

**Examining graduate applicant intentions to apply to an  
organisation: The Theory of Planned Behaviour in the South  
African context**

by

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## **DECLARATION**

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## ABSTRACT

The fiercely competitive nature of South Africa's skilled labour market has necessitated a degree of awareness, from employers and researchers alike, of factors that potentially attract skilled graduates. Drawing on the Theory of Planned Behaviour (TPB) (Ajzen, 1991) the present study explored the formation of intentions towards job pursuit activities (i.e., submitting an application form) of the South African graduate. The proposed model of applicant intention that was tested in the present study is based on salient beliefs — an applicant's attitude towards behaviour, subjective norm and perceived behavioural control — that determine the development and strength of intentions to apply for a job.

The study was conducted in two phases using a mixed method approach. The first phase employed a qualitative design on a sample ( $N = 32$ ) of students in order to elicit salient beliefs associated with applying to a chosen organisation. Next, we conducted interviews, administered open-ended questionnaires and conducted content analysis to identify applicants' salient behavioural beliefs about applying. The second phase of the study employed a quantitative design to test the hypotheses that behavioural beliefs (attitudinal beliefs, normative beliefs and control beliefs) would influence intention to apply. We administered belief-based measures to a convenience sample ( $N = 854$ ) of students from a tertiary institution in the Western Cape. Confirmatory Factor Analysis (CFA) of the measurement and structural models found that the hypothesised models fit the data reasonably well and significant relationships between perceived behavioural control and intention to apply were confirmed. Latent variable correlation analysis showed that all three behavioural beliefs (attitude towards behaviour, subjective norm and perceived behavioural control) were significantly related to intention to apply, but only normative and control beliefs showed significant path coefficients when all the beliefs were considered jointly in the structural model. Following the confirmatory factor analysis, we further explored socio-demographic group differences in the levels of, and relationship between, behavioural beliefs and intention to apply to an organisation. The results showed that perceived behavioural control had a significant relationship with intention to apply.

The study makes three important contributions to the literature. First, TPB can be a useful framework to explain graduate applicant's intention to apply. Second, the

significant role of perceived behavioural control and subjective norm in the formation of graduate applicant intentions was highlighted. Third, the diagnostic utility of the TPB framework for applicant intentions was established. Finally, the results suggest there might be group differences in behavioural beliefs and intention to apply – a finding that calls for more research on graduate applicant decision-making in the South African context.

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## CHAPTER 1: INTRODUCTION

Organisations vary in size, product market, sector of operation, geographic location, and in the extent of their connections with other companies, both locally and globally (Finnemore, 2006). Moreover, the organisation exists to produce products and services that ultimately fulfil a host of needs expressed by its stakeholders. Organisations are also driven by the economic principle and thus serve society through the efficient combination and transformation of limited factors of production into outputs that will ultimately generate a profit (De Goede & Theron, 2010). In order to achieve this objective, a competent workforce is required, and is viewed as:

a pivotal production factor due to the fact that the organisation is managed, operated and run by people... labour is the life giving production factor through which other factors of production are mobilized and thus represents the factor with which the other factors of production are mobilized (De Goede & Theron, 2010, p. 5).

Organisations are thus man-made phenomena built on the efforts of the individuals in their employment, whose behaviour is structured and directed towards a specific purpose. It is in the organisation's interest to provide opportunities for employment to talented employees in order to remain productive and competitive. The relationship between the organisation and the society which it serves therefore extends beyond the mere trade of goods and services — the citizens of the society also tender their services in exchange for remuneration in order to maintain a certain standard of living. This relationship is thus mutually beneficial and interdependent, as one is not possible without the other.

Human resource practitioners are viewed as the custodians of human capital within organisations. In the current information age, the knowledge, competence and experience of employees have become fundamental assets to the organisation (Van der Westhuizen, Van Vuuren & Visser, 2003). Organisational success relies, then, not only on individuals who are capable of performing the necessary functions, but also on the productivity of

these individuals. Harold and Ployhart (2008) propose that the success of an organisation is largely dependent on the quality of the workforce within the organisation; it relies on the effective functioning of human resource practices, most importantly recruitment and selection. The role of the human resource function is thus driven by the attraction and maintenance of a competent and motivated workforce, as well as the effective and efficient utilisation of such a workforce, thereby striving to serve the objectives of the organisation. The central role of the HR practitioners is thus to assist organisations to fulfil their highest-level business goals.

An important dimension of the talent management process is recruitment and selection. Recruitment and selection is the process whereby employers attract applicants for a job to determine their suitability. This process not only sources the necessary talent, but is often the most important means for meeting numerical targets and increasing the representation of designated groups in the workplace (Employment Equity Act 55, 1998). Moreover, a pool of applicants who are both *attractive* to the organisation and *attracted* to the organisation is sourced, sorted and selected (Terjesen, Vinnicombe & Freeman, 2007). Van Hoye and Saks (2011) provide three reasons for why recruitment activities are an important human resource function in the present labour situation. First, there is the ever present competition for vacancies that are hard to fill and require specialised skills. Second, the most talented job seekers often receive the most job offers and are therefore able to critically appraise prospective employers before making a decision. Third, demographic trends with regard to a limited supply of younger workers and the retirement of baby boomers also present a challenge to the filling of vacancies.

In order to effectively contribute to the organisations in which they operate, HR practitioners need to be aware of the context in which the organisation finds itself, i.e., the society it serves. Nation Master (2010) ranks South Africa 80<sup>th</sup> out of 151 countries with regard to university enrolment, with only 15,2% of the population enrolled at a tertiary institution. The importance of these statistics for human resource managers may not seem immediately clear, but having this knowledge provides valuable information for

effective planning within the organisations where HR managers operate, especially regarding jobs requiring a highly skilled workforce.

Skills are the currency in which employers and employees trade, but as a result of past discrimination and an education system in crisis, a large majority of South Africans do not possess the necessary skills or qualifications to make a meaningful contribution to the economic growth of the country. The destructive legacy of apartheid has necessitated the normalisation of the workforce through transformation efforts stipulated in the Employment Equity Act (1998). In terms of the conditions of the Employment Equity Act (1998), employers have a duty to eliminate unfair discrimination through a framework, stipulated by the conditions of the Act, governing the attraction, development, advancement and retention of an employer's human capital. The Act specifies certain *designated groups* — comprising 'Black' people, including African, Coloured, Indian, Chinese, Women and People with Disabilities — that are to benefit from provisions aimed at redressing inequalities inherited from the past. The Act extends employers the right to exercise discretion and preference within an applicant pool meeting the minimum requirements of a particular position. The Act is thus based on two key components, namely to make unfair discrimination illegal and to make Affirmative Action a legal requirement in conjunction with legislated measures to monitor its progress (Van Aswegen, 2008). Even though these steps are a necessary part of the envisioned reform, Human (2000) contends that; "true workplace reform is the result of deliberate management action focused at deep organisational transformation" (as cited in Van Aswegen, 2008).

Due to the emphatic nature of the government's transformation objectives and the objectives of the Employment Equity Act (1998), non-compliance with the act is not taken lightly. The Act, therefore, requires all employers who employ more than 50 employees or who have a turnover in excess of the amounts specified in the Act are legally obligated to comply with Chapter III of the Employment Equity Act (1998), whilst all employers, regardless of their size and turnover, are obligated to comply with Chapter II of the Act. As such, these employers are required by law to submit statutory

employment equity reports; compile and implement an employment equity plan; conduct employment equity and diversity awareness training, compile workforce profiles which are representative of designated employees (Africans, Indians, Coloureds, White Women and People with Disabilities) amongst the economically active population. With only 13% of top management consisting of black employees, compared to 87% being white and predominantly male, the Broad-Based Black Economic Empowerment (BBBEE) Act (RSA, 2003) was then established in order to facilitate the participation of non-whites at all levels of the economy.

The seriousness with which non-compliance, if detected, is met, is demonstrated with the issuance of a compliance order by the Department of Labour, who may approach the Labour Court to enforce such orders. Sanctions for non-compliance are issued by the Labour court and have included financial penalties ranging from R100 000 to R500 000, and up to R900 000 for repeated non-compliance. Moreover, the Department of Labour has also taken to “naming and shaming” organisations that have not complied with the provisions of the Act (Employment Equity Act 55, 1998). Apart from the fact that there are organisations that still do not comply with the Act, the reality remains that there are employers who hold the notion that employing black workers exclusively is a form of implementation of the Act. The presiding judge in an employment equity enforcement case involving the *Department of Labour v Win-Cool Enterprise (Pty) Ltd* commented that the notion of mechanical compliance is:

... not genuine compliance with the letter and spirit of the EEA. Compliance is not an end in itself. The employer must systematically develop the workforce out of a life of disadvantage. Disadvantage of all kinds is targeted by the EEA. Contrary to the submission for the respondent by employing exclusively black people and mainly women in low skilled jobs at low rates of pay cannot, without more, redress race, gender, sex or economic discrimination. Non-racialism is a façade if economic and other forms of exploitation persist. Equity is about creating jobs of quality that inspire the spiritual and material development of the workforce and thereby, economic growth. (Pillay, 2007, p.5)

The case in question highlighted the level of responsibility that falls on the employer in not only ensuring compliance with the Act but providing *opportunities for the inclusion* of the designated group and *advancement* of the workforce, thereby fulfilling the objectives of the Act. On the other hand, it is important to remain cognizant of the fact that these practices do not necessarily constitute the tools required to facilitate the movement of previously disadvantaged groups into meaningful positions of employment.

The goal of the Employment Equity Act (1998) is evidently the transformation of the workforce. Transformation is the process whereby an institution actively promotes and engages in steps that lead to a working environment where there is no unfair discrimination and all employees can enjoy equal opportunities. A transformed workplace is one in which all members understand and respect their colleagues, which leads to a more harmonious and productive working environment (Jongens, 2006). In order to achieve employment equity and sustainable affirmative action, employees, managers and the country at large need to understand the diversity that there is in this country and learn how to work with it. Employment Equity, Affirmative Action and Black Economic Empowerment are intrinsically linked to one another and, in order for the entire process to succeed; each aspect should be recognised as equally important (Jongens, 2006).

The annual Employment Equity report issued by the Commission of Employment Equity conveyed the findings of research conducted by the Sociology of Work Programme at Wits University that examined the effectiveness of the government's efforts thus far. The Minister of Labour commented that:

The hierarchy of the national labour market is still very much racialised; occupations at the lower-end and lowest end are almost exclusively filled by Black people and African women respectively, whilst the very top-end occupation has the smallest proportion of Black people and especially African people. Coloured people are clustered from middle of the range to lower end occupations whilst Indian people and White people are predominantly located in middle to high end occupations". Black people remain at the lowest end of the labour

market hierarchy. Fourteen years into our democracy, why is this still the case? The common answer to this question is that there are not enough well qualified Black people to employ.

(Department of Labour, 2010, p. 41)

The findings of this research convey the reality of the labour context at present, in which South African organisations are faced with a sometimes alarming shortage of skills and a far smaller population to draw on across designated and non-designated groups (Grubb, 2004). This being said, it must be mentioned that the shortage is considerably more acute in the designated group, Africans in particular. In response to the findings of the Sociology of Work Programme at Wits University, the Minister stated that there has been “a concerted effort across all study fields to increase the rate of growth of Black graduates, and Africans in particular” (p. 42) in order to aid the transformation imperative expressed by the Employment Equity Act (1998).

The consequent reality of the skills shortage and the limited applicant pool in the South African labour market requires more than just a one-sided analysis of the numbers. It is therefore important to also include the perceptions of those individuals who are directly affected through an examination of the employment experiences of graduates entering the job market. In a study conducted by the Human Research Council on employment and economic policy, Moleke (2003) presented the findings of a graduate tracking system based on survey data that gathered over a number of years. This study served to develop an understanding of South African graduates’ entry into, and progression through, the labour market based on the reported employment experiences of the target group. An area of concern highlighted in the findings was the role that gender, race and institution played in graduate employment prospects. The findings highlighted the disparity between the employment prospects of graduates with similar qualifications; African and coloured graduates had fewer prospects when compared to their white and Asian counterparts. Correspondingly, the absorption rate of graduates from historically black universities into the labour market was markedly slower than those individuals who graduated from historically white universities. The author concluded that;

While this does not necessarily suggest (or rule out) discrimination in the labour market, it reflects the concentration of Africans in those fields of study with less employment prospects. This is disquieting as it suggests that although their participation in higher education has increased, this does not necessarily translate into economic improvement.

(Moleke, 2003, p. 15)

Another worrying trend is the migration of a large proportion of the white population migrating out of South Africa. Due to the injustices committed in the past, the white demographic remains the portion of the population with the most skilled individuals. It is therefore vital that the brain drain phenomenon is recognised, as it may constitute one of the most serious labour market constraints that the South African economy currently faces (Bhorat, 2000). The brain drain is attributed to the permanent exodus of a larger portion of the population in which the country's skills are currently concentrated (Bhorat, 2000). Under the circumstances, the alienation of this demographic does little for the improvement of the current situation, as the country's key skills reservoir is being rapidly diminished. The significant declines in labour force participation and employment reported amongst Whites in the 16 to 24 and 25 to 34 age groups paints a grim picture of the loss of potentially valuable and value-adding skills. Bhorat (2000) speculates that a large number of young White graduates who are at the beginning of their working life are leaving the country. If this is the trend, then the labour market may be losing skilled individuals who are at the beginning of their earnings and productivity life cycle. The current situation thus requires remedial action on the part of government and business in order to retain these skilled individuals while the equalisation of the rest of the workforce is in progress. This endeavour is by no means an easy feat and requires a strategic approach engaging all role players concerned, more specifically the organisations that absorb new entrants into the labour market.

The interaction between organisations and labour market entrants — referring to graduates, specifically — is based on the communication of implicit expectations and assumptions. Moleke (2003) proposes that qualifications within a certain field (e.g.,

engineering) presuppose the presence of, and the ability to, utilise certain job-specific skills. The information that such a qualification conveys is clearly understood by the labour market and decisions to recruit and hire these graduates are based on an assumed “potential level of productivity” (p. 11). On the other hand, individuals who hold qualifications in fields of a more general nature (e.g., economic and management sciences) are judged as having certain character traits that are necessary for success on the job (e.g., business acumen) and thus set them apart from graduates in other fields (Moleke, 2003). The organisation, in turn, has specific recruitment objectives that would include the number of job openings that need to be filled, as well as the types of individuals that would be required to fill them. This would, thus, require the attraction of the right applicants who possess the relevant skills, work experience and/or level of education (Breaugh, 2008).

For the employment-seeking South African graduate, the process of finding a ‘suitable’ job is not always easy. This is due to the disparity created between the number of degree-level job openings available and the higher number of individuals seeking to fill them (Moleke, 2003). Compounding the problem of graduate absorption into the labour market (especially from the designated group) is the fact that, even though it is generally accepted that graduates have an advantage in the labour market, most members of the designated group are concentrated in fields of study with fewer employment ‘prospects’.

Based on the aforementioned propositions, it would seem that both job and skills shortages are contributing to an exceedingly competitive market for attracting and retaining talent (from designated and non-designated groups). Organisations seeking to recruit skilled graduates often engage in campus recruitment initiatives such as information sessions and campus career fairs. Exposure to these recruitment practices thus provides potential applicants with various job pursuit options based on salient beliefs about prospective employers of choice. In order to maximise the effect of these efforts, recruiters would be better served with relevant information regarding the job pursuit and choice processes of the population of interest (Jaidi, Van Hooft & Arends, 2011). It is important to note that much of the research regarding the applicant decision-making

process has come out of the United States of America and Europe — South African organisations recruiting from a South African pool of applicants need to understand what drives this unique group of potential applicants to apply to their organisation.

The literature on this subject strongly advocates a high level of awareness that organisations should foster with regard to what potential applicants want, and what they are looking for (Terjesen et al., 2007). Certain areas of the South African labour market currently face a demand for skilled labour that exceeds the supply. This creates fierce competition for a limited skills pool. Lievens and Highhouse (2003) maintain that, as a result of shortages in various labour markets, it has become very important for organisations to make themselves stand out from the competition. This underscores the need for employers to seek new ways to attract graduates or potential applicants to their organisations. Terjesen et al. (2007) suggest that the management of these knowledge resources (i.e., potential skilled applicants) lies in organisations, firstly, identifying the most important sources and methods for recruiting talent and, secondly, disseminating relevant company information that provides a desirable view of the organisation. To illustrate the latter point, Konrad, Ritchie, Lieb and Corrigan (2000), in their study regarding the attraction of generation Y graduates in the UK, identified a positive relationship between the desirability of perceived organisational attributes and the likelihood of applying to that organisation. Moreover, they emphasise the fact that the success of any talent management efforts rests on a clear understanding of the needs, preferences and general characteristics of this growing labour sector.

Employer attractiveness is understood as a potential employee's perception of how working at a particular organisation will benefit that individual and forms part of the associations made with the brand (Berthon, Ewing & Hah, 2005). It can therefore be proposed that identifying and attracting potential incumbents require an understanding of which features carry more weight — with regard to the attractiveness of an organisation — at the *beginning* of the recruitment process, when many make the initial decision to submit an application (Harold & Ployhart, 2008). An understanding of how potential employees view or obtain information about the organisation plays an integral role in

attracting and retaining these individuals through effective recruitment and retention strategies (Brewster, Carey, Grobler, Holland, & Warnich, 2009). This understanding implies more than just a knowledge of which organisational attributes are important to the individual; a holistic view of the cognitive processes underlying an individual's intention to apply to an organisation is required.

In recent years, considerable focus has been placed on the development of integrated models of behaviour, as well as additional determinants of behaviour, such as social norms or intentions (Armitage & Connor, 2001). One of the most widely researched topics on intention and its relationship with behaviour is the Theories of Reasoned Action (developed by Ajzen and Fishbein, 1980) and Planned Behaviour (developed by Ajzen). The Theory of Planned Behaviour (TPB) is essentially an extension of the Theory of Reasoned Action (TRA) that includes measures of *control belief* and *perceived behavioural control*. TRA is built on the postulation that human behaviour is guided by three types of considerations:

...beliefs about the probable outcomes of the behaviour and the appraisal of these outcomes (behavioural beliefs), beliefs about the normative expectations of others and motivation to comply with these expectations (normative beliefs), and beliefs about the presence of factors that may facilitate or impede performance of the behaviour and the perceived power of these factors (control beliefs). (Ajzen, 2001, p. 1)

Behavioural beliefs generate a favourable or unfavourable *attitude toward the behaviour*; normative beliefs result in perceived social pressure or *subjective norm*; and control beliefs give rise to *perceived behavioural control*. The author postulates that the combination of attitude toward the behaviour, subjective norm, and perception of behavioural control will result in the development of a behavioural intention (Ajzen, 2001). The TRA and TPB have been successfully used as means of predicting behaviour and intentions for actions in health-related behaviours such as physical exercise, and other behaviours such as smoking and weight loss, etc. (Smith & Biddle, 2010).

TPB is based on the assumption that intentions are influenced by the presence of salient beliefs and/or information about the likelihood that performing a particular behaviour will lead to a specific outcome (Levine & Pauls, 1996). For this reason, the TPB can be used as a framework to investigate and understand prospective South African applicants (graduates) intention to apply for a job at a specific organisation. The current study endeavoured to establish a basis from which further investigation of the most influential latent casual variables at work in this process.

In light of the above, the aim of this study is to develop and test an explanatory structural model that seeks to explain variance in job seekers' intention to apply for employment at a given organisation, as well as examining the level of discrepancy that may, or may not, be present between the designated and non-designated applicant group. In a review of the South African literature, very few, if any, studies have used the TPB to evaluate the job pursuit behaviour of graduate applicants. Moreover, the majority of international studies have used Western samples, and job seeking has been studied almost entirely from a Western standpoint. The foremost area of practical interest lies in the identification of the motivational factors that influence black graduates to apply to a specific organisation while, at the same time, not excluding white graduates, who also have a valuable contribution to make. The value of this study lies in the discovery of factors that could be manipulated by the organisation in order to attract as many applicants as possible from the graduate population thus ensuring the availability of a larger skills pool from which to recruit and hire.

### **1.1 Research objectives**

The objectives of the present study are:

- To develop and test the explanatory structural model and establish the extent to which it explains variance in job pursuit behaviours, i.e., Intention to Apply;
- To explore possible differences in the Theory of Planned Behaviour variables and Intention to apply between socio- demographic groups;

- To identify the relative importance of causal factors in applicants' intention to apply;
- To test the model's fit; and
- To propose a research agenda for further cross-cultural research on applicant intentions to apply.

## **1.2 Overview of the study**

Chapter 2 provides a literature study on the recruitment, job search, applicant intentions and decision making. The chapter concludes by proposing a framework based on the Theory of Planned Behaviour for the examination of graduate applicants intentions to apply to an organisation. Chapter 3 comprises an overview of the methodology and the preliminary analyses that were conducted in order to test the fit of the structural model which proposes how the different variables influence each other. The results are reported and discussed in Chapter 4 and finally, conclusions and recommendations are provided in Chapter 5.

## CHAPTER 2: LITERATURE REVIEW

### 2.1 Introduction

The literature review seeks to develop a platform from which the complex decision-making process that a potential applicant engages in can be understood. The variables involved in his or her decision to apply to an organisation are discussed and explained. The discussion culminates in the development of a theoretical model that serves to depict and propose an explanation of the interaction amongst the identified variables of interest.

The central focus of the literature review is to develop a comprehensive, systematic and reasoned argument for an applicant's intention to apply to an organisation of his/her choice. The discussion begins with an overview of the recruitment context in which applicant intentions are formed and influenced and an understanding of the organisation's role in influencing and encouraging organisational attraction is developed. The organisations' efforts influence its attractiveness to prospective applicants, which directly or indirectly affects their decision and intention to apply. The discussion then follows an investigation of the proposed perspectives posed by various researchers in this field that may serve to explain applicant intention to apply. The merits of the Theory of Planned Behaviour (Ajzen, 1991) chosen as the framework for this study is argued through a discussion of (a) the proposed motivational variables in this model; (b) each variable's unique role in the model; and (c) arguments and findings of related studies in this research area. The focus of this review is centred on the influence that motivational factors such as attitude towards the behaviour, subjective norms and perceived behavioural control has on an applicant's intention to engage in specific job pursuit behaviour, i.e., applying to an organisation.

Lastly, following from the argument in the preceding chapter concerning the need for understanding the South African graduate and the current needs of the South African labour market, the proposition that differences based on designated group status exist, was explored. The case for proposed differences (or lack thereof) in the designated and

non-designated group was set out and relevant hypotheses were developed on the basis of the assumptions of the Theory of Planned Behaviour.<sup>1</sup>

## **2.2 Recruitment**

An organisation's ability to draw applications for employment flows from its recruitment practices and efforts. A prospective applicant's intention to apply to an organisation is thus not a random event but one that occurs as the result of the recognition that a particular organisation is offering a position that the individual wants to pursue (Gomes & Neves, 2011). In order to understand the prospective applicant's behaviour it is important to examine the role the organisation plays in this process and the extent of its influence on the individual.

Recruitment and selection involves concerted purposeful efforts on the part of the organisation to attract individuals to it and this is an immediate objective of recruitment (Rynes, 1989a). The purpose of this activity is to fill available positions through the systematic determination of an applicant's suitability for the job. As previously discussed, recruitment within the South African context is partial to legislative labour requirements. Recruitment thus serves as a means of ensuring equal representation and opportunity within the context of the organisation. It is thus not only a necessary means of sourcing the required talent, but is often the most integral means of meeting numerical targets and increasing the representation of designated groups in the workplace (Department of Labour, 2010). Recruitment is thus a necessary, purpose-driven activity designed to serve a number of organisational needs and requirements.

External recruitment activities are effective in meeting most organisations' staffing requirements. External recruitment is defined as:

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<sup>1</sup> From this point on, designated groups will refer to previously disadvantaged individuals classified as "Black" i.e. African, Coloured, Indian and Other. Non-designated group members will refer to white members of the population.

...a process encompassing an employer's actions that are intended to: (a) bring a job opening to the attention of potential job candidates who do not currently work for the organisation, (b) influence whether these individuals apply for the opening, (c) affect whether they maintain interest in the position until a job offer is extended, and (d) influence whether a job offer is accepted.

(Breaugh, 2008, p. 104)

This process can also be succinctly captured in three distinct phases, i.e., generating applicants, maintaining applicant interest in the organisation, and influencing job choice (Barber, 1998 as cited in Allen, Mahto, & Otondo, 2007) . The applicant's intention to apply is thus a function of the first phase of recruitment where an organisation will generate applicants through attracting the interest of prospective applicants.

Applicant attraction is central to the sustainability and maintenance of a competitive advantage in the world of business (Van Hoye & Saks, 2011). The demand for high quality applicants is central to this line of reasoning. In order to attract the attention of potential applicants, organisations will engage in various recruitment activities to draw their attention, provide information, pique their interest and encourage them to submit an application (Collins & Stevens, 1999). Communication with prospective applicants is captured in an organisation's recruitment, marketing and advertising efforts and thus is a calculated presentation of and emphasis on job and organisational attributes and offerings that are attractive to the targeted applicant group.

An effective recruitment drive is underpinned by the careful consideration of various factors, including the organisation's recruitment objectives, the development of a clear strategy, the identification of specific recruitment activities, the consideration of specific applicant variables and, finally, the evaluation of recruitment results (Breaugh, 2008). These factors and key considerations that accompany them are conceptually depicted in Figure 2.1.

