GORDON INSTITUTE
OF BUSINESS SCIENCE

Causal factors that influence turnover intent in a manufacturing organisation

Maximillian Lewis
89353511

A Research project submitted to the Gordon Institute of Business Science, University of Pretoria in partial fulfilment of the requirements for the degree of

Masters of Business Administration

13 November 2008

ABSTRACT

South Africa is experiencing a shortage of skills in key industries and many organisations have listed the retention of staff as a key objective in their annual sustainability reports.

The factors that affect an employee's intent to turnover have received greater attention as a study field of late but the literature is not all in agreement on the principal factors that influence an employee's decision to leave an organisation. Many authors suggested that more empirical evidence are necessary to validate the significance of the identified precursors of employee turnover.

Prince (2001) and other contributing authors postulated a causal model that tries to explain the complex interactions between the principal constructs that influence the job satisfaction and organisational commitment of an employee, ultimately leading to the employee's decision to stay at the organisation or turnover.

A Structural Equation Modelling technique was applied to the survey data gathered from a South African organisation to validate its fit to the postulated causal relationships defined in Prince's (2001) model.

Many of causal relationships could be validated for the company under study but this study had to conclude as so many other authors has done before that more empirical research is necessary to test the principal constructs of labour turnover as this research could not confirm all the factors postulated by Prince (2001).

DECLARATION

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

_____ _____

M Lewis Date

ACKNOWLEDGEMENTS

My eternal gratitude to God who gave me the talent and ability to complete this course.

I want to thank my wife Cathie and my two children, Max and Christi for their many sacrifices and support during these two years of study. I hope to make for our lost time together.

Thank you to Columbus Stainless who provided the means and the time for me to study.

Thank you to Dr. Charlene Lew who supported me with this dissertation. Your comment, support and advice were of great assistance to shape the outcome.

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1. INTRODUCTION TO RESEARCH PROBLEM

1.1 Research title

Causal factors that influence turnover intent

1.2 Research problem

South Africa is experiencing a shortage of skills in industries critical to South Africa's future growth as defined by the Accelerated and Shared Growth Initiative for South Africa (ASGI-SA). The South African government recognised that solutions to the skills shortage are critical to the successful implementation of the national strategic objectives and has launched various initiatives to accelerate human resource development:

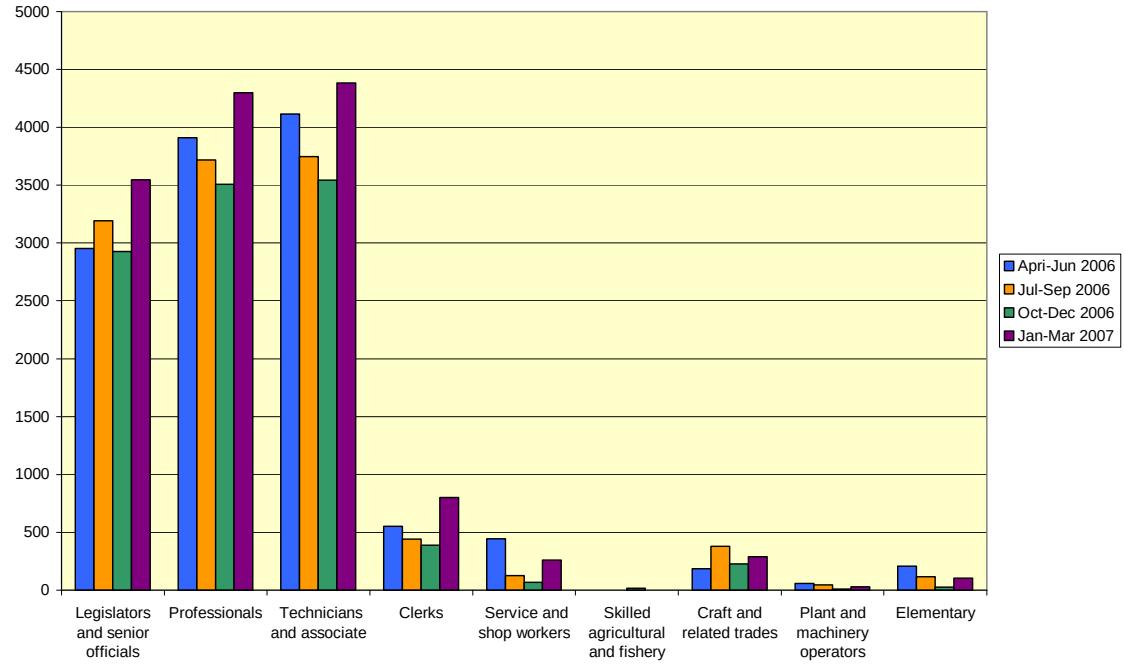
a) The second National Skills Development Strategy was published in 2005 to coordinate the government's initiatives on skills development (DOL, 2005).
b) The Joint Initiative on Priority Skills Acquisition (JIPSA) workgroup was formed in 2006. This workgroup identified a list of scarce skills in the South African economy (DOL, 2008).
c) The National Skills Fund was launched to support skills development projects (DOL, 2008).

The retention of critical skills has also become a matter of strategic importance to the major industries in South Africa. For example, AcelorMittal South Africa emphasizes in their annual report for 2007 the strategic importance of retaining talented employees in a climate of industry-wide skills shortages (AcelorMittal, 2008).

Sasol identified the retention of key employees as a strategic focus area in their sustainability report for 2007 (Sasol, 2008). Highveld Steel and Vanadium Corporation identified the labour turnover at management level as the principal reason for not meeting equity targets. (Highveld, 2008)

The Annual Labour Market Bulletin published by the Department of Labour (DOL, 2007) illustrates the significant number of advertisements for positions in the Legal-, Professional- and Technician job categories published in the Sunday Times' Careers supplement for the period 1 April 2006 to 31 March 2007 as depicted in Figure 1 below. These statistics highlight the significant shortages that exist in the job market for these professions.

Figure 1 - Advertised vacancies per job category



The factors that affect employee's intent to turnover have received greater attention as a study field of late but the literature is not all in agreement on the principal factors that influence a person's decision to leave an organisation (Allen, Shore and Griffeth, 2003).

Commitment and satisfaction were studied as possible precursors to employee turnover (Rhoades, Eisenberger and Armeli, 2001; Whitener, 2001). Other studies focussed on the effect of remuneration strategies on staff turnover (Tosi, Werner, Katz and Gomez-Mejia, 1998; Miller, Hom and Gomez-Mejia, 2001; Blakemore, 1987). Luna-Arocas and Camps (2008) included Job Enrichment and Job Stability as precursors of intent to turnover. Becker (1964) focussed on the influence of general training as an indirect impact on the intent to stay through job satisfaction.

