship between the career anchors of IT workers in Nigeria and their preferred career patterns?

This research question was reframed into testable proposition as follows:

Proposition 5: IT workers in Nigeria with stability, work and life balance, or managerial competence anchor will prefer the slow and steady career pattern.

Proposition 6: IT workers in Nigeria with independence, marketable skills, or technical challenge career anchor will prefer the explorer career pattern.

Proposition 7: IT workers in Nigeria with independence, managerial competence, work and life balance, or technical challenge career anchors will prefer the canvasser career pattern.

Proposition 8: IT workers in Nigeria with stability, marketable skills, technical challenges, independence, work and life balance, or managerial competence career anchors will find the zigzag career pattern suitable

The findings of these propositions are discussed below:

There was a clear tendency for IT workers with different career orientations to gravitate towards different career patterns. In proposition 5, the stability career anchor had a statistically significant association with the slow and steady career pattern. This suggests that IT workers with the stability career anchor have a high tendency to enact the slow and steady career pattern. In essence, enacting the canvasser career pattern or the explorer career pattern (for IT workers with the stability anchor) involves business risks and uncertainties. There are no guarantees that a business venture will succeed, or that the individual will always find a job to meet their personal and family responsibilities, should they decide to enact the explorer career pattern. Hence, it is not surprising that IT workers who had an overriding career need for stability were also interested in following the slow and steady career pattern.

In proposition 6, there was a statistically significant relationship between the independence and marketable skills career anchors, with the explorer career pattern. This suggests that IT workers with the independence or the marketable skills career anchor have a high tendency to follow the explorer career pattern. A possible explanation is that IT workers who are interested in being independent can enact the canvasser career pattern to enhance their skills and get substantial experience before setting up their own IT firm. Similarly, IT workers interested in marketable skills are likely to enact this career pattern as they move around in the industry in search of organisations that offer skill development opportunities and a higher pay package.

In proposition 7, the independence and the managerial competence career anchors had statistically significant associations with the canvasser career pattern. This suggests that IT workers with the independence career anchor and the managerial competence career anchor have a high tendency of following the canvasser career pattern. This is not surprising, as individuals with a strong need for independence are likely to have a high tendency to leave salaried employment for careers that would permit them to define for themselves their areas of interests and to pursue them. Similarly, individuals who have a strong managerial career anchor are likely to be interested in a high-level position in a firm in order to exercise power, authority and possibly link the organisation's achievements to their efforts. IT workers with managerial competence career anchor may also prefer to follow the canvasser career pattern, so they can obtain sole credit for the success of a business venture.

In proposition 8, all the career anchors had statistically significant associations with the zigzag career pattern. This suggests that IT workers with any of the career anchors have a high tendency of enacting the zigzag career pattern if they experience changes in their personal or external circumstances. A possible reason for the significant association with all the career anchors is that the zigzag career pattern involves flexibility and experimentation with a range of career patterns, and it is likely that individuals may at some point in their career (when they experience changes in personal circumstance) find this career pattern suitable.

Put together, the findings of this study are consistent with Schein's (1990) view that career orientations influence employees' career decisions to pursue specific jobs and career paths; that individuals consciously consider career options available to them and make choices based on their career orientation. These findings also lend support to Holland's (1985) personality –environment fit theory which posits that individuals seek out vocations that have an environment that matches their career interests. However, it is important to note that some of the proposed relationships between career anchors and career patterns did not receive statistically significant support. In proposition 5, there was no statistically significant association between the managerial competence or work life balance anchor. and the slow and steady career pattern. Similarly, in proposition 6, there was no statistically significant association between the technical challenge anchor and the explorer career pattern. In addition, in proposition 7 there was no statistically significant

association between the technical challenge anchor or work life balance anchor and the canvasser career pattern.

A possible explanation for the lack of statistically significant association in the propositions between some career anchors and career patterns is that societal factors as well as personal circumstances moderate the relationship between an individual's career interests and career choice. As highlighted in section 2.5 of the literature review, Schein (1990) argued that individuals will not always be free to act in ways consistent with their preferences when there are strong external situational constraints (e.g., a tight labour market or no reasonable alternative jobs). In addition, an individual's personal circumstances can also moderate the relationship between career anchors and career patterns. For instance in Nigeria, as in other parts of the world, marriage and child bearing are often referred to as 'settling down'. Thus as the personal responsibilities of an individual grow, decisions concerning careers become more complicated, given that a job change or a bad career move would now affect a family as opposed to an individual. In this case, individuals may be constrained to work in circumstances or follow a career pattern that does not reinforce their career needs. Despite the moderating effect of these variables, the potential positive outcomes that can be achieved when there is a match between an individual's career anchor and career pattern suggest that organisations that employ IT workers will need to pay attention to providing career paths and a work environment that reinforces the career needs of their IT workers.

7. 3 IMPLICATIONS FOR HUMAN RESOURCE MANAGEMENT

The finding of this research raises important issues for human resource management in the career management of their IT workers. Firstly, individuals with different career anchors were found to have widely different preferences for the kind of career pattern they want to follow. This implies that having predetermined standardised career ladders and job rotation sequences for all employees may lead to poor staffing decisions, reduced job performance and increased staff turnover. In this case, human resource managers need to recognise the diversity of career orientations held by IT workers in their organisation, so that appropriate reward systems and career paths can be developed to match their career needs. This may require restructuring of jobs to accommodate the unique needs and

divergent career orientations of IT workers. For instance, if having autonomy over one's work is important, organisations may need to factor this feature into their work design. If being challenged or being marketable is important, organisations will need to develop a work plan that involves creating complexity in work assignments and investing in training and development of their employees.

In addition, it is important for human resource managers to understand that an individual's career orientations may change over time as the individual moves through different life stages. This implies that organisations should not attempt to seek only one set of incentives with which to motivate their entire workforce. Rather, organisations should be more flexible and collaborative in their career planning for individuals and not assume that organisational assessments of what is best for employees are always correct (Fieldman and Bolino, 1996).

Finally, the interview data suggests that some IT workers are primarily interested in searching for interesting projects and the development of marketable skills. Therefore, the organisations employing IT workers should recognise that they might not be able to retain IT workers in this category if they do not offer them training and development opportunities or challenging projects that extend their skill base. In order to address this issue, human resource managers should accept and manage turnover by designing a series of short term challenging projects for this category of IT workers.

7.4 SUMMARY OF SUBSTANTIVE FINDINGS

- Firstly, the findings of this research revealed six distinct and independent career anchors held by IT workers in Nigeria. These anchors are being stable, being marketable, being in-charge, being independent, being balanced and being challenged. The most dominant career orientations were stability and marketable skill.

- Secondly, the findings of this study indicate the existence of four distinct career patterns exhibited by IT workers in Nigeria. These career patterns are categorised as follows: Route A - slow and steady career pattern, Route B - explorer career pattern, Route C - canvasser career pattern, and Route D - zigzag career pattern. These career patterns conform to the traditional view of career as hierarchical and progressive, as well as to the recent models of boundaryless careers.

- Thirdly, although several contextual factors converge to shape the careers of IT workers in Nigeria, four societal factors were identified that primarily interfere with the process of turning career interests into choice goals and goals-directed behaviour. These factors are economic conditions, ethnic allegiance, sexual discrimination and perception of educational qualifications.