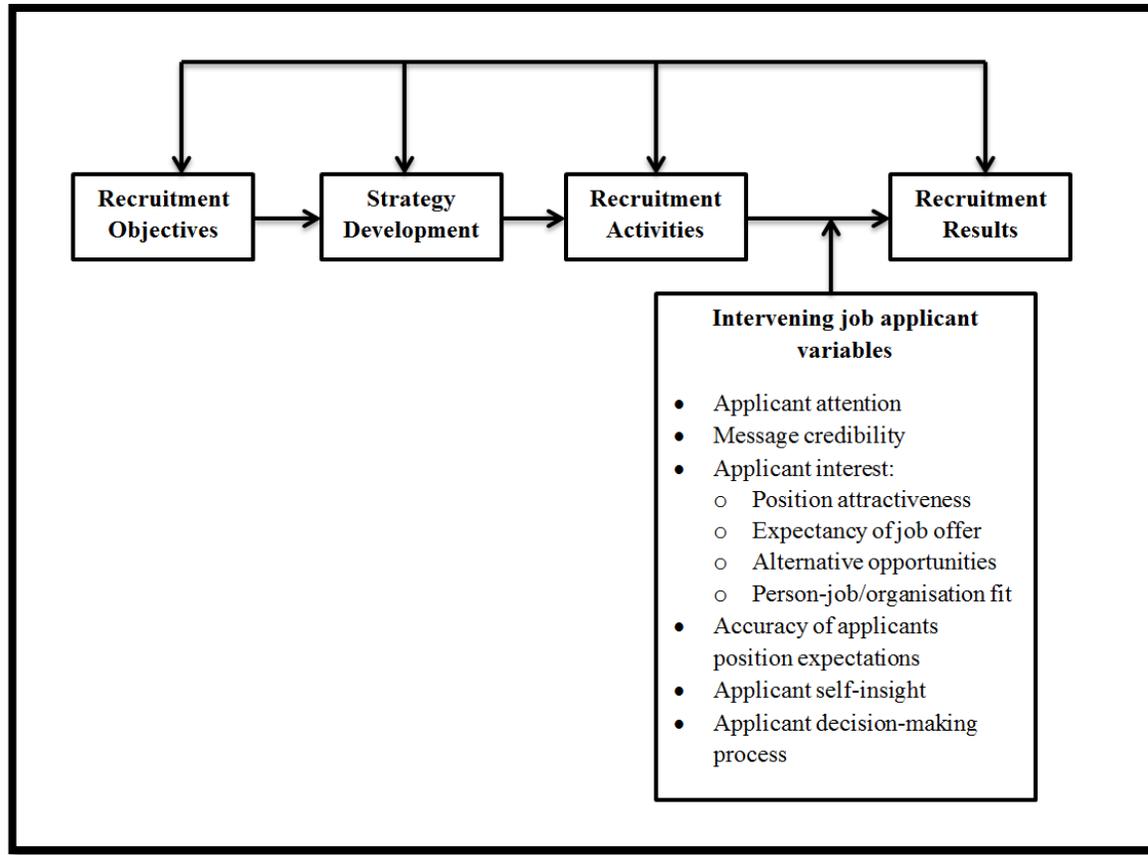


Figure 2.1. Model of the recruitment process

(adapted from Breugh, 2008)

Within the recruitment literature, much research has been focused on the job applicant variables, grouped in Figure 2.1 as “Intervening Job Applicant Variables”. These variables play a critical role in the strategic planning that dictates the nature and targets of its recruitment process, as well as the means through which recruitment objectives are met (Breugh, 2008). Moreover, recruitment variables that are manipulated to ensure the required results will also provide the individual with sufficient information to assess whether or not the position and organisation are aligned to his/her job and personal expectations. The recruitment process thus is a means of communicating with and persuading prospective applicants to pursue the opportunities presented by the organisation (Allen et al., 2007). Moreover, the recruiting practices employed by organisations generally, “(a) seek to build an organisation’s image or visibility, (b) improve an organisation’s campus presence, (c) rely on social networks to disseminate

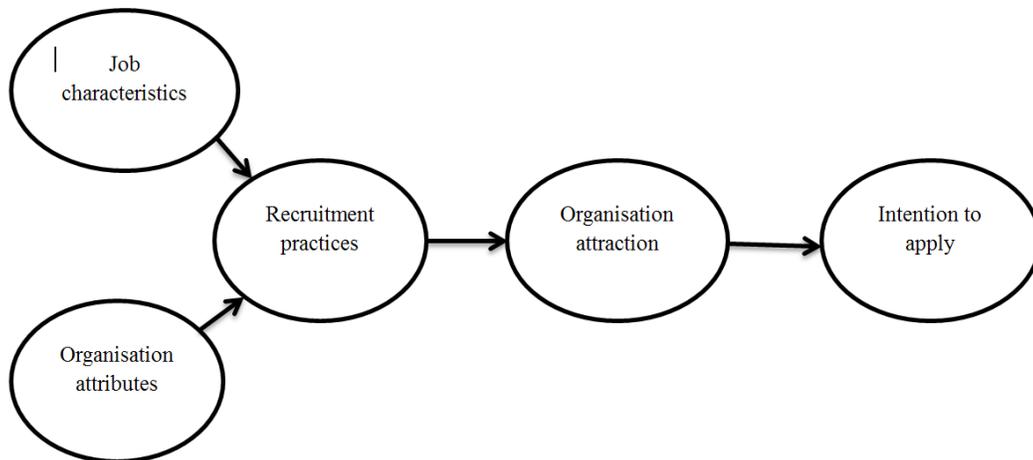
information, and (d) provide information about openings through traditional means”. (Collins & Stevens, 1999 p. 2). The perception of an organisation’s attractiveness in terms of its suitability will result in a “suitable” applicant self-selecting into the applicant pool through the submission of an application.

Organisation attraction is “the way employers strategically attempt to exploit their strengths in order to attract applicants” (Gomes & Neves, 2011). Organisational attraction and attractiveness thus serve as a function of the organisation’s efforts, as well as a targeted group’s perception of these efforts. A number of studies have provided strong evidence for the role that organisational attractiveness plays in an applicant’s job choice intentions, but few have systematically examined the role of attractiveness within the recruitment process leading to an applicant’s intention to apply to their organisation of choice (Gomes & Neves, 2011). Job characteristics and organisational attributes have been proposed as predictors of organisational attractiveness. Early recruitment practices are thus designed with this in mind in order to influence decision-making early in the recruitment process.

Attraction and perceptions of organisational characteristics have been found to mediate the relationship between early recruitment efforts and decisions to apply (Collins & Stevens, 1999). Prospective applicants could therefore evaluate a job vacancy based on job characteristics and organisational attributes presented in the recruitment material. We propose that this evaluation should therefore lead to perceptions of organisational attractiveness, which could affect an applicant’s intention to apply to that organisation. Therefore, organisation attraction may mediate the relationship between recruitment practices and applicant intentions (Figure 2.2.).

Much of the research in the literature on recruitment postulates that distinct phases or cycles of recruiting exist. Moreover, these phases or cycles may provide a means of developing a clear understanding of the applicant (Barber, 1998). Therefore, the exploration of the activities that are most effective and efficient in affecting the thought and attraction processes involved in recruitment is of interest to recruiters, marketers and

researchers alike. From a theoretical perspective, various theories have proposed descriptions of applicant attraction to organisations through organisation attraction activities (e.g., Collins & Stevens, 2002; Turban & Keon, 1993). However, organisational attraction and attractiveness is nothing without the prospective applicant's motivation to consider or actively pursue employment with an organisation. The required intention and behaviour encompasses the act of searching for a job.



*Figure 2.2.* Diagrammatic representation of the relationship between recruitment practices and intentions to apply

An organisational perspective of recruitment is based on the proposition that prospective applicants are drawn to the organisation through their attraction to perceived positive outcomes or attributes associated with applying to the organisation. Organisation attraction or attractiveness is the result of efforts to influence applicants' intentions towards the organisation. Therefore, an integral part of the recruitment process is the communication of desirable job and organisational attributes that will increase the likelihood of the submission of an application. The literature focused on the organisation's efforts in attracting prospective applicants is rich with theories and studies that have attempted to explain and continue to explore the variables involved in this phenomenon. However, the focus of this study is the thinking and reasoning process involved when applicants find an organisation attractive and are compelled to invest the time it takes to complete the application process. The section that follows will examine

the individual's perspective of the recruitment process and the development of intentions to apply to a preferred organisation.

### **2.3 Job search and applicant intention to apply**

Job search and recruitment can be conceptualised as two complementary processes but they differ in terms of the source of the effort exerted. Research on these processes has forged two distinct streams. On the one hand, job search involves the effort of the individual to make particular decisions on their job and organisational choice, as well as influence their inclusion in and progression through the selection process (Kanfer, Wanberg, & Kantrowitz, 2001). Recruitment, on the other hand, entails the efforts by the organisation to influence selection processes and individuals job choice decisions (Chapman, Uggerslev, Carroll, Piasentin, & Jones, 2005)

The context and areas of primary focus in the job search literature examining job seekers distinguishes between new entrants/job choice, job loser/unemployment and employed job seeker/turnover (Boswell, Zimmerman, & Swider, 2011) Due to the focus of this study, the job search experiences of new entrants to the job market are highlighted. An applicant's approach to securing employment involves information gathering, alternative generation and processing and, finally, the development of intentions towards a particular organisation (Boswell et al., 2011; Gomes & Neves, 2011).

When considering the formation and execution of occupational decisions, relevant job search experiences, and the evaluation of past occupational decisions are relevant determinants of job search and application intentions (Arnold et al., 2006). Early experiences with the job search process will influence the perceptions held by applicants about their employability, the labour market environment and the challenges associated with securing employment (Boswell et al., 2011). In general, new entrants to the job market have limited exposure to full time employment and therefore lack a well-defined understanding of the unstructured nature of the job market (Turban, Stevens, & Lee,

2009). Job choice decisions are thus guided to an extent by information gathered about job market opportunities (Rynes, Bretz, & Gerhart, 1991).

Job search can be explained as a motivated and self-directed process that involves acquiring information about labour market alternatives with the view to generate employment opportunities, evaluate alternatives and make a considered decision from these alternatives (Boswell et al., 2011; Saks, 2006). The measurement of job search is generally carried out through the assessment of job source usage, job search intensity and job search effort (Saks, 2006).

A key element in job search behaviour is the job sources used which would provide the job seeker with information regarding available opportunities. These sources may be formal (e.g., advertisements, employment agencies, and campus placement offices) or informal (e.g., friends, relatives, or employees of organisation) (Saks, 2006). Job search intensity denotes the frequency of job search behaviours, for a particular duration (Kanfer et al., 2001). The literature distinguishes two behavioural measures of job search intensity, namely preparatory job search behaviour and active job search behaviour (Blau, as cited in Saks, 2006). When planning his/her job search, a job seeker will engage in the collection of job search information and identification of possible opportunities, which is referred to as preparatory job search intensity. On the other hand, actively engaging in a job search and making job-related decisions (e.g., filling out applications or going for interviews) refers to active job search intensity. Lastly, job search effort involves the investment of time, energy, and determination that regulates the number of employment offers a job seeker will receive.

The job search process starts when prospective applicants recognise the need to seek employment. The related anxiety is minimised through active engagement with the labour market to a low or high degree. This involves gathering relevant information that is of interest to the individual about organisations and vacancies that are available. Information gathering aids the development of a clear picture of what the labour market is offering

and the requirements set forth by the advertising organisations. This phase is thus critical to the generation of alternatives that the prospective applicant may pursue.

Research on the decision-making process of individuals in different contexts has identified three search strategies that aid the process of generating alternatives. These include the focused approach, the exploratory approach and the haphazard approach (Stevens & Turban, 2001). A focused search strategy involves concerted search efforts regarding a predetermined set of potential employers. The individual would identify a list of favoured employers and only apply for jobs they perceive they would have a good chance of obtaining. An exploratory search strategy involves the consideration of a number of employment options and consultation of various sources regarding job-related information. This approach is generally associated with job seekers who have an idea of what they want but are weighing up their alternatives. Lastly, a haphazard search strategy involves passively collecting information that may or may not be relevant or related to the individual's focus. This method is characterised by trial and error and unexplained changes in approach during the job search process (Stevens & Turban, 2001). The type of decision an individual is required to make may also influence the method employed.

Decision-making research makes the distinction between two types of decisions that individuals may employ when faced with a choice, namely rational and intuitive methods. Rational choices involve the objective measurements of fixed calculations based on specific prompts from the environment (Hammond, Hamm, Grassia, & Pearson, 1987). A person would make use of systematic, rationally defensible patterns of thinking. In contrast, an intuitive choice is generally less structured and involves a subjective assessment of various cues. The decision maker often does not consciously acknowledge the choice method. Intuition is viewed as the weaker and less effective method of the two decision-making methods. However, Hammond (1980) stated that most decisions might be of a quasi-rational nature, employing features of both methods. Depending on the type of choice required, one would alternate between the two methods. In a recent study on the relationship of job search and choice processes with satisfaction, the authors suggested that decisions using both rational and intuitive methods might produce better decision

outcomes than either method alone (Crossley & Highhouse, 2005). The findings also highlighted the tendency of individuals who engage in a more focused information search and rational choice to consider future outcomes. This is attributable to the importance of determining what information to focus on in the search and the determination of the probability of a desired outcome.

When making a choice regarding which organisation to submit an application to, prospective applicants may engage in a focused, an exploratory or a haphazard search strategy and their choices may be either of a rational or of an intuitive nature (Stevens & Turban, 2001). Due to the unpredictable nature of intuitive decisions, most studies and theories pertaining to decision making have followed the assumption that applicants engage in a predominantly rational decision-making process. The present study continues with this line of reasoning. The following section reviews the varied perspectives in the literature that pertain to the decision-making process. This discussion serves to develop an understanding of how behavioural intentions towards applying to an organisation are formed.

#### **2.4 Applicant intentions and behavioural decision making**

A number of factors, both internal/personal and external to the individual, influence behavioural decision-making. These factors affect whether or not engagement in a particular behaviour will occur. The growth in the number of perspectives and theories developed to explicate this process since the 1960s, testifies to its complex nature. The development of an applicant's intentions toward applying is therefore examined from a number of perspectives in order to gain a comprehensive understanding of the probable variables associated with this particular decision. The role that attraction, organisational practices and job search play in the formulation of intentions is highlighted.

### 2.4.1 Marketing perspective of applicant intention to apply

In recent years, organisation attraction and choice has been closely aligned with marketing principles in an attempt to further the understanding of the applicant's decision making (Collins & Stevens, 2002; Highhouse, Lievens, & Sinar, 2003; Keller, 1993). The alignment is plausible due to the use of marketing and advertising involved in the recruitment and attraction of applicants to the organisation. Various authors have applied marketing principles and concepts to explain applicant attraction and recruitment (e.g., Aiman-Smith, Bauer, & Cable, 2001; Collins & Stevens, 2002; Han & Collins, 2002; Highhouse & Lievens, 2003; Maurer, 2006; Turban & Cable, 2003).

The choice between two or more organisations and a consumer's buying decisions is regularly compared with the implication that the act of purchasing an item is comparable to potential applicants making application decisions (Maurer, Howe, & Lee, 1992). The steps in this process are represented in Figure 2.3.

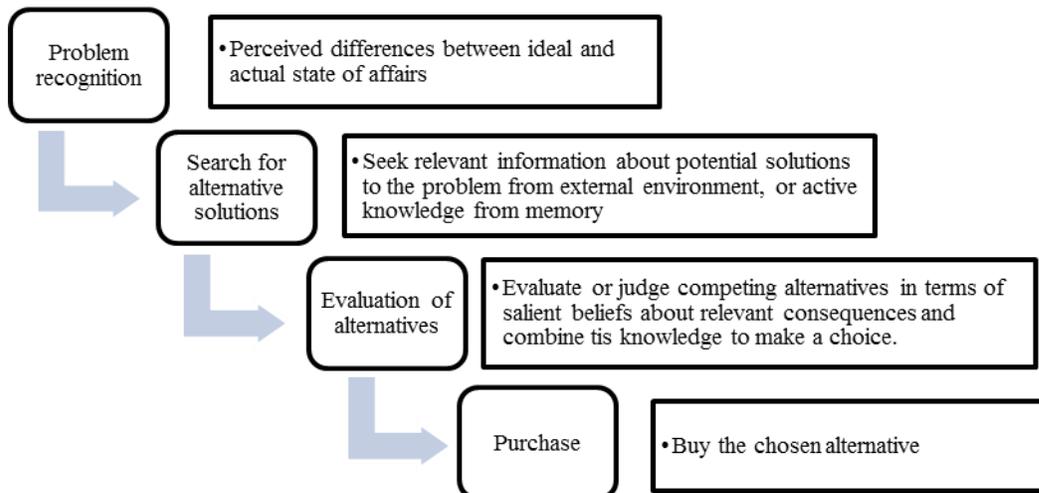


Figure 2.3. A generic model of consumer problem solving (Peter & Olson, 2008 as cited in Ajzen, 2002)

Graduates nearing the end of their studies face various challenges presented by the labour market or intrapersonal factors. At the heart of this decision-making process is the problem structuring that occurs prior to making a decision. This includes becoming aware of the need or availability of a job; collecting information about the alternatives;

identifying likely future events and other circumstances relevant to the organisation/job decision; and considering possible outcomes contingent on the decision (Albert, Aschenbrenner, & Schmalhofer; Peter & Olson; Slovic, Lichtenstein, & Fischhoff, as cited in Ajzen, 2002).

When deciding which organisations to apply to, applicants will search for relevant information about various organisations; consult family, friends or lecturers; and attend career fairs or information sessions. The information sought from these sources becomes evaluative criteria for comparison, alternative solutions and the performance of each alternative on each evaluative criterion (Hawkins, Mothersbaugh, & Best, 2007). These alternatives are grouped into evoked sets (or considered alternatives), inert sets (backup alternatives) and inept sets (avoided alternatives) (see Figure 2.3). In addition, decision makers limited by time, ability, and motivation to search for information might limit the number of sources they consult. Once the problem has been structured and the obtained information processed, the applicant will choose a preferred course of action, and implement the decision at an appropriate opportunity (Ajzen, 2001). The final step in this process involves feedback for the re-evaluation the decision.

An applicant's decision is also influenced by the recruitment marketing and advertising used by organisations intent on attracting potential applicants. More organisations are investing time and effort into developing and endorsing a defined identity and image. The concept of brand image is the schematic recall of a brand that contains the target market's construal of the product attributes, benefits, usage situations and marketer characteristics (Hawkins, et al., 2007). It represents the feelings and thoughts that come to mind when people see the brand. Keller (1993) expands this idea with the description of brand image as the perceptions related to product-related/non-product-related attributes and the practical/experiential/symbolic benefits that are manifest in the brand associations stored in the consumer's memory. The application of this concept is company or corporate image.

The vehicle for brand image is product positioning whereby a marketer attempts to attain a defined and differentiated brand image relative to competition within a market segment (Hawkins et al., 2007). That market segment will value a brand that matches a target market's needs and desires. Such a brand is said to have brand equity. Brand equity is the value consumers assign to a brand beyond the functional characteristics of the product (Hawkins et al., 2007). Brand equity is often synonymous with the reputation of the brand, even though equity has a stronger implication of economic value. Hawkins et al. (2007) explain the effect of brand equity as the favourable response that is achieved when a brand with a good reputation is evaluated. They argue that the relevant dimensions that distinguish brand knowledge and affect consumer response are brand awareness and the favourability, strength, and uniqueness of the brand associations in consumer memory. These dimensions are considered antecedents of brand equity. As a result, brand equity occurs when "the customer is familiar with the brand and holds some favourable, strong and unique brand associations in memory" (Keller 1993).

When applying these marketing concepts to the recruitment process, potential employees are the consumers and the organisation, as an employer, is the product or brand. It can thus be assumed that employment brands are a combination of instrumental and symbolic characteristics (Caines, 2008). Instrumental aspects are those job and organisation characteristics that are tangible, such as remuneration and benefits, work location, promotion and training and development. The symbolic characteristics translate into the potential employee's perception of the company or organisation's brand personality (Highhouse & Lievens, 2003).

Employer branding is "a targeted, long-term strategy to manage the awareness and perceptions of employees, potential employees, and related stakeholders with regard to a particular firm" (Sullivan, as cited in Backhaus & Tikoo, 2004, p. 501). Put differently, employer branding is "the sum of a company's efforts to communicate to existing and prospective staff that it is a desirable place to work" (Berthon, Ewing, & Hah, 2005). It is also an on-going process whereby all the tangible and intangible elements that constitute a company's image and reputation are organised and communicated and can thus be

explained as the personification of an organisation. In recruitment practices therefore portray the organisation as a good place to work. In order to differentiate the organisation from its competition, branding highlights its individuality or unique employment offerings and environment (Backhaus & Tikoo, 2004).

The outcomes of an applicant's decision opportunities attributable to his/her beliefs about the company as an employer is defined as employment brand equity (Han & Collins, 2002). Ambler and Barrow (as cited in Backhaus & Tikoo, 2004) define the employer brand in terms of benefits, calling it "the package of functional, economic and psychological benefits provided by employment, and identified with the employing company" and establishes the identity of the organisation as an employer (p. 502). One dimension of the employer brand and brand equity is employer attractiveness. Berthon et al. (2005) define employer attractiveness as "the envisioned benefits that a potential employee sees in working for a specific organisation" (p.156). In addition, when viewed as an antecedent of employer brand equity, the attractiveness of the employer may be stronger than the organisation's brand equity is. In another study, Vroom (1966) found that both before and after choosing an organisation/employer, there was a noticeable and somewhat linear relationship between the attractiveness rating of an organisation and the extent to which it was believed to be instrumental to the individual's goal attainment. Employer attractiveness may therefore be an intrinsically motivated perception.

Prospective applicants may also use their perceptions of an organisation's instrumental and symbolic features to make evaluations about the organisation (Highhouse & Lievens, 2003). More specifically, inferences about the symbolic features of organisations have been suggested as indicators of the extent to which an organisation can serve personal needs for self-expression (Highhouse, Thornbury, & Little, 2007). Therefore, the symbolic features of the organisation could also be used to make inferences about an individual's fit with the organisation.

#### **2.4.2 Person-organisation fit perspective of applicant intention to apply**

A prospective applicant's preference for an organisation could be influenced by the alignment of their personal perceptions or preferences with features portrayed by the organisation (Cable & Judge, 1996). Person-environment (P-E) fit presumes a complex view on applicant-organisation attraction. P-E fit is "the compatibility between an individual and a work environment that occurs when their characteristics are well matched" (Kristof-Brown, Zimmerman, & Johnson, 2005, p. 281). Applicants are presumed to be more satisfied when their personal characteristics are aligned with the organisation's attributes (Cable & Judge, 1996). Several distinct types of fit have emerged from this simple argument, including person-job fit, person-organisation fit, person-vocation fit and person-group fit (Kristof-Brown et al., 2005). The focus on applicant attraction to the organisation in this study dictates the focus of a person-organisation fit that is most fitting for this discussion.

Person-organisation (P-O) fit proposes that an applicant will evaluate the fit of their needs and values with the known characteristics of a potential employer and thereby appraise interaction between their personal characteristics and needs and job-organisational characteristics (Chapman et al., 2005; Kristof-Brown et al., 2005). A recent meta-analysis of 71 studies reported that organisational characteristics predict applicant attraction outcomes (Chapman et al., 2005). Thus, individuals who perceive a strong fit with an organisation will be attracted to apply and join that organisation. Similarly, Carless' (2005) longitudinal study of 193 graduate applicants also connected congruence to job seekers' intent to apply and intent to accept a job offer. Organisational attraction also mediated this relationship. Coupled with the theory of reasoned action (Ajzen, 1991; Ajzen & Fishbein, 1980), P-O fit suggests that graduates' preferences for organisation attributes will influence their intentions to apply (Terjesen, Vinnicombe, & Freeman, 2007).

In contrast, studies that have assessed the extent to which P-O and P-J fit perceptions influence job search behaviours have been relatively inconclusive (Saks, 2006). Wanberg et al. (2002) did not find a significant relationship between job search intensity and job-

organisation fit. Saks and Ashforth (1997) failed to find a significant relationship between the number of job offers and P-J and P-O fit perceptions. Job and organisation fit might then be less important to new entrants to the labour market who are more concerned with finding any form of suitable employment. It is also possible that job and organisation fit are not a priority for young workers who are more focused on favourable organisation characteristics and immediate payoffs (Smola & Sutton, 2002). In addition, ineffective job searches could result in an inadequate level of fit between the applicant and the organisation (Boswell et al., 2011; Saks & Ashforth, 2000). Nevertheless, P-O fit has been proven to predict job choice intentions and work attitudes, even when organisation attractiveness was controlled for (Cable & Judge, 1996).

Despite the role an applicant's subjective evaluations and perceptions in forming intentions, the role of the environment in predicting behaviour should not be ignored. It is therefore necessary to highlight the role of social influences that may also contribute to an individual's final application decision. The social comparison theory offers insight into the role these influences might play in the formation of application intentions and behaviour.

#### **2.4.3. A social comparison perspective of applicant intention to apply**

The effect of social influences on behaviour is generally recognised and the effect this may have on organisational attractiveness and organisational choice has recently been well documented (e.g., Kilduff, 1990; Van Hove & Saks, 2008). A number of studies have investigated the role of social networks and their comparative influence in order to develop meaningful theories about this phenomenon. One such theory is the Social comparison theory. The assumptions underlying social comparison theory are that,

- (1) human beings learn about themselves by comparing themselves to others;
- (2) people choose similar others with whom to compare; and
- (3) social comparisons will have strong effects when no objective non-social basis of comparison is available and when the opinion is very important to the individual. (Festinger, as cited in Kilduff, 1990, p. 272).

From what is known of organisational choice, prospective job applicants will generally acquire information about job vacancies through informal sources which include their friends, family, and acquaintances rather than through official sources such as advertisements or websites (Kilduff, 1990). On the other hand, Saks (2006) argues that informal information sources are no longer relevant in today's context due to advancements in technology and selection procedures employed by organisations. Nevertheless, even though informal information may not be exchanged as readily as it was in the past, comparison with relevant others remains a relevant means of assessing the probable outcome of a particular behaviour.

Prospective job applicants may make comparisons with others who fall in the same social category or members of groups they do not belong to (Richins, 1991). In the Proxy model of social comparison (Wheeler, Martin, & Suls, 1997), the basic assumption is that individuals will compare themselves to a proxy who has attempted to perform a particular behaviour, in order to assess their own likelihood of success. In contrast to the commonly held view of the social comparison theory, the authors hold that the proxy must be similar to the comparing individual on the underlying ability. However, ability is not directly observable, but observation of the proxy's performance would be considered an indication of his/her ability (Suls, Martin, & Wheeler, 2002). Thus, a prospective applicant may evaluate the application decisions their peers or friends are making in order to assess whether or not they are choosing the 'right' organisation or to ascertain their own likelihood of success.