Prince and Mueller (Price, 1977; Price & Mueller, 1986) have developed a causal model based on their theoretical studies on turnover that explains the interactions between various environmental, individual and structural factors that influence the intent to stay. Other authors have build on Prince and Mueller's original work by empirically testing the validity of the postulated relationships between the factors.

Although a significant theoretical base exists many authors suggested that more empirical evidence are necessary to validate the significance of the identified precursors of employee turnover. (Luna-Arocas and Camps, 2008; Allen *et al.*, 2003; Miller *et al.*, 2001)

1.3 Research aim

Price (2001) suggests a structural theoretical model to test the relationships between environmental, individual and structural variables and the intention to turnover. His empirical studies, based on this model, not only suggests remuneration to be an important precursor for turnover intentions as suggested in literature (Blakemore, 1987; Tosi *et al.*, 1998; Miller *et al.*, 2001) but also personal factors and the organisational structure.

The aim of the intended research is to determine if these precursors of employer turnover as defined by Price (2001) are valid in a labour market where skills are scarce.

1.3.1 Definition of scarcity in the South African labour market

The definition of a scarce skill as defined by the Department of Labour will be used to categorise the scarcity of positions (DOL, 2008). The Department of Labour differentiate between absolute- and relative scarcity of skills:

a) **Absolute scarcity**

Absolute scarcity refers to suitably skilled people who are not available in the labour market. Specific contexts in which absolute scarcities may arise include:

I. A new or emerging occupation, i.e. there are few, if any, people in the country with the requisite skills.

II. Companies, sectors and even the national economy are unable to implement planned growth strategies because productivity, service delivery and quality problems are directly attributable to a lack of skilled people.

III. Replacement demand would reflect an absolute scarcity where there are no people enrolled or engaged in the process of acquiring skills that need to be replaced.

b) **Relative scarcity**

Relative scarcity refers, to the context where suitably skilled people are in fact available in the labour market but they do not exhibit other employment criteria, for example:

I. High-level work experience, for example project management of large construction sites such as dams or power plants.

II. Geographical location, for example, people are unwilling to work outside of urban areas.

III. Equity considerations, for example, there are few if any candidates with the requisite skills from specific groups available to meet the skills requirements of firms and enterprises.

Both absolute- and relative scarce positions as listed in the National Scarce Skills List will be sampled for this research. The following job categories will be included in this study:

a) Construction, Distribution and Production / Operations Managers
b) Accountants, Auditors and Company Secretaries
c) Human Resource and Training Professionals
d) Engineering Professionals
e) Business and Systems Analysts, and Programmers
f) Building and Engineering Technicians
g) Manufacturing and Process Technicians
h) Fabrication Engineering Trades Workers
i) Electricians

The research will be performed on an organisation that operates in the manufacturing sector in South Africa. The company is in existence since 1966 and has mature management structures and business systems. The company is situated in Mpumalanga in a countryside setting. The economic activity in the geographical area is categorised by high industrial and mining activities such as the mining of coal, chrome, platinum and iron ore, the generation of electricity and the production of construction steel, vanadium steels and stainless steels. All these industries have a significant demand for the scarce skills as defined in the National Scarce Skills List (DOL, 2007a). The organisation under study has 1670 employees and has experienced significant labour turnover over the past few years. Table 1 below summarises the labour turnover trend over the past three years.

Table 1 - Labour turnover trend in the organisation

Year	Labour turnover in organisation
2005	11.60%
2006	13.49%
2007	11.37%

1.4 Research method employed

A questionnaire will be developed to test the relevance of the factors suggested in the theoretical model put forward by Price (2001). The questionnaire will be distribute electronically to the sample respondents and the questionnaire replies will be analysed using a structural equation modelling technique to assess the validity of the relationship between the environmental, individual and structural variables and the individual's intent to turnover.

2. THEORY AND LITERATURE REVIEW

2.1 Introduction

Labour turnover is a contentious difficulty for organisations that prefer to see the investment in human capital to be an exclusive competitive advantage to the business rather than that well trained human assets leave the organisation to add value to a competitor. Before we assess the reasons for labour turnover in an organisation we must first define the principal factors that influence labour turnover.

2.2 The importance of human resources in the fulfilment of the organisation's goals

Academic literature has argued that human resources are a critical component of an organisation's competitive advantage over its competitors (Kochan and Dyer, 1993; Arthur, 1994; Pfeffer, 1994). The debate on the sources of organisations' competiveness has identified Strategic Human Resource Management to be a principal source of competitiveness by many accomplished authors (Porter, 1985; Lee and Miller, 1999; Price, 2001).

Huselid (1995) did a comprehensive empirical study to evaluate the association between high performance work practices and the performance of nearly 1000 organisations over a wide range of industries in the United States. Huselid found considerable support for the hypotheses that investment in high performance work practices are associated with lower labour turnover, greater productivity and ultimately corporate financial performance.

Eisenberger, Cummings, Armeli and Lynch (1997) found that high performance work practices increased the organization's ability to perform by increasing the employee's commitment towards the organisation's goals through job satisfaction. Becker and Gerhart (1996) stated, based on their empirical research, that organisations will achieve greater performance through specific human resource strategies.

2.3 The importance of turnover on organisational performance

Turnover can be defined as the movement of an employee over the boundaries of the organisation. In the research there is a greater focus on people leaving rather than entering the organisation (Price, 2001). It is widely believed that voluntary turnover adversely affects an organisation's ability to perform (Hom and Griffeth, 1991). Not only are there the direct cost of recruiting and training a new team member but also the consequential losses in organizational efficiency, corporate knowledge and business culture. It is far better to retain employees than expense the cost of recruiting and training (Mitchell, Holtom, Lee, Sablynski and Erez, 2001).

2.4 Theories on human resource practices and organisation performance

Two competing normative schools have developed in the literature over the relationship between human resource practices and organisation performance.

2.4.1 Universalistic approach

The first school of thought argues that there exist human resource practices that are consistently better than others and can be adopted on a best practices approach regardless the business strategy, industry or cultural context. This view is collectively known as the universalistic approach.

The universalistic approach asserts that there is a direct relationship between certain human resource practices and the organisation's performance (Arthur, 1994; Delery and Doty, 1996). Authors that support this view state that some human resource practices directly influence organizational performance, independent of other external or internal factors.

Although several theoretical and empirical studies have been done to identify these universal practices it still poses a challenge to define the universal human resource practices that have a direct effect on the organisation's performance irrespective the organisation's size, industry, the country of operation and over time (Delery and Doty, 1996).

Huselid (1995) has found in his study that a specific set of high performance work practices did benefit organisations in a wide range of industries and organisation sizes in the United States. Huselid could not identify a significant association between the degree of external fit of the organisation's human resource practices and organizational performance. He argued that it is more important to implement high performance work practices than to ensure it is internally consistent with the organisation's strategy or business environment. But Huselid cautioning on the outright acceptance of his view as not enough empirical research has been done on the premise of fit.