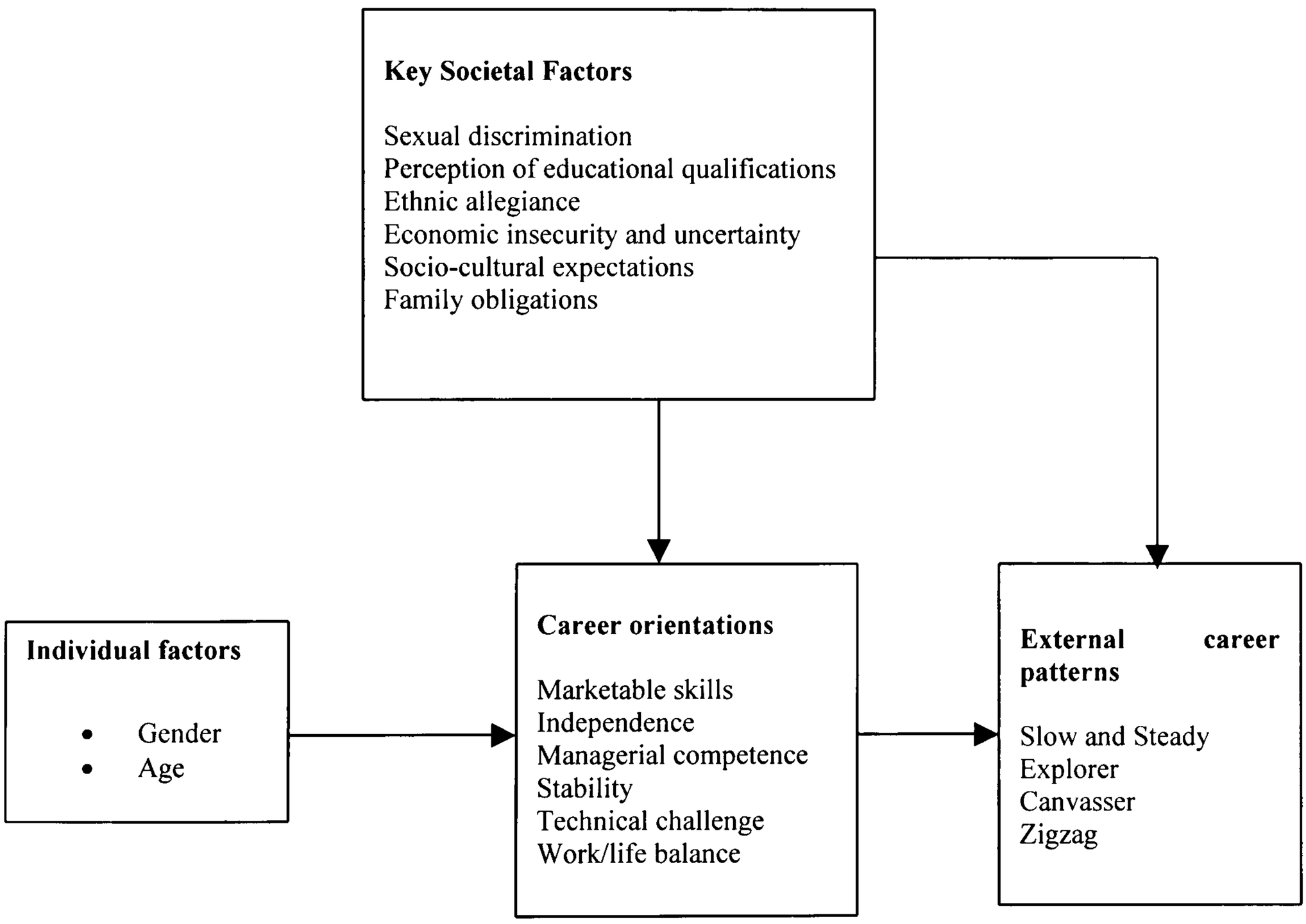
- Fourthly, the findings of this research show that age and gender influence the career orientations of IT workers in Nigeria. Surprisingly, educational qualification did not have a statistically significant association with career orientations. This was attributed to the scale used in assessing educational qualification in the questionnaire.

- Fifthly, the findings of this research support the notion that career orientations influence career decisions and career pattern. There was a clear tendency for IT workers with different career orientations to gravitate towards different career patterns that were consistent with their orientations. However, it was observed that in some cases IT workers did not opt for a career pattern that was consistent with their career orientation. This was attributed to the influence of personal circumstance and situational constraints.

- Finally, the conceptual framework below articulates the key findings of this study. On one hand, the societal factors prevalent in Nigeria shape and constrain the career orientations and external career patterns of IT workers in Nigeria. These societal factors are economic conditions (characterised by uncertainty, high unemployment rate), sexual discrimination, lack of solid welfare scheme and unreliable pensions scheme, family obligations and socio-cultural expectations.

On the other hand, individual factors such as gender and age, influences the career orientations of IT workers in Nigeria. The model also shows that individual career orientations influence career patterns in the sense that individuals gravitate towards career patterns that reinforce their career orientations rather than challenge it.

Diagram D: Conceptual model developed from the findings of this research



7.5 CONCLUSION

Firstly, although there has been an increase in empirical studies that have explored claims about the changing nature of careers (e.g., Arthur and Rousseau, 1996; Kanter, 1989), there have been relatively few studies that have provided an in-depth analysis of the career experiences of highly skilled technical workers in the changing world of work. Even fewer have examined the career experiences of IT workers in a non-European or

North American context. This study provides valuable insight into the nature of the careers of IT workers in Nigeria. In doing so, it has advanced our knowledge and understanding in this area, and contributed the Nigerian perspective and context to the wider discourse on the changing nature of careers and the career management of highly skilled technical workers.

Secondly, this research provides important insights into the internal career orientations of IT workers in Nigeria. The taxonomy of the internal career anchors developed in this research may serve as a further impetus for the development of much-needed research and theory in this area. For instance, while this research identified marketable skills as a 'peculiar' career anchor in the Nigerian context, there may be other peculiar anchors embedded in different national contexts that are yet to be explored.

Thirdly, while the influence of context on career is widely recognised in human resource management literature, the interplay between careers and the context in which it occurs is still a relatively unexamined area of inquiry, particularly in developing economies of Africa. Thus, this study provides important insights into the contextual factors that shape and constrain careers in Nigeria. In addition, this research adds value to career studies by providing a unifying conceptual framework that can help connect a variety of factors that shape and constrain careers of IT workers.

Fourthly, this research provides further empirical evidence that career orientations do influence career choice. The findings of this research show that IT workers with different career orientations gravitated towards different career patterns. In addition, this research provided further empirical evidence to show that individual demographic factors shape career needs. To the knowledge of the author, this represents one of the few empirical studies that have explored the relationship between career orientations and career patterns in Nigeria.

Finally, the findings of this research suggest a re-conceptualisation of the nature of career and the development of more nuanced and more contextual understanding of the concept. Contrary to the traditional depiction, which assumes that individuals are predominately making maximising choices, the findings of this research shows that the nature of the careers of IT workers in Nigeria are not purely motivated by individual interest and

skills. Rather, they are largely shaped by broader social structures in which individual employees careers are embedded and partly determined by individuals' personal circumstance, gender and age. From this perspective, the nature of the careers of IT workers in Nigeria is conceptualised as dynamic and reactive. Thus, the term '*chameleon career*' is proposed as a concept that captures the important elements of the careers of IT workers in this context. Chameleon career implies a series of adaptation to changing personal circumstance, social cultural obligations and societal context. The metaphor was adopted because of the characteristics of the reptile- chameleon, which can be likened to the nature of the careers of IT workers in Nigeria. The skin colours of a chameleon normally change under influence of mood, light and temperature. It also blends with the forest surroundings. In this sense, the characteristics of a chameleon concur with the nature of the careers of IT workers in Nigeria. For instance, the career orientations and career patterns of IT workers in Nigeria change in accordance with the personal circumstance, gender, age and the societal context of the individual. Overall, the notion of a chameleon like career do not imply a radically different way for conceptualising careers, rather it complements and advances some of the perspective already in place in recent career literature which suggest that career unfolds through the interplay between individuals and larger social structures (Baruch, 2004).

7.6 LIMITATIONS OF THIS RESEARCH

While the findings of this research have extended our understanding of the career experiences of IT workers in Nigeria, some limitations need to be taken into consideration while making generalisations from the findings of this research.

The results may be unique to the geographical area (Lagos) where this study was conducted. It will be interesting to establish whether these results are as relevant to other areas of Nigeria. In addition, the sample chosen for this research comprised mainly of members of NCS. As the NCS is not a mandatory association which IT workers are required to join, it is possible that the sample is biased towards those who voluntarily join a professional association for reasons unknown to this study. However, at the time of the research, the NCS was believed to be the most representative organisation of IT workers in Nigeria.