According to social comparison theory, individuals facing important and uncertain decisions tend to prompt and may be inclined to consider the opinions of their peers (Kilduff, 1990). One study supported predictions that pairs of individuals who were either friends or who perceived each other as similar were more likely to make similar organisational choices, even if they were from different academic fields and had differing job preferences. Social comparison is thus reliant on the amount of information available within an individual's social network that may support the creation and validation of choice criteria. Other studies have also shown that friends may reciprocally influence the

type and use of evaluative criteria (Duck, 1973 as cited in Kilduff, 1990). On the other hand, when considering trivial choices, views of strangers do little to influence behaviour (Kilduff & Regan, 1988). Therefore, following the assertion made by social comparison theory, only important and ambiguous decisions, such as the choice of an organisation to work for, would prompt individuals to seek out comparative information from their peers. Now that the roles of the organisation, the individual and the social environment have been explored, the discussion will move to the actual decision-making process. The following subsection is focused on the process involved in the formulation of a decision.

#### **2.4.4 A decision-making perspective of applicant intention to apply**

Whereas the previous perspectives have emphasised the role of evaluative factors or influential others, the decision-making perspective is process-focused. The intention to submit an application to a particular organisation involves engagement in a decision-making process amongst various attractive options. Consequently, many studies have endeavoured to explain this process. The decision-making perspective is supported by various studies concerned with how job seekers make application and job choice decisions, albeit from differing viewpoints. The one stream of research has focused on the content that potential job applicants would consider when evaluating a number of organisations that are all presenting their offerings in a very similar manner, in order to make a job choice. Conversely, the other stream view job choice as a process and therefore seeks to understand how attributes combine to inform the job seeker's decision.

The majority of job-content-focused studies have explored the extent to which individuals differ with regard to their attraction to particular jobs or organisations. (Quinn, Rynes, & Bretz, 2011; Turban, Eyring, & Campion, 1993; Turban & Keon, 1993). These and other studies have readily demonstrated that applicant attraction is the product of applicants' perceptions of instrumental job and organisational characteristics (e.g., pay, job security, location) (e.g., Lievens & Highhouse., 2003; Turban & Keon, 1993). These attributes are described as "...objective, concrete, and factual attributes of a job or organisation, that trigger interest among applicants because of their utility" (Schreurs, Druart, & Proost, 2009 p. 36). Three theories that can be employed to explain the role of organisational

attractiveness in applicant decision making are: Signalling theory (Spence, 1973), Expectancy theory (Vroom, 1964) and Soelberg's generalisable decision processing theory (Soelberg, 1967).

#### ***2.4.4.1 Signalling theory***

Signalling theory stems from the economics literature and is based on the premise that information regarding employment conditions within a job and organisation may not always be readily accessible to potential job applicants. This situation therefore places the potential applicants in a position where they have to make inferences regarding the employment conditions of the organisation based on other organisational attributes (Ehrhart & Ziegert, 2005). Signalling theory postulates that potential job applicants are often faced with incomplete information about organisations and will therefore interpret available data as signals about the organisation's working conditions (Cober, Brown, Levy, Cober, & Keeping, 2003; Rynes & Barber, 1990; Rynes, 1989; Spence, 1973). In the earliest stages of recruitment, job seekers face the task of deciding to which organisations to apply and which to exclude. Numerous studies have examined the use of recruitment activities, organisations reputations, corporate image, on-campus presence, recruiter interaction, etc. as signals that provide information about job characteristics or working conditions in the organisation (Ehrhart, 2005; Jaidi, Van Hooft, & Arends, 2011; Ma & Allen, 2009; Turban & Cable, 2003).

Arguments in the recruitment debate have speculated that the role of the signal sender and the signal receiver in the signalling process may be distorted (Ehrhart & Ziegert, 2005; Highhouse & Hoffman, 2001). These authors contend that the information obtained from various sources (e.g., recruiters, business publications, and other job seekers) communicate a number of qualities to potential applicants as a result of the inferences drawn by the receivers of this information. Other authors extend this contention by proposing that inferences drawn by prospective job seekers may either have instrumental or symbolic features. To illustrate; marketing signals such as development opportunities and job security are categorised as instrumental features and company reputation and

social responsibility concerns may signal symbolic features (Highhouse, Thornbury, & Little, 2007).

The desire to seek an organisation that encompasses the desired instrumental and symbolic features may serve as a motivational force in the job search process. The classic interpretation of Vroom's (1966) expectancy theory would explain these features as desirable outcomes related to the amount of effort or job search intensity expended as well as the expectations of the organisation that accompany the motivation to invest time and effort in the application process. The following subsection examines the role the expectancy theory of motivation plays in the job search and intentions, which may form, to apply.

#### ***2.4.4.2 Expectancy (VIE) theory of motivation***

In the recruitment literature, Vroom's (1966) expectancy theory stands out as one of the most popular process models. The theory is built on the following assumption:

The strength of a tendency to act in a certain way depends on the strength of an expectancy that the act will be followed by a given consequence (or outcome) and on the value or attractiveness of that consequence (or outcome) to the actor. (Lawler, as cited in Mitchell & Beach, 1976, p. 45)

It is thus a postulation of choice processes that occur when an individual is required to choose from a number of possible actions which they may or may not be aware of (Wanous, Keon, & Latack, 1983). Moreover the decision is influenced by the individual's rational, cognitive assessment of a behaviour based on the valence (i.e., desirability of an outcome), instrumentality (i.e., performance of an action and the likelihood of an outcome) or expectancy (i.e., perceived relationship between effort/action leading to an outcome/performance of an action) (Van Eerde & Thierry, 1996). Expectancy theory has been applied to various forms of motivated behaviour such as work motivation, work performance and, most notably, motivation to pursue (or exit) employment for a particular position or organisation. As a result of the level of control the individual holds

regarding whether or not to apply to an organisation, expectancy theory has been advocated as a more appropriate theory for clarifying organisational choice than for work motivation or performance (Wanous et al., 1983).

A review of the expectancy theory research advocated the fairly successful use of this approach in predicting organisational choice (Wanous et al., 1983). The application of expectancy theory is however led by the differentiation of the following; “a) the attractiveness of each organisation to an individual, (b) the amount of effort that is expended toward joining each organisation, and (c) the organisation that is actually chosen from among those offering admittance” (Vroom, 1966; Wanous, 1980 as cited in Wanous et al., 1983, p.67). In addition, the authors put forward two algebraic formulas:

- (1) *"Attractiveness of an organisation to an individual =*  

$$\sum \text{Desirability of each outcome to the individual} \times$$
*Belief about outcome associated with membership"*
- (2) *"Effort expended to try to join an organisation =*  

$$\text{Expectancy of being admitted to the organisation} \times$$
*Attractiveness of the organisation"*

Of particular importance to this study is the proposition put forward by Vroom (1966) that organisational choice stems from psychological variables that affect the attitude a prospective job seeker has towards an organisation. Moreover, these attitudes stem from predictions made about; “measures of his goals or values and of his beliefs regarding the instrumentality of the object for the attainment of these goals or values” (Vroom, 1966, p. 213). This process is initiated by the recognition of the problem of finding employment. The prospective job seeker would thus search for alternatives and eventually develop a set that would be evaluated according their potential ability to aid the individual in attaining predetermined goals. This process would culminate in certain judgments about the organisation. The author thus hypothesised (and later found support for the hypothesis) that the attractiveness of the organisation would be directly related to the prospective job seeker’s beliefs regarding the organisation’s instrumentality for the

attainment of his/her goals, i.e., the instrumentality of organisational membership. The findings of this study also supported consistency between beliefs, attraction, and behaviour.

Despite the strong support for expectancy theory in various fields of study, the compensatory nature of the decision being made may not be an accurate account and prediction of a prospective job applicant's attraction to an organisation and decision to apply. Firstly, expectancy theory has been suggested as a measure of behaviour and not intentions or attitudes, even though these are acknowledged (Wanous et al., 1983). Secondly, observed job/organisational attributes are not always considered in a compensatory manner (Barber & Roehling, 1993; Rynes & Barber, 1990). Potential applicants seem to use some attributes as non-compensatory screening variables (i.e., jobs are rejected if they do not meet minimum requirements) and allow for trade-offs among other attributes (Highhouse & Hoffman, 2001). An alternative model that considers these considerations is Soelberg's (1967) generalisable decision-processing theory.

#### ***2.4.4.3 Soelberg's generalisable decision-processing theory***

Soelberg's generalisable decision-processing theory is the "study of organisation choice decision process of college students" (Glueck, 1974, p. 78). The model was developed for ill-structured decision situations that Soelberg felt were ideally manifested in job search and choice. A sequence of four phases represents the model: (1) identifying an ideal occupation; (2) planning job search; (3) job search and choice; and (4) decision confirmation and commitment (Van Eerde & Thierry, 1996). Phase three is most pertinent to this study.

The decision process precedes the formulation of specific expectations of the 'ideal' organisation the individual wants to work for, and criteria for the search are thus developed from these preconceived goals and expectations (Glueck, 1974). Soelberg's model is an elaborate reoccurring investigation and consideration of alternatives, by the decision maker. These alternatives are screened against a stringent list of non-compensatory criteria and are then either rejected or accepted. An implicit choice is made

during this search and the decision maker will stop searching once they are relatively sure they would receive an offer (Van Eerde & Thierry, 1996). Despite Soelberg's extensive work in this area, his model has failed to produce sufficient empirical research support to validate this model (Highhouse & Hoffman, 2001; Van Eerde & Thierry, 1996).

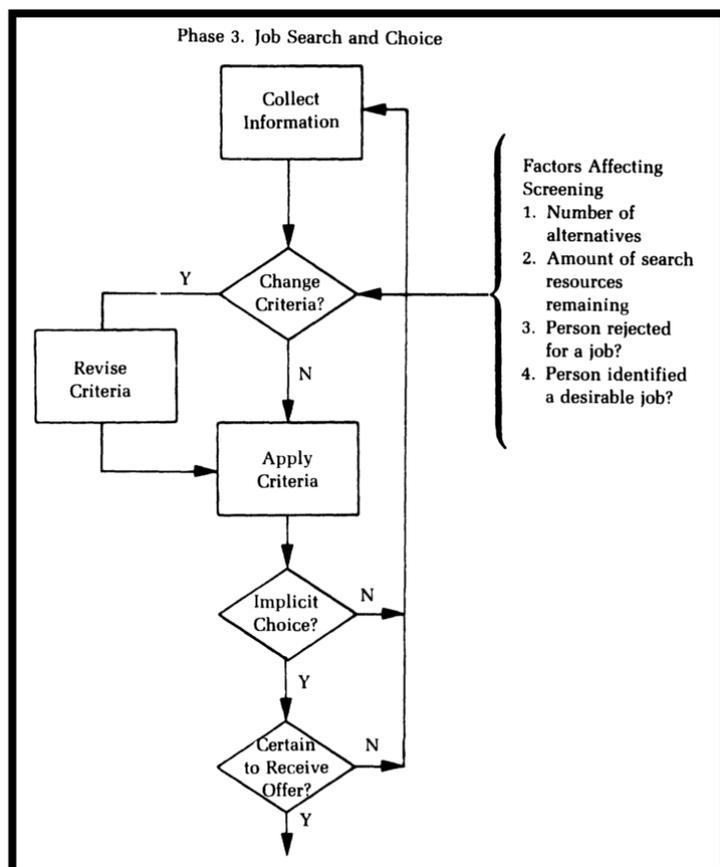


Figure 2.4. Phase 3: Job search and choice (Van Eerde & Thierry, 1996)

#### 2.4.5 A reasoned action perspective of intention to apply

Measures of intention to perform a particular behaviour (e.g., apply for a position or accept an appointment to an organisation) are often employed as alternatives for direct behavioural measures. The basis for this practice is derived from the commonly held assumption that the stronger a person's intention to perform a particular behaviour, the more likely they are to actually perform that behaviour (Levine & Pauls, 1996). Intentions are therefore influenced by salient beliefs regarding the likelihood that performing a particular behaviour will bring about a specific outcome (Ajzen, 1985).

Many studies have convincingly demonstrated the predictive validity of behavioural intentions. Moreover, when behavioural intentions are correctly measured, they can explain a significant proportion of variance in actual behaviour. In Armitage and Conner's (2001) meta-analytic review of the use of TPB models in the recruitment literature, they found that the use of TPB accounted for 27% of the variance in behaviour and 39% of the variance in intention. Correspondingly, Sheeran's (2002) meta-analysis of 10 meta-analyses, TRA, TPB and protection motivation theory meta-analytic reviews were examined; intentions accounted for 28% of variance on average. Table 2.1 provides an overview of the findings from each of the meta-analyses included in the review. Correlations ranged from 0.40 to 0.82 with a sample-weighted average correlation of 0.53 with a 95% confidence interval from 0.52 to 0.53. The analysis was based on 422 hypotheses and a total sample size of  $N = 82\ 107$  (Sheeran, 2002).

Table 2.1

*A meta-analysis of meta-analyses of the intention-behaviour relationship (Sheeran, 2002)*

Authors	<i>n</i>	<i>k</i>	$R^2$	<i>r</i>
Armitage & Conner (in press)	7318	48	0.22	0.47
Hausenblas <i>et al.</i> (1997)	10621	32	0.22	0.47
Kim & Hunter (1993)	5216	18	0.67	0.82
Milne, Sheeran, & Orbell (2000)	432	4	0.16	0.40
Randall & Wolff (1994)	26906	98	0.20	0.45
Sheeran & Orbell (1998)	2532	28	0.19	0.44
Sheeran & Sutton (1999)	6301	40	0.26	0.51
Sheppard, Hartwick, & Warshaw (1988)	11566	87	0.28	0.53
Trafimow <i>et al.</i> (1999)	1475	9	0.33	0.57
Van den Putte (1993)	9740	58	0.38	0.62
Overall	82107	422	0.28	0.53

A number of social psychological models are in agreement with the premise that intentions are relatively direct and important predictors of an individual's behaviour. These models include the theory of reasoned action (Fishbein, 1980; Fishbein & Ajzen, 1975), the theory of planned behaviour (Ajzen, 1985, 1991), Triandis's (1980) attitude-

behaviour theory, and protection motivation theory (Rogers, 1983 as cited in Sheeran, 2002).

When taking into consideration the strong effects that recruitment practices can have on actions that are proximal to exposure to those practices, the theory of planned behaviour provides a suitable framework from which to work. Both Barber (1998) and Rynes (1991) have argued that the critical outcomes for early recruitment practices are increased attraction and the decision to apply for available openings (Collins & Stevens, 1999). Intentions, decisions and behaviour are discussed further in the next subsection.

#### **2.4.5.1 Theory of Planned Behaviour (TPB)**

In order to explain the influence of various factors that contribute to an individual's intention and actual application to an organisation, the TPB has been selected as a framework for the present study. The TPB was developed by Ajzen and is based on two assumptions; (1) human beings are rational and make systematic use of information available to them; and (2) people consider the repercussions of their actions before they decide whether to engage in certain behaviours (Levine & Pauls, 1997). The choice to use the TPB as opposed to the TRA is the addition of a third antecedent of intention termed perceived behavioural control, which would provide a clear understanding of the entire cognitive process underlying an individual's intention to apply to a certain company.

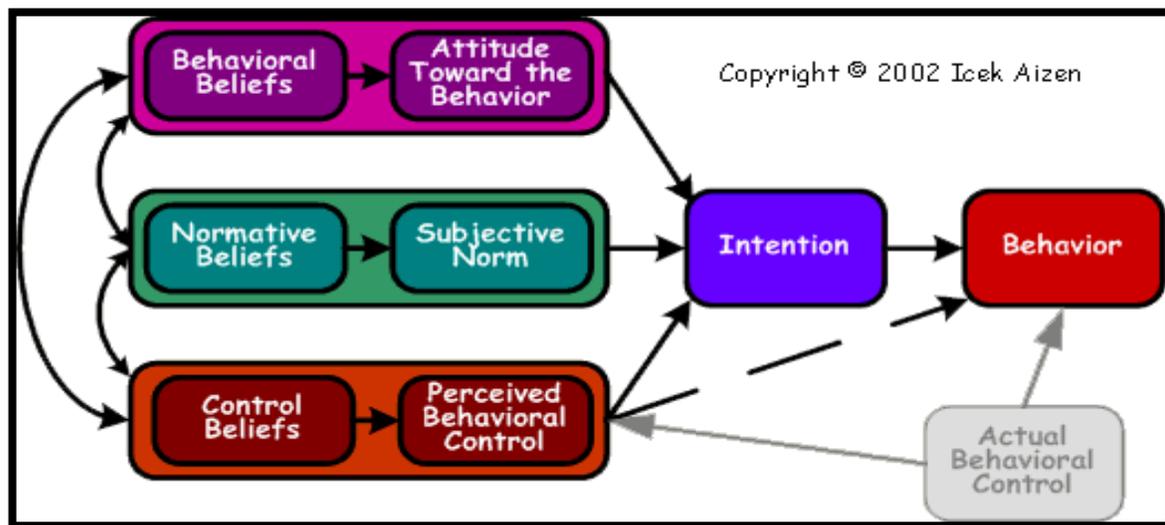


Figure 2.5. Conceptual model of the theory of planned behaviour (Ajzen, n.d.)

Behavioural intentions are viewed as the direct antecedents to behaviour because intentions are influenced by the presence of salient beliefs and/or information about the probability that performing a particular behaviour will lead to a specific outcome (Ajzen & Fishbein, 1980). In an attempt to predict and understand behaviour, Ajzen and Fishbein (1980) identified the determinants of behavioural intentions as a) attitude toward behaviour and b) subjective norms of behaviour. Ajzen elaborated this model through the inclusion of the perceived behavioural control variable that made provision for behaviour that is under the volitional control of the individual concerned. The applicability of the TPB is held in its use as a framework for the description of the behaviour of interest. In this instance, the behaviour of interest is an applicant's application to a particular organisation, i.e., the engagement in and completion of the application procedure. The individual is aware of his/her capability to engage in this behaviour, should they so desire. Other authors have referred to this process as part of the job pursuit activities (Chapman et al., 2005; Jaidi et al., 2011).

At a final year level, a student begins to consider the prospect of searching for an acceptable form of employment and thus engages in job search activities with certain prerequisites in mind. Once suitable options have been found (i.e., vacancies, graduate programmes, employers of choice, etc.), the next step would involve submitting an application to the organisation. An outcome of the student's job search activities is thus the individual's intention to apply to one or several organisations. Strong motivating forces of the job and organisational attributes under consideration would lead to the completion and submission of an application form and thus the behaviour required to be considered for selection. Ajzen (1991) proposes that the extent to which an individual intends to engage in a certain behaviour (e.g., applying for a job) increases the likelihood that actual behaviour will be performed.

With this in mind, the application of the TPB is discussed in order to explore the variables associated with intention to apply, in the hope that the structural model will yield positive results in favour of the hypotheses and research question. Therefore the present study will examine the following hypothesis:

***Hypothesis 1:*** *The structural model provides a valid psychological description of how (a) attitude towards applying, (b) subjective norm, and (c) perceived behavioural control influence intention to apply.*

#### **2.4.5.1.1 Attitude towards behaviour**

Attitude is offered as the first antecedent of behavioural intention. Simplistically stated, it is an individual's positive or negative belief about performing a specific behaviour (Ajzen & Fishbein, 1980). The emphasis in this study is thus on attitude towards application. The expectancy value model of attitude proposed by the authors asserted that attitudes stem from association beliefs about an object through the relation of certain characteristics to the object. Moreover, the individual's behavioural beliefs about the consequences of performing the behaviour are weighted by a positive or negative evaluation of those consequences. This is otherwise referred to as an outcome evaluation (Ajzen, 1991). If an individual evaluates the performance of a particular behaviour positively, the likelihood of intending to perform that behaviour will be higher. Ajzen (1991) thus proposes that an attitude towards the behaviour is automatically and simultaneously acquired through this internal association and evaluation process. The subjective value placed on the outcome contributes to the attitude and is thus directly proportional to the strength of the belief held by the individual. Attitude towards behaviour would therefore include the evaluation of an employer's attractiveness based on the beliefs the individual holds as result of his/her subjective evaluation of the organisation of interest.

It has been argued on the one hand that, even though the individual may feel attracted to an employer, they may not want to apply for a job or be employed there (Van Hooft, Born, Taris & Van der Flier, 2006). On the other hand, organisational attractiveness items seem to map onto the attitude component as it reflects an individual's affective and attitudinal thoughts about particular companies as potential places for employment (Highhouse et al., 2003) Furthermore, it is passive in nature because it does not automatically imply that any actual behaviour will be taken toward applying to the

organisation. An individual can thus be attracted to many companies at the same time (Highhouse et al., 2003). Many actions associated with an attraction toward an employer are possible, including recommending it to friends, remaining loyal to its products, paying particular attention to its advertisements and campaigns, and attempting to gain employment there. However, only attitudes associated with trying to gain employment are likely to predict behaviour such as filing job applications and ultimately accepting employment (Van Hooft et al., 2006). Even though the effect of intention to apply on an individual's behaviour (applying to a particular company) cannot be directly measured, the underlying assumption provided by Ajzen's TPB will be assumed, i.e., Intention to apply will have a significant positive effect on the behaviour (applying for a job). This assumption is based on Ajzen and Madden's (1986) proposition that the immediate antecedent of any behaviour is the intention to perform and the stronger the intention is, the more likely an individual is to try and therefore the greater the likelihood that the behaviour will be performed. Based on these propositions, it is proposed that intention to apply is likely to be positively affected by attitude towards the behaviour. Therefore:

*Hypothesis 2: Attitude towards applying will have a significant positive effect on the prospective applicant's intention to apply.*

#### **2.4.5.1.2 Subjective norm**

Subjective norms are also assumed to be a function of beliefs that specific individuals approve or disapprove of performing the behaviour (normative beliefs). An individual will intend to perform a particular behaviour when he/she perceives that important others think he/she should (Levine & Pauls, 1996). Important others might be a person's parents, close friends, lecturers, etc. An assessment is made by asking respondents to judge how likely it is that most people who are important to them would approve or disapprove of their performing a given behaviour (Levine & Pauls, 1996). This component is also influenced by beliefs about the normative expectations of others and the extent to which the individual is motivated to conform to these expectations (Ajzen, 1991). Moreover, these normative sources may be used as information sources as job seekers tend to combine information from multiple sources, and interactions between

these information sources are likely to occur (Turban & Greening, 1997). To elaborate, information sources include advertising and marketing strategies on the part of the organisation; employees currently employed at the organisation; as well as friends, parents, classmates and acquaintances who hold certain perceptions about a particular organisation. Social norm thus concerns the social pressure exerted on an individual. It is reliant on interpersonal influences (e.g., word-of-mouth information from family, friends, and colleagues/peers for an individual to perform the behaviour) and external influence (e.g., mass media reports, government promotion and other non-personal information affecting whether the individual performs the behaviour) (Bhattacharjee, 2000 as cited in Lin, 2010).

One particular study looked at the effect of social influences (particularly word of mouth) as recruitment sources on organisational attractiveness, using a regression analysis (Van Hoye & Lievens, 2007). Using a sample ( $N = 171$ ) of industrial/organisational psychology graduates, and through the regression of organisational attractiveness on word of mouth, a significant prediction of organisational attractiveness was yielded ( $b = -.68$ ,  $p = .00$ ,  $R^2 = .47$ ). The study established that positive word of mouth was associated with positive organisational attractiveness and that word of mouth had a significant impact on participants' perception of organisational attractiveness, even when considering recruitment advertising.

A finding of one study suggested that, when job seekers observe increased adoption of e-recruitment services by their family, friends, and colleagues/peers, they feel more social pressure to adopt the services themselves (Lin, 2010). However, external influence was found to have an insignificant impact on subjective norm about using job-search websites. The findings from Lin's (2010) empirical examination of factors affecting job seeker intentions to use job-search websites, using an extended theory of planned behaviour model, suggested that persuasion by significant others may influence job seeker intentions to conduct online job applications. The evaluation of fit indices provided evidence of a good model fit ( $GFI = .80$ ,  $NNFI = .97$ ,  $CFI = .98$ ,  $RMSEA = .07$ ).

Furthermore, of the normative factors, interpersonal influence significantly influenced subjective norm.

Based on the assumptions of the TPB and the findings in the reported studies it is proposed that normative influences encompassed by subjective norm will have a significant positive effect on intention to apply.

***Hypothesis 3:** Subjective norm will have a significant positive effect on the prospective applicant's intention to apply.*

#### **2.4.5.1.3 Perceived behavioural control**

The TPB is distinct in its addition of the perceived behavioural control variable that is associated with the volitional control an individual possesses. Perceived behavioural control refers to the degree to which an individual feels that the decision to perform or not perform behaviour is under his or her volitional control (Ajzen, 1991). Control factors include both internal and external factors. Internal factors include skills, abilities, information, emotions such as stress, etc. External factors include such things as situation or environmental factors.

Similarly, outcome expectations and efficacy expectations are both strong contributors to optimal performance (Liebert & Spiegler, 1994). Efficacy expectations are an individual's personal forecast of the level of success he/she will achieve should he/she choose to perform a particular behaviour. On the other hand, outcome expectations are the individual's belief that participation in a task will result in a specific outcome. Therefore, the level of perceived behaviour control an applicant experiences is based on the beliefs held about his/her own ability and suitability for the position that is applied for, as well as the possibility of being selected for consideration.