Other researchers support Huselid's (1995) view that a set of best practices exist. Pfeffer (1994) identified 16 human resource practices that result in higher productivity and profits across several organisations. Osterman (1994) also argues innovative working practices such as teams, job rotation, quality circles and total quality management will result in improved productivity and its consequence will be higher profits for organisation. In more recent studies Geringer, Frayne and Milliman (2002) focussed on hiring, training and development, performance appraisal, pay, leadership and communication. Tzafrir (2006) did a longitudinal study on the significance of training, employee participation, internal labour market, selection and incentive compensation. He concluded that the performance on organisational and market levels is strongly related to the level of training in an organization.

Although a fast body of knowledge already exist on universal human resource practices more evidence is required to identify and validate universally applicable practices that will improve the organisation's performance in all business environments.

2.4.2 Contingency approach

Scholars of the contingency view on the other hand argue that the human resource strategy and organisational performance link can only be made under high external fit conditions and that a specific business strategy will have a specific set of human resource practices that will optimise the organisation's performance (Porter, 1985; Zeffane, 1994).

Delery and Doty (1996) have also found in their research that it is the interaction between specific human resource actions, the organisation culture and the economic environment that is manifested into organisational performance rather than the contribution of the individual human resource actions. Miles and Snow's (1984) research showed that different organisational strategies (defenders, explorers, analysts and reactives) required different human resource systems. Porter (1985) argued that the principal organisation strategies, cost leader, product differentiation and segmentation require radically different human resource strategies. Huang, Lin and Chuang (2005) found evidence in an empirical study done under 180 employees of a construction firm that left the organisation that inter- and intra company wages and economic cycles to be significant.

2.5 Factors that influence the intent to turnover

Figure 2 depicts the causal model of the different factors that influence the employee's intent to turnover as defined by Price (2001). A brief definition of each factor is also provided in Table 2. This model is based on research conducted by various collaborating authors over the period 1972 to 2000 (Price, 1975, 1977; Price and Mueller, 1981, 1986; Mueller and Price, 1990; Agho, Mueller, Price, 1993; Iverson and Roy, 1994; Mueller, Boyer, Price and Iverson, 1994). Prince's (2001) causal model supports the notion of the contingency theorists that the effectiveness of human resource practices is closely linked to several environmental-, individual-, and organisational factors.

The research subjects in Price's (2001) research were predominantly medical professionals (Medical doctors, Nurses, Dental hygienists) but Iverson and Roy (1994) also applied this model to blue collar workers in Australia and found that the causal properties of the model hold true for blue collar workers. Their study provided additional evidence that structural, pre-entry, environmental variables and employee orientations play a significant role in the decision process of employees to stay or leave an organization.

Figure 2 - Causal model of turnover courtesy of Price (2001)