The second major limitation was the sample size (30 interviews) from which the career orientations and career patterns of IT workers in Nigeria were identified. However, qualitative researchers place less emphasis on sample size compared to the systematic examination of available cases (Rubin and Rubin, 1995). In this regard, what is important is not so much the number of people interviewed, but whether the career orientations and external career patterns of IT workers in Nigeria were understood at the end of the interviewing process. Limiting the number of interviews to a few cases makes it possible to "investigate in detail the relationship of a specific behaviour to its context, to work out the logic between the individual and the situations" (Kvale, 1996, p. 103). In this regard, the respective interviews were explored in depth to gain a better understanding of the internal career orientations, external career patterns, and the contextual factors that shape and constrain the careers of IT workers in Nigeria.

The third major limitation of this research was that subjects were asked to provide retrospective accounts of their career histories and career decisions. This can be problematic, because some people may have better memories than others, some may have selective memories and recall only what they feel good about or proud of, and some participants may provide stories they believe the researcher wants to hear (Rubin, 1986). To help address this problem, a career history survey was sent to prospective participants before the interview to allow them to articulate their thoughts.

7.7 RECOMMENDATIONS FOR FUTURE STUDIES

The results of this research are suggestive of several directions for future research as follows:

Firstly, the results of this research identified four key societal factors that shape and constrain the career choice of IT workers in Nigeria. However, we do not understand the relative strength of each of these factors on the career choice of IT workers in Nigeria. Thus, future studies should use a quantitative approach to examine the strength of each of these societal factors on the career choice of IT workers in Nigeria.

Secondly, given that the research sample for this research was drawn mainly from one state (Lagos) in Nigeria, this has affected the generalizability of the findings of this research. Thus, it is important that future research be done with a larger sample of IT workers drawn from different parts of Nigeria to gain further knowledge of the nature of the careers of IT workers as well as further explicate the findings of this research.

Thirdly, this research focused on identifying the career orientations and the external career patterns of IT workers in Nigeria and on the influence of demographic and societal factors in shaping the career decisions and career patterns of these workers. It would be interesting for future studies to explore in more detail the influence of factors (e.g., socio-cultural expectations, extended family, parents, spouses and organisational factors) on the career orientations and career patterns exhibited by IT workers in Nigeria. By so doing, we will have a more holistic understanding of the different factors that shape and constrain the careers of IT workers in Nigeria.

Fourthly, from a practical perspective, a fundamental reason for the interest in career orientations is the notion that these orientations can be significantly related to work related outcomes such as job satisfaction and retention. Thus, future studies should examine in the Nigeria context the relationship between career orientations and external career outcomes, such as job satisfaction, motivation and retention. This will provide useful information for the career management of IT workers.

Finally, based on the findings of this research, it is suggested that future career studies take a more contextualised approach in studying the careers of individuals, and not assume that the existing career models developed largely in the developed economies of North America and Europe will adequately reflect the career experiences of individuals in other national contexts. It is hoped that this research will encourage more contextualised studies that take into consideration the interrelationship between individual career action and wider societal structure, especially in developing economies of Africa.

APPENDIX 1

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APPENDIX 2

INVITATION TO MEMBERS OF NIGERIAN COMPUTER SOCIETY

Dear sir/madam,

I am a doctoral researcher at the School of Business and Management, Brunel University, United Kingdom. My PhD research focuses on exploring the internal career orientations and the external career patterns exhibited by IT workers in Nigeria.

I have obtained your name from the membership list of Nigerian computer society as a possible participant in this research. Thus, I would like to invite you to participate in this research project. You will be required to talk about your career experiences during an in-person interview that will last for approximately 1-2 hours. Prior to that, I will send a career –in-Life Story Survey for you to complete that will form the basis for our interview discussion. The interview will be audio-taped and transcribed. All interviews and transcripts will be kept strictly confidential and no participant will be identified.

In return for the participation, I will provide copy of the significant findings of this research.

If you would like to participate in this research, please email or call me as listed below. Once I hear from you, I will send you a survey to complete and schedule a convenient time and place for the interview. If you would like to discuss this study prior to making a decision to participate, I may be reached via email at afam.ituma@brunel.ac.uk.

Thank you for your consideration. I hope you will agree to participate. I look forward to speaking to you soon.

Yours sincerely,

Afam Ituma

Doctoral Researcher

School of Business and Management

Brunel University

APPENDIX 3

INTERVIEW PROTOCOL

INTRODUCTION:

I would like to begin by thanking you for your participation in this research. Your input is very important to me and I am excited about being here to talk to you today.

ROAD MAP FOR THE CONVERSATION

Thank you for completing the Career –in-Life Story Survey that I sent you when we spoke about your participation in this research. I would like to ask you to take that out now and let us talk about it as a way of beginning our conversation about your career.

CAREER HISTORY QUESTIONS

Tell me about your lifeline-themes, colour, etc

What was it like for you to draw?

Please, I will be asking you some specific questions about your career history

1. What areas did you concentrate in your last period of education, why did you choose those areas and how do you feel now about those choices?

2. What was your first real job after your education?

3. What were you looking for in your first job? Why did you make that choice?

4. What were your ambitions or long range goals when you started your career?

5. How did the first job work out in terms of your goals? (Did it enable you achieve your goals)?

6. What was your first major change in job or employing organisation?

7. How did this come about? Who initiated the change? What were the reasons for the change?

8. How did you feel about the change? How did it relate to your goals?

9. **Next Job or Major Life event.** What was the major change in job or employer?

10. How did this come about? Who initiated the change? What were the reasons for the change?

11. How did you feel about the change? How did it relate to your goals?

12. Next Job (or Career Change):

13. How did this come about? Who initiated the change? What were the reasons for the change?

14. How did you feel about the change? How did it relate to your goals?

15. Next job (or Career or Life change):

16. How did this come about? Who initiated the change? What were the reasons for the change?

17. How did you feel about the change? How did it relate to your goals?

18. Next Job (or Career Change):

19. How did this come about? Who initiated it? What were the reasons for the change?

20. How did you feel about the change? How did it relate to your goals?

21. I continued to analyze job/career changes until the present, using the preceding format of questions.

22. As you look back over your career and life so far, do you see any major transition points, times when the change seemed more than routine? Please describe each of these times.

23. What was the transition? How did it come about? Who initiated it?

24. How did you feel about it? How was it related to your goals?

25. As you look back over your career, have there been times you particularly enjoyed or not enjoyed-what was it about those times that made hem particularly enjoyable or not?

26. Have you refused a job or promotion, if yes why?

27. Looking ahead, what are the things you are especially looking forward to, and why? Are there things you would especially like to avoid and why?

28. How would you now describe your long-range career goals?

29. Why are you looking for these things?

30. What do you think your next job will be?

31. After that, what do you think your next job will be?

32. I continued asking for next jobs until I elicited the answer to what the person would "ultimately" like to be.

33. As you think over the answers you have given, what patterns or themes do you see?

34. Please, what are the factors in Nigeria that have influenced your career decisions?

35. What are the factors in Nigeria that have stopped you from achieving any of your career goals?

36. What are the societal factors in Nigeria that you considered when taking past career decisions?

Thank you for telling your story, I look forward to sharing my results with you. Please, do not hesitate to contact me if you think of anything else you would like to add or you have any questions for me.

APPENDIX 4

Brunel University
School of Business and Management
Uxbridge
UB8 3PH
United Kingdom

Dear prospective participant,

Career –in-Life Story Survey

Thank you for agreeing to participate in this research project on the career experiences of IT workers in Nigeria. Please, complete this career–in-life story survey prior to our meeting. The information contained here will be used as a basis for discussion during our interview and a copy will be collected as part of this research. The results of this survey will remain strictly confidential. I hope you enjoy reflecting on your career history as you complete the survey, I look forward to talking with you about your career experiences.

There are two parts to this survey:

Part 1: Demographics (page 2) asks you to provide demographic information

Part 2: Lifeline (page 3) asks you to graphically present your career-in-life story by drawing a lifeline.

Please, fee free to contact me if you have any questions as you complete the survey.

Thanks again, you participation is very much appreciated.