An important inclusion in most models of behavioural intention is that of perceived self-efficacy (see Lin, 2010, Saks & Ashforth, 2000). An examination of the conceptual definitions of perceived behavioural control and perceived self-efficacy reveals a very

direct similarity because both express an individual's belief in his/her ability to perform a particular behaviour (Ajzen, 2002). Perceived self-efficacy is thought to be the key determinant of behavioural control and is defined as the extent to which an individual believes he or she has the ability exercise control over his or her own level of functioning and events that may occur (Bandura, as cited in Ajzen, 2002). Ajzen maintains that, conceptually, very little difference exists between perceived behavioural control (PBC) and self-efficacy (SE). Both refer to people's beliefs that they are capable of performing a given behaviour. However, self-efficacy is generally regarded as a measure of how likely an individual is to overcome obstacles that may be present in performing a particular behaviour. In contrast, a measure of PBC would assess the extent to which the respondent believes they have the ability to perform the behaviour, how much the behaviour is under their control (Ajzen, 2002).

It can thus be postulated that individuals are not likely to form a strong intention to perform behaviour if they believe that they do not have any resources or opportunities to do so, even if they hold positive attitudes toward the behaviour and believe that important others would approve of the behaviour (subjective norm) (Ajzen, 1991). Perceived behavioural control can influence behaviour directly or indirectly through behavioural intentions. A direct path from perceived behavioural control to behaviour is expected to emerge when there is some agreement between perceptions of control and the person's actual control over the behaviour. Behaviour is affected indirectly through the increase in the individual's intention, thereby resulting in an increase in effort and perseverance (Ajzen, 2002) In this instance the prospective applicant would have full control over his/her decision to apply but the internal factors which affect this decision are of greater interest in this study.

Internal factors are comparable and interchangeable with self-efficacy beliefs. In Lin's (2010) study, hypotheses related to the perceived ease of use and self-efficacy were supported by a strong effect regarding intention to use job-search websites on the respondents' perceived behavioural control. These findings highlighted that, when job seekers perceive easier to get job information and more self-efficacy associated with

adoption, they feel more in control, which makes them more confident in using job-search websites. In the recruitment literature, Chapman et al. (2005) report that perceived alternatives, perceptions of hiring expectancies, and perceptions about one's performance during an application process can each influence recruitment-related outcomes (e.g., attraction, intentions). Furthermore, the realistic evaluation of the difficulty of a behaviour will also directly influence whether or not the individual will engage in the behaviour. For this reason, it is postulated that perceived behavioural control is an immediate antecedent of intention to apply. Therefore;

***Hypothesis 4:** Perceived behavioural control will have a significant positive effect on the prospective applicant's intention to apply.*

In summary, a prospective applicant's submission of an application to an organisation is determined by his/her intention to apply. Intention to apply, in turn, is predicted by (a) the degree to which the applicant perceives applying to an organisation as either a positive or a negative pursuit in terms of the level of attributed attractiveness (i.e., Attitude towards applying); (b) the perception of social pressure to apply for a job in that organisation (i.e., subjective norm); and (c) the perceived difficulty or perceived control over internal and external resources to be considered for selection in a particular organisation (i.e., perceived behavioural control). The theory of planned behaviour has been successfully employed in numerous studies to predict different types of behaviours including the prediction of job pursuit intentions (e.g., Jaidi et al., 2011; Schreurs, Derous, Hooft, Proost, & Witte, 2009; Van Hooft, Born, Taris & Van der Flier, 2006).

## **2.5. Summary**

The recruitment context offers a practical and relevant setting in which decision-making can be studied. The two key players in the recruitment game are the prospective applicant and the organisation, both eager to fill vacant positions in the organisation. The efforts of each party are integral to the success of this exercise. The extant literature on the topic of recruitment has taken various avenues in order to understand and explain the influence of

attraction factors and the decisions involved during this stage. The development of prospective applicants' behavioural intentions to apply to an organisation of their choice is often a function of a number of factors. These include organisation recruitment practices, environmental and social influences, and the applicant's personal perceptions and evaluations. The theory of planned behaviour is one of the few theories that addresses the multifaceted nature of behavioural decision making.

## **CHAPTER 3: RESEARCH METHODOLOGY AND PRELIMINARY DATA ANALYSIS**

### **3.1 Introduction**

As previously mentioned, the aim of the study was to develop and test an explanatory structural model that seeks to explain variance in job seekers' intention to apply for employment at a given organisation. The intention was to examine whether the same psychological process underpins the intention to apply across designated and non-designated applicant groups (i.e., whether the same structural model fits the data of both groups). In addition, the similarity in strength of structural relations between the two groups was also observed. For this purpose, a multi-group SEM analysis was employed in order to establish whether or not structural invariance existed between these groups, when comparing the variables related to their intentions to apply (i.e., attitude towards behaviour, subjective norm and perceived behavioural control). This essentially meant evaluating the generalisability of the proposed TPB model.

### **3.2 Research design**

The research design is often defined as a plan or blueprint of the manner in which the proposed research will be conducted (Babbie & Mouton, 2001; Blumberg, Cooper, & Schindler, 2005). This includes the types of measurement, sampling, data collection and data analysis that will be used and is determined by the nature of the research problem. The function of the research design is to ensure the generation of empirical evidence that can be interpreted unambiguously for or against the operational hypothesis. The design thus represents the plan or strategy that will be employed to empirically test the hypotheses that have been put forth (Babbie & Mouton, 2001). In order to establish the presence of salient beliefs and attitudes of the South African graduate, the methods used were triangulated in an attempt to develop a comprehensive understanding of the phenomenon in question. A mixed methods approach was chosen that included qualitative and quantitative research designs carried out sequentially in two phases. The nature, aims and procedures involved in each are discussed next.

### 3.3 Phase 1: Qualitative research approach

A qualitative research design was selected as a means to explore and identify a set of salient beliefs regarding the intention to apply that are specific to the South African graduate. The fruitfulness of such an approach is effectively captured as follows:

*“... the notion of quality is essential to the nature of things. On the other hand, quantity is elementally an amount of something. Quality refers to the what, how, when and where of a thing – its essence and ambience.”*

(Dabbs, 1982, as cited in Berg, 2009, p. 2)

Qualitative research essentially involves unearthing the meaning, definition, analogy, model or metaphor that distinguishes a phenomenon (Berg, 2009; Blumberg et al., 2005). Qualitative data thus are based on words, sentences, narratives, visual and audio material that are systematically analysed and interpreted to draw inferences about possible explanations for the aforementioned phenomenon (Blumberg et al., 2005; Neuman, 2003).

#### 3.3.1 Qualitative research question

Qualitative research is not driven by specific hypotheses but rather by an overarching research question that guides the use of this method. Based on the type of information required to test for the generalisability of the TPB model, the following research question was formulated: *“Do applicants from designated and non-designated groups differ in the salient beliefs that are modalised when considering the question of whether to apply or not?”* Put differently, this enquires whether the strength of the influence of the independent variable on the dependant variable differs across groups. The beliefs in question include the accessible beliefs, i.e., behavioural beliefs, normative beliefs and control beliefs that would provide insight into the underlying cognitive foundation of applicants' intentions and behaviour (Ajzen, 2002).

### 3.3.2 Qualitative sampling design

Convenience sampling was used to draw a sample. An invitation was extended to the Industrial Psychology Honours Class at the University of Stellenbosch to participate in the interview. This approach involves the inclusion of participants who are readily available and willing to participate (Babbie, 2010). One drawback of this approach is that the researcher has limited control over the representativeness of the sample; a repercussion of this situation is that findings should be interpreted with caution, especially when making generalisations to the larger population (Gravetter & Forzano, 2009). To minimise the issues, convenience sampling presents two sample groups that were drawn from two Western Cape universities that exhibit prominent differences in student demographics and racial representation. Even so, the researchers do acknowledge that the sample may not be an accurate reflection of the larger population.

The first sample comprised a small group ( $N = 12$ ) of students from the University of Stellenbosch (i.e., Industrial Psychology and Human Resource Management Honours students) who were invited to complete the pilot questionnaire through a short semi-structured interview. The semi-structured interview served to elicit readily accessible behavioural outcomes, normative referents, and control factors in a free response format but guided by very specific prompts (Fishbein & Azjen, 2010). The utility of this approach is evident in instances where issues that are significant to the understanding of a situation need to be detected and identified in order to narrow the research problem area (Blumberg et al., 2005). The 12 interviews lasted approximately 20 minutes and were recorded and transcribed (see Appendix B). Respondents were each assigned a number and were not required to provide their names, in order to maintain anonymity and confidentiality.

The second sample consisted of Industrial Psychology Honours students ( $N = 20$ ) from the University of the Western Cape. This sample completed the questionnaire in a pen-and-paper format due to time constraints. These responses were used to validate and add to the salient beliefs presented by the first sample. The demographic breakdown of the total qualitative sample ( $N = 32$ ) was nine White, two Black and 23 Coloured students.

The majority of the sample was female (68.8%) with an average age of 23. The qualitative questionnaire is discussed next.

### **3.3.3 Qualitative measurement instrument**

A semi-structured pilot questionnaire was developed in order to identify a set of salient beliefs that were meaningful to and representative of the South African graduate (see Appendix A). The nine items included in the measure were open-ended questions designed with the purpose of eliciting salient beliefs related to the specific belief outcomes, i.e., attitude to towards applying, subjective norm and perceived control. For example, “*What do you believe are the advantages or disadvantages of applying to an organisation for employment in the forthcoming months?*” The questionnaire was then used as an interview schedule as well as a self-report questionnaire in order to save time and to maximise the number of participants included in this phase of the study.

### **3.3.4 Qualitative data analysis**

The interviews that were conducted were transcribed and analysed according to appropriate approaches and techniques. Qualitative data analysis of textual material frequently employs content analysis to systematically examine the data collected. Content analysis is a “careful, detailed, systematic examination and interpretation of a particular body of material in an effort to identify patterns, themes biases and meanings” (Berg & Latin, 2008; Leedy & Ormrod, 2005; Neuendorf, 2002 as cited in Berg, 2009, p.8). It involves the manual or automated coding of the specified material (i.e., written, visual or audio) and the frequency of relevant words or phrases are counted (Blumberg et al., 2005). Hsieh and Shannon (2005) make a distinction between three types of content analysis, namely conventional, directed and summative. Each approach is separated by the coding scheme used, origins of the codes and challenges that influence the trustworthiness of the method. Based on the use of the theory of planned behaviour as a framework, the direct content analysis approach was favoured. A directed approach is a more structured approach to content analysis and is characterised by the validation or conceptual extension of a theoretical framework or theory (Hsieh & Shannon, 2005).

Moreover, the utility of the approach lies in the resulting predictions or relationships amongst the variables of interest and may serve to focus the research question.

The standard analytic activities used in content analysis include: data collection; conversion of data to text; identification of codes; developing categorical labels and themes through the grouping of codes; sorting and examining the material through the identification of similar patterns, relationships and commonalities or disparities; and, finally, comparing the identified patterns to previous research and theories in order to establish meaningful generalisations (Berg, 2009). In the directed approach, existing theory is used for the identification of key coding categories and operational definitions for these categories (Hsieh & Shannon, 2005) The analysis is thus guided by a more structured process.

The coding procedure is dependent on the research question and the goals of the study. The researcher may seek to identify and categorise all instances of a particular phenomenon or identify predetermined codes highlighted by the theory or related studies (Hsieh & Shannon, 2005). The goal of this study was to identify salient outcome beliefs that emerged from the transcribed responses to the interview questionnaire. The analysis resulted in lists of modal salient outcomes, referents, and control factors, and a rank order comparison of the frequency of these beliefs (Icek Ajzen, 2002).

Despite the contribution that the directed approach makes to existing research, there are a number of limitations that should be considered. Firstly, the use of theoretical frameworks or theory may introduce bias, as the researcher is more likely to identify support for the theory, than evidence to the contrary. Secondly, probing questions used during the interview may contain cues that would prompt respondents to answer in a particular direction in order to please the researcher. Lastly, the danger of over reliance on the theory lies in the oversight of contextual features of the variable of interest by the researcher (Hsieh & Shannon, 2005). Owing to the nature of qualitative research and the improbability of analysing the coded data with statistically meaningful tests, the approach employed was repeated by two raters recruited from the Industrial Psychology Master's

class who had limited knowledge of the theory, in order to ensure the reliability of the method and the results. The results obtained from these three sources were combined and sorted in order to develop the pilot questionnaire.

### **3.3.5 Questionnaire design**

The lists of salient beliefs obtained from the content analysis were used to construct items for inclusion in the final questionnaire. The guidelines provided by Ajzen (2002) were followed in order to develop direct measures and belief based-measures of the TPB's latent variables. The items were formulated according to the principle that beliefs provide the cognitive and affective basis for the variables contributing to the development of intentions. Ajzen states that: "Beliefs in the theory of planned behaviour are assumed to obtain indirect, belief-based measures of the constructs in question." (Ajzen, 2002, p. 8).

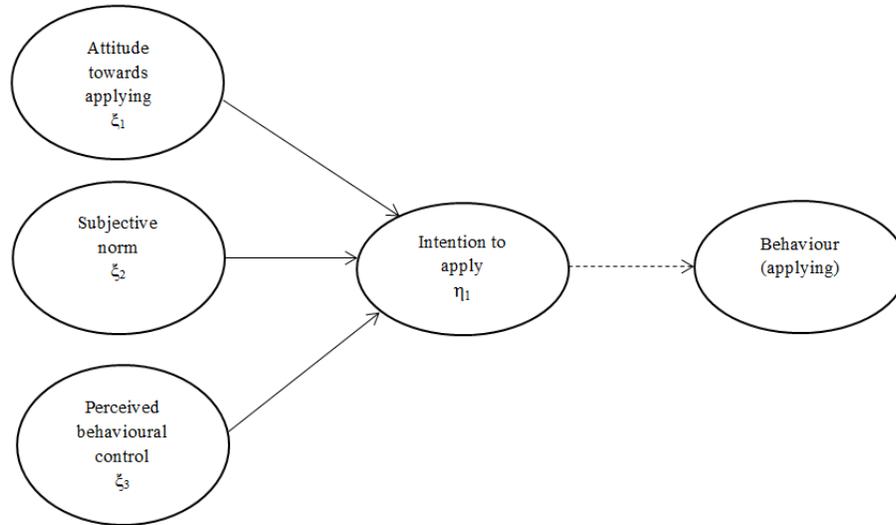
Belief-based measures were formulated for attitude towards applying, subjective norm and perceived behavioural control in order to operationalise these variables. The attitude toward applying variable included direct and belief-based measures. The direct measure included bi-polar adjectives on a seven-point scale. The questions expressed a mix of instrumental (e.g., goal-directed vs. directionless) and experiential (e.g., satisfying vs. unsatisfying) evaluations ( Ajzen, 2002). Belief-based measures were formulated to evaluate the salient outcomes and beliefs derived from the content analysis.

The data obtained also guided the selection of reliable and valid items for use in the final questionnaire. Keeping in mind the principles of a quantitative research design the nature, aims and procedures employed in designing the final questionnaire were primarily selected to achieve a valid, reliable measure for the purpose of collecting quantitative data. The items were reviewed for construct validity by an expert with extensive experience in the development and use of TPB measures.

The following section provides an in-depth discussion of a quantitative research design and the related processes and procedures.

### **3.4 Phase 2: Quantitative research design**

In order to gather empirical evidence that will be used to test the presented assumptions, an ex post facto correlation design was employed. A correlation design is specifically suited to research where the researcher cannot manipulate the dependant variable and both the independent and the dependant variables therefore are only observed across individuals. Through this observation, the researcher can determine the causal relationships in the identified (dependent and independent) variables across individuals to establish the extent to which they co-vary, without any direct control over the independent variables. Essentially, covariances are calculated between the observed variables that are represented by individual items or item parcels (Kerlinger & Lee, 2000). In order to reproduce the covariance matrix as truthfully as possible, the estimates for the freed measurement model parameters are acquired in an iterative fashion (Diamantopoulos & Siguaw, 2000a). Failure to reproduce the observed covariance matrix by fitting the proposed model would serve as evidence that the TPB does not explain the observed covariance matrix as proposed (Kelloway, 1998a). However, if the estimated model parameters do allow the accurate reproduction of the observed covariance matrix, it is not immediately assumed that the TPB model explains the observed covariance matrix as proposed. A significant degree of fit between the observed and estimated covariance matrices lends only one plausible explanation of the phenomenon described by the model.



*Figure 3.1:* The structural equation model depicting the Theory of Planned Behaviour variables.

### 3.4.1 Research hypotheses

The aforementioned substantive hypothesis translates to the following specific operational hypotheses:

#### Hypothesis 1:

The structural model provides a valid psychological description of how (a) attitude towards applying, (b) subjective norm, and (c) perceived behavioural control influence intention to apply.

Close fit null hypothesis:

$$H_{01a}: \text{RMSEA} \leq 0.05$$

$$H_{b1a}: \text{RMSEA} \geq 0.05$$

Reasonable fit null hypothesis:

$$H_{01b}: \text{RMSEA} \leq 0.08$$

$$H_{a1b}: \text{RMSEA} \geq 0.08$$

### Hypothesis 2:

Attitude towards applying will have a significant positive effect on the prospective applicant's intention to apply.

$$H_{02}: \gamma_{11} = 0$$

$$H_{a2}: \gamma_{11} > 0$$

### Hypothesis 3:

Subjective norm will have a significant positive effect on the prospective applicant's intention to apply.

$$H_{03}: \gamma_{21} = 0$$

$$H_{a3}: \gamma_{21} > 0$$

### Hypothesis 4:

Perceived behavioural control will have a significant positive effect on the prospective applicant's intention to apply.

$$H_{04}: \gamma_{31} = 0$$

$$H_{a4}: \gamma_{31} > 0$$

## **3.4.2 Sampling and data collection**

Most research studies make use of two types of sampling method, namely; probability and non-probability sampling. Probability sampling can be defined as “samples selected in accord with probability theory, typically involving some random-selection mechanism” (Babbie, 2010, p. 196). The final questionnaire was disseminated electronically and respondents were invited to participate in the study; they therefore had a choice whether to opt in to the study, or not. Respondents were also informed that they could leave the study at any point without any repercussions. This approach therefore did not support a completely random sample of the population of interest as a result of the constraints placed on the study. For this reason, a non-probability convenience sampling method was employed in the present study. A convenience sample is defined as the selection of respondents based on their availability and willingness to respond (Gravetter & Forzano, 2009)

The major advantages of using convenience sampling are that it is easy and less expensive than utilising probability sampling (Gravetter & Forzano, 2009). However, a major drawback of convenience sampling is that this type of sampling method provides little control over the representativeness of the sample, thus bias becomes an issue (Gravetter & Forzano, 2009). However, one way in which this research study tried to address this issue was by inviting all final year of study or postgraduate level students who were planning to enter the job market on completion of their studies (preferably the following year) to complete the questionnaire. This ensured that the sample was diversified to a certain degree and also prevented a distorted representation of salient beliefs that would contribute to the formation of intentions. The next issue for consideration was obtaining valid measures for the constructs being investigated.

### **3.4.3 Measuring instruments**

Each of the variables represented in the structural model were operationalised in order to gauge the extent of the respondents' intention to apply. The variables that were operationalised included: Attitude towards the behaviour, Subjective norm, Perceived Behavioural Control, and Intention to Apply. A survey questionnaire, using guidelines set out by Ajzen (2002), was developed for this purpose. The qualitative data from the first phase of the study served as an important source in the formulation of the measurement and the selection of appropriate items.

The final questionnaire was formulated to evaluate each of the theory's major constructs: Attitude towards behaviour, subjective norm and perceived behavioural control (Fishbein & Azjen, 2010). The items were developed by the researcher on the basis of the most salient beliefs that were highlighted in the qualitative data collection. An empirical as well as rational keying approach was followed for the selection of themes and items to be included in the final questionnaire. A number of items from Jaidi et al.'s (2011) study were also reformulated and adapted to the context of this study to be included in the questionnaire. The original instrument contained 17 items within four scales with Cronbach's alpha reliabilities ranging from 0.60 to 0.82 (Appendix D).

The items were developed according to strict specifications provided by the authors, i.e., they were self-directed and formulated in a manner that was exactly compatible with behavioural criterion (Fishbein & Azjen, 2010). Furthermore, confirmatory factory analysis was conducted to ensure that each set of items that was designed to directly assess a given construct had a high degree of internal consistency, and that the measures of the different constructs exhibited discriminant validity (Fishbein & Azjen, 2010). A seven-point bipolar adjective scale was selected whereby participants were asked to circle the number that best described their personal opinions.

The final questionnaire also included measures of all demographic characteristics, personality variables, and other background factors that were deemed useful to retain.

#### **3.4.4 Ethical considerations**

The proposal for the research, as well as the thesis questionnaire, was submitted for review by the Research Ethics Committee at the university. This is an important part of the research process, since this study required personal information in order to access members of the student population. An official letter delineating approval to conduct the research study at the University of Stellenbosch was eventually received from the committee (Appendix C). It is recommended that further considerations be taken into account to ensure that the participants are protected from any type of harm in conducting the actual research (Aguinis, Henle, & Ostroff, 2001).

The ethical considerations most pertinent to this study included the right to informed consent, right to privacy and the right to confidentiality (Aguinis et al., 2001). Participants were informed of these issues in the introduction to the study that was provided in the interview and e-survey. The purpose and aim of the questionnaire and the research study were clearly outlined. Even though the participants had the opportunity to opt out of the study at any time, the e-survey was set to require a response on every item (in order to limit the number of missing data as far as possible). The respondents were

informed of the anonymity of their responses and were therefore not required to provide their names or any other form of identification.

### **3.4.5 Data analysis**

The present study employed multivariate data analysis as the chosen method of data analysis. The decision was underpinned by the need to investigate four constructs simultaneously and was therefore considered the optimal choice. Multivariate analysis also provides a means of enhancing the level of understanding that the lecturer has about the relationship between two constructs (Babbie, 2010). Once the data analysis rationale has been established, one then needs to consider how to analyse the gathered data; for which there are various data analysis techniques. These techniques are outlined briefly in the following subsections.

#### ***3.4.5.1 Data analysis techniques and software packages***

The statistical techniques that were employed for the analysis of the collected data included; item analysis, factor analysis, frequency analysis, item parcelling, confirmatory factor analysis (CFA) and structural equation modelling (SEM). The software packages that facilitated the effective analysis of the data were Statistical Package for Social Sciences version (SPSS 20) and LISREL 8.8 (Jöreskog & Sörbom, 1996a). The procedures in conjunction with the statistical technique whereby these software packages were employed are elaborated upon in the subsequent section.

### **3.4.6 Statistical analysis**

The statistical analysis technique that has been selected is Structural Equation Modelling (SEM). It was chosen for the purpose of conducting Confirmatory Factor Analysis on the TPB measurement model using LISREL (Du Toit & Du Toit, 2001; Jöreskog & Sörbom, 1996a). The SEM technique has gained considerable popularity due to the rigorous and parsimonious approach that is taken when it is used in analyses (Kelloway, 1998b). The advantages of this approach are: (a) SEM allows the researcher to determine how well these measures reflect the intended constructs; (b) SEM permits the testing and specification of more complex path models in addition to testing the components

comprising the model to make sound predictions; and (c) it provides a flexible yet powerful method that caters for the quality of measurement which is very important in the evaluation of the predictive relationships amongst the underlying latent variables (Kelloway, 1998a).

### **3.4.7 Preparatory procedures**

The aim of this section is to describe and motivate the procedures that preceded the SEM analysis. This process involves the approach that is taken to treat missing values as well as an argument for the necessity of performing item and dimensionality analyses and a description of the procedure that was followed. Finally, the procedure for examining measurement equivalence/invariance is argued and explained.

#### ***3.4.7.1 Treatment of missing values***

Missing values need to be acknowledged and controlled to ensure the completeness of the data set prior to conducting analyses. An analysis of the missing values was conducted using PRELIS. The literature suggests various avenues that may be considered when handling missing data; these include: (1) listwise deletion, (2) pairwise deletion, (3) mean substitution, (4) group mean substitution, (5) imputation by regression, (6) the structural equation modelling approach, (7) hot-deck imputation, (8) expectation maximisation, (9) full information maximum likelihood and (10) multiple imputation (Du Toit & Du Toit, 2001).

In the case of imputation by matching (Jöreskog & Sörbom, 1996a), the imputation of a missing value on variable  $y_a$  for a specific case  $a$  with no missing values on a set of  $p$  matching variables  $x_1, x_2, \dots, x_p$  involves the following procedure:

- All cases  $b_i$ ;  $i = 1, 2, \dots, n$  are identified with no missing values on either  $y_{b_i}$  or on the set of matching variables for which  $W = \sum(z_{b_i} - z_{a_i})^2$ ;  $i=1, 2, \dots, n$  is a minimum.
- If only  $n = 1$  case exists for which  $W$  is a minimum, then  $y_a$  is simply replaced by  $y_b$ .

- If, however  $W$  is a minimum for  $n > 1$  cases, with  $y$  values  $y_1(m), y_2(m), \dots, y_n(m)$ , the mean  $E(y_m) = (1/n)\sum y_i(m)$  and variance  $s^2_m = (1/[n-1])\sum (y_1(m)-E(y(m)))$  of the  $y$ -values of the matching cases will be calculated.
- If  $s^2_m/s^2_y < v$ , where the variance ratio  $v$  was set equal to 0.50,  $y_a$  is replaced by  $E(y_m)$ . If the variance ratio does not pass the critical value, no imputation is done (Jöreskog & Sörbom, 1996a).

The value of this approach lies in the preservation of the distributional characteristics of the data as opposed to a mean substitution of data values. On the other hand, the approach may become cumbersome when dealing with large datasets as many classification variables would need to be specified. It is also ideal if matching variables are used that are not included in the actual data analysis (Dunbar-Isaacson, 2006; Olinsky, Chen, & Harlow, 2003). Even though other SEM methods such as expectation maximisation and multiple imputations are more favourable, these estimation methods of the missing values are based on the assumption of multivariate normality. This condition is impossible to guarantee and can therefore not be presumed.

The preceding discussion highlights the utility and suitability of an imputation by matching approach as the most suitable approach for this study, as allowed for making use of the naturally occurring distributional properties of the existing data. The choice of classification/matching variables is a prerequisite in using imputation by matching. Therefore, items least plagued by missing values were identified and served as matching variables. Missing values were imputed using the PRELIS programme (Jöreskog & Sörbom, 1996b) by using the matching variables.