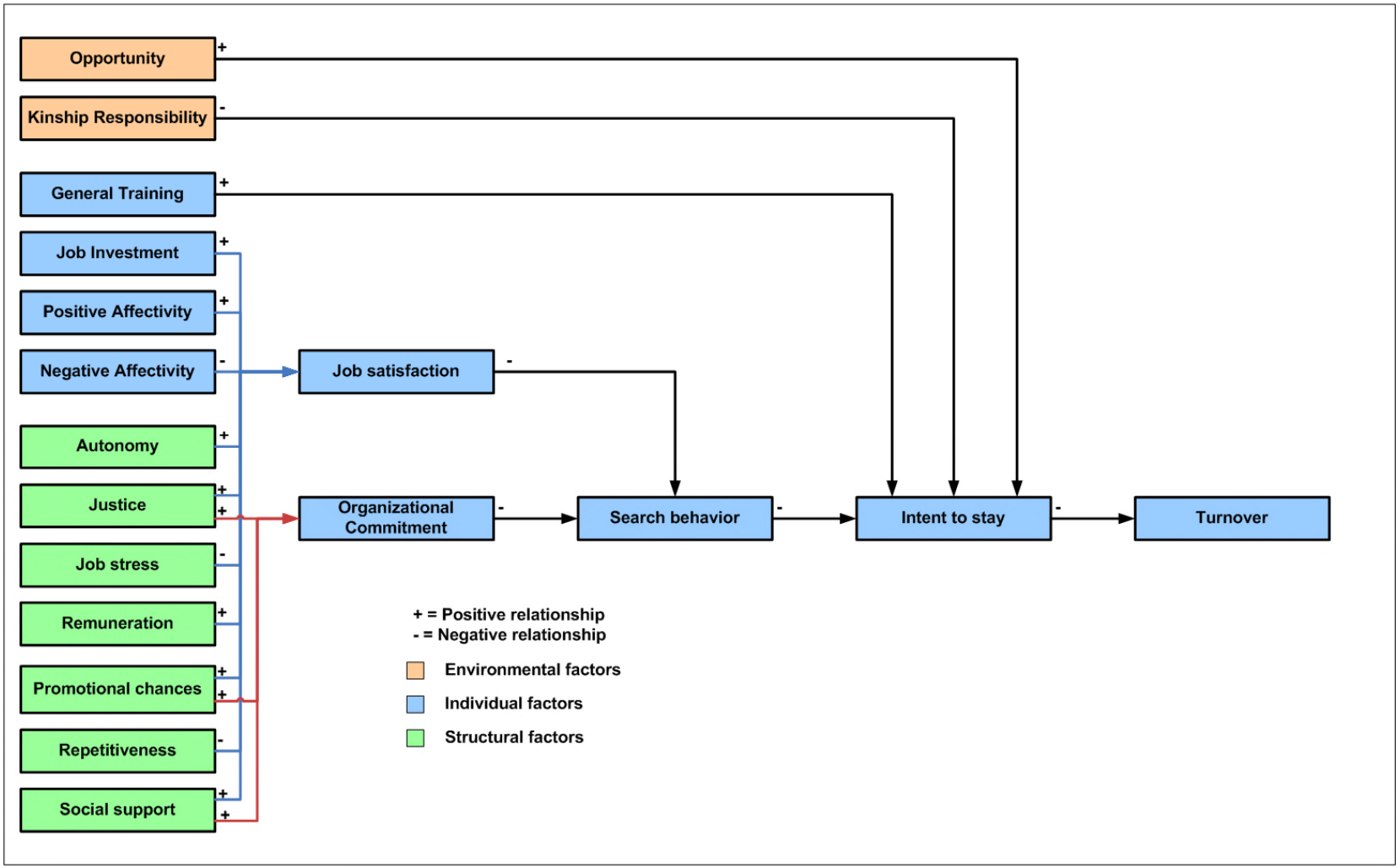


Table 2 - Definitions of factors in the causal model

Factor	Definition
Environmental	
Kinship responsibility	The existence of obligations to relatives residing in the community.
Opportunity	The availability of alternate jobs in the environment.
Individual	
Job satisfaction	The extent to which employees enjoy their role in the organisation.
Organizational commitment	The extent of the Employee's loyalty to the employer.
Search behaviour	The degree to which an employee is looking for another job.
Intent to stay	The extent to which an employee plans to continue membership with his/her employer.
General training	The transferability of skills and knowledge among employers.
Job investment	The willingness to exert effort on the job.
Positive/negative affectivity	The respectively dispositional tendency to experience pleasant or unpleasant emotional states.
Structural	
Autonomy	The degree to which an employee exercises power relative to his/her job.
Distributive justice	The extent to which rewards and punishments are related to job performance.
Job stress	The extent to which job duties cannot be fulfilled.
Resource inadequacy	Lack of the means to perform job.
Role ambiguity	Unclear job obligations.
Role conflict	Inconsistent job obligations.
Workload	The amount of effort required by a job.
Remuneration	Money and its equivalents which employees receive for their services to the employer.
Promotional chances	The degree of potential vertical occupational mobility within an organization.
Repetitiveness	The extent to which a job actions are repetitive.
Social support	The extent of social support in job-related problems.
Family support	Assistance with job-related problems provided by relatives.
Supervisor support	Assistance with job-related problems provided by the immediate superior.
Workgroup cohesion	Assistance with job-related problems provided by peers at work.

2.5.1 Environmental factors

Two environmental factors are considered by Price (2001): Opportunity and Kinship responsibility.

2.5.1.1 Opportunity

Opportunity refers to the availability of jobs in the market. Price (2001) argues that the more jobs that there are available in the market the easier it becomes for an individual to find a better fit in other organisations and this increases labour turnover and reduces job satisfaction due to the perceived benefits of turnover. This view is supported by Wheeler, Gallagher, Brouer and Sablynski (2007) who highlight the effects of person-organisation (P-O) fit and job mobility on human resource practices. They found that the perceived job mobility (The ability to get another job) moderates the job satisfaction-intent to turnover relationship such that the combined effect of poor P-O fit with high job mobility predicted the intend to turnover well.

Clarke and Herrmann (2007) found in the house building sector of the UK that the skills shortage in site management and carpenter positions has created greater opportunities for incumbents with these skills and a greater mobility of employees was experienced in the job market. Prince (2001) in his own study of career intent amongst air force physicians identified a strong correlation between job opportunities and an employee's organisational commitment that in turn strongly correlates with an individual's intent to turnover.

It is expected that this study will collaborate previous research results and that job mobility will be positively related to an employee's intent to turnover.

2.5.1.2 Kinship

Kinship responsibility refers to the individual's responsibilities towards next-of-kin. Price and Mueller (1981, 1986) suggests that the obligations to relatives reduce an employee's intent to turnover due to the responsibility towards their family and relatives. Turban, Campion, and Eyring (1992) also identifies kinship as an important moderation factor on turnover when employees need to move to a company outside their local job market. The local job market is defined as the geographical area a person will be able to work in without the need to move from his current residence. Mitchell, Holtom, Lee, Sablynski and Erez (2001) also found kinship to be a significant factor when employees make the decision to turnover outside the local job market.

Lystad (1970) identified a deeply rooted system of family values under black South Africans that influence members of a family to look after their elderly and even adult members that are not able to look after themselves. Enslin and Horsthemke (2004) found in their anthropological studies that the African principal of "ubuntu", the notion of interdependence between people, to be a driving factor in social behaviour.

South Africans have a strong culture of family values and it is expected that this study will show a strong negative correlation between the employees' degree of kinship responsibility and their intent to turnover.

2.5.2 Individual factors

Price's (2001) model includes four individual variables: general training, job involvement, positive- and negative affectivity.

2.5.2.1 General training

Price (2001) suggests a direct link between general training and the intent to turnover. Arthur (1994) argues that by providing the proper training, linked to appropriate rewards, can lead to a highly motivated and empowered work force with the subsequent effect of reduced labour turnover. Huselid (1995) has found in his study of 968 publicly held US companies that a strong negative relationship exists between the skills of employees and the rate of turnover. Pfeffer (1994) identifies 16 management practices, amongst them general training, that will lead to greater productivity and reduced labour turnover based on studies performed on US based organisation.

General training, in a skill constrained job market, better equip employees to fit other positions in the job market and it is expected that general training, moderated by the employee's organisational commitment will be positively related to intent to turnover.

2.5.2.2 Job involvement

Prince (2001) makes a distinction between job motivation and work motivation based on the research done by Kanungo (1982). Kanungo defined work motivation as the motivation an employee experience from his daily responsibilities. Job motivation on the other hand is the motivation an employee brings to work because he has an affinity for the tasks he needs to perform. Job motivation is better known as job involvement in the literature and Prince (2001) refers to this term.

Job involvement has its foundation in the work of McClelland, Atkinson, Clark and Lowell (1953). These authors argue that an employee's performance is primarily influenced by the individual's need for achievement, moderated by his simultaneous need for acceptance and power. Each employee has a different level of attraction to achievement and the perceived comprehensiveness with which the job fulfils this need for achievement determines the Person-Job fit. It is assumed that job involvement results in employees that are willing to work harder. When this hard work is rewarded employees become more motivated resulting in increased job satisfaction and more commitment towards the organisation.

This study expects to show that high job involvement manifests in higher job satisfaction and organisational commitment.

2.5.2.3 Positive- and Negative affectivity

Prince (2001) introduces positive- and negative affectivity as factors indirectly influencing the intent to turnover based on the research conducted by Watson, Clark and other contributing authors (Watson and Clark, 1984; Watson Pennebaker, and Folger, 1987; Clark and Watson, 1991). Watson and Clark argue that employees have personality based determinants of satisfaction that will influence the employee's response to structural variables such as job stress and social support and it is important to control for positive and negative affectivity in studies (Brief, Burke, George, Robinson, Webster, 1988).

Positive- and negative activity measures will be included in this study to take into account their moderating effect Job Satisfaction.

2.5.3 Structural factors

Price (2001) includes seven structural variables in the causal model: Autonomy Justice, Job stress, Remuneration, Promotional chances, Repetitiveness of work and Social support. These factors are included based on the research by sociologists on high performance work practices (Arthur, 1994; Huselid, 1995).

2.5.3.1 Autonomy

Autonomy is defined as the degree to which an employee may exercise power over his own job and responsibilities (Arthur, 1994).

Bokemeier and Lacy (1987) concludes from their study done on the National Opinion Research Centre's social surveys for the period 1974-1982 that supervisors with higher job autonomy experience more job satisfaction than subordinates that have to adhere to stricter job guidelines. Wharton, Rotolo and Bird (2000) support this view based on their study performed in 18 departments of the university. They identified an important relation between the worker's job satisfaction and the autonomy they experience in their job.