Afam Ituma

Afamituma@brunel.ac.uk

PART 1-DEMOGRAPHIC INFORMATION

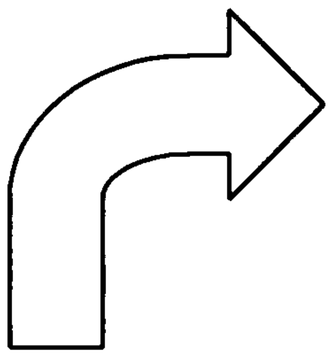
Please, answer the following questions as they relate to you. All responses will be kept confidential.

- Name:……
- Date of birth:……
- Email: ……
- Gender……
- Educational qualification:……
- IT area of specialisation……..
- Current position……
- Name of current organisation……
- Tenure in the industry……

PART 2- CAREER- IN -LIFE STORY

Please, draw your career history from your first job to your present job noting salient transitions. For instance, you can use symbols like the ones used below. However, feel free to use other symbols, as you deem necessary.

Job change



Organisation change

APPENDIX 5

CONSENT FORM

You were selected as a possible participant because of your membership in the Nigerian Computer Society (NCS). Please, read this form and ask any questions that you may have before agreeing to participate in this research.

BACKGROUND INFORMATION: The purpose of this study is to explore the internal and external career experiences of IT workers. This study also aims to explore the societal factors that shape and constrain the careers of IT workers in Nigeria. By so doing, this study aims to contribute to the wider discourse on the changing nature of careers and the career management of high skilled workers.

PROCEDURES: If you agree to participate in this research, you will be asked to do the following:

- Spend approximately 2 hours for an audio-taped face-to-face interview
- If necessary, participate in a short follow-up telephone conversation to clarify the earlier discussion.

RISKS AND BENEFITS:

Risks- There is no physical or psychological risks to participating in this study. Benefits- A copy of the findings of this research, and the opportunity to add to the existing body of knowledge concerning the career experiences of IT workers.

CONFIDENTIALITY: The records if this research will be kept private. In any sort of report that the findings of this research are published, I will not include any information that will make it possible to identify you as a participant. Research records and audio tapes will be kept in a locked file, and will be used only for research purposes.

VOLUNTARY NATURE OF THE STUDY: Your participation is voluntary. If you decide to participate, you are free to withdraw at any time without penalty or loss of benefits.

CONTACTS AND QUESTIONS: Feel free to contact me for any questions or clarifications with this email address –afam.ituma@brunel.ac.uk. If you want to talk to someone else regarding this research, please contact my supervisor Dr Ruth Simpson – Ruth.Simpson@brunel.ac.uk.

You will be given a copy of this form to keep for your records.

Statement of consent: I have read the above information. I have received answers to the questions I have asked, I consent to participate in this research.

Signature of participant……Date……..

APPENDIX 6

Contact Summary Form

Contact type
Visit:
Phone:

Site:
Contact Date
Today's Date

1. What were the main issues or themes that struck you in this contact?

2. Summarise the information you got from the interview

3. Anything else that struck you as salient, interesting, illuminating or important in this contact?

APPENDIX 7

QUESTIONNAIRE

Brunel University
School of Business and Management
Uxbridge
UB8 3PH
United Kingdom
9th March 2004

To Whom It May Concern:

Dear Sir/Madam,

RESEARCH ON THE CAREERS OF IT WORKERS IN NIGERIA

I am a doctoral researcher in the school of Business and Management, Brunel University, United Kingdom. As part of my PhD research, I am examining the internal career orientations and the external career patterns exhibited by IT workers in Nigeria.

I will be pleased if you can carefully complete the attached questionnaire, which aims to examine the relative frequency of the career orientations of IT workers in Nigeria and the relationship between career orientations and career patterns.

Please, feel free to email for any clarification with this address

afam.ituma@brunel.ac.uk.

I wish to express my profound gratitude for your anticipated cooperation in this career survey.

Sincerely,

Afam Ituma

CAREER ORIENTATIONS AND CAREER PATTERNS INVENTORY

Kindly, indicate your agreement or disagreement with each of the following items by ticking the one number to the right of each statement that corresponds most closely to your desired response. 1 represents the lowest (of no importance), 2 represents slightly important, 3 represents important, 4 represents very important the lowest rating while 5 represents the highest (extremely important).

How important is each of the following to you?

	Of no Importance				**Extremely important**
1. The process of supervising influencing, leading, and controlling people at all levels is.	1☐	2☐	3☐	4☐	5☐
2. To be in a position of leadership and influence is	1☐	2☐	3☐	4☐	5☐
3. A job that provides the opportunity for an individual to continuously develop marketable technical skills is	1☐	2☐	3☐	4☐	5☐
4. An organization that will provide me stability through guaranteed work, a good retirement program, etc. is.	1☐	2☐	3☐	4☐	5☐
5. Working on challenging technical problems that are almost unsolvable is....	1☐	2☐	3☐	4☐	5☐
HOW TRUE IS EACH ONE OF THE FOLLOWING TO YOU?	**Not at all True**				**Completely True**
6. I always seek to develop marketable skills and knowledge that will boost my career and employment prospects outside my present organisation	1☐	2☐	3☐	4☐	5☐
7. I am most fulfilled in my work when I am completely free to define my own tasks, schedules and procedures	1☐	2☐	3☐	4☐	5☐
8. Balancing the demands of personal and professional life is more important to me in my career than any other factor	1☐	2☐	3☐	4☐	5☐
9. I will feel successful in my career only if I attain a managerial position in an organisation	1☐	2☐	3☐	4☐	5☐
10. I would rather leave my organization than to be put into a job that would compromise my ability to pursue personal and family concerns	1☐	2☐	3☐	4☐	5☐
11. I would not take a job where there was not a chance of improving and extending my marketable technical skill base	1☐	2☐	3☐	4☐	5☐
12. I would rather leave my organisation than accept a job that would take me away from the managerial track	1☐	2☐	3☐	4☐	5☐
13. I will feel very satisfied in my career when I have guaranteed employment stability	1☐	2☐	3☐	4☐	5☐

14. I seek to develop marketable technical skills from the job situations I experience to enable me get another job easily	1☐	2☐	3☐	4☐	5☐
15. An endless variety of technical challenges in my career is what I really want	1☐	2☐	3☐	4☐	5☐
16. I will feel successful in life only if I have been able to balance my personal, family and career requirements	1☐	2☐	3☐	4☐	5☐
17. I would rather leave my organisation than accept a job that would reduce my autonomy and freedom	1☐	2☐	3☐	4☐	5☐
18. I only seek for jobs in organisations that can offer me employment security	1☐	2☐	3☐	4☐	5☐
19. The chance to do a job my own way, free of rules and constraints, is more important to me than ay other factor	1☐	2☐	3☐	4☐	5☐
20. I feel very fulfilled in my career when I have solved seemingly unsolvable technical problem	1☐	2☐	3☐	4☐	5☐
21. I will feel successful in my career only if I achieve complete autonomy and freedom	1☐	2☐	3☐	4☐	5☐
22. I dream of having a career that will allow me feel a sense of security and stability	1☐	2☐	3☐	4☐	5☐
23. I dream of a career that will permit me to integrate my personal, family and work needs	1☐	2☐	3☐	4☐	5☐
24. I will feel successful in my career only if I face and overcome very difficult technical challenges	1☐	2☐	3☐	4☐	5☐

CAREER PATTERN INVENTORY

HOW TRUE IS EACH ONE OF THE FOLLOWING TO YOU?	**Not at all True**			**Completely True**	
1. I prefer to progress steadily in the hierarchies of an organisation which provides tenure (life-time employment)	1☐	2☐	3☐	4☐	5☐
2. I am always on the look out for opportunity to start my own company	1☐	2☐	3☐	4☐	5☐
3. I am flexible and I always change my career movement and direction in response to changes in the industry and in my personal life	1☐	2☐	3☐	4☐	5☐
4. A career which involves mobility by taking advantage of career opportunities within the industry rather than committing oneself to one particular organisation is what I really want	1☐	2☐	3☐	4☐	5☐
5. I would prefer to stay with the same employer throughout my career life if possible	1☐	2☐	3☐	4☐	5☐
6. I have always wanted to start and build up my own organisation/company	1☐	2☐	3☐	4☐	5☐
7. I am very flexible and my career decisions and career movement have been characterised by twists and turn in response to changes in my personal circumstances and changes in the socio-economic environment in the country	1☐	2☐	3☐	4☐	5☐