#### ***3.4.7.2 Dimensionality analysis***

Contrary to the popular method of conducting item analysis before dimensionality analysis, the researchers opted to begin with the dimensionality analysis. This decision was based on the assumption that the TPB scales may not be completely uni-dimensional due to different factors that could be measured in the same scale. However, the instrument developed for the purpose of the study was required to fulfil the uni-dimensionality assumption whereby the items selected to represent each latent variable

would solely measure the intended latent variable (Hair, Black, Babin, Anderson, & Tatham, 2006). Strict uni-dimensionality however, is rarely achieved.

Uni-dimensionality would attempt to achieve partial-item correlations that would become significantly smaller when controlling for a single underlying factor (Hair et al., 2006). The presence of high resultant factor loadings served as a useful indicator in testing that a sufficient number of factors were included to explain the observed correlation matrix and also account for their correspondence with the intentions of the scale. In instances where more than one factor emerges for a scale formulated to measure a single latent variable, this occurrence signalled the possibility of multiple dimensions and the scale would thus fail the uni-dimensionality assumption. This approach facilitated an understanding of the internal function of the previously specified factor structure of the TPB model, thereby providing probable explanations for possible poor model fit.

The dimensionality analyses were conducted by subjecting each TPB scale to an unrestricted principal axis factor analysis with oblique rotation. Principal axis factor analysis was selected as a more favourable method to apply than principal components analysis. Principal components analysis does not separate error and specific variance, whereas principal axis analysis does allow for the presence of measurement error (Kline, 1994; Stewart, 2001). Oblique rotation is considered to be more effective than varimax rotation as it can provide simple structure even when underlying factors may be related to each other but may also be complex to interpret (Kerlinger & Lee, 2000; Stewart, 2001; Tabachnick & Fidell, 2007). The outcome of the dimensionality analysis will be discussed in Chapter 4. This analysis was followed by the item analysis.

#### ***3.4.7.3 Item analysis***

Item analysis serves to develop a clear understanding of a test or questionnaire (Murphy & Davidshofer, 2005). In effect it is an analysis of correlations between each item with a total score (Kline, 1994) as well as inter-item correlations (Murphy & Davidshofer, 2005). Items with higher correlations are assumed to be measuring the same latent variable. Item analysis is applied in the formulation of tests/questionnaires and serves as a means of making an informed item selection and then subjecting the selected items to factor analysis (Nunnally, 1978).

Item analysis thus is a valuable precursor to fitting data to the a priori model. The procedure assists in the confirmation of consistency between observed and latent variables, i.e., whether the observed variables are consistent measures of the intended latent variable. High reliability of the test items/observed latent variable manifestations would confirm the design intentions of the study. Item analysis thereby served to make final item selection decisions (Nunnally, 1978). It is important, however, to note that Azjen (2002) states that assumptions of internal consistency do not necessarily hold for accessible beliefs tapped by belief-based measures. The author's reasoning is as follows:

People's attitudes toward a behavior can be ambivalent if they believe that the behavior is likely to produce positive as well as negative outcomes. And the same is true of the set of accessible normative beliefs and the set of accessible control beliefs. Consequently, internal consistency is not a necessary feature of belief based measures of attitude, subjective norm, and perceived behavioral control. It is in their aggregate that they provide a single manifest indicator of the latent construct. (p.8)

Remaining cognizant of this assertion, items that were identified as contributors to poor latent variable representation and possible poor model fit were evaluated and considered in light of the theory before deciding whether to delete them or not.

### **3.4.8 Structural Equation Modelling**

#### ***3.4.8.1 Variable type***

The TPB questionnaire that was developed for the purpose of this study utilised a seven-point Likert-type response scale. The respondents were required to indicate the strength of their agreement with the statements that were presented. This type of data would be regarded as continuous data, which is ideal for the purpose of CFA (Maximum Likelihood) SEM analyses. Alternatively, raw, item-level data can be converted to continuous data through the use of item parcels.

#### ***3.4.8.2 Evaluation of multivariate normality***

When using continuous data in SEM, maximum likelihood estimation is preferred. Other estimation methods include generalised least squares (GLS) and full information maximum likelihood (FIML). FIML is useful when dealing with missing values. However, with all these estimation methods, multivariate normality is assumed for the data (Mels, 2003).

When working with non-normal data, supplementary estimation methods could be employed, such as robust maximum likelihood (RML), weighted least squares (WLS), or diagonally weighted least squares (DWLS) (Mels, 2003). The advantage of these methods lies in the interpretation of the solution not being based on transformed values (Du Toit & Du Toit, 2001). However, RML has been highlighted as the preferred approach when dealing with multivariate non-normal data (Mels, 2003).

The default method of estimation when fitting measurement models to continuous data (indicated by the 6-point scale used in the measure) an underlying assumption is that of multivariate normality. Multivariate normality is tested via PRELIS in LISREL (Jöreskog & Sörbom, 1996b). The lack of multivariate normality would result in an increase in the chi-square statistic. The multivariate normality assumption was tested for each subset of indicator variables used in the fit of the TPB measurement model. The null hypothesis of univariate normality is rejected if  $p < 0.05$ . However, the null hypothesis of univariate normality is rejected if  $p > 0.05$ .

#### ***3.4.8.3 Estimation method***

In order to meet the research objectives of this study, LISREL 8.88 (Du Toit & Du Toit, 2001, Jöreskog & Sörbom, 1996b) was used to determine the fit of the TPB model to the presenting data. When multivariate normality is assessed and the data is found to lack normality it is read into PRELIS (Jöreskog & Sörbom, 1996a) to compute the asymptotic covariance matrix that will serve as input for further LISREL analyses.

#### ***3.4.8.4 Evaluation of fit***

The fit of the TPB structural model in the single group analyses is examined by testing  $H_{01}$  to  $H_{04}$ . The full range of fit indices reported in LISREL is examined and interpreted

to determine the adequateness of fit of the data for each sample and model. The fit indices are interpreted holistically and are carefully assessed before conclusions regarding model fit are made (Diamantopoulos & Siguaaw, 2000). The indicators of fit are discussed in detail in Chapter 4 the fit of the specified models is evaluated. Examination of the modification and resultant change indexes presented by LISREL are also reviewed. Standardised residuals are also investigated and presented. Finally, squared multiple correlations and the completely standardised factor loadings are examined.

### **3.5 Summary**

The current chapter has explicated the two research designs employed for the purpose of effectively gathering and analysing the required data. The discussion began with the qualitative research design that was employed for the purpose of eliciting salient beliefs in members of the student population that would be entering the workforce in the next few months. These beliefs were used to develop items for the quantitative questionnaire. The second phase of the study followed a qualitative research design approach in order to gather numerical data for the purpose of quantitative analysis. The data were used to evaluate the research hypotheses and also provided the foundation for the conceptual structural model being fitted.

Chapter 3 also outlined the sampling procedure, the nature of the sample items and the sampling method that was employed. The chapter culminated in a discussion of the data analysis techniques that were implemented in the study. The various techniques employed in this study include item analysis, factor analysis, frequency analysis, item parcelling, confirmatory factor analysis (CFA) and structural equation modelling (SEM). The software packages utilised for data analysis were Statistical Package for Social Sciences version 20 (SPSS 20.0) and LISREL 8.8 (Jöreskog & Sörbom, 1996a).

## CHAPTER FOUR: RESULTS

### 4.1 Introduction

The various methods chosen to analyse the data was explicitly outlined in Chapter three and the results will be discussed in this chapter. The discussion will begin with the results of the quantitative phase of the present study. An outline of the psychometric properties and Exploratory Factor Analysis (EFA) of the TPB measure will be provided that will include the results of the dimensionality analysis, item analysis and the univariate descriptive statistics will be presented. The results of the Confirmatory Factor Analysis (CFA) and fitting of the combined measurement and structural model using Structural Equation Modelling (SEM) will be reported.

### 4.2 Preparatory procedures for Structural Equation Modelling

#### *4.2.1 Computation of TPB scores*

The quantitative analysis began with an investigation of the data in order to establish the nature of these data (Field, 2005). However before the data could be analysed scores were computed for the TPB variables. As previously stated in Chapter 3, the items were developed to elicit responses regarding (a) the respondents' beliefs about the likelihood of the behaviour of interest producing a particular outcome (expectancy component), as well as (b) the desirability of the outcome (value component) (Hankins, French, & Horne, 2000). These pairs of scores were then multiplied to calculate a product term for each item (Ajzen, 2002).

In the data file, items 1-8 were direct measures of attitude towards applying, and were measured with a seven point, bipolar semantic differential. The researcher decided to exclude the direct measure and only focus on the belief- based measures in this analysis. The indirect belief-based measures required the computation of a product term according to Ajzen's (2002) guidelines for the use of the TPB framework. The items that measured belief strength and their corresponding outcome evaluation were computed (using the

SPSS COMPUTE VARIABLE procedure) (SPSS 20.0, 2012) according to the following equation:

$$A_B \propto \sum b_i e_i$$

The belief strength ( $b_i$ ) was multiplied by the outcome evaluation ( $e_i$ ) to produce a product score that was used in the subsequent analyses of the data (Ajzen, 2002). In a similar manner subjective norm (SN) was computed using the equation:

$$SN = \sum n_i m_i$$

The equation represents the product of normative belief strength ( $n_i$ ) multiplied by the individual's motivation to comply ( $m_i$ ) (Ajzen, 2002). Lastly, perceived behavioural control was computed using the strength ( $c_i$ ) and power ( $p_i$ ) of the presented control beliefs (PBC), as indicated by the equation:

$$PBC = \sum c_i p_i$$

Contrary to the usual practice of item and dimensionality analysis, the dimensionality analysis was conducted first followed by the item analysis. This approach was taken due to concerns about the dimensionality of the subscales in the TPB measure. Therefore dimensionality was examined first and will be presented below.

#### **4.2.2 Dimensionality analysis**

Dimensionality analysis was employed in order to gain an understanding of the item functioning within each scale in the TPB questionnaire. Uni-dimensionality was determined through the interpretation of the both the number of factors extracted and associated factor loadings (Tabachnick & Fidell, 2007). In cases where the uni-dimensionality assumption was not supported the possibility of meaningful factor fission was investigated. The objective of this step was to determine whether the extracted factors created meaningful sub-themes within each sub-scale. These sub-scales were further subjected to forced extraction of a single factor in order to examine the resultant magnitude of the factor loadings and the residual correlations. The dimensionality

analyses were conducted in SPSS 20.0 (2012) by subjecting each subscale to an unrestricted principle axis factoring (PAF) with oblique rotation.

The following sub-section begins with an overview of the TPB scales assessed against the unidimensionality assumption. A summary is also provided describing items that returned low factor loadings.

#### ***4.2.2.1 Dimensionality analysis results***

The dimensionality analysis was conducted on each subscale of the TPB questionnaire. The sub-scales in the measure supported the uni-dimensionality assumptions however, two of the 5 sub-scales namely; (i) Behavioural beliefs and (ii) Perceived behavioural control presented evidence of factor fission. A summary of the number of components (eigenvalues bigger than 1 and the scree plot) will be presented and then interpreted in accordance with the factor loadings reported. The interpretation of the psychometric properties of the subscales and the uni-dimensionality assumption are discussed below.

#### ***4.2.2.2 Uni-dimensionality results of the core TPB variables and Intention to Apply***

Principle axis factor analysis with oblique rotation was performed on each of the subscales in order to evaluate the success with which each item accomplished its intended function of reflecting the intended latent dimension of a particular sub-scale. The factor analysis was conducted in SPSS 20.0 (2012) and dimensionality was assessed for the items in each subscale. The number of factors to be extracted was identified using the eigenvalue-greater-than-unity rule of thumb and the percentage of variance accounted for by the presenting factors. Two of the four of the subscales performed well under this assessment effectively reflecting the latent variable they were intended to (i.e., subjective norm and intention to apply). The two subscales (i.e., behavioural beliefs and perceived behavioural control) that exhibited multidimensionality were subjected to further analysis.

The heterogeneous subscales (i.e., behavioural beliefs and perceived behavioural control) were split accordingly with oblique rotation to assess the distinctiveness of each factor

(Tabachnick & Fidell, 2001). Furthermore, the consideration of eigenvalues was accompanied by the inspection of the respective scree plots for confirmation of the number of factors. In all cases the scree plot results confirmed the greater than unity rule results (see Appendix D).

Factor fission occurred within the Attitude towards applying subscale and highlighted the presence of three factors. Factor 1 showed the majority of the variance (eigenvalue = 4.226; % variance = 42.258). Factor 2 (eigenvalue = 1.340; % variance = 13.398) and factor 3 (eigenvalue = 1.006; % variance = 10.064) accounted for smaller amounts of variance. The factors could not be supported by the theoretical logic underpinning this factor. It should also be noted that the eigenvalues greater-than-one rule is known to overestimate and, in some cases, even underestimate the number of components (Cliff as cited in O'Connor, 2000). Furthermore, the use of this rule does not always result in components that are reliable (Cliff as cited in O'Connor, 2000). However, the extraction of a single factor using Principal Axis Factoring was sufficient to explain the observed inter-item correlation matrix (.463 to .729), thereby confirming the essentially uni-dimensional nature of the sub-scale.

The Perceived behavioural control subscale split into two factors (eigenvalue = 4.629 and 1.125% variance; eigenvalue = 42.081 and 10.23% variance). An assessment of the factor loadings and the items themselves were consistent with the dimensions of this variable proposed by the theory. Factor 1 (eigenvalue = 4.629; 42.081% variance) constitutes a factor characterized by internally determined and managed control beliefs e.g., whereas Factor 2 (eigenvalue = 1.125; 10.23% variance) represents a factor characterized by externally controlled elements of their beliefs. The rotated factor matrix (Appendix D) contains the items that load on the respective factors. The emergence of two factors can be attributed to the content of the questions posed. In the items; PBC2, PBC7, PBC10 and PBC11 relate to factors beyond the control of the individual, such as positions advertised and opportunities to apply, the job market and the recruitment policy. When forcing a single factor, the items loaded satisfactorily ( $>.40$ ) except for the item PBC10 (0.294% variance). Even though this item did not load satisfactorily it was flagged and retained for

consideration in the item analysis. The results of the item analysis will be discussed in the subsequent section.

### **4.2.3 Item Analysis**

Item analysis is essentially an assessment of the reliability of items in a measure. Reliability is described as the extent to which individual items (or sets of items) are able to produce results consistent with the overall questionnaire. It is therefore the ability of a scale to consistently reflect the construct that is being measured (Field, 2005). The Cronbach's alpha value is a commonly accepted means of measuring reliability. This value reports the average correlation of items within a test where the items are standardised (Coakes, Steed & Price, 2008). An acceptable value for Cronbach's alpha ranges from .7 to .8 while values considerably lower values may be indicative of an unreliable scale (Field, 2005; Nunnally, 1978). The current study will therefore utilize a Cronbach's alpha value of .7 as the criterion for acceptable reliability coefficients. The examination of the factor loadings for the TPB measure will be outlined in the following subsection.

#### ***4.2.3.1 Item factor loadings for the TPB subscales***

Factor loadings can be understood as follows: (i) 0.30 to 0.40 are considered to meet the minimal level for interpretation of structure, (ii) 0.50 or greater are considered practically significant, and (iii) loadings exceeding 0.70 are considered indicative of distinct structure (Hair et al., 2006). The practical 0.30 or greater was used as a benchmark for these analyses. When interpreting the output, factor loadings of 0.30 and above were assumed to be an acceptable reflection of the factor being measured (Tabachnick & Fidell, 2001).

Item analyses were performed on all the subscales developed to test the measurement model, by means of the SPSS Reliability Procedure (SPSS 20, 2012). The purpose of the analyses was to identify and eliminate possible items that were not contributing to an

internally consistent description of the latent variables measured by the subscales in question (Anastasi & Urbina, 1997).

It is generally accepted that Cronbach's alpha's serve as an indication of internal consistency and thus the suitability of the items and subscales included in a measure (Field, 2005). However, a social cognition model such as the Theory of planned behaviour differs in terms of the reliabilities that can be used for direct and indirect measures. High internal consistencies are required for direct measures of Attitude Towards Behaviour, Subjective Norm and Perceived Behavioural Control (Ajzen, 2002). However, Ajzen (2002) contends that due to the theoretical underpinnings of this approach belief-based measures of these variables are not subjected to the same impositions. The author's reasoning is that the accessible salient beliefs account for each of their related constructs, i.e., behavioural beliefs account for attitude towards applying and there is no assumption of internal consistency. Due to the likelihood of an individual holding both positive and negative expectations of the outcome of the behaviour in question internal consistency is not a prerequisite for belief-based measures. Therefore the analysis of the subscales will not adhere as strictly to the guidelines that are generally set forth for item and factor analysis.

A more detailed presentation of the results of the subscale analyses on the imputed data set are presented in separate sections below and in Tables 4.1. to 4.4. In addition to the interpretation of Cronbach's alpha, a number of guidelines were adhered to in order to determine the acceptability of the different items constituting the subscales, and the decision-making regarding the retention or deletion of individual items. These guidelines imply investigating the strength of inter-item correlations and item-total correlations, as well as looking for extreme item means and changes in standard deviations if items are deleted.

#### ***4.2.3.2 Intention to apply***

The reliability coefficient for the Intention to Apply subscale was = .867, which was considered satisfactory. The item ITA4, as indicated in Table 4.1., was correlated lower than the other items when examining the corrected item-total correlations (.578). Even though deleting the item would result in an increase (from .867 to .937) in the reliability

coefficient the item was not removed, as deletion would reduce the breadth of the measurement of the construct. Its deletion would also complicate the fitting of the CFA and the item was therefore retained.

Table 4.1

*Reliability Analysis of the Intention to Apply Subscale*

<b>Item-Total Statistics</b>					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
ITA1	17.20	15.451	.827	.823	.797
ITA2	17.22	15.191	.845	.841	.789
ITA3	17.36	15.543	.774	.676	.813
ITA4	18.02	13.102	.574	.330	.936

*Note.*  $N = 843$ ;  $\alpha = .867$

**4.2.3.3 Behavioural Beliefs**

The items comprising the Behavioural Beliefs indicated a satisfactory Cronbach's alpha for the overall scale ( $\alpha = .831$ ). The inter-item correlations for the items were satisfactory except for ATT4 that had a relatively low correlation with the other items in the subscale. The item was therefore flagged as problematic. The nature of the item, i.e., "I will be in my preferred geographic location", may not be a concern for respondents in this sample and may have had an impact on the responses given. The item ATT4 was deleted due its weak inter-item correlation and its weak loadings on the factors extracted in the uni-dimensionality analysis.

Table 4.2

*Reliability Analysis of the Behavioural Belief Subscale*

<b>Item-Total Statistics</b>					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
ATT1	321.542	3365.778	.489	.288	.808
ATT2	328.233	3376.867	.428	.463	.815
ATT3	328.674	3307.517	.521	.504	.805
ATT4	331.737	3557.548	.175	.065	.851
ATT5	324.918	3160.424	.676	.483	.789
ATT6	324.282	3305.295	.503	.349	.807
ATT7	322.959	3225.957	.608	.504	.796
ATT8	322.011	3219.628	.649	.498	.793
ATT9	321.909	3278.000	.646	.483	.794
ATT10	321.434	3302.992	.546	.383	.803

*Note.*  $N = 843$ ;  $\alpha = .831$

**4.2.3.4 Subjective Norm**

The Subjective Norm subscale was only comprised of five items which Nunnally (1978) contends could give rise to a small Cronbach's alpha value, as this measure is generally at the mercy of the number of items included in a scale. Despite these warnings the Subjective Norm subscale yielded a satisfactory Cronbach's alpha of .868.

Table 4.3

*Reliability Analysis of the Subjective Norm Subscale***Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SN1	81.7805	1706.378	.645	.470	.850
SN2	85.792	1611.053	.670	.506	.845
SN3	92.393	1672.742	.660	.527	.847
SN4	89.358	1569.643	.792	.630	.814
SN5	90.776	1618.606	.690	.528	.840

*Note.*  $N = 843$ ;  $\alpha = .868$

**4.2.3.5. Perceived behavioural control**

Through the item analysis for the Perceived Behavioural Control subscale, items PBC2, PBC7 PBC10 and PBC11 were flagged as somewhat problematic. As depicted in Table 4.4., deletion of these items would not increase the scale variance substantially except for PBC10 . ( $\alpha = .844$  to  $\alpha = .854$ ). Furthermore, this item reported a poor corrected item-total correlation ( $r = .298$ ) with the scale overall, indicating a poor reflection of the latent variable construct. Nevertheless, the item was retained for further analysis.

Table 4.4

*Reliability Analysis of the Perceived Behavioural Control Subscale*

<b>Item-Total Statistics</b>					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
PBC1	328.5421	5670.885	.496	.283	.833
PBC2	339.7651	5579.379	.466	.264	.836
PBC3	333.4603	5432.764	.621	.437	.823
PBC4	330.3381	5370.818	.642	.482	.821
PBC5	326.9834	5559.575	.547	.342	.829
PBC6	327.3179	5465.298	.669	.540	.821
PBC7	340.5421	5547.089	.428	.217	.841
PBC8	330.2100	5447.563	.634	.494	.822
PBC9	329.2977	5343.295	.719	.625	.816
PBC10	342.3986	5752.240	.298	.135	.854
PBC11	328.1673	5789.676	.385	.171	.842

*Note.*  $N = 843$ ;  $\alpha = .844$

In summary, the TPB measure performed well in the item analysis with all the subscales displaying internal consistency coefficients above .7 (Field, 2005). Table 4.5 presents a summary of the results of the item analyses performed.

Table 4.5

*Reliability of the subscale measures*

Scale	$\alpha$	$M$	$\sigma^2$
Behavioural beliefs	.831	359.843	4214.355
Subjective norm	.868	109.381	2492.088
Perceived Behavioural Control	.848	365.522	6763.781
Attitude towards applying	.926	47.88	77.580
Intention to apply	.867	23.27	25.249

*Note.*  $N = 843$

The items in each subscale were also examined. Most of the items reported moderate to strong factor loadings and were therefore retained. However, two items that obtained factor loadings lower than .30 were part of the Behavioural Belief subscale and Perceived Behavioural Control subscale. Poor items were detected in the item analysis but only the ATT4 item was flagged for deletion as its presence could not be theoretically supported.

In the following sections the results of tests of the various assumptions underlying multivariate statistics are presented.

#### **4.2.4 Assumptions underlying multivariate procedures**

A vital part of any research project is to ensure that valid inferences are drawn from the sample data to ensure their generalizability within the larger population. Even though the likelihood of samples from the population yielding values that are exactly equal to the population is slim, there are various statistical methods that may increase the confidence with which inferences are made. Statistical estimation using confidence intervals or null hypotheses testing constitute two commonly used approaches to statistical inference (Cohen, Cohen, West & Aiken, 2003).

The accurate interpretation of inferences resulting from data analysis is contingent upon effective data screening techniques (Coakes et al., 2008). Amongst other considerations, these techniques ensure the accuracy of data entry and the normal distribution of variables to be used in the analysis thus increasing the likelihood of valid results. Moreover, when employing multivariate procedures it is important to test the assumptions underlying this approach as inaccuracies in the data may lead to flawed interpretations and inferences (Tabachnick & Fidell, 2007). The present study tested the following assumptions of the multivariate approach:

- a) sample size and missing values
- b) outliers (univariate and multivariate)
- c) normality, linearity and homoscedasticity
- d) multicollinearity and singularity

Each of the assumptions will be discussed in the following subsections as well as the presentation of the results of each comparison. In addition, the issues that required attention to assure an honest analysis of the collected data will also be discussed.

#### ***4.2.4.1 Sample size and missing data***

The present study started off with 854 participants and 38 observed variables. The data file was screened for missing values using frequency statistics (SPSS 20.0, 2012). Missing data can seriously hamper the analysis of data depending on the number of missing responses, the reasons for omission as well as the patterns of missing data (Tabachnick & Fidell, 2007). The frequency output indicated 13 cases that were missing data specifically related to responses regarding “Race”. Due to the large number of respondents it was decided to delete these cases as the respondents race was a necessary piece of information for the grouping of the data later in the analysis.

Possible solutions for handling missing data include deletion of cases or variables with missing values, as well as the estimation (imputation) of missing values (Tabachnick & Fidell, 2007). The appropriateness of each technique is reliant on factors such as the number of missing values and the distribution of these values (Tabachnick & Fidell, 2007). Imputation by matching to estimate the missing data was not considered a viable

option due to the nature of the information required. Imputation by matching also involves substituting missing values with similar values to cases that displayed a similar response pattern within a set of matching variables (Jöreskog & Sörbom, 1996).

#### ***4.2.4.2 Normality, linearity and homoscedasticity***

One of the main assumptions underlying various multivariate statistical procedures is multivariate normality. Multivariate normality is the assumption that each variable, and all linear combinations of the variables, are normally distributed (Tabachnick & Fidell, 2007). A lack of multivariate normality may affect the robustness of the statistical inferences (Bradley as cited in Tabachnick & Fidell, 2007). For this reason, normality, linearity and homoscedasticity are advocated as effective conditions that lend strength to the analysis. The improvement of normality is thus strongly recommended.

Various approaches have been suggested for the assessment of normality of variables. The researcher opted to examine skewness and kurtosis values, as well as the Kolmogorov-Smirnov test. The Kolmogorov-Smirnov tests the null hypothesis that a sample comes from a particular distribution. A distribution that is not significantly different from a normal distribution is indicated by a significance value of  $p > .05$ , i.e., it is probably normal. If the test, on the other hand, is significant ( $p < .05$ ) it means that the distribution of variables deviates significantly from that of a normal distribution, i.e., it is non-normal. Other characteristics of a normal distribution are that the values for measures of shape, i.e., skewness and kurtosis, are zero (Field, 2005).

Normality of the observed variables was analysed through the examination of histograms using SPSS FREQUENCIES. The researchers did find evidence of skewness in the Intention to Apply (ITA) items, which were negatively skewed and highly kurtotic. The cases in question displayed a standardised skewness greater than 3.75. Attempts were made to address the problem using logarithmic transformations in SPSS but the items remained significantly skewed and the full data set was retained.