Meiksins and Watson (1989) found in a study performed under engineers that autonomy was very important to the respondents of the study. Their study distinguished between two types of autonomy:

a) Technical autonomy

   Technical autonomy refers to an individual's ability to define and influence the work schedule of a job and the process that will be followed to complete a task.

b) Substantive autonomy

   Substantive autonomy refers to an individual's control over the choice of work assignment.

Their study highlights the importance of technical autonomy to engineers with little support for substantive autonomy. They concluded that it is more important to engineers to have control over their work schedule and the process to follow to complete a job than the type of jobs they complete. Similar studies perform on professional employees in general by Derber (1982) and Bailyn (1985) support this strong relationship between professional employees' job autonomy and their job satisfaction.

It is expected to see a similar strong relation between job autonomy and job satisfaction in this study because the sampling frame for this study includes professional staff in the organisation.

2.5.3.2 Justice

Kim, Price, Mueller and Watson (1996) state that an employee's perceived justice in the organisation can be categorised under Distributive- and Procedural justice. They define Distributive justice as the "equity" and "fairness" perceived by the employee when evaluating role descriptions, remuneration, and promotion in the organisation and Procedural justice is related to the consistency with which the organisation's rules are applied. This definition puts the emphasis on the structural impact of justice in the context of psychological factors. This view is supported by Homans (1961) and Adams (1965).

Price (2001) argues that employees evaluate the fairness of human resource practices in the organisation and should there not be perceived distributive justice the employee's commitment towards the organisation will decrease.

It is expected that this study will substantiate the positive relationship between Justice and Organisational commitment.

2.5.3.3 Job stress

Price (2001) evaluates four dimensions of job stress: resource inadequacy, role ambiguity, role conflict and workload. His view is based on prior research by House (1980, 1981).

Parasuraman and Alutto (1981) suggest that job stress should be evaluated as an integrated system of contextual-, role -, and task - factors. Contextual factors refer to the individual's involvement a specific subsystem in the organization. Their study has found that employees perceive the severity of their job stress differently in the different subsystems in the organisation due to diverse management- structures and styles in the different departments and any study of job stress should acknowledge the effect of context on the responses of employees.

Role conflict, role ambiguity, resource inadequacy and workload have been identified as principal sources of job stress by several authors. Goldstein and Rockart (1984) identify strong correlations between role conflict and role ambiguity and job satisfaction. Kemery, Bedeian, Mossholder and Touliatos (1985) validated Bedeian and Armenakis' (1981) model of causal relationship between job stress and role ambiguity and role conflict.

It is expected that resource inadequacy, role ambiguity, role conflict and excessive work load will have a negative impact on job satisfaction and organisational commitment.

2.5.3.4 Remuneration

Many papers have been published on the effect of remuneration on labour turnover (Flinn, 1986; Trevor, Gerhart and Boudreau, 1997; Lazear, 1998; Brown, Sturman and Simmering, 2003; Huang *et al.*, 2005). In all these studies the intuitive hypothesis was found to hold true: an employee is more inclined to leave an organisation if he is paid below the market related rate and employees tend to stay if they are paid above market related rates. Remuneration indirectly impact on the intent to turnover as a moderation variable that influences job satisfaction and organisational commitment.

Remuneration information is considered confidential and is not available to this study. Remuneration will not be included in this study even though the effect of remuneration on turnover is accepted.

2.5.3.5 Promotional chances

Price's (2001) model hypothesises a positive casual relationship between promotional chances and job satisfaction and organisational commitment. Munasinghe (2006) identifies a significant relationship between job prospects and labour turnover when he analyse the longitudinal career data of a heterogeneous group of 12,686 employees in the United States that was first interviewed in 1997. Employees that had higher future job outcome expectations had a lower and flatter tenure profile relative to the norm of the group.

It is expected that this study will support this view and that higher promotional chances will relate to increased organisational commitment.

2.5.3.6 Repetitiveness of work

With the increased used of technology in today's manufacturing processes many jobs have become routinized. Highly repetitive job may lead to boredom and consequently to a decrease in job satisfaction (Price, 1997). Fullan (1970) found in an empirical study of 1491 Canadian workers in the highly automated industries of printing, automobile and oil that technology lead to the alienation of the employees from their jobs with subsequent reduced organisational-integration and commitment.

With the advent of automation in the manufacturing industries decision making in organisation has continually been centralised as processes became more and more standardised with little room for experimentation and information became available to all level in the organisation from the advance manufacturing information systems. The repetitiveness combined with the lack of autonomy often lead to lower job satisfaction (Co, Patuwo and Hu, 1998). Price (2001) warns of the possible correlation between autonomy and repetitiveness due to the effect of information technology.

It is expected that this study will support the negative relationship between Job repetitiveness and Organisational commitment.

2.5.3.7 Social support

Price (2001) evaluates three modes of social support: supervisory, peer and kinship. Supervisory- and peer support will reduce the intent to turnover due to the positive impact on job satisfaction. Kinship support for an employee's job improves the employee's view of the organisation, reducing the intent to turnover.

Price (2001) makes a interesting proposition that the social support from co-workers are not significant to job satisfaction.

Griffin, Patterson and West (2001) performed an extensive empirical study that sampled 48 companies throughout the United Kingdom in the manufacturing sector. The companies were predominantly single site operations of more than 260 employees. They find a strong relationship between supervisor support and the job satisfaction of employees. A recent study by Aubé, Rousseau and Morin (2007) confirmed the relationship between supervisor support and job satisfaction under 239 employees of the correctional service in North America. Goldstein and Rockart (1984) evaluated the job satisfaction of programmers and analyst at an IT firm using the Job Diagnostic Survey tool developed by Hackman and Oldman (1976). Their results show that social support by peers and supervisors are a very important factor for the employee job satisfaction

It is expected to see a positive relationship between Supervisor- and Peer support and Job satisfaction. This study will also aim to confirm the characteristics of the causal relationship between co-worker support and Job satisfaction.