8. I prefer to work on successive technical projects in different organisations, instead of a continuous job in one organisation	1☐	2☐	3☐	4☐	5☐
9. I will feel successful in my career only if I have succeeded in establishing or building a company that is entirely my own idea	1☐	2☐	3☐	4☐	5☐
10. I prefer to depend on my organisation for career progression and career management rather than manage this myself	1☐	2☐	3☐	4☐	5☐
11. I prefer a career pattern that provides the opportunity for an individual to move from one organisation to the other rather than commit myself to working for one organisation	1☐	2☐	3☐	4☐	5☐
12. I am not committed to a particular career path instead I change my career direction in response to changes in my external environment	1☐	2☐	3☐	4☐	5☐
13. My career movement is primarily shaped by external factors in the industry rather than personal interest	1☐	2☐	3☐	4☐	5☐
14. I prefer to pursue my career within the confines of one or two organisations instead of frequently jumping from one organisation to the other	1☐	2☐	3☐	4☐	5☐
15. Establishing my own company is more important to me than achieving a high-level position in someone else's organisation	1☐	2☐	3☐	4☐	5☐
16. I prefer self management of my career by moving from one organisation to another rather than committing my career to one organisation	1☐	2☐	3☐	4☐	5☐

Please tick ☐ in the appropriate box

1. What is your gender?

(a) Male ☐ (b) Female ☐

2. What is your marital status?

(a) Single ☐ (b) Married ☐

(c) Divorced ☐

3. What is your age?

(a) 18-25 years ☐ (b) 26- 35 years ☐

(c) 36-45 years ☐ d) 45 years and above ☐

4. What is your highest level of education?

(a) Primary ☐ (b) Secondary ☐

(c) Bachelor's degree ☐ (e) Master's degree ☐

(f) Doctoral degree ☐ (g) others specify _____

4. How many years have you worked in the ICT industry?

(a) 1 year or less ☐ (b) 2 to 5 years ☐

(c) 6-10 years ☐ (d) 11 years and above ☐

Many thanks

APPENDIX 8

SCALE RELIABILITY ANALYSIS

****** Method 1 (space saver) will be used for this analysis ******

MARKETABLE SKILLS

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1. ITEM3 Qa3 A job that provides the opportunity
2. ITEM6 Qb6 I always seek to develop marketable
3. ITEM11 Qb11 I would not take a job where was no
4. ITEM14 Qb14 I seek to develop marketable techni

		Mean	Std Dev	Cases
1.	ITEM3	3.6964	1.3790	336.0
2.	ITEM6	3.9464	1.2033	336.0
3.	ITEM11	2.2530	.7908	336.0
4.	ITEM14	3.7440	1.4163	336.0

Statistics for	Mean	Variance	Std Dev	N of Variables
SCALE	13.6399	15.5983	3.9495	4

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
ITEM3	9.9435	7.1580	.8861	.6452
ITEM6	9.6935	8.0759	.8882	.6581
ITEM11	11.3869	14.7334	.0394	.9548
ITEM14	9.8958	7.2100	.8391	.6731

Reliability Coefficients

N of Cases = 336.0 N of Items = 4

Alpha = .7321

****** Method 1 (space saver) will be used for this analysis ******

TECHNICAL CHALLENGE

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1.	ITEM5	Qa5 Working on challenging technical pro
2.	ITEM15	Qb15 An endless variety of technical cha
3.	ITEM20	Qb20 I feel very fulfilled in my career
4.	ITEM24	Qb24 I will feel successful in my career

	Mean	Std Dev	Cases
1. ITEM5	4.1697	1.1623	336.0
2. ITEM15	4.4727	.9030	336.0
3. ITEM20	4.3970	.9628	336.0
4. ITEM24	3.4545	1.1641	336.0

Statistics for	Mean	Variance	Std Dev	N of Variables
SCALE	16.4939	9.8373	3.1365	4

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
ITEM5	12.3242	4.6514	.7649	.5011
ITEM15	12.0212	5.5467	.8171	.5175
ITEM20	12.0970	5.4313	.7752	.5274
ITEM24	13.0394	8.4939	.8017	.9537

Reliability Coefficients

N of Cases = 336.0 N of Items = 4

Alpha = .7604

****** Method 1 (space saver) will be used for this analysis ******

INDEPENDENCE

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1. ITEM7 Qb7 I am most fulfilled in my work when I
2. ITEM17 Qb17 I would rather leave my organisation
3. ITEM19 Qb19 The chance to do a job my own way.
4. ITEM21 Qb21 I will feel successful in my career

	Mean	Std Dev	Cases
1. ITEM7	4.4851	.8293	336.0
2. ITEM17	4.1386	1.0644	336.0
3. ITEM19	4.5941	.8478	336.0
4. ITEM21	4.3069	.9215	336.0

Statistics for	Mean	Variance	Std Dev	N of Variables
SCALE	17.5248	5.3562	2.3143	4

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
ITEM7	13.0396	3.6342	.5271	.8852
ITEM17	13.3861	2.9597	.7450	.7568
ITEM19	12.9307	4.2369	.8447	.6548
ITEM21	13.2178	3.2703	.5711	.8352

Reliability Coefficients

N of Cases = 336.0 N of Items = 4

Alpha = .8298

****** Method 1 (space saver) will be used for this analysis ******

STABILITY

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1.	ITEM4	Qa4 An organisation that will provide me
2.	ITEM13	Qb13 I will feel very satisfied in my ca
3.	ITEM18	Qb18 I only seek for jobs in organisation
4.	ITEM22	Qb22 I dream of having a career that w

		Mean	Std Dev	Cases
1.	ITEM4	4.6458	.7370	336.0
2.	ITEM13	3.3854	1.3896	336.0
3.	ITEM18	4.1771	1.0820	336.0
4.	ITEM22	4.4583	.8785	336.0

Statistics for	Mean	Variance	Std Dev	N of Variables
SCALE	16.6667	7.1638	2.6765	4

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
ITEM4	12.0208	5.3306	.4905	.8398
ITEM13	13.2812	3.9659	.7176	.7313
ITEM18	12.4896	4.4110	.8423	.6708
ITEM22	12.2083	5.0366	.5466	.8064

Reliability Coefficients

N of Cases = 336.0 N of Items = 4

Alpha = .8113

**** Method 1 (space saver) will be used for this analysis ******

MANAGERIAL COMPETENCE

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1.	ITEM1	Qa1	The process of supervising, leading
2.	ITEM2	Qa2	To be in a position of leadership an
3.	ITEM9	Qb9	I will feel successful in my career
4.	ITEM12	Qb12	I would rather leave my organisation

	Mean	Std Dev	Cases
1. ITEM1	4.4708	.9081	336.0
2. ITEM2	3.7398	1.2582	336.0
3. ITEM9	4.4094	.9545	336.0
4. ITEM12	1.2310	.4221	336.0

Statistics for	Mean	Variance	Std Dev	N of Variables
SCALE	13.8509	8.3795	2.8947	4

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
ITEM1	9.3801	4.2774	.8725	.5628
ITEM2	10.1111	3.2779	.7723	.7242
ITEM9	9.4415	4.4526	.7486	.6288
ITEM12	12.6199	8.2480	.7193	.8964

Reliability Coefficients

N of Cases = 336.0 N of Items = 4

Alpha = .8569

****** Method 1 (space saver) will be used for this analysis ******

WORKLIFE BALANCE

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1.	ITEM8	Qb8 Balancing demands of personal and p
2.	ITEM10	Qb10 I would rather leave my organisation
3.	ITEM16	Qb16 I will feel successful in life only
4.	ITEM23	Qb23 I dream of a career that will per