The test of linearity assumes that two variables on a bivariate scatterplot share a straight line relationship when a line is fitted to the X and Y-values (Tabachnick & Fidell, 2007). The presence of a linear relationship between the variables in the data was confirmed

through the examination of the bivariate scatterplots (Coakes et al., 2008). Ideally, the cloud of data points should take the shape of an ellipse, where the cloud is dispersed along the straight line with a slight bulge in the middle (Tabachnick & Fidell, 2001). A cloud that is closely dispersed along the straight line would result in a thinner ellipse and therefore indicate a stronger degree of linearity (Kinnear & Gray, 2000). The cloud that formed in the bivariate scatterplots indicated some evidence of heteroscedasticity which is an indication of non-normality and severe negative skewness (see Appendix D).

The results of the Kolmogorov-Smirnov test for the normality assumptions indicated that the data was non-normal (i.e.,  $p < .05$ ). In order to confirm these results and skewness and kurtosis values for all variables were once again investigated. The results revealed skewness and kurtosis values that deviated from the assumption of normality.

#### **4.2.4.3 Outliers**

Using SPSS DESCRIPTIVES the z-scores for each subset were calculated. Univariate outliers were detected by visually inspecting boxplots of standardised normal scores (z-scores) for each variable, where cases with standardised scores in excess of  $|3.29|$  (i.e.,  $p < .001$ ) were identified as significant outliers (Field, 2005). The present data set presented 7 significant outliers that were consequently deleted. To identify multivariate outliers, Mahalanobis distance, which presents the distance of a case from the centroid of the remaining cases where the centroid is the point created at the intersection of the means of all the variables, were investigated. By comparing the distance value against  $p < .001$  and a  $\chi^2$  value for three degrees of freedom (one degree of freedom for each independent variable), multivariate outliers were sought. The critical chi-square for three independent variables, at an alpha level of .001, is 16.266. In other words, any case with a Mahalanobis distance greater than 16.266 is a multivariate outlier (Tabachnick & Fidell, 2001). The 11 multivariate outliers were detected and deleted ( $p < .001$ ). The analysis was therefore conducted on a sample of 843 participants. SPSS was then used to create a new file without the outliers.

Multivariate normality was also tested in LISREL 8 (Jöreskog & Sörbom, 1996a). The individual items were used as indicator variables and the variables were defined as

continuous. As previously stated the preferred estimation for continuous data in SEM is maximum likelihood estimation. (RML) was employed as the use of this method is the preferred method when using multivariate non-normal data (Du Toit & Du Toit, 2001, Mels, 2003). The normality of the indicators items were evaluated using PRELIS (Jöreskog & Sörbom, 1996b). The null hypothesis of univariate normality was rejected ( $p < 0.05$ ) for most of the indicator variables. The null hypothesis of multivariate normality for all the samples was rejected ( $p < 0.05$ ). The comparison of the normal and non-normal data produced an improvement in the chi-square from  $\chi^2 = 2180.670$ ;  $p < .05$  before normalisation to  $\chi^2 = 1118.626$ ;  $p < .05$ . The deviation from multivariate normality was still significant ( $p < .05$ ) and as a result, the appropriate estimation method needed to be explored. Due to these findings the Robust Maximum Likelihood method of estimation was selected as the preferred estimation method for this study.

The examination of the assumptions for multivariate procedures highlighted a few areas for adjustment within the data. The necessary steps were taken to correct the areas of concern and the data was deemed satisfactory for further analysis.

#### **4.2.5 Descriptive statistics**

The univariate descriptive statistics were drawn to evaluate and describe the variables in terms of the means, medians and frequencies, amongst others. Moreover, descriptive statistics were drawn for the total sample and the designated and non-designated group within the sample in order to highlight any discrepancies between the two. The frequency distribution presented in Table 4.6 reports the descriptive statistics for the four TPB subscales. The results indicate that three of the four subscales were negatively skewed. The descriptive statistics for the designated and non-designated group respondents were also generated and presented in Table 4.7. The means on each of the subscales were examined for any differences that may be present. The means for both groups were relatively similar but the designated group respondents scored slightly higher on each of the subscales.

An independent samples t-test was also conducted to compare the intention to apply mean scores for designated (1) and non-designated (2) group members (see Appendix D). A significant difference in scores for designated ( $M = 6.064$ ,  $SD = 1.044$ ) and non-designated ( $M = 5.836$ ,  $SD = 1.156$ ) group. The magnitude of the differences in the means (mean differences = 0.228, 95%  $CI = .0321$  to  $.423$ ) was very small (eta squared = .006). This however indicated that only 0.6 percent of the variance in intention to apply was attributed to race group membership.

Table 4.6

*Analysis of Univariate Descriptives for all Variables*

Descriptive Statistics <sup>a</sup>									
	Minimum	Maximum	M	$\sigma$	$\sigma^2$	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
ITA_T	1.75	7.00	5.880	1.138	1.295	-.980	.085	.403	.169
ATT_T	15.20	49.00	36.079	6.291	39.580	-.352	.085	-.090	.169
SN_T	1.00	49.00	22.065	9.854	97.102	.296	.085	-.284	.169
PBC_T	12.64	49.00	33.343	7.295	53.223	-.149	.085	-.279	.169

*Notes.* ITA\_T = Intention to Apply total; ATT\_T = Attitude Towards Behaviour total; SN\_T = Subjective Norm total; PBC = Perceived Behavioural Control total.

<sup>a</sup>Descriptive statistics represent unweighted linear composite total values calculated for each of the variable subscales

Table 4.7

*Analysis of Univariate Descriptives for all variables in the designated and non-designated group*

GROUP		Descriptive Statistics <sup>a</sup>								
		Minimum Statistic	Maximum Statistic	M Statistic	$\sigma$ Statistic	$\sigma^2$ Statistic	Skewness Statistic	Std. Error	Kurtosis Statistic	Std. Error
D	ITA_T	2.25	7.00	6.064	1.044	1.091	-1.328	.191	1.734	.380
	ATT_T	23.30	49.00	37.306	5.960	35.523	.029	.191	-.720	.380
	SN_T	3.20	49.00	23.575	10.394	108.036	.177	.191	-.673	.380
	PBC_T	16.00	49.00	35.949	7.808	60.957	-.340	.191	-.488	.380
ND	ITA_T	1.75	7.00	5.836	1.156	1.335	-.909	.094	.203	.188
	ATT_T	15.20	49.00	35.786	6.337	40.160	-.418	.094	-.056	.188
	SN_T	1.00	49.00	21.703	9.693	93.957	.317	.094	-.159	.188
	PBC_T	12.64	49.00	32.718	7.030	49.431	-.169	.094	-.179	.188

*Note.* D = Designated group ( $N = 161$ ); ND = Non-designated group ( $N = 161$ ); ITA\_T = Intention to Apply total; ATT\_T = Attitude towards Behaviour total; SN\_T = Subjective Norm total; PBC = Perceived Behavioural Control total.

<sup>a</sup>Descriptive statistics represent unweighted linear composite total values calculated for each of the variable subscales.

Table 4.8

*Intercorrelations (gamma) of the latent variables in the TPB structural model*

	<i>M</i>	$\sigma^2$	1	2	3	4
1.INTENT <sup>a</sup>	5.880	1.295	-			
2.CONTROL	33.343	53.223	.591	-		
3.NORM	22.065	97.102	.255	.291	-	
4.ATTITUDE	36.079	39.580	.375	.644	.293	-

*Note.* *N* = 835; INTENT = Intention to Apply; CONTROL = Perceived Behavioural Control; NORM = Subjective Norm, ATTITUDE = Attitude towards Behaviour.

<sup>a</sup>The correlations reported are latent variables correlations and have been dissattenuated for measurement error.

Following an assessment of the items and dimensions of the subscales and an examination of the descriptive statistics for the gathered data, the data was deemed satisfactory for further analysis. The discussion and results of the preparatory procedures for the fitting of the measurement and structural model will follow.

### 4.3 Structural equation modelling

Structural equation modelling (SEM) is a technique used to investigate an entire model in order to determine its predictive accuracy which differs from regression analysis where a single relationship is examined (Hair et al., 2006). The investigation begins with an examination of both the measurement model and the structural model for the entire model. The chief function of SEM is to test the structural model whereas; CFA is employed to evaluate the measurement model. CFA is a strategy within the framework of SEM. CFA assesses the extent to which the data fits the model and provides a means of testing the hypotheses that were postulated (Child, 2006).

#### 4.3.1 Fit indices in Confirmatory Factor Analyses (CFA)

The assessment of measurement model fit investigates the extent to which there is consistency between the model and the data collected (Diamantopoulos & Siguaw, 2000). Model fit is determined by the examination and deliberation of fit indices such as Chi-square test, RMSEA, ECVI, standardised RMR, GFI and CFI indices, as suggested by

Diamantopoulos and Siguaw (2000). For the purpose of this study the Satorra-Bentler Scaled Chi-square statistics, Root Mean Square Error of Approximation (RMSEA) and the Root Mean Square Residual (RMR) were interpreted to assess model fit.

The Chi-square statistic is a measure used to test the null hypothesis of perfect fit where the proposition has been made that a model fits the population data perfectly. In contrast to the usual convention of hypothesis testing the objective is to not reject the null hypothesis (Diamantopoulos & Siguaw, 2000b). The null hypothesis is rejected if the Chi-square is statistically significant and thereby considered an imperfect fit with the population data. Stated differently, it is therefore more desirable to obtain a small  $\chi^2$ -value and a corresponding large  $p$ -value as support of the hypotheses put forth (Hair et al., 2006). Furthermore, where small samples are used the reliability of the chi-square statistic may be questioned (Healy, 2010). This justifies the need to examine other fit indices before make a final conclusion regarding the close fit of the proposed structural model.

RMSEA emphasises error due to approximation. The observed and estimated sample covariance matrices and their differences are assessed with this index and values that lie below .05 specify a good fit and RMSEA < .08 a reasonably good fit. Values that lie between .08 and 0.1 indicate a mediocre fit and > .10 a poor fit (Diamantopoulos & Siguaw, 2000). In contrast to other indices where high values indicate a better fit, low RMSEA values are more desirable (Hair et al., 2006).

The RMR represents a summary measure of fitted residuals. Standardised residuals are often interpreted to avoid problems relating to un-standardised residuals which may vary with the unit of measurement. A standardised RMR with values below .05 are indicative of an acceptable fit (Diamantopoulos & Siguaw, 2000).

The researcher decided to impose a rigorous test by jointly fitting the measurement and structural model to the data set. The discussion of the measurement model properties will therefore be subsumed as part of the discussion of the structural model and the reported indices. The model was assessed for fit and the operational hypotheses set forth in Chapter 3 where tested.

### 4.3.2 Results of the fitted structural model

The validity of the structural model will be assessed in order to confirm the theoretical paths between constructs (Hair Jr. et al., 2006). The focus is thus on the associations between all the dependent and independent variables (Diamantopoulos & Siguaw, 2000). The investigation of the structural model will assess the statistical significance of the proposed paths. The predicted direction of the hypothesised relationships will be examined as well as a check of the significance of the completely standardised loading estimates (Hair et al., 2006). The structural model was evaluated using LISREL 8 (Jöreskog & Sörbom, 1996a).

A descriptive evaluation of model fit, based on the aforementioned model fit indices reported by LISREL 8 (Jöreskog & Sörbom, 1996a) is subsequently provided. Thereafter, an examination of the factor loadings, standardized residuals, squared multiple correlations as well as the latent variable inter-correlations, is reported. The TPB structural model is presented in Figure 4.1 and is followed by the goodness of fit statistics in Appendix D. A detailed discussion of the goodness of fit statistics is presented in the following paragraphs.

#### 4.3.2.1 Structural model Fit

The structural model was fitted to the data of the combined sample ( $N = 835$ ) producing the goodness of fit statistics presented in Table 4.9. An evaluation of the various goodness-of-fit statistics was conducted to determine whether acceptable model fit had been attained or not. “Model fit is determined by the correspondence between the observed covariance matrix and an estimated covariance matrix that results from the proposed model.” (Hair et al., 2006, p. 641).

The purpose of fitting the structural model is to determine whether the theoretical relationships are supported by the data (Diamantopoulos & Siguaw, 2000). Moreover, by fitting the structural model a visual portrayal of the nature and strength of the relationships between the variables in the study is presented. The fit of the TPB structural model was evaluated in LISREL 8.80 (Jöreskog & Sörbom, 2006). The structural model is presented in Figure 4.1. and the goodness-of-fit statistics that were used to determine the fit of the model are reported in Table 4.9.

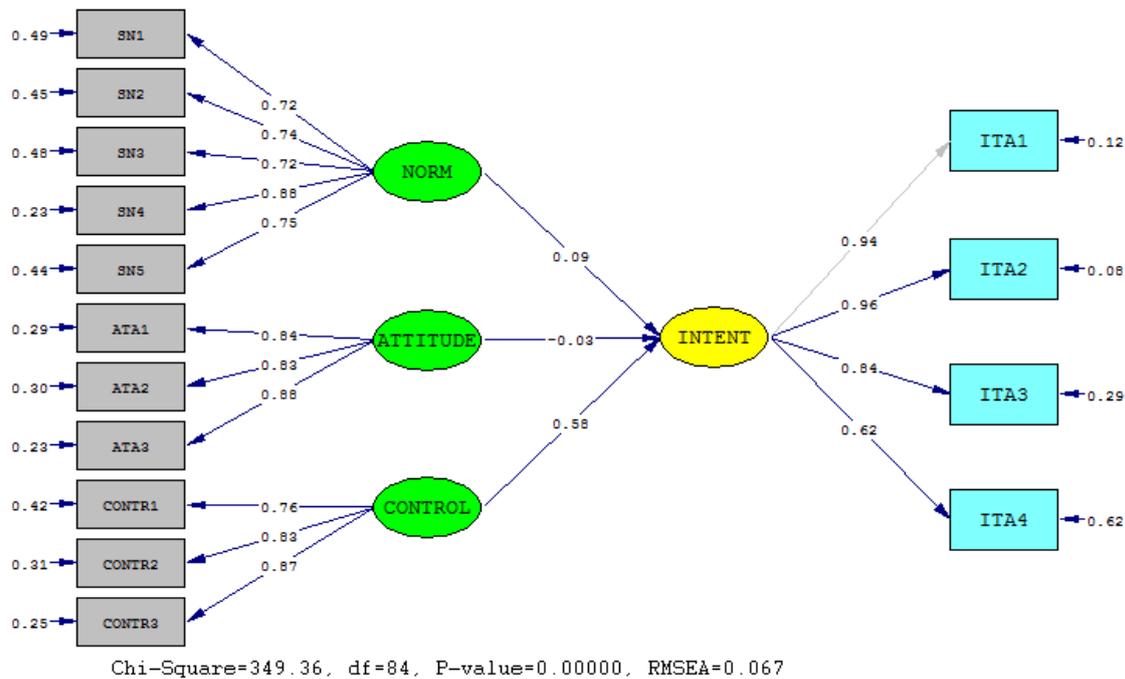


Figure 4.1 The standardised factor loadings of the intention to apply structural model

A confirmatory factor analytic (CFA) approach was taken in order to assess whether the measurement and structural model could closely reproduce the covariances observed between the items comprising each of the TPB scales. The asymptotic covariance matrix was used as input, and the parameters were obtained by using robust maximum likelihood estimation as suggested by Chou and Bentler (1995). Although the  $\chi^2$  was not significant,  $\chi^2 (49.36) = .00$ ,  $p < .01$ , the structural model fit the data reasonably well (RMSEA = .07, comparative fit index [CFI] = 0.98, non-normed fit index [NNFI] = .98, root-mean-square residual [RMSR] = 4.28). All parameter estimates were within acceptable range, and no standardized factor loadings or factor correlations exceeded 1.0. In addition,  $t$  values for all items were significant, and the standardized factor loadings ranged from .72 to .96.

An examination of the modification indices (Figure 4.2 and Table 4.10) reported a number of significant paths for consideration. Most of the indices suggested cross loading between the items and between the latent variables and other items. The identification of these paths should be considered in future studies which may benefit from investigating these proposed relationships.

Table 4.9

*Modification Indices for measurement model factor loadings*

	CONTROL	NORM	ATTITUDE
SN1	24.224	--	35.453
SN2	0.562	--	0.114
SN3	4.452	--	3.079
SN4	4.342	--	8.100
SN5	0.911	--	0.115
ATA1	6.382	1.867	--
ATA2	1.891	1.208	--
ATA3	1.609	0.077	--
CONTR1	--	19.049	3.994
CONTR2	--	0.033	0.999
CONTR3	--	10.923	4.546

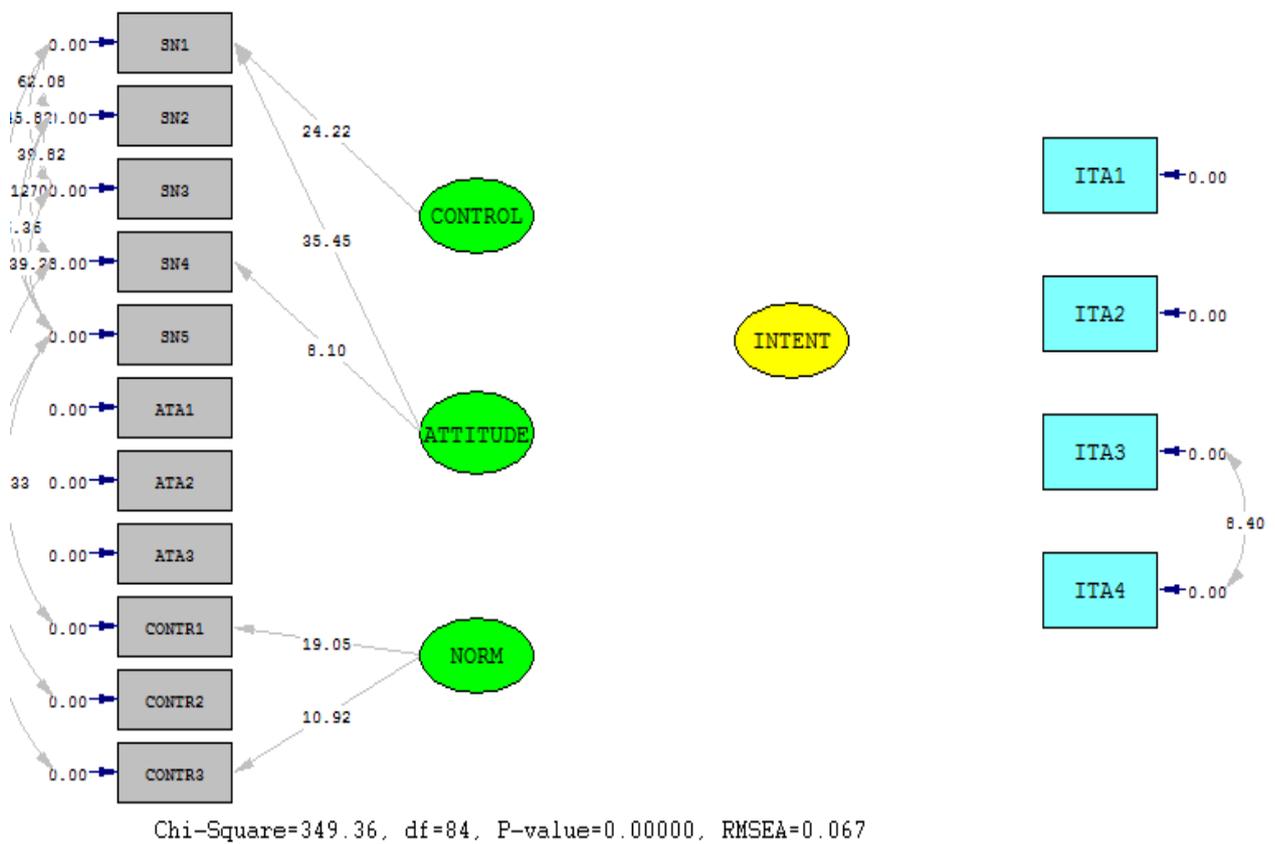


Figure 4.2 Modification indices for the TPB structural model

A further analysis of the data was conducted whereby the structural models for both the designated and non-designated group were also fitted. The results are compared in Table 4.11. The structural models for the total sample and the groups all fitted the data reasonably well. However, the large difference in  $p$ -values raised concern but this may be attributed to the small sample sizes ( $N = 161$ ) used to test the fit of the structural model for the two groups.

Following the fitting of the structural models, the hypotheses were evaluated against the results reported in Table 4.11. The null hypothesis for close fit was rejected in all three models and the models were deemed to fit the data reasonably well. In Model B and C the paths between subjective norm (NORM) and attitude towards applying (ATTITUDE) in relation to intention to apply (INTENT) were not significant. Model A presented significant paths between Intention to apply, subjective norm and perceived behavioural control. The factor loadings for all three models were acceptable except for two items in Model C (ATA\_1 and CONTR1). These findings could be attributed to the small size that may limit the models ability to effectively fit the data. The following subsection will evaluate the hypotheses set forth in Chapter 3 against the reported results.

Table 4.10

*Comparison of the goodness-of-fit statistics for the three structural models*

Model	Description	$N$	RMSEA	$p$	CFI	NNFI	RMSR	$\chi^2$	$df$
Model A	Total group	835	.067	.000	.980	.976	.05	349.357	84
Model B	Designated group	161	.063	.394	.983	.983	.548	121.714	84
Model C	Non-designated group	161	.061	.520	.987	.984	.694	116.111	84

*Note.* RMSEA = root mean squared error of approximation; CFI = comparative fit index; NNFI = non-normed fit index; RMSR = root-mean-square residual;  $\Delta\chi^2$  = change in Chi square between the alternative model (Model B, Model C) and the a priori model (Model A).

#### ***4.3.2.2 Evaluation of proposed research hypotheses in light of the Structural Model Fit***

The hypotheses of the current study were developed with reference to the relationships between the core TPB variables and intention to apply. The hypotheses were tested in order to establish the extent to which the TPB variables adequately predict in intention to apply. The  $t$  test statistic for the gamma matrices were used to evaluate the hypotheses.

##### Hypothesis 1:

The structural model provides a valid psychological description of how (a) attitude towards applying, (b) subjective norm, and (c) perceived behavioural control influence intention to apply.

$$H_{01a}: \text{RMSEA} \leq 0.05$$

$$H_{a1a}: \text{RMSEA} \geq 0.05$$

$$H_{01a}: \text{RMSEA} \leq 0.08$$

$$H_{a1b}: \text{RMSEA} \geq 0.08$$

The research hypothesis states that the reproduced covariance matrix closely approximates the observed population covariance. The RMSEA was ( $df = 84, N = 835$ ) = 0.067,  $p < .05$  which indicates that the null hypothesis of close fit  $H_{01}: \text{RMSEA} \leq .05$  can also be rejected in favour of  $H_{a1}: \text{RMSEA} \geq .05$  which indicates the structural model does not fit the data closely. The hypothesis for reasonable fit was also tested. Due to the  $\text{RMSEA} = 0.067$  the  $H_{01}: \text{RMSEA} \leq .08$  was not rejected. Therefore it would appear that the structural model provided a reasonable fit for the data.

##### Hypothesis 2:

$$H_{02}: \gamma_{11} = 0$$

$$H_{a2}: \gamma_{11} > 0$$

The research hypothesis states that attitude towards applying would have a significant positive effect on the prospective applicant's intention to apply. The relationship between attitude towards applying and intention to apply was not significant ( $-0.528; p > .05$ ) since the  $t$ -value  $< |1.96|$ . The  $H_{01}$  null hypothesis was not rejected for the alternative hypothesis  $H_{a1}$ .

Based on the data it is thus concluded that the relationship between attitude towards applying and intention to apply is not significant.

#### Hypothesis 3:

$$H_{03}: \gamma_{21} = 0$$

$$H_{a3}: \gamma_{21} > 0$$

The research hypothesis states that subjective norm would have a significant positive effect on the prospective applicant's intention to apply. The gamma path coefficient illustrated that this relationship was significant ( $\gamma = 2.67$ ;  $p < .05$ ) since the t-value  $> |1.96|$ . Thus the null hypothesis  $H_{03}$  is rejected in favour of the alternative hypothesis  $H_{a3}$ . Therefore, from the data it appears that the proposed relationship between subjective norm and intention to apply is corroborated.

#### Hypothesis 4:

$$H_{04}: \gamma_{31} = 0$$

$$H_{a4}: \gamma_{31} > 0$$

The research hypothesis states that perceived behavioural control would have a significant positive effect on the prospective applicant's intention to apply. The null hypothesis  $H_{04}$  is rejected in favour of alternative hypothesis  $H_{a4}$  since the t-value  $> |1.96|$  and the relationship is significant ( $\gamma = 11.48$ ;  $p < .05$ ). Therefore, the relationship between perceived behavioural control and intention to apply is corroborated.

#### **4.3.2.3 Hypothesis evaluation**

The proposed structural model fit the data reasonably well even though the null hypothesis for close fit was rejected. The individual path hypotheses were however not all corroborated. The relationship between attitude towards behaviour and intention to apply was not statistically significant which warrants further consideration. Even though the null hypothesis for subjective norm was not rejected the factor loading was relatively low. Lastly the hypothesis for perceived behavioural control was corroborated and the factor loading was considerably higher than the other two variables. The findings raise a number of pertinent questions for the use of the Theory of Planned Behaviour within the context of this population and will be discussed in Chapter 5. The present study achieved its objective

through the exploration of the veracity of the relationships between intention to apply and the three variables in the TPB model.

#### ***4.3.3 Exploring the possibility of group differences in the South African context***

The present study is set in the context of a labour market that is strongly governed by numeric employment equity targets based on race. Even though no formal hypotheses were formulated for the purpose of comparing groups in the sample it is still a meaningful exercise to examine whether differences may exist based on designated or non-designated group status. For this purpose the means of the two groups were compared in order to explore whether overall mean differences exist that would warrant further investigation of these variables in future studies.