2.6 Conclusions

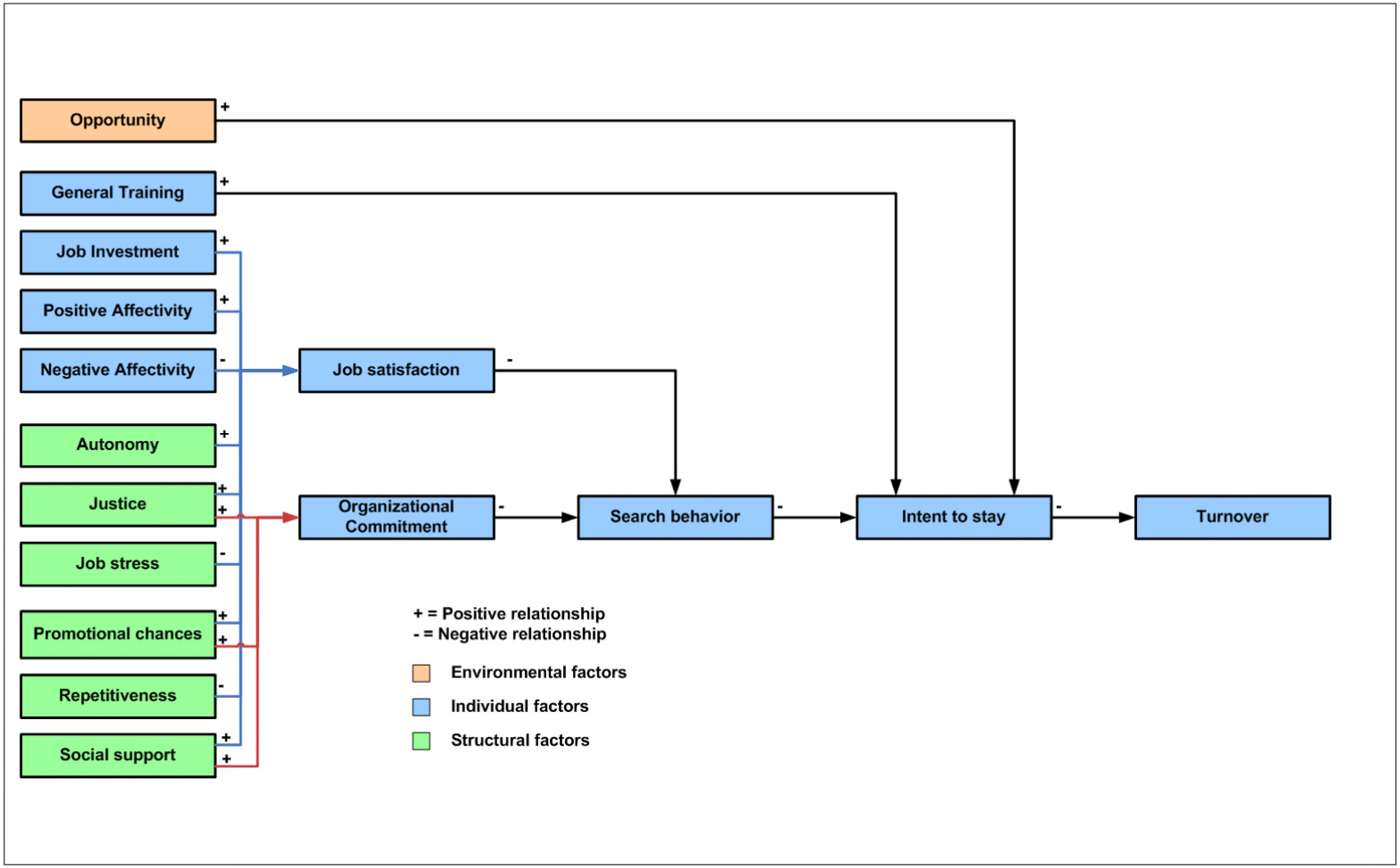
Many authors have shown that human resources are a critical component of an organisation's competitive advantage and labour turnover is an important matter to organisations (Kochan and Dyer, 1993; Arthur, 1994; Pfeffer, 1994).

Two schools of thought exist on what can be considered as best practise for human resource management. The universalistic view claims that a set of universal best human resource practises exist that will improve an organisation's competitiveness, irrespective of industry- or organisational context (Delery and Doty, 1996). The contingency approach on the other hand suggest that best human resource practise are irrefutably a function of the individual-, organisational- and environmental context (Porter, 1985; Zeffane, 1994).

Price (2001) subscribes to the contingency view and his research suggests that an employee's intent to turnover is a function of individual-, structural- and environmental factors. The findings of the literature review supports the relationships between the individual factors in Price's (2001) model but several authors cautioned that more empirical studies are necessary to validate the theoretical claims in different business environments.

This study aims to test Price's (2001) model in a specific organisational setting. Refer to Figure 3 for the adapted model of Prince (2001) that will be evaluated in this study.

Figure 3 – Adapted model that will be evaluated in this study



3. RESEARCH PROPOSITIONS

3.1 Introduction

The research propositions will be based on relations suggested by the causal model by Price (2001) as depicted in Figure 2. Price (2001) suggests individual, structural and environmental factors that impact on Job satisfaction, Organisational commitment and Search behaviour that in turn impact on the Intent to turnover. The aim of this research is to evaluate the validity of these relationships in the setting of a skills constrained industry based on the experience of employees a manufacturing organisation.

3.2 Environmental factors

Contingency authors argue that the perceived availability of jobs will increase the likelihood that a person will know about a position better than his current and the employee will increasingly think about leaving the organization (Huselid, 1995; Boselie *et al.*, 2001; Price, 2001; Tzafrir, 2006). This variable should be very significant in a skills constrained environment such as South Africa's current job market.

Proposition 1: The extent to which an employee perceives his ability to get another job is negatively related to the employee's intent to stay.

Proposition 2: The extent to which an employee perceives his responsibility towards kinship is negatively related to the employee's intent to stay.

3.3 Individual factors

Price (2001) defines three individual factors that will affect an employee's intent to turnover: general training, job investment, affectivity.

General training puts an individual in a better position to have the correct skills for another position in the market and will enable employees to turnover.

When an employee really enjoys the job he does, he will have greater job satisfaction and will be less inclined to search for a new position.

A person's affectivity will influence his responses to the questions and possible influence must be taken into account.

Proposition 3: The extent to which an employee perceives the quality of his training is negatively related to the employee's intent to stay.

Proposition 4: The extent to which an employee enjoys his job is positively related to the employee's job satisfaction.

3.4 Structural factors

Price (2001) argues that job satisfaction is influenced by several human resource practices. This include the employee's perceived autonomy in his job, the perceived justice in the distribution of rewards, the perceived stress levels of the job, the perceived fairness of the rewards for the job, the perceived opportunities for promotion, the perceived repetitiveness of the job and the perceived support fro management and his peers.

Proposition 5: The extent to which an employee perceives his autonomy in his job is positively related to the employee's job satisfaction.

Proposition 6: The extent to which an employee perceives justice in the distribution of rewards is positively related to the employee's job satisfaction.

Proposition 7: The extent to which an employee perceives the level of stress is negatively related to the employee's job satisfaction.

Proposition 8: The extent to which an employee perceives his opportunity to be promoted is positively related to the employee's job satisfaction.

Proposition 9: The extent to which an employee perceives the level of repetitiveness in his job is negatively related to the employee's job satisfaction.

Proposition 10: The extent to which an employee perceives the level of support of his superior in his job is positively related to the employee's job satisfaction.

Price (2001) argues that organisational commitment is influenced by the perceived justice in the distribution of rewards, the perceived opportunities for promotion and the perceived support from management.