	Mean	Std Dev	Cases
1. ITEM8	4.0434	1.0466	336.0
2. ITEM10	2.6899	1.4213	336.0
3. ITEM16	2.7713	1.4135	336.0
4. ITEM23	3.7403	1.3998	336.0

Statistics for	Mean	Variance	Std Dev	N of Variables
SCALE	9.1581	15.4671	3.9328	4

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
ITEM8	9.2016	9.6012	.6355	.7661
ITEM10	6.4682	7.7707	.6163	.7246
ITEM16	6.3868	8.2410	.7222	.6251
ITEM23	5.4178	7.3946	.5030	.8627

Reliability Coefficients

N of Cases = 336.0 N of Items = 4

Alpha = .8236

****** Method 1 (space saver) will be used for this analysis ******

Slow and steady

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1.	ITEM1	Qb1 I prefer to progress steadily....
2.	ITEM5	Qb5 I will prefer to stay with the same
3.	ITEM10	Qb10 I prefer to depend on my organisat
4.	ITEM14	Qb14 I prefer to pursue my career with

		Mean	Std Dev	Cases
1.	ITEM1	4.3767	.9788	336.0
2.	ITEM5	2.2300	.7826	336.0
3.	ITEM10	3.0187	1.0090	336.0
4.	ITEM14	4.1000	1.1978	336.0

Statistics for	Mean	Variance	Std Dev	N of Variables
SCALE	10.6880	10.9302	3.3061	4

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
ITEM1	6.3113	5.6580	.9266	.6874
ITEM5	8.4580	9.8375	.9378	.8299
ITEM10	10.7067	5.5257	.9247	.6842
ITEM14	6.5880	4.8626	.8770	.7015

Reliability Coefficients

N of Cases = 336.0 N of Items = 4

Alpha = .7476

***** Method 1 (space saver) will be used for this analysis ******

Canvasser

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1.	ITEM2	Qb2	I am always on the look out for opp
2.	ITEM6	Qb6	I have always wanted to start and b
3.	ITEM9	Qb9	I will feel successful in my career
4.	ITEM15	Qb15	Establishing my own company is more

		Mean	Std Dev	Cases
1.	ITEM2	3.5409	1.3052	336.0
2.	ITEM6	3.6842	1.3741	336.0
3.	ITEM9	2.2544	.7901	336.0
4.	ITEM15	2.8830	1.4685	336.0

Statistics for	Mean	Variance	Std Dev	N of Variables
SCALE	12.3626	16.2142	4.0267	4

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
ITEM2	8.8216	8.1587	.8519	.6416
ITEM6	8.6784	7.6910	.8705	.6254
ITEM9	9.1082	15.2053	.0624	.8329
ITEM15	9.4795	7.7459	.7722	.6836

Reliability Coefficients

N of Cases = 336.0 N of Items = 4

Alpha = .7193

****** Method 1 (space saver) will be used for this analysis ******

Explorer

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1.	ITEM4	Qa5 A career which involves mobility...
2.	ITEM8	Q13 I prefer to work on successive techn
3.	ITEM11	Qb15 I prefer a career pattern that pro
4.	ITEM16	Qb29 I prefer self management of my career

		Mean	Std Dev	Cases
1.	ITEM4	2.8850	1.4701	336.0
2.	ITEM8	3.7286	1.4257	336.0
3.	ITEM11	4.3245	.9171	336.0
4.	ITEM16	2.6195	1.1941	336.0

Statistics for	Mean	Variance	Std Dev	N of Variables
SCALE	13.5575	13.6853	3.6994	4

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
ITEM4	10.6726	6.1380	.7394	.4493
ITEM8	9.8289	7.0712	.6042	.5607
ITEM11	9.2330	8.5047	.8112	.5088
ITEM16	10.9381	12.1175	.0171	.8767

Reliability Coefficients

N of Cases = 336.0 N of Items = 4

Alpha = .7419

***** Method 1 (space saver) will be used for this analysis ******

Zigzag

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1.	ITEM3	Qb3 I am flexible and I always career mo
2.	ITEM7	Qb7 I am very flexible and my career d
3.	ITEM12	Qb12 I am not committed to a particular
4.	ITEM13	Qb13 My career movement is primarily sh

		Mean	Std Dev	Cases
1.	ITEM3	3.5636	1.3060	336.0
2.	ITEM7	3.1030	1.3715	336.0
3.	ITEM12	3.4545	1.1641	336.0
4.	ITEM13	2.8788	1.4723	336.0

Statistics for	Mean	Variance	Std Dev	N of Variables
SCALE	13.6000	16.4657	4.0578	4

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
ITEM3	10.0364	8.7950	.7700	.5784
ITEM7	8.8970	8.0866	.8330	.5302
ITEM12	10.1455	15.3587	.6272	.6380
ITEM13	10.7212	7.8005	.7901	.5497

Reliability Coefficients

N of Cases = 336.0 N of Items = 4

Alpha = .6726

APPENDIX 9

FACTOR ANALYSIS FOR CAREER ORIENTATIONS

Rotated Component Matrix[a]

	Component					
	1	2	3	4	5	6
VAR24	.836	.214	.128	.172	.134	.235
VAR15	.816	.234	.161	-.323	.22	.241
VAR20	.792	.108	.188	-.329	.115	.113
VAR5	.695	.120	.150	.247	.170	.183
VAR3	.127	.878	.174	.235	.305	.202
VAR6	.032	.748	.042	-.369	.102	.159
VAR14	.101	.734	-.134	.147	-.408	-.123
VAR11	.305	.671	.114	.138	.308	-.109
VAR4	.303	.170	.824	.150	-.446	.170
VAR13	.428	.205	.798	.121	.173	.305
VAR18	.159	.220	.708	-.194	.324	-.251
VAR22	.126	.302	.324	.148	.684	-.208
VAR8	.161	.410	.198	.721	-.411	.351
VAR10	.188	.142	.108	.787	-.262	.015
VAR16	.150	.125	.021	.662	.240	.159
VAR23	.174	-.222	.216	.546	.164	.223
VAR1	.042	.115	-.114	.380	.639	.211
VAR2	.235	.133	.324	.169	.587	-.362
VAR9	.213	.102	-.150	.136	.512	.244
VAR12	.294	.183	.121	.154	.507	.377
VAR7	.175	.202	-.163	.425	.119	.714
VAR17	.108	.159	.218	.212	.106	.703
VAR19	.374	-.199	.108	.216	.195	.691
VAR21	.115	.156	.374	.346	.127	.542

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Factor 1: Technical challenge

Factor 2: Marketable skills

Factor 3: Stability

Factor 4: Work life balance

Factor 5: Managerial competence

Factor 6: Independence

APPENDIX 10

FACTOR ANALYSIS FOR CAREER PATTERNS

Rotated Component Matrix[a]

	Component		
	1	2	3
Var4	.804	.380	.309
Var8	.762	.365	.311
Var7	.679	.191	.335
Var16	.609	-.178	.266
Var12	.583	.874	.374
Var11	.564	.821	.240
Var6	.409	.713	.231
Var9	.321	.622	.217
Var15	.335	.335	.137
Var1	.166	.166	.137
Var5	.207	.474	.740
Var10	-.148	.140	.596
Var13	.185	.331	.551
Var14	-.114	.207	.532

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Factor 1- Explorer career pattern

Factor 2- Canvasser career pattern

Factor 3- Slow and steady career pattern

APPENDIX 11

MEAN SCORE AND FREQUENCY DISTRIBUTION OF THE DIFFERENT ANCHORS

Mean scores of the career anchors

Statistics

		Independence	Managerial Competence	Marketable Skills	Technical	Stability	Work/life Balance
N	Valid	336	336	336	336	336	336
	Missing	0	0	0	0	0	0
Mean		3.85	3.96	4.07	3.89	4.18	3.09

Distribution of career anchors by percentages

Independence

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	74	22.0	22.0	22.0
	3	99	29.5	29.5	51.5
	4	85	25.3	25.3	76.8
	5	78	23.2	23.2	100.0
	Total	336	100.0	100.0	