To ensure the validity of the previous findings for the factor loading in the structural model the correlations between the variables in the TPB model were also examined (Table 4.12.). The relationship between the aforementioned variables was investigated using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure that no violation of the assumptions of normality, linearity and homoscedasticity existed. Contrary to the findings for the path coefficients for the structural model, where PBC was only significant relation there were significant relationships between all the variables and intention to apply, (Table 4.11), albeit that some were weaker than others.

Table 4.11

*Pearson correlation coefficients for the total sample*

Variable	Correlation <sup>a</sup>			
	ITA_T	ATA_T	SN_T	PBC_T
ITA_T	-	.339**	.292**	.481**
ATA_T		-	.285**	.574**
SN_T			-	.273**
PBC_T				-

*Note.*  $N = 835$ ; ITA\_T = Intention to Apply total score; ATA\_T = Attitude towards Applying total score; SN\_T = Subjective Norm total score; PBC\_T = Perceived behavioural control total score.

<sup>a</sup>The correlations reported are latent variables correlations and have been dissattenuated for measurement error.

Table 4.12.

*Comparison of Pearson correlation coefficients for designated (N = 161) and non-designated groups (N = 161)*

Variable	Designated group				Non-designated group			
	ATA_T	SN_T	PBC_T	ITA_T	ATA_T	SN_T	PBC_T	ITA_T
ATA_T	1	.334**	.601**	.335**	1	.318**	.592**	.265**
SN_T		1	.292**	.268**		1	.278**	.076
PBC_T			1	.588**			1	.372**
ITA_T				1				1

*Note.* Designated group:  $N = 161$ ; Non-designated group:  $N = 161$  ITA\_T: Intention to apply total score; ATA\_T: Attitude towards applying total score; SN\_T: Subjective norm total score; PBC\_T: Perceived behavioural control total score.

#### 4.4 Summary

Chapter four presented all the results from the analysis techniques employed within this study as well the results of testing the various statistical hypotheses that were formulated in chapter three. However, before the data could be analysed preparatory procedures were conducted in order to examine the extent to which the data cleaning procedures affected the data. The computation of the TPB scores for the sample were implemented and discussed. Missing values were a factor that required urgent attention and resulted in the deletion of 13 cases from the original sample ( $N = 854$ ) resulting in a sample of  $N = 841$ .

Following, the data cleaning process discussions on the results of the dimensionality and item analysis of all the sub-scale items of the measuring instrument were presented. The item analyses of the four TPB sub-scales were found to be quite good ( $.822 \leq \alpha \leq .925$ ). Unidimensionality was then examined and most of the factor loadings for the four TPB sub-scales were found to be quite good. Only one item from the Behavioural beliefs subscale was deleted.

Following the item and dimensionality analysis the assumptions for multivariate procedures were assessed and resulted in the deletion of identified univariate and multivariate outliers. The univariate and multivariate analyses of the data was repeated and examined. The data was normalised, however, the deviation from multivariate normality was still significant ( $p <$

.05) and consequently, robust maximum likelihood estimation was used to satisfy the multivariate normality requirements and as result the asymptotic covariance matrix was calculated.

Next, confirmatory factor analysis was used to assess the measurement and structural model simultaneously. The structural model was then fitted to the data. The chi-square was  $\chi^2 (50, N = 73) = 213.49, p < .05$ . The null hypothesis of close fit  $H_{01}: RMSEA \leq .05$  was tested but rejected in favour of  $H_{a1}: RMSEA \geq .05$  because the RMSEA was .06. However, the null hypothesis for reasonable fit was also tested and the  $H_{01}: RMSEA \leq .08$  was supported. Therefore, it was assumed that the proposed TPB structural model provided a reasonable fit to the data. In addition, the results also illustrated that three of the four hypothesised relationships were significant ( $p < .05$ ) since all the  $t$ -values  $> |1.96|$ . The only exception was Hypothesis 2, which was rejected as the factor loadings were not significant  $t$ -value  $< |1.96|$  ( $p > .05$ ). The null hypothesis was rejected in favour of the alternative hypothesis in three of the four cases. As a result of the findings it was assumed that a statically significant relationship exists between intention to apply and two of the three TPB variables.

Chapter 5 will present a discussion of these results as well as, the limitations found within this research study. The discussion will conclude with recommendations for future research.

## CHAPTER 5: DISCUSSION

### 5.1. Introduction

Within the recruitment context very little attention has been given to the examination of the processes underlying the development of intentions related to the submission of an application. Prior research in the job search literature have focused on various aspects of an applicant's decision making process in the recruitment context but very few have specifically focused on intention to apply (Gomes & Neves, 2011). A holistic understanding of how potential employees view and process information about the organisation plays an integral role in attracting and retaining these individuals through effective recruitment and retention strategies (Brewster, Carey, Grobler, Holland & Warnich, 2009). Thus, understanding intention to apply to an organisation has evident practical value for organisations.

Drawing on the Theory of Planned Behavior, the present study extends existing research by investigating whether beliefs about salient beliefs held by a prospective job applicant regarding their behavioural beliefs, normative beliefs and control beliefs may influence the strength of their intention to perform a particular behaviour (Ajzen, 1991). The current study followed this proposition and generated empirical evidence to a rather unexplored area within the recruitment literature namely, applicant intention to apply. A mixed method design was employed to a large sample ( $N = 835$ ) of final year students using Structural Equation Modelling to examine the fit of the structural model developed for this purpose. Moreover, the extent to which socio-demographic group differences may exist in the degree to which behavioural beliefs influence intentions was also explored.

The findings from the analyses conducted in chapter 4 will be discussed further in the following sections. The limitations of the present study as well as recommendations for future research will also be given attention.

### 5.2. Summary findings and discussion of research study

A key objective of the current research study was to examine the relationships between the salient beliefs about the application process and intention to apply to a particular organisation. In this regard, the present study highlighted the role normative and control beliefs, drawn from the Theory of Planned Behaviour (Ajzen, 1991), play in the formation of

graduates' application intentions. The results of the statistical analysis presented in the previous chapter corroborated three of the five hypotheses. The results from the data analysis pertaining to the proposed relationships between attitude towards behaviour (ATB), subjective norm (SN), perceived behavioural control (PBC) and intention to apply indicated significant relationships between subjective norm and intention to apply and a highly significant relationship between perceived behavioural control and intention to apply. The findings suggest that graduate applicants' intentions, within this sample, are greatly influenced by important referent others as well as their own beliefs of control regarding factors internal to the individual and external environmental factors. The relationship between each of the core TPB variables and intention to apply will be further discussed.

The most noteworthy finding was the significant support for the relationship between PBC and intention to apply. PBC refers to the degree to which an individual feels that the decision to perform behaviour is under his or her volitional control (Ajzen, 1991). Our results showed that control beliefs about applying to an organisation were important in the applicants' intention to apply. Stated otherwise, those who felt that they had high control beliefs were more likely to apply, and vice versa.

The results of the present study are supported by a number of previous studies (e.g., Arnold et al., 2006; Sheeran, Webb, & Gollwitzer, 2005; Smith & Biddle, 1999; Sparks, Ajzen, & Hall-box, 2002) who also found that intentions are significantly predicted by the variables present in the TPB. To illustrate, a similar study conducted by Arnold et al. (2006) examined an extended version of the TPB to examine three groups of healthcare professionals' intention to work for the UK's National Health Service (NHS). Their study found that all the core TPB variables were all significantly correlated with intention to apply. The implication is that PBC's role in the TPB model is empirically supported. Nevertheless, Ajzen (n.d.) acknowledges that, in some samples, one or more of the core TPB variables may not be as influential as the others in the formation of intentions.

Other studies have also found inconsistencies with the TPB. In Jaidi et al.'s (2011) study the researchers found that even though perceived behavioural control correlated positively with both job pursuit intention and behaviour, it only predicted unique variance in job pursuit behaviour. This indicated the PBC had a more direct effect with actual behaviour rather than

the formation of intentions. In Van Hooft, Born, Taris, and Van der Flier (2004)'s study attitude and subjective norm significantly predicted job search intention, whereas self-efficacy failed to contribute to the prediction of intention and behaviour. In contrast, a meta-analysis of the TPB variables conducted by Armitage and Conner (2001) their study found that PBC independently predicted intentions and behaviour in a wide number of domains.

A possible explanation of the strong relationship between perceived behavioural control and intentions found in the present research could be explained by *human agency* in Bandura's Social Cognitive Theory (Bandura, 1989). Human agency is characterised by various elements that operate within "a broad network of socio-structural influences" (Bandura, 1989, p.1175). It involves "the temporal extension of agency through intentionality and forethought, self-regulation by self-reactive influence, and self-reflectiveness about one's capabilities, quality of functioning, and the meaning and purpose of one's life pursuits" (Bandura, 1989, p.1175). These features ultimately determine one's self-efficacy beliefs that may be self-aiding or self-hindering (Bandura, 1989). The link between self-efficacy and perceived behavioural control is plausible due to Ajzen's (1991) proposition that PBC and self-efficacy constructs are interchangeable. Various studies have substituted PBC for self-efficacy, or included it as a factor of PBC. Armitage and Conner (2001) even went as far as to suggest that perceived control beliefs may be an antecedent of self-efficacy. The implication therefore is that control beliefs can be manipulated or taught.

Control beliefs can also be influenced by the provision of information. In Lin's (2010) study perceived behavioural control was defined as the perceived ease of use and self-efficacy. The analyses revealed a strong effect of intention to use job-search websites on the respondents' perceived behavioural control. These findings highlighted that when job seekers perceive easier to get job information and more self-efficacy associated with adoption, they feel more in control, which makes them more confident in using job-search websites. Following this line of reasoning, it could consequently be implied that access to resources and information regarding the application process would make applicants more confident in their ability to apply to an organisation. The resources and information available to students could therefore be assumed to affect the magnitude of a prospective applicants control beliefs.

In sum, the present study's results are generally supported by previous literature, but disagreed with earlier work in some important ways. First, we found that PBC was a better

predictor of intention to apply than the other variables, which has not been reported before. Ajzen (n.d.) warned that the individual TPB variables' role in intentions may be sample specific. A number of factors may account for the high significant result for the PBC variable. First, the results suggest that internal (i.e., skills, abilities, information, emotions such as stress, etc.) and external factors (i.e., situation or environmental factors) have a significant role to play in the formation of the South African student's job application intentions. The resources available to graduates may influence the strength of their control beliefs. If true, it would imply that the environment could hinder or aid the individual when control beliefs are being formed. Second, the moderating effect of sample type (e.g. inexperience vs. experienced job seekers) could also account for the strong role of PBC. Inexperienced job seekers may approach the application process with confidence or anxiety (Van Hooft et al., 2004). Lastly, PBC has also been advocated as a significant predictor of intentions in student samples (Notani, 1998). This can be attributed to the motivational factors that would influence the strength of this behaviour (Notani, 1998). The need or desire to find employment would be a relatively strong motivational force for most graduates, whereas not having the means to complete long applications online could have a negative effect on the individual's motivation to perform this behaviour.

Besides the finding that PBC was a significant predictor of intention to apply the other interesting finding was the relationship between subjective norm and intention to apply. Our evidence of a significant and positive association between these two constructs supports the relationship suggested by Ajzen's (1991) Theory of Planned Behaviour. The evidence in the present study suggests that prospective applicants will form intentions to apply based on their beliefs about the normative expectations of others. This decision is also influenced by the extent to which the individual is motivated to conform to these expectations (Ajzen, 1991).

The results of this study are congruent with similar literature on SN and intention to apply. In Jaidi et al.'s (2011) study both job pursuit attitude and subjective norm predicted unique variance in job pursuit intention. Similarly, SN also played a significant role in predicting occupational intentions. In contrast, the meta-analysis conducted by (Armitage & Conner, 2001) highlighted the relatively weak relations subjective norm has with intention. However, the poor performance of the subjective norm component was shown to be a function of measurement. Nevertheless, the use of all three components of the TPB was found to have a moderate correlation with intention.

SN has also been used as an indicator of group differences. Van Hooft et al. (2004) investigated the role cultural differences played in the relative importance of job search attitudes and subjective norm in the prediction of job search intentions. Their findings supported stronger relationships between subjective norms behavioural intentions in the minority group in comparison to job search attitudes (Van Hooft et al., 2004). Similarly, the current study examined the significance of the difference between the correlations of the designated and non-designated group. The results suggest that group differences between designated and non-designated group members are marginally insignificant but still warrant further inspection. These differences may be attributed to collectivist values in the designated group where the opinion of the group or referent others are held in high regard. In addition, the literature and findings suggest that informal sources (i.e., friends, current employees of the organisation, etc.) and positive word-of-mouth could play an important role in the formation of intentions.

Whereas subjective norm presented a moderately significant relationship with intention to apply, we also sought to explore the role attitude towards applying played. In most studies, attitude towards a particular behaviour has been supported as a strong and consistent predictor of intention (Notani, 1998). However, the evidence presented in the present study did not corroborate the prediction of a positive relationship between attitude towards applying and intention to apply. Attitude towards applying is defined as the individual's behavioural beliefs about the consequences of applying to an organisation. These outcome evaluations are weighted by a positive or negative evaluation of those consequences (Ajzen, 1991). The results presented suggest that the respondents did not subjectively rate the likelihood of intending to apply to an organisation very highly based on organisational attributes presented in the questionnaire.

The literature did not support the absence of a relationship between attitude towards applying and intention to apply (e.g. Notani, 1998). It could however be speculated that the organisations' offerings may be ambiguous in the early stages of the recruitment process as job advertisements provide limited information about the organisation itself. Alternatively, applicants may be uncertain of the extent to which these offerings would assist them in engaging in this particular behaviour. Moreover, the salient beliefs extracted from the qualitative interviews and questionnaires were probably not salient to the present sample.

The results from the data analysis, were partially consistent with findings from previous literature on the TPB model that. It was also confirmed that subjective norm and PBC were significant predictors of intention to apply. However, the hypothesis for attitude towards applying and its relationship with intention to apply was not supported. When considering the preceding discussion holistically the results point to certain implications for the organisation and the tertiary institution. First, an applicant's control beliefs may be influenced or manipulated by the resources and information available to the prospective applicant from the organisation or the tertiary institution. This implies the development of transparent application procedures and more easily accessible options for applying. Second, word of mouth and subjective reports from referent others can influence the probability of a prospective applicant submitting an application. Organisations therefore need to be cognizant of the perceptions held about their organisation and provide prospective applicants with realistic relevant accounts of the work environment, not just the job. Finally, group differences in the South African context are present and significant and should therefore not be ignored. Organisations should therefore exercise caution when standardising Western recruitment practices to the present context especially when recruiting across socio-demographic groups.

### **5.3 Limitations of research study**

This research study had limitations that must be considered when interpreting the results of the data.

First, we used convenience sampling in both the qualitative and quantitative designs. The sample used in both designs were drawn from two universities in the Western Cape, which limit the generalizability of the results as they are only a small representation of the larger graduate applicant population nationally and internationally. Even though the qualitative sample was drawn from two different tertiary institutions the academic focus area was the same. By the same token, the quantitative sample was drawn from a wide range of students with differing academic interest areas, year of study, age and race. Future research should replicate the present research to investigate the generalizability of the results to other graduate applicant samples.

The second limitation of this study is the presence of common method bias, defined as “the overlap between two variables due to a common bias rather than to a relationship between the underlying constructs” (Bass & Bass, 2008, p. 74). Practically speaking, it is possible to observe relationships between different constructs, not because they actually co-vary, but because scores on both measures originate from the same source, i.e., respondent. The effect of common-method bias can be limited by the use of different groups of people when collecting data (Krause, 2006). However, the nature of the study variables (e.g., beliefs and intentions) limited the researchers to use self-report data only, as is common in studies using the Theory of Planned Behaviour. Nevertheless, it is suggested that future studies try to include data from multiple sources to minimise the effect of common-method bias.

Lastly, even though it is commonly believed that using a student sample may limit the generalizability of the findings a student sample was necessary to the present study as new entrants to the job market are generally university graduates. However, necessary steps were taken to ensure the validity of the present study. First, the study was specifically pitched at final year graduates who intended to seek employment in the near future. Second, the online survey used served as a means to filter out respondents who were not applicable to the study. Finally, the data was collected at a time when final year students were searching for employment. We believe that these precautions

#### **5.4 Concluding remarks and recommendations for future research**

The findings of the study suggest that applicant intention to apply within the South African context is directly affected by all three variables in the Theory of planned behaviour model, with particular emphasis on the significant relationships on the Behavioural Control variable.

In the present investigation, our focus was on testing the hypothesis that beliefs about the application process could explain how intentions to apply an organisation are formed. However, these beliefs, and their effect on intention to apply to an organisation, are highly contextualized within a socio-demographic context, since historic disadvantage and the resultant regulatory framework (i.e., Employment Equity, Affirmative Action and Broad Based Black Economic Empowerment) could potentially influence these cognitions. We did not hypothesise the effect of group on the levels of beliefs, nor their effect on intention to apply, but explored these effects incidentally. Our results suggest that significant differences may exist that should be unravelled. Future studies should test the effect of socio-

demographic group on intention to apply to an organisation, using multi-group confirmatory factor analysis (MGCFA).

This study sampled university students from one tertiary institution in the Western Cape. Perhaps future research should investigate whether these results would also be replicated in a different university setting as well. Moreover, a study conducted by Moleke (2003) on the employment prospects of South African graduates suggests that race, gender and institution (historically black and/or historically white university) differences may also provide important insights to this particular population's intentions and decisions. Other influences that merit further exploration include; values, appraisal sets, culturally based decision-making styles. The results reported here give valuable insights into the role of beliefs about applicant's behaviour; especially control beliefs, in the present sample. We see exciting opportunities to extend our research. First, more complex dynamics between the TPB variables and intention to apply to an organisation may underlie the formation of applicant intentions (Ajzen, 1991). Beliefs about applying to an organisation may mediate the relationship with intention to apply or, may be moderated by individual differences or environmental influences (Sheeran, Trafimow, Finlay, & Norman, 2002; Van Hooft et al., 2006). Future studies should seek to explore the mediating and moderating mechanisms of socio-demographic differences that may be present in the South African context. Second, our study only focused on beliefs. Other variables may affect intentions to apply, such as organisational recruitment practices (Han & Collins, 2002), perceptions of employment equity (Jongens, 2006), and perceived hiring expectancies (Chapman et al., 2005). Therefore, future studies could incorporate measures of perception or organisational recruitment and selection practices and test their effect on intention to apply.

By developing an understanding of prospective applicants' decisions organisations can use these insights when planning and developing their recruitment efforts. Of particular importance is the amount and quality of information communicated to the applicant about the organisation and not just the job. This could be achieved through providing prospective applicants with realistic organisation previews, using current employees in recruitment drives and during on campus visits and also increasing the transparency of the application process. In light of the current labour shortages and other issues facing the South African job market it is imperative to understand the different groups of applicants in order to develop proficient recruitment activities (Gomes & Neves, 2011). Moreover, attracting high-quality applicants

increases the utility of the selection process and limits the number of applicants that could potentially pull out (Turban, Forret & Hendrickson, 1998).

These results should be seen as an opening attempt to establish a foundation for future research in the South African recruitment context. The Theory of Planned Behaviour is therefore a useful tool that can provide important insight into the decision making process graduate applicants engage in. Organisations should also realise that the road to high quality job candidates is paved with application intentions.

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## APPENDICES

### Appendix A: Quantitative questionnaire example



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### STELLENBOSCH UNIVERSITY CONSENT TO PARTICIPATE IN RESEARCH

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*Research title: Applicants' Intention to Apply: a Planned Behaviour Perspective in the South African Labour Market*

You are asked to participate in a research study conducted by Miss Samantha Adams, from the Industrial Psychology Department at Stellenbosch University. The results obtained will contribute to the completion of a MComm degree in Industrial Psychology, specifically the thesis component of this postgraduate programme. You were selected as a possible participant in this study because you are a final year university student who intends to pursue employment (apply) at an organisation, within the forthcoming months.

#### 1. PURPOSE OF THE STUDY

Using the theory of planned behaviour (Ajzen, 1991) the proposed study will examine the variables that influence the decision making process involved in the job pursuit activities (job application) of the South African graduate. A secondary objective of the study is the identification of possible differences that may exist between graduates from the designated and non-designated group that may or may not be influential in applicant intention to apply for jobs.

#### 2. PROCEDURES

If you volunteer to participate in this study, you would be required to do the following:

##### 2.1. PILOT QUESTIONNAIRE

You will be asked to reflect on your beliefs regarding the decision making process involved when of seeking permanent employment from a particular organisation in the forthcoming months. The questionnaire will be guided by open ended questions regarding your beliefs about specific facets of your decision-making considerations. There are no right or wrong responses; we are merely interested in your personal opinions. You will be asked to list the thoughts that come immediately to mind. A short interview will be conducted once the

questionnaire is completed. Your responses will remain anonymous and your confidentiality protected. You will require approximately 20 to 30 minutes to complete this questionnaire.

### **3. POTENTIAL RISKS AND DISCOMFORTS**

There are no potential risks or discomforts envisaged in this study.

### **4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY**

Participation in the study would provide the participant with an opportunity to reflect on the influential factors that play a role in their decision making when choosing an organisation they would consider applying to for permanent employment.

The need for the proposed study was initiated by the lack of research on differences that exist in South African graduates intention to apply based on the historical context they have grown up in, as well the social influences that stem from the historical oppression of specific race groups. If differences are found between the two groups — designated, and non-designated — this would warrant further investigation of the most influential latent casual variables at work, in this process.

### **5. PAYMENT FOR PARTICIPATION**

No payment will be made to participants for partaking in this study.

### **6. CONFIDENTIALITY**

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of a coding procedure. You will not be required to provide your names or particulars in the interview. The interview will be conducted by the researcher, in person. The results of this study will be published in the form of a completed dissertation as well as in an accredited journal, but confidentiality will be maintained. No names will be published.

### **7. PARTICIPATION AND WITHDRAWAL**

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

### **8. IDENTIFICATION OF INVESTIGATORS**

If you have any questions or concerns about the research, please feel free to contact Samantha Adams (adamss@sun.ac.za / 021 808 2599 / 083 668 6527 ) or Mr F. S. De Kock (fsdk@sun.ac.za / 021 808 3016 / 081 5345754)

## 9. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

### CONSENT OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

The information above was described to me by Samantha Adams in English and I am in command of this language or it was satisfactorily translated to me. I was given the opportunity to ask questions and these questions were answered to my satisfaction.

*Please tick the relevant box*

I hereby consent voluntarily to participate in this study. I have also been given a copy of this form.

I do not consent to participate in this study.

### SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to the subject. [He/she] was encouraged and given ample time to ask me any questions. This conversation was conducted in English and no translator was used.

\_\_\_\_\_  
**Signature of Investigator**

\_\_\_\_\_  
**Date**

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## OUTCOME BELIEFS QUESTIONNAIRE

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### Purpose:

The purpose of the following interview is to identify the accessible behavioural, normative, and control beliefs you hold about applying to an organisation of your choice i.e. the beliefs you hold about submitting an application to an organisation, the people who have the most influence over your decision to perform this behaviour and the degree of control you believe you have over this behaviour and the outcome.

### *Instructions to participants*

*Please take a few minutes to tell us what you think about the possibility of seeking permanent employment in the forthcoming months based on the questions posed. There are no right or wrong responses; we are merely interested in your personal opinions. In response to the questions below, please list the thoughts that come immediately to mind. Write each thought on a separate line.*

Please list the names of five organisations you are considering applying to for employment:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

*Keep these organisations in mind when answering the following questions*

### **BEHAVIOURAL OUTCOMES**

What do you believe are the *advantages* of your applying to these organisations for employment in the forthcoming months?

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What do you believe are the *disadvantages* of applying to these organisations for employment in the forthcoming months?

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Are there any other beliefs you associate with your applying to these organisations for employment in the forthcoming months?

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### **NORMATIVE BELIEFS**

Are there any individuals or groups who would approve of your applying to these organisations for employment in the forthcoming months?

---

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Are there any individuals or groups who would disapprove of your applying these organisations for employment in the forthcoming months?

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---

Are there any other individuals or groups who come to mind when you think about applying to these organisations for employment in the forthcoming months?

---

---

**CONTROL BELIEFS**

What factors or circumstances would enable you to apply these organisations for employment in the forthcoming months?

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What factors or circumstances would make it difficult or impossible for you to apply to these organisations for employment in the forthcoming months?

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Are there any other issues that come to mind when you think about the difficulty of applying to an organisation for employment in the forthcoming months?

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*Thank you for your participation*

**Appendix B: Transcribed interview example****INTERVIEW 11**

Interviewer: The first sets of questions look at your behavioural outcomes. In the forthcoming months you will begin submitting job applications to organisations that you consider favourable employers. When choosing an organisation to apply to what characteristics or criteria would you consider important determinants of your behaviour?

Interviewee: The most important thing for me that I would have to look at working for an organisation is the ethics, by that I mean how will they treat me as an employee, will my right and integrity as a person be receptive. Also I would look at what I think the organisation would offer me in terms of growing in my career and I would also look at if what I have correspond with what I think they are looking for, if I could positively influence an organisation.

Interviewer: Is there anything else that you can think of that would or any other characteristics or criteria that would influence your decision?

Interviewee: I think second to those I previously mentioned I would look at an organisation that I think the workforce is socially interact and they can work as a family outside of the office hours. I think I would enjoy that just considering being someone who is working in a job when they are still very young, I think I would enjoy that as it is not of primary importance to the job.

Interviewer: The second question is what characteristics or criteria would discourage you from applying or make you not consider an organisation?

Interviewee: I think what would influence me is if I heard or read bad media coverage of the organisation exploiting the employees or not conducting their business in an ethical way, I think that would influence me to not apply to the organisation.

Also I can probably look at accreditation in terms of depending on what the organisation is doing but if they have got the right accreditation for the sector they working in that would, if they don't have those accreditations I would ask why maybe not be very keen to start working for them.

Interviewer: Is there anything else you would like to add to that question?

Interviewee: No.

Interviewer: Question number 3 is do you foresee any advantages or disadvantages associated with applying to a particular organisation? I asked you to list three organisations that you would like to work for. So think about the advantages and disadvantages of working for either one of these.