Proposition 11: The extent to which an employee perceives justice in the distribution of rewards is positively related to the employee's organisational commitment.

Proposition 12: The extent to which an employee perceives his opportunity to be promoted is positively related to the employee's organisational commitment.

Proposition 13: The extent to which an employee perceives the level of support from his superior in his job is positively related to the employee's organisational commitment.

4. RESEARCH METHODOLOGY

4.1 Introduction

The literature review highlighted the complexity of the factors that influence an individual's decision to turnover. Prince's (2001) causal model has been found to be a comprehensive representation of an employee's decision to turnover but some authors suggest that more empirical testing of the model is necessary. (Agho *et al.*, 1993; Arthur, 1994; Price, 2001)

Empirical data was gathered from a South African organisation in a business context where there is significant labour turnover due to a skills shortage in South Africa and globally.

4.2 Research design

4.2.1 Research type

Research studies can broadly be categorised under the following principal approaches:

a) Exploratory research

Exploratory- or qualitative research methods are followed when very little or no previous research findings are available on the topic of the research. With qualitative research only a small number of research cases are used but these cases are analysed in-depth. The richness of the sampled data rather than the breadth covered by the sample is more important in this instance. A principal drawback of exploratory research is that it case specific and no generalisations can be made from the study results.

Typical research tools used for exploratory research include case studies, expert interviews, focus groups, group discussions, observations or in-depth interviews.

b) Descriptive research

In contrast to exploratory research, descriptive- or quantitative research methods are generally employed when a body of knowledge already exists on the topic and the validity of specific research propositions are to be evaluated. Large sample sizes are required to improve the reliability of the results and the data must be sampled from random cases within the sampling frame to allow generalizations to be made from the results.

Typical research tools used for descriptive research include: surveys, cross-sectional analysis of case data, longitudinal analysis of case data or analysis of casual (cause-effect) relationships.

The topic under study in this research presides under the broad research field of social science with a specific emphasis on an employee's intent to turnover based on various individual-, structural- and environmental factors. Much has been published on these factors and their interdependence and it follows that a descriptive research methodology should be followed. The time allowed for this research study did not allow for a longitudinal study on the subject matter and a cross-sectional sample will be taken as input to this research.

Structural equation modelling (SEM) is a set of powerful techniques to analyse the causal relationships between observed and measured constructs. SEM was chosen as the principal analysis technique for this study.

4.2.2 Structural equation modelling and ordinal data

Structural equation modelling is used extensively in social and behavioural science research to establish the fit between empirical results from surveys and a postulated model of the causal relationships of latent variables based on the covariance between these variables. A latent variable is defined as a dependent response based on observable explanatory variables (Jöreskog, 1994). Structural equation modelling allows for the simultaneous estimation of the relationships between the exogenous variables, and the various levels of endogenous variables (Steensma and Lyles, 2000).

Structural equation models consist of a linear system of equations of two basic types. The first set of equations describes the relations between the latent variables. A distinction is made between endogenous latent variables which are predicted by other variables in the model, and exogenous latent variables which are external predictors whose own causes are unmodelled (Bauer, 2003).

Using Jöreskog and Sörbom's (1993) LISREL notation, the latent variable model is:

$$\eta = \alpha + \beta\eta + \Gamma\xi + \zeta \qquad (1)$$

Where:

η is the vector of endogenous latent variables

ξ is the vector of exogenous latent variables

α is a vector of intercept terms for the equations,

β is the matrix of coefficients giving the impact of the endogenous latent variables on each other,

Γ is the coefficient matrix giving the effects of the exogenous latent variables on the endogenous latent variables and

ζ is the vector of disturbances of η with covariance matrix Ψ.

The second set of equations defines the measurement model for the latent factors. The measurement model relates the observed variables of the model to the latent variables that are postulated to be present. The first equation regress y on η and the second regress x on ξ:

$$x = \nu_x + \Lambda_x \xi + \delta \tag{2}$$

$$y = \nu_y + \Lambda_y \eta + \varepsilon \tag{3}$$

Where:

Λ_x is the factor loading matrix relating x to ξ,

Λ_y is the factor loading matrix relating y to η,

The intercepts of x and y are contained in ν_x and ν_y respectively and

The vectors δ and ε represent the residuals of x and y (Bauer, 2003).

When the structural equation model is based on ordinal data such as the ordered categories of questionnaires the traditional correlation coefficients for continuous variables can not be used because the survey variable is a crude estimation of the underlying continuous variable. It is necessary to estimate the polychoric correlation coefficients for the survey variables before the structural equation model can be designed.

When ordinal data is used to construct the structural equation model it is prudent not to use the ordinary product-moment correlations based on the raw survey data but instead use polychoric correlations analysed with the Weighted Least Squares method to determine the relationships between the observed and latent variables (Jöreskog and Sörbom, 1993).

4.3 Sampling plan

4.3.1 Sample frame and unit of analysis

Figure 1 depicts the number of advertisements for the various job categories that were advertised in a prominent national newspaper during the period April 2006 to March 2007. The graph highlights the job categories Legislators and senior officials, Professional positions in Management, Finance, Engineering and Legal and Technicians as high volume advertised positions and by inference high labour turnover job categories.

In the organisation that was sampled for this study the jobs that coincide with these high labour turnover job categories as defined in Figure 1 were graded from 7 to 0 in the organisation's internal job grading system. See Table 3 below for a detailed breakdown of the job grading system of the organisation, the assigned job titles and the high labour turnover job category it relates to.

Table 3 - The evaluated organisation's internal job grading system and related positions

Job grade	Job Title	High turnover Job category
0-3	Senior Management	Management
4	Middle Management	Management
	Senior technical specialists	Professional : Engineering Professional : Legal Professional : Finance
5	Area managers	Management
	Technical specialists	Professional : Engineering Professional : Legal Professional : Finance
6	Technicians	Technicians : Engineering
7	Team leaders	Management

The organisation has six distinct departments, each with its own executive manager and a distinct departmental culture. These departments are listed in Table 4 below.

Table 4 - Distinct departments in the organisation

Department	Characteristics of department
Manufacturing	Responsible for production High stress environment High performance culture
Engineering	Responsible for equipment availability High stress environment High performance culture
Commercial	Responsible for sales High stress environment High performance culture Customer focussed
Finance	Responsible for business' finance Low stress environment High accuracy culture
Human resources	Overseas employee wellbeing Low stress environment Caring culture
Information Technology	Responsible for Business systems Low stress environment High accuracy culture

The sampling frame was restricted to all employees who were employed in these departments listed in Table 4 and whose job grade fell within the grades defined in Table 3.

The unit of analysis for this study was chosen to be the response of an individual employee that fall within the sampling frame.

4.3.2 Size and nature of the sample

The organisation that was studied employed 516 employees who adhered to the sampling frame criteria. Because a significant number of responses were necessary to build a reliable statistical model of the causal relationships all employees in the sampling frame were invited to respond to the survey.