Managerial Competence

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	42	12.5	12.5	12.5
	3	68	20.2	20.2	32.7
	4	141	42.0	42.0	74.7
	5	85	25.3	25.3	100.0
	Total	336	100.0	100.0	

Marketable Skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	34	10.1	10.1	10.1
	3	51	15.2	15.2	25.3
	4	156	46.4	46.4	71.7
	5	95	28.3	28.3	100.0
	Total	336	100.0	100.0	

Technical Challenge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	33	9.8	9.8	9.8
	3	71	21.1	21.1	31.0
	4	181	53.9	53.9	84.8
	5	51	15.2	15.2	100.0
	Total	336	100.0	100.0	

Stability

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	35	10.4	10.4	10.4
	3	42	12.5	12.5	22.9
	4	140	41.7	41.7	64.6
	5	119	35.4	35.4	100.0
	Total	336	100.0	100.0	

Work/life Balance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	43	12.8	12.8	12.8
	2	100	29.8	29.8	42.6
	3	45	13.4	13.4	56.0
	4	80	23.8	23.8	79.8
	5	68	20.2	20.2	100.0
	Total	336	100.0	100.0	

APPENDIX 12

STATISTICAL ANALYSES TABLES

Statistical analysis for proposition 5

Table 6.14 Stability * Slow and Steady Crosstabulation

			Slow and Steady					Total
			1	2	3	4	5	
Stability	1	Count	13	5	1	6	32	57
		Expected Count	11.5	13.1	10.7	12.2	9.5	57.0
	2	Count	36	11	0	11	2	60
		Expected Count	12.1	13.8	11.3	12.9	10.0	60.0
	3	Count	4	23	2	38	0	67
		Expected Count	13.6	15.4	12.6	14.4	11.2	67.0
	4	Count	13	26	52	14	14	119
		Expected Count	24.1	27.3	22.3	25.5	19.8	119.0
	5	Count	2	12	8	3	8	33
		Expected Count	6.7	7.6	6.2	7.1	5.5	33.0
Total		Count	68	77	63	72	56	336
		Expected Count	68.0	77.0	63.0	72.0	56.0	336.0

Table 6.14.2 Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	37.914[a]	12	.000
Likelihood Ratio	29.799	12	.003
Linear-by-Linear Association	3.360	1	.067
N of Valid Cases	336		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10 .17.

Table 6.15 Work/life balance *Slow and Steady Cross tabulation

			Slow and Steady					Total
			1	2	3	4	5	
Work/life Balance	1	Count	4	12	10	24	13	63
		Expected Count	12.8	14.4	11.8	13.5	10.5	63.0
	2	Count	18	11	20	17	7	73
		Expected Count	14.8	16.7	13.7	15.6	12.2	73.0
	3	Count	13	13	9	10	17	62
		Expected Count	12.5	14.2	11.6	13.3	10.3	62.0
	4	Count	19	24	14	6	10	73
		Expected Count	14.8	16.7	13.7	15.6	12.2	73.0
	5	Count	14	17	10	15	9	65
		Expected Count	13.2	14.9	12.2	13.9	10.8	65.0
Total		Count	68	77	63	72	56	336
		Expected Count	68.0	77.0	63.0	72.0	56.0	336.0

Table 6.15.2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.446[a]	16	.640
Likelihood Ratio	13.880	16	.608
Linear-by-Linear Association	.529	1	.467
N of Valid Cases	336		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.26.

TABLE 6.16 Managerial Competence* Slow and Steady Cross tabulation

			Slow and Steady					Total
			1	2	3	4	5	
Managerial Competence	1	Count	0	8	24	23	5	60
		Expected Count	12.1	13.8	11.3	12.9	10.0	60.0
	2	Count	17	27	4	1	17	66
		Expected Count	13.4	15.1	12.4	14.1	11.0	66.0
	3	Count	25	22	11	8	6	72
		Expected Count	14.6	16.5	13.5	15.4	12.0	72.0
	4	Count	11	14	11	18	12	66
		Expected Count	13.4	15.1	12.4	14.1	11.0	66.0
	5	Count	15	6	13	22	16	72
		Expected Count	14.6	16.5	13.5	15.4	12.0	72.0
Total		Count	68	77	63	72	56	336
		Expected Count	68.0	77.0	63.0	72.0	56.0	336.0

Table 6.16.2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.239[a]	12	.109
Likelihood Ratio	20.108	12	.065
Linear-by-Linear Association	1.195	1	.274
N of Valid Cases	336		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.04.

Statistical analysis of proposition 6

Table 6.17

Independence * Explorer Crosstabulation

			Explorer				Total
			2	3	4	5	
Independence	2	Count	12	28	39	7	86
		Expected Count	7.7	25.3	44.3	8.7	86.0
	3	Count	4	27	51	4	86
		Expected Count	7.7	25.3	44.3	8.7	86.0
	4	Count	8	27	41	13	89
		Expected Count	7.9	26.2	45.8	9.0	89.0
	5	Count	6	17	42	10	75
		Expected Count	6.7	22.1	38.6	7.6	75.0
Total		Count	30	99	173	34	336
		Expected Count	30.0	99.0	173.0	34.0	336.0

Table 6.17.2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	84.902[a]	12	.000
Likelihood Ratio	80.140	12	.000
Linear-by-Linear Association	53.964	1	.000
N of Valid Cases	336		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 9.07.

Table 6.18

Marketable Skills * Explorer Crosstabulation

			Explorer				Total
			2	3	4	5	
Marketable Skills	2	Count	5	12	41	12	70
		Expected Count	6.3	20.6	36.0	7.1	70.0
	3	Count	8	39	25	2	74
		Expected Count	6.6	21.8	38.1	7.5	74.0
	4	Count	12	30	81	7	130
		Expected Count	11.6	38.3	66.9	13.2	130.0
	5	Count	5	18	26	13	62
		Expected Count	5.5	18.3	31.9	6.3	62.0
Total		Count	30	99	173	34	336
		Expected Count	30.0	99.0	173.0	34.0	336.0

Table 6.18.2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	52.464[a]	12	.000
Likelihood Ratio	49.874	12	.000
Linear-by-Linear Association	7.044	1	.008
N of Valid Cases	336		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 9 .03.

Table 6.19

Technical * Explorer Crosstabulation

			Explorer				Total
			2	3	4	5	
Technical	2	Count	2	31	35	6	74
		Expected Count	6.6	21.8	38.1	7.5	74.0
	3	Count	8	27	37	5	77
		Expected Count	6.9	22.7	39.6	7.8	77.0
	4	Count	11	25	62	12	110
		Expected Count	9.8	32.4	56.6	11.1	110.0
	5	Count	9	16	39	11	75
		Expected Count	6.7	22.1	38.6	7.6	75.0
Total		Count	30	99	173	34	336
		Expected Count	30.0	99.0	173.0	34.0	336.0

Table 6.19.2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.489[a]	12	.488
Likelihood Ratio	12.942	12	.373
Linear-by-Linear Association	2.446	1	.118
N of Valid Cases	336		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.54.

Statistical analysis of proposition 7

Table 6.20

Independence * Canvessar Crosstabulation

			Canvessar				Total
			2	3	4	5	
Independence	2	Count	8	27	37	14	86
		Expected Count	5.9	16.9	38.4	24.8	86.0
	3	Count	9	24	42	11	86
		Expected Count	5.9	16.9	38.4	24.8	86.0
	4	Count	5	9	39	36	89
		Expected Count	6.1	17.5	39.7	25.7	89.0
	5	Count	1	6	32	36	75
		Expected Count	5.1	14.7	33.5	21.7	75.0
Total		Count	23	66	150	97	336
		Expected Count	23.0	66.0	150.0	97.0	336.0

Table 6.20.2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	84.601[a]	12	.000
Likelihood Ratio	81.494	12	.000
Linear-by-Linear Association	62.722	1	.000
N of Valid Cases	336		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.04.