Interviewee: The first organisation I mentioned the [REDACTED], they came to speak to us as a third year class and an advantage that I saw was that there are a whole lot of smaller companies that together form the [REDACTED] and an advantage I saw in that is because they are such a large company and they have other different companies underneath them is more a chance that I could grow in my career, there is more space to grow – I see that as an advantage and also a larger company is more established in their ways and I think an advantage of that is that they are rightly to function as established to get away of functioning at work instead of whereas smaller companies tend to still be finding their feet and mistakes might be made. The second organisation is Britain for the Church and I think that an advantage for such an organisation would be that I would almost be guaranteed that their ethics and morals correspond with mine and that the work environment could be conducive to what the type of work environment that I would want to work in. A disadvantage of working for the Church is often finances. A lot of the time they are organisations that are charitable

organisations and the unlike together a best salary to support yourself that would be a disadvantage for working for [REDACTED]

[REDACTED] – I can't think of a disadvantage right now.

Interviewer:

The second set of question looks at your normative beliefs. So the people that influence your decisions. Are there any individuals or groups who would approve of you applying to a particular organisation of your choice for employment in the forthcoming months?

Interviewee:

I think my family plays a large role. My mother and my two sisters. I don't think they would try and control my decision but I think that they would want the best for me and so their opinions would definitely influence my decision. I can't think specifically of any other people that would influence my decision but I think perhaps the university institution that I have been studying with would influence my decision with regard to the amount of information that they have given to me like when we have external groups like the [REDACTED] coming to speak to us, they expose us to that information and therefore that influences what I know about the organisation and influences my decision.

Interviewer:

Is it more the university or is it more the people who are coming to speak to you, the employees of those organisations?

Interviewee:

I think it is more the university and what information they allow us to receive because I think a lot of organisations could come and give us information that would want us to work for them but a lot of organisations don't get that exposure it depends on who the university allows and organises to come and speak to us.

Interviewer:

The next sets of questions look at your control beliefs. It looks at the way you perceive yourself, your abilities and your experiences. How that influences your decision to apply to an

organisation. In the forthcoming months, when applying to a preferred organisation for employment which personal characteristics or circumstances would encourage you to apply? So looking at yourself what do you feel would encourage you to apply to an organisation?

Interviewee: If my qualification in terms of the degree I have corresponds with what they require as a qualification, if there is a direct correspondence I would be more confident to apply to an organisation, I wouldn't be confident to apply if they are looking for a student with qualifications that I haven't achieved. I think that is the most prominent thing that would stick out in terms of my degree and my qualification and what they are looking for.

Interviewer: Which strengths do you think you have that would encourage you to apply to one organisation but not another?

Interviewee: I think the amount of people XXX what is needed. I think that I have the strength interacting with people and certain degree of social skills that is a strength for me that would influence to apply to an organisation that requires that as oppose to an organisation where it would just be a eight to five job working in an office and not really that much exposure to people and events.

Interviewer: Anything else you would like to add to that question?

Interviewee: No.

Interviewer: In the forthcoming months when applying to a preferred organisation for employment which personal characteristics or circumstances would prevent you from applying?

Interviewee: The first thing that comes to mind is financial situation. If I wanted to work for an organisation that does not give me the finances that I need to sustain a life that would prevent me from applying

for a position. I think that is the most prominent thing.

Interviewer:

The example that I normally give here is some people feel that if they do not have previous work experience that they won't even attempt to apply to a particular organisation because what they have heard or read or because of the job description. Is there anything like that?

Interviewee:

I don't think that that would prevent me from applying because if I don't have previous work experience and the company wants me to have previous work experience then they would just decline my application. I wouldn't fear applying and therefore not apply just because they require previous experience that I don't have. I think that I am quite a fast learner and I could gain experience quite quickly.

Interviewer:

What environmental factors or circumstances would encourage you to apply? Say for instances there may be a course that you have attended or a workshop that has given you particular skills. Things within your personal environment that would actually encourage you to apply to an organisation.

Interviewee:

I think an organisation that can list a certain part of their business to community work would encourage me because I have participated in a fair amount of community work and I think that I could benefit an organisation in that way. So if an organisation has community development projects. I don't think I completely understand the question in terms of environmental factors – would that be my current environment or what I have experienced in the past?

Interviewer:

It could be your experiences, things that you have been exposed to that would actually encourage you to apply to an organisation. So your qualifications would be an example.

Interviewee:

Oh. I think perhaps because in Matric I did more

creative subjects like technical drawing and speech and drama rather than science and biology I think that that in terms of qualification might determine but I don't think those subjects influence how I would work for an organisation. I don't think they have such a large impact although it is at the back of my mind that my Matric qualification is more creative subjects than XXX subjects.

Interviewer: Anything else you would like to add to that question?

Interviewee: I think also from my personal experience in life with regard to family situations and just my life experiences than a lot of struggle, I think I would be able to safe starting out at a company in a position where I do struggle and learn a lot and not be in a perfect position and work my way up rather than look for the perfect job with a lot of Genesis.

Interviewer: What environmental factors or circumstances would prevent you from applying? An example here is some individuals have no internet access at home or in an easily accessible area. If they know that an organisation has an application on the website or on the internet they would then completely disregard that organisation because they don't have easy internet access. That is just an example. Is there anything like that, any environmental factors that would prevent you from applying?

Interviewee: I think the geographical position of the XXX that I work would influence me. I don't like to drive and that is why I enjoy [REDACTED], I have a central flat and I can walk everywhere. So the actual position of the job would influence me, I wouldn't like to work in a city where I have to drive in traffic every day that would influence me to quite a large extent. So if that had to be a factor I would probably not be very XXX to work for that organisation. I think if the organisation portrays

an image that the organisation had mainly males in management or were mainly male dominated, that would discourage me from working there. I can't think of anything else right now.

Interviewer: So the last question is are there any other issues/ideas that come to mind when you think about the difficulty of successfully applying for a position especially in the South African market?

Interviewee: I often think of the amount of jobs that require degree in the ratio to how many people actually have an degree. So how many jobs are available for my qualification. Are there companies, are there a lot of companies who are looking for individuals with a qualification that I will get from the university or are there more graduates than there are actually the jobs available. I often consider that ratio and that concerns me. With regard specifically to South Arica – I don't want to have to leave South Africa but if an opportunity would be better overseas then I would consider will I be willing to make that move. Also with regard to South Africa's history – a lot of time lower level workers aren't treated with the same respect – there is a different view on lower level workers in South Africa I believe as oppose to European or American industries so I wouldn't want to be in a position or in a company that holds that view to lower level workers, I would like to be part of a company that sees that the lower level workers actually hold a lot of value in the company and I think that concerns me about South Africa is the view that they have of the lower level workers.

Interviewer: Anything else you would like to add to that?

Interviewee: No.

Interviewer: Thank you very much for your participation.

## Appendix C: Quantitative questionnaire example



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### STELLENBOSCH UNIVERSITY CONSENT TO PARTICIPATE IN RESEARCH

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*Research title: Applicants' Intention to Apply: a Planned Behaviour Perspective in the South African Labour Market*

You are asked to participate in a research study conducted by Miss Samantha Adams, from the Industrial Psychology Department at Stellenbosch University. The results obtained will contribute to the completion of a MComm degree in Industrial Psychology, specifically the thesis component of this postgraduate programme. You were selected as a possible participant in this study because you are a final year university student who intends to pursue employment (apply) at an organisation, within the forthcoming months.

#### 10. PURPOSE OF THE STUDY

Using the theory of planned behaviour (Ajzen, 1991) the present study will examine the variables that influence the decision making process involved in the job pursuit activities (job application) of the South African graduate. A secondary objective of the study is the identification of possible differences that may exist between graduates from the designated and non-designated group that may or may not be influential in applicant intention to apply for jobs.

#### 11. PROCEDURES

If you volunteer to participate in this study, you would be required to do the following:

##### 2.1. QUESTIONNAIRE

You will be asked to complete a questionnaire regarding the factors that influence your decision making process when seeking permanent employment within a particular organisation. You will be required to rate each question on a scale of 1 to 7 based on the favourability and likelihood of performing the statement posed. There are no right or wrong responses; we are merely interested in your personal opinions. Your responses will remain anonymous and your confidentiality protected. You will require approximately 30 minutes to complete this questionnaire.

## **12. POTENTIAL RISKS AND DISCOMFORTS**

There are no potential risks or discomforts envisaged in this study.

## **13. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY**

Participation in the study would provide the participant with an opportunity to reflect on the influential factors that play a role in their decision making when choosing an organisation they would consider applying to for permanent employment.

The need for the present study was initiated by the lack of research on differences that exist in South African graduates intention to apply based on the historical context they have grown up in, as well the social influences that stem from the historical oppression of specific race groups. If differences are found between the two groups — designated, and non-designated — this would warrant further investigation of the most influential latent causal variables at work, in this process.

## **14. PAYMENT FOR PARTICIPATION**

No payment will be made to participants for partaking in this study.

## **15. CONFIDENTIALITY**

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of a coding procedure. You will not be required to provide your names or particulars in the interview. The interview will be conducted by the researcher, in person. The results of this study will be published in the form of a completed dissertation as well as in an accredited journal, but confidentiality will be maintained. No names will be published.

## **16. PARTICIPATION AND WITHDRAWAL**

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

## **17. IDENTIFICATION OF INVESTIGATORS**

If you have any questions or concerns about the research, please feel free to contact Samantha Adams ([adamss@sun.ac.za](mailto:adamss@sun.ac.za) / 021 808 2599 / 083 668 6527 ) or Mr F. S. De Kock ([fsdk@sun.ac.za](mailto:fsdk@sun.ac.za) / 021 808 3016 / 081 5345754)

## 18. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

### CONSENT OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

The information above was described to me by Samantha Adams in English and I am in command of this language or it was satisfactorily translated to me. I was given the opportunity to ask questions and these questions were answered to my satisfaction. . I have been given a copy of this form.

*Please tick the relevant box*

I hereby consent voluntarily to participate in this study

I do not wish to participate in this study.

### SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to the subject. [He/she] was encouraged and given ample time to ask me any questions. This conversation was conducted in English and no translator was used.

\_\_\_\_\_

**Signature of Investigator**

\_\_\_\_\_

**Date**



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**DEMOGRAPHIC INFORMATION SHEET**

*The following information is solely for research purposes*  
**Please tick the appropriate box**

<b>RACE</b>	
Black	
Coloured	
White	
Asian	

<b>AGE</b>

<b>GENDER</b>	
Male	
Female	

<b>YEAR OF STUDY</b>	
Third year	
Fourth year	
Honours	
Masters	

**DEGREE PROGRAMME**

--

Have you been permanently employed in the past?

<b>YES</b>	<b>NO</b>

Will you pursue permanent employment next year?

<b>YES</b>	<b>NO</b>

Have you started searching for permanent employment?

<b>YES</b>	<b>NO</b>

Have you applied to any organisations for permanent employment?

<b>YES</b>	<b>NO</b>

Do you have a job yet?

<b>YES</b>	<b>NO</b>



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**Think of a company you want to work for. Keep this company in mind when answering the following questions.**

**Which organisation would you like to work for? \_\_\_\_\_**

**1. ATTITUDE TOWARDS APPLYING**

**When you think about submitting an application to your preferred organisation how do you view this behaviour? My decision to apply to this organisation would be...**

**Example:**

GOOD:   7  :   6  :   5  :   4  :   3  :   2  :   1  : BAD

7 = extremely 6 = moderately 5 = slightly 4 = neither 3 = slightly 2 = moderately 1 = extremely

**sensible: \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : foolish**

**favourable: \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : unfavourable**

**wise: \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : unwise**

**stimulating : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : dull**

**career building : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : career stagnating**

**satisfying: \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : unsatisfying**

**exciting: \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : boring**

**with confidence: \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : anxiety provoking**

**goal directed: \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : directionless**

**rewarding: \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : unrewarding**

**I will be afforded opportunities for growth (e.g., training and promotions) if I apply to this organisation.**

extremely unlikely: \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : extremely likely

1      2      3      4      5      6      7

**I will earn a good salary if I apply to this organisation.**

extremely unlikely: \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : extremely likely

1      2      3      4      5      6      7

**I will receive favourable benefits if I apply to this organisation.**

extremely unlikely: \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : extremely likely

1 2 3 4 5 6 7

**I will be in my preferred geographic location if I apply to this organisation.**

extremely unlikely: \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ : extremely likely

1 2 3 4 5 6 7

**I would derive some security from submitting an application to an organisation that has a good reputation as an employer.**

extremely unlikely: \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ : extremely likely

1 2 3 4 5 6 7

**I would feel comfortable applying to a company that has the same values as my own.**

extremely unlikely: \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ : extremely likely

1 2 3 4 5 6 7

**I would feel proud to apply to a company that sells a reputable product or service.**

extremely unlikely: \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ : extremely likely

1 2 3 4 5 6 7

**I would feel satisfied applying to a company that has proven to be economically sustainable.**

extremely unlikely: \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ : extremely likely

1 2 3 4 5 6 7

**I would feel satisfied if I am able to work in a conducive work climate.**

extremely unlikely: \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ : extremely likely

1 2 3 4 5 6 7

**I would feel proud to become part of a professional team.**

extremely unlikely: \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ : extremely likely

1 2 3 4 5 6 7

*Please rate the importance of the following characteristics of a potential employer*

	<i>Not very important</i>						<i>Very Important</i>
							7
<i>Opportunities for growth are ...</i>							
<i>A good salary is ...</i>							
<i>Favourable benefits are ...</i>							
<i>The geographic location of the organisation is ...</i>							
<i>An organisation's reputation as an employer is ...</i>							
<i>An organisation that has similar values to my own is</i>							
<i>An organisation that sells a reputable product or service is ...</i>							
<i>Working for a company that has proven to be economically sustainable is ...</i>							
<i>Working in a conducive work climate is ...</i>							
<i>Working as part of a professional team is ...</i>							

**2. SUBJECTIVE NORM**

**Most people who are important to me think that I should pursue a job in this organisation.**

Extremely unlikely: \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : extremely likely  
 1        2        3        4        5        6        7

**My parents expect me to pursue a job in this organisation.**

Extremely unlikely: \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : extremely likely  
 1        2        3        4        5        6        7

**My friends expect me to pursue a job in this organisation.**

Extremely unlikely: \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : extremely likely  
 1        2        3        4        5        6        7

**My lecturers expect me to pursue a job in this organisation.**

Extremely unlikely: \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : extremely likely

1 2 3 4 5 6 7

**My classmates would also submit an application to this organisation.**

Extremely unlikely: \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ : extremely likely

1 2 3 4 5 6 7

**Generally speaking, how much do you want to do what the following people think you should do?**

	Not at all						Very much
<b>Most people who are important to me</b>							
<b>My parents</b>							
<b>My friends</b>							
<b>My lecturers</b>							
<b>My classmates</b>							

**PERCEIVED BEHAVIOURAL CONTROL**

**Whether or not I submit an application to this organisation is entirely up to me.**

strongly disagree: \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ : strongly agree

1 2 3 4 5 6 7

*To what extent will your personal control over this behaviour enable you to successfully submit an application to this organisation? It will make it ...*

*Much more difficult: \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ : much easier*

1 2 3 4 5 6 7

**There are likely to be plenty of opportunities for me to complete an application to this organisation.**

strongly disagree: \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ : strongly agree

1 2 3 4 5 6 7

*To what extent will the number of opportunities to apply to this company motivate you to successfully submit an application to this organisation? It will make it ...*

*Much more difficult: \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ : much easier*

1 2 3 4 5 6 7

**I can overcome any obstacles or problems that could prevent me from completing an application to this organisation.**

strongly disagree: \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ : strongly agree

1 2 3 4 5 6 7

*To what extent will your ability to overcome obstacles enable you to successfully submit an application to this organisation? It will make it ...*

*Much more difficult: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: much easier*

1 2 3 4 5 6 7

**My confidence in my abilities will aid my application to this organisation.**

strongly disagree: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: strongly agree

1 2 3 4 5 6 7

*To what extent will your confidence in your abilities motivate you to successfully submit an application to this organisation? It will make it ...*

*Much more difficult: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: much easier*

1 2 3 4 5 6 7

**My education will aid my application to this organisation.**

strongly disagree: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: strongly agree

1 2 3 4 5 6 7

*To what extent will your education enable you to complete and submit an application to this organisation? It will make it*

*Much more difficult: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: much easier*

1 2 3 4 5 6 7

**I believe I am capable of submitting an application to this organisation.**

strongly disagree: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: strongly agree

1 2 3 4 5 6 7

*To what extent will your belief in your abilities motivate you to submit an application to this organisation? It will make it...*

*Much more difficult: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: much easier*

1 2 3 4 5 6 7

**The current job market encourages me to submit an application to this organisation.**

strongly disagree: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: strongly agree

1 2 3 4 5 6 7

*To what extent will the present job market (i.e. job scarcity, competition etc) enable you to submit an application to this organisation? It will make it...*

*Much more difficult: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: much easier*

1 2 3 4 5 6 7

**My motivation and dedication will greatly increase the chances that I complete an application for a job in this organisation.**

strongly disagree: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: strongly agree

1 2 3 4 5 6 7

*To what extent will your motivation and dedication enable you to complete and submit an application to this organisation? It will make it...*

*Much more difficult: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: much easier*

1 2 3 4 5 6 7

**I am confident that I will be able to complete an application to work for this organisation.**

strongly disagree: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: strongly agree

1 2 3 4 5 6 7

*To what extent will confidence in your abilities empower you complete and submit an application to this organisation? It will make it...*

*Much more difficult: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: much easier*

1 2 3 4 5 6 7

**I would apply to this organisation despite the fact that it is looking for Affirmative Action or Employment Equity candidates only.**

strongly disagree: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: strongly agree

1 2 3 4 5 6 7

*To what extent will the recruitment policy of the company enable you to successfully submit an application to this organisation? It will make it ...*

*Much more difficult: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: much easier*

1 2 3 4 5 6 7

**I would apply to this organisation if my preferred job was advertised.**

strongly disagree: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: strongly agree

1 2 3 4 5 6 7

*To what extent will the availability of your preferred job enable you to successfully submit an application to this organisation? It will make it ...*

*Much more difficult: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: much easier*

1 2 3 4 5 6 7

**JOB APPLICATION INTENTION**

**I intend applying for a job at this preferred organisation**

strongly disagree: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: \_\_\_\_\_: strongly agree

1            2            3            4            5            6            7

**I will complete an application for a job with this organisation.**

strongly disagree: \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_: strongly agree

2            2            3            4            5            6            7

**I will actively pursue obtaining a position in this organisation.**

strongly disagree: \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_: strongly agree

1            2            3            4            5            6            7

**I want to submit an application to this organisation in the forthcoming months.**

strongly disagree: \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_: strongly agree

1            2            3            4            5            6            7

*Thank you for your participation*

## Appendix D: Results of statistical analyses

### Dimensionality analysis

*Principal component loadings for the behavioural beliefs dimension*

#### Total Variance Explained

Factor	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	4.226	42.258	42.258
2	1.340	13.398	55.656
3	1.006	10.064	65.720
4	.680	6.799	72.519
5	.652	6.516	79.035
6	.553	5.533	84.568
7	.457	4.573	89.141
8	.419	4.185	93.326
9	.356	3.565	96.891
10	.311	3.109	100.000

Extraction Method: Principal Axis Factoring.

#### Factor Matrix<sup>a</sup>

	Factor
	1
ATT1	.548
ATT2	.463
ATT3	.544
ATT5	.729
ATT6	.558
ATT7	.701
ATT8	.733
ATT9	.730
ATT10	.633

Extraction Method:

Principal Axis

Factoring.

a. 1 factors

extracted. 5

iterations required.

*Principal component loadings for the perceived behavioural control dimension***Total Variance Explained**

Factor	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	4.629	42.081	42.081
2	1.125	10.231	52.312
3	.897	8.152	60.463
4	.747	6.793	67.257
5	.718	6.526	73.783
6	.647	5.883	79.666
7	.583	5.301	84.966
8	.515	4.680	89.646
9	.462	4.197	93.843
10	.401	3.646	97.489
11	.276	2.511	100.000

Extraction Method: Principal Axis Factoring.

*Principal component loadings for the perceived behavioural control dimension***Rotated Factor Matrix<sup>a</sup>**

	Factor	
	1	2
PBC1	.501	.231
PBC2	.271	.535
PBC3	.548	.407
PBC4	.684	.255
PBC5	.557	.242
PBC6	.751	.209
PBC7	.227	.515
PBC8	.681	.236
PBC9	.812	.228
PBC10	.100	.452
PBC11	.367	.188

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

**Factor Matrix<sup>a</sup>**

	Factor
	1
PBC1	.553
PBC2	.479
PBC3	.676
PBC4	.724
PBC5	.608
PBC6	.757
PBC7	.432
PBC8	.712
PBC9	.818
PBC10	.294
PBC11	.414

Extraction Method:

Principal Axis

Factoring.

a. 1 factors extracted.

4 iterations required.

### Test of univariate normality before normalisation

Variable	Skewness		Kurtosis		Skewness and Kurtosis	
	Z-Score	P-Value	Z-Score	P-Value	Chi-Square	P-Value
ITA1	14.021	0.000	7.917	0.000	259.261	0.000
ITA2	13.510	0.000	7.287	0.000	235.620	0.000
ITA3	11.333	0.000	4.703	0.000	150.547	0.000
ITA4	9.669	0.000	-2.142	0.032	98.084	0.000
SN1	2.115	0.034	-4.876	0.000	28.250	0.000
SN2	1.452	0.146	-7.795	0.000	62.875	0.000
SN3	6.327	0.000	-3.547	0.000	52.616	0.000
SN4	4.522	0.000	-3.542	0.000	32.994	0.000
SN5	6.064	0.000	-3.188	0.001	46.930	0.000
ATA_1	-5.747	0.000	-1.854	0.064	36.463	0.000
ATA_2	4.247	0.000	-0.741	0.458	18.583	0.000
ATA_3	-4.874	0.000	-0.252	0.801	23.823	0.000
CONTR1	1.424	0.154	-1.894	0.058	5.615	0.060

CONTR2	-2.367	0.018	-2.612	0.009	12.423	0.002
CONTR3	-3.544		-3.544	0.000	28.189	0.000

Test of univariate normality on imputed item parcels after normalisation

Variable	Skewness		Kurtosis		Skewness and Kurtosis	
	ZScore	P-Value	Z-Score	P-Value	Chi-Square	P-Value
ITA1	7.624	0.000	-3.732	0.000	72.052	0.000
ITA2	7.738	0.000	-3.767	0.000	74.068	0.000
ITA3	6.672	0.000	-4.726	0.000	6.849	0.000
ITA4	5.071	0.000	-11.093	0.000	148.779	0.000
SN1	0.990	0.322	-1.592	0.111	3.515	0.173
SN2	0.659	0.510	-1.910	0.056	4.080	0.130
SN3	0.147	0.883	-1.381	0.167	1.930	.381
SN4	0.260	0.795	-1.206	0.228	1.522	0.467
SN5	0.099	0.921	1.647	0.100	2.723	0.256
ATA_1	1.305	0.192	-2.163	0.031	6.382	0.041
ATA_2	0.467	0.640	-0.877	0.381	0.987	0.610
ATA_3	0.661	0.509	-1.269	0.204	2.046	0.359
CONTROL_	-0.268	0.789	-0.544	0.586	0.368	0.832
CONTROL_	-0.534	0.594	-1.054	0.292	1.395	0.498

*Evaluation of the goodness-of-fit indices for the TPB structural model*

Degrees of Freedom for (C1)-(C3)	84
Maximum Likelihood Ratio Chi-Square (C1)	404.421 (P = 0.0000)
Browne's (1984) ADF Chi-Square (C2_NT)	428.705 (P = 0.0000)
Browne's (1984) ADF Chi-Square (C2_NNT)	344.006 (P = 0.0000)
Satorra-Bentler (1988) Scaled Chi-square (C3)	349.357 (P = 0.0000)
Satorra-Bentler (1988) Adjusted Chi-square (C4)	240.163 (P = 0.0000)
Degrees of Freedom for C4	57.745
Estimated Non-centrality Parameter (NCP)	320.421
90 Percent Confidence Interval for NCP	(261.516 ; 386.859)
Minimum Fit Function Value	0.480
Population Discrepancy Function Value (F0)	0.380

90 Percent Confidence Interval for F0	0.310 ; 0.459)
Root Mean Square Error of Approximation (RMSEA)	0.0673
90 Percent Confidence Interval for RMSEA	(0.0608 ; 0.0739)
P-Value for Test of Close Fit (RMSEA < 0.05)	0.00277
Expected Cross-Validation Index (ECVI)	0.500
90 Percent Confidence Interval for ECVI	(0.495 ; 0.644)
ECVI for Saturated Model	0.285
ECVI for Independence Model	16.285
Chi-Square for Independence Model (105 df)	13698.268
Normed Fit Index (NFI)	0.974
Non-Normed Fit Index (NNFI)	0.976
Parsimony Normed Fit Index (PNFI)	0.780
Comparative Fit Index (CFI)	0.980
Incremental Fit Index (IFI)	0.980
Relative Fit Index (RFI)	0.968
Critical N (CN)	283.133
Root Mean Square Residual (RMR)	4.227
Standardized RMR	0.0481
Goodness of Fit Index (GFI)	0.936
Adjusted Goodness of Fit Index (AGFI)	0.909
Parsimony Goodness of Fit Index (PGFI)	0.656
Critical N (CN)	283.133

Independent samples t-test

**Group Statistics**

	GROUP	N	Mean	Std. Deviation	Std. Error Mean
ITA_T	1.00	161	6.0637	1.04443	.08231
	2.00	671	5.8361	1.15559	.04461

**Independent Samples Test**

	Levene's Test for Equality of Variances	t-test for Equality of Means								
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
ITA_T Equal variances assumed	4.068	.044	2.285	830	.023	.22760	.09961	.03209	.42311	

Equal variances not assumed			2.431	262.393	.016	.22760	.09362	.04325	.41195
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