Table 6.21

Managerial Competence * Canvessar Crosstabulation

			Canvessar				Total
			2	3	4	5	
Managerial Competence	1	Count	4	10	25	21	60
		Expected Count	4.1	11.8	26.8	17.3	60.0
	2	Count	3	13	31	19	66
		Expected Count	4.5	13.0	29.5	19.1	66.0
	3	Count	11	18	34	9	72
		Expected Count	4.9	14.1	32.1	20.8	72.0
	4	Count	3	12	31	20	66
		Expected Count	4.5	13.0	29.5	19.1	66.0
	5	Count	2	13	29	28	72
		Expected Count	4.9	14.1	32.1	20.8	72.0
Total		Count	23	66	150	97	336
		Expected Count	23.0	66.0	150.0	97.0	336.0

Table 6.21.2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	53.529[a]	12	.000
Likelihood Ratio	45.940	12	.000
Linear-by-Linear Association	18.962	1	.000
N of Valid Cases	336		

a. 0 cells (50.0%) have expected count less than 5. The minimum expected count is 7 .12.

Table 6.22

Work/life Balance * Canvessar Crosstabulation

			Canvessar				Total
			2	3	4	5	
Work/life Balance	1	Count	6	4	26	27	63
		Expected Count	5.3	12.4	28.1	18.2	63.0
	2	Count	2	19	32	20	73
		Expected Count	5.0	14.3	32.6	21.1	73.0
	3	Count	3	10	30	19	62
		Expected Count	5.2	12.2	27.7	17.9	62.0
	4	Count	6	17	30	20	73
		Expected Count	5.0	14.3	32.6	21.1	73.0
	5	Count	6	16	32	11	65
		Expected Count	5.4	12.8	29.0	18.8	65.0
Total		Count	23	66	150	97	336
		Expected Count	23.0	66.0	150.0	97.0	336.0

Table 6.22.2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.041[a]	16	.218
Likelihood Ratio	18.200	16	.312
Linear-by-Linear Association	3.769	1	.052
N of Valid Cases	336		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.13.

Table 6.23

Technical * Canvessar Crosstabulation

			Canvessar				Total
			2	3	4	5	
Technical	2	Count	6	14	37	17	74
		Expected Count	5.1	14.5	33.0	21.4	74.0
	3	Count	9	21	31	16	77
		Expected Count	5.3	15.1	34.4	22.2	77.0
	4	Count	6	11	54	39	110
		Expected Count	7.5	21.6	49.1	31.8	110.0
	5	Count	2	20	28	25	75
		Expected Count	5.1	14.7	33.5	21.7	75.0
Total		Count	23	66	150	97	336
		Expected Count	23.0	66.0	150.0	97.0	336.0

Table 6.23.2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	27.070[a]	12	.008
Likelihood Ratio	25.965	12	.011
Linear-by-Linear Association	9.868	1	.002
N of Valid Cases	336		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.07.

Statistical analysis of proposition 8

Table 6.24

Stability * Zigzag Crosstabulation

			Zigzag				Total
			2	3	4	5	
Stability	1	Count	0	6	32	23	57
		Expected Count	5.1	15.4	32.6	7.9	57.0
	2	Count	1	8	41	10	60
		Expected Count	5.0	15.1	32.1	7.7	60.0
	3	Count	15	15	28	6	67
		Expected Count	5.4	16.1	34.2	8.3	67.0
	4	Count	5	36	71	3	119
		Expected Count	7.1	21.4	45.4	11.0	119.0
	5	Count	7	19	6	1	33
		Expected Count	5.3	15.9	73.7	8.1	33.0
Total		Count	28	85	180	43	336
		Expected Count	28.0	85.0	180.0	43.0	333.0

Table 16.24.2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	42.237[a]	12	.000
Likelihood Ratio	36.669	12	.000
Linear-by-Linear Association	4.752	1	.029
N of Valid Cases	336		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.08.

Table 6.25

Marketable Skills * Zigzag Crosstabulation

			Zigzag				Total
			2	3	4	5	
Marketable Skills	2	Count	10	17	28	15	70
		Expected Count	5.8	17.7	37.5	9.0	70.0
	3	Count	6	26	33	9	74
		Expected Count	6.2	18.7	39.6	9.5	74.0
	4	Count	8	25	89	8	130
		Expected Count	10.8	32.9	69.6	16.6	130.0
	5	Count	4	17	30	11	62
		Expected Count	5.2	15.7	33.2	7.9	62.0
Total		Count	28	85	180	43	336
		Expected Count	28.0	85.0	180.0	43.0	336.0

Table 6.25.2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	48.489[a]	12	.000
Likelihood Ratio	49.541	12	.000
Linear-by-Linear Association	18.134	1	.000
N of Valid Cases	336		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.10.

Table 6.26

Technical * Zigzag Crosstabulation

			Zigzag				Total
			2	3	4	5	
Technical	2	Count	11	19	40	4	74
		Expected Count	6.2	18.7	39.6	9.5	74.0
	3	Count	4	32	34	7	77
		Expected Count	6.4	19.5	41.3	9.9	77.0
	4	Count	6	21	67	16	110
		Expected Count	9.2	27.8	58.9	14.1	110.0
	5	Count	7	13	39	16	75
		Expected Count	6.3	19.0	40.2	9.6	75.0
Total		Count	28	85	180	43	336
		Expected Count	28.0	85.0	180.0	43.0	336.0

Table 6.26.2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	59.973[a]	12	.000
Likelihood Ratio	45.843	12	.000
Linear-by-Linear Association	.254	1	.215
N of Valid Cases	336		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.17.

Table 6.27

Independence * Zigzag Crosstabulation

			Zigzag				Total
			2	3	4	5	
Independence	2	Count	8	27	47	4	86
		Expected Count	7.2	21.8	46.1	11.0	86.0
	3	Count	10	27	47	2	86
		Expected Count	7.2	21.8	46.1	11.0	86.0
	4	Count	9	22	43	15	89
		Expected Count	7.4	22.5	47.7	11.4	89.0
	5	Count	1	9	43	22	75
		Expected Count	6.3	19.0	40.2	9.6	75.0
Total		Count	28	85	180	43	336
		Expected Count	28.0	85.0	180.0	43.0	336.0

Table 6.27.2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	68.064[a]	12	.000
Likelihood Ratio	67.037	12	.000
Linear-by-Linear Association	48.851	1	.000
N of Valid Cases	336		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.25.

Table 6.28

Work/life Balance * Zigzag Crosstabulation

			Zigzag				Total
			2	3	4	5	
Work/life Balance	1	Count	7	14	31	11	63
		Expected Count	5.3	15.9	33.8	8.1	63.0
	2	Count	3	20	42	8	73
		Expected Count	6.1	18.5	39.1	9.3	73.0
	3	Count	4	19	29	10	62
		Expected Count	5.2	15.7	33.2	7.9	62.0
	4	Count	8	14	43	8	73
		Expected Count	6.1	18.5	39.1	9.3	73.0
	5	Count	6	18	35	6	65
		Expected Count	5.4	16.4	34.8	8.3	65.0
Total		Count	28	85	180	43	336
		Expected Count	28.0	85.0	180.0	43.0	336.0

Table 6.28.2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	57.605[a]	16	.000
Likelihood Ratio	18.720	16	.000
Linear-by-Linear Association	.346	1	.556
N of Valid Cases	336		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.17.

Table 6.29

Managerial Competence * Zigzag Crosstabulation

			Zigzag				Total
			2	3	4	5	
Managerial Competence	1	Count	6	22	31	1	60
		Expected Count	5.0	15.2	32.1	7.7	60.0
	2	Count	1	9	41	15	66
		Expected Count	5.5	16.7	35.4	8.4	66.0
	3	Count	11	20	38	3	72
		Expected Count	6.0	18.2	38.6	9.2	72.0
	4	Count	6	16	36	8	66
		Expected Count	5.5	16.7	35.4	8.4	66.0
	5	Count	4	18	34	16	72
		Expected Count	6.0	18.2	38.6	9.2	72.0
Total		Count	28	85	180	43	336
		Expected Count	28.0	85.0	180.0	43.0	336.0

Table 6.29.2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	56.436[a]	12	.000
Likelihood Ratio	37.207	12	.000
Linear-by-Linear Association	12.257	1	.000
N of Valid Cases	336		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.13.