4.4 Survey instrument

The survey instrument was based on the questionnaire designed by Price (2001). Price's original questionnaire is provided in Annexure B. Price's (2001) survey is a conglomeration of his own work and that of several other authors (Price and Mueller, 1981; Cyphert, 1990; Kim *et al.*, 1996; Gurney, Mueller and Price, 1997). The questionnaire was tested on a small sample of five employees to identify any ambiguities or lack of differentiation in the way the questions were put.

The adapted survey instrument that was used for this research is provided in Annexure C. The questionnaire was subdivided into 23 sections, each with a series of questions. Some of these questions were stated as an antithesis to the construct to improve the reliability of the instrument. The survey covered the following main topics:

a) General information

This section addressed the demographics of the respondent. This included: Job grade, Gender, Spouse or Partner, Job environment.

This section also included the confirmation that the respondent understood that the survey is anonymous and the results will only be used for research purposes.

b) Local Job market opportunity

The local job market was defined as the area in which you can work without changing where you stay. The questions used in this section were adapted from Kim *et al.* (1996).

c) Outside Local Job market opportunity

The questions in this section were identical to the questions asked in the previous section with the exception that it focused on the geographical area outside the local job market. These questions were adapted from Kim *et al.* (1996).

d) Kinship responsibility

Not much literature was available on the theme of Kinship responsibility and turnover and the research performed by Price and Mueller are considered to be the leading work on this subject (Iverson *et al.*, 1994). The questions used in the survey were adapted from Price (2001).

e) Career orientation

The questions related to career orientation were adapted from Gurney *et al.* (1997). It was necessary to change the descriptions of the different responses from “Very great extend, Great extend, Some extend, To a little extent, To no extent” to a more appropriate “Strongly disagree, Disagree, Indifferent, Agree, Strongly agree” to improve the lack of differentiation that existed in the former responses.

f) General training

The questions for general training were adapted from Kim *et al.* (1996). The word “employer” was substituted with “company” because many of the test respondents did not understood the difference between employer and their direct supervisor. The third and fourth questions in this section were stated in contrast to the construct General Training and were reversed scored during the analysis.

g) Job involvement\Engagement

The questions asked in this section were adapted from Cyphert (1990) as they were listed in Price (2001).

h) Affectivity

The questions related to affectivity were adapted from Price (2001). Both positive- and negative affectivity were tested in this section of the survey. The first four questions in this section related to a positive affectivity with the rest of the responses related to a negative affectivity towards life. The questions were considered to be an introspective review of an employee's personal view on life.

Positive- and negative affectivity was analysed as separate factors to ensure a coherent relationship between a respondent's affectivity and the other factors.

i) Autonomy

The questions in this section of the survey were adapted from Kim *et al.* (1996). The last three questions (Question 4 to question 6) were stated in contrast to the construct Autonomy and were reverse scored during analysis.

j) Distributive justice

The questions related to distributive justice were adapted from Price (2001). It was necessary to replace the word "employer" with "company" to minimise any ambiguity that existed with the definition of an employer. The first two questions were stated as an antithesis to the construct Distributive Justice and were reverse scored during analysis.

k) Procedural justice

The questions used in this section were adapted from Price (2001). Questions two to four were stated in contrast to the construct Procedural Justice and were reverse scored during analysis.

l) Job stress (Ambiguity)

The questions in this section were adapted from Kim *et al.* (1996). Questions three and four were stated as an antithesis to Job Stress related to ambiguity and was reverse scored during analysis.

m) Job stress (Conflict)

The questions in this section were adapted from Kim *et al.* (1996). Questions three and four were stated in contrast to the construct Job Stress related to conflict in the workplace and were reverse scored during analysis.

n) Job stress (Workload)

The questions in this section were adapted from Kim *et al.* (1996). Questions one and two were stated as an antithesis to Job Stress related to work load and were reverse scored during analysis.

o) Job stress (Inadequate resources)

The questions asked in this survey were adapted from Price (2001). Questions three and four were stated in contrast to Job Stress related to inadequate resources and were reverse scored during analysis.

p) Promotional chances

The questions in this section were adapted from Kim *et al.* (1996). Questions three and four were stated as an antithesis to the respondent's chances to get promoted and were reverse scored during analysis. The word "employer" was replaced with "company" to eliminate any ambiguity.

q) Job repetitiveness

The questions in this section were adapted from Kim *et al.* (1996). It was found that the word "routinization" was not familiar to the test group and it was replaced with "job repetitiveness" to improve the respondent's understanding of this section. The first two questions were stated in contrast to the construct Job Repetitiveness and were reverse scored during analysis.

r) Job Satisfaction

The questions in this section were adapted from Kim *et al.* (1996). Questions four to six were stated as an antithesis to the construct Job Satisfaction and were reverse scored during analysis. The word "employer" was replaced with "company" to eliminate any ambiguity.

s) Social support (Immediate supervisor)

The questions were adapted from Kim *et al.* (1996). Question three was stated in contrast to the construct Social Support from the supervisor and was reverse scored during analysis.

t) Social support (Co-workers)

The questions were adapted from Kim *et al.* (1996). Questions three and four were stated in contrast to the construct Social Support from the co-workers and were reverse scored during analysis.

u) Organizational commitment

The questions related to organizational commitment were adapted from Kim *et al.* (1996). It was imperative in this section to replace the word "employer" with "company" to minimise any ambiguity that existed with the definition of an employer. Questions five and six were stated as an antithesis to the construct Organizational Commitment and were reverse scored during analysis.

v) Search behaviour

The questions were adapted from Kim *et al.* (1996). The first two questions were stated in contrast to the construct Search Behaviour and were reverse scored during analysis.

w) Intent to stay

The questions were adapted from Kim *et al.* (1996). The first two questions were stated as an antithesis to the construct Intent to Stay and were reverse scored during analysis.

4.5 Data collection process

The target population for the survey were all computer literate and all had internet access. The intended respondents were sent an email that explained the survey process, what the data will be used for, what information will be published and a shortcut to the survey website. All questionnaires were completed online and anonymously on the third-party service provider's website to reduce auspice bias.

The survey was made available for a two week period to allow respondents enough time to complete the questionnaire. Two follow-up emails were sent to the whole sample group to remind potential respondents in order to improve the return rate.

Of the 516 eligible respondents, 63 email addresses returned errors due to employees that were on leave, erroneous email addresses and employees that left the organisation since the list was compiled. From the 453 possible responses 253 respondents filled in the questionnaire online, a return rate of 56%. This return rate is inline with the past experience of Prince and Mueller (1986) who attained typical response rates of 50% in their studies.

A detailed report of all the individual responses was received from the third-party survey website once the survey period expired. This final response dataset did not include any reference to the respondents to protect their identity.

4.6 Data analysis approach

4.6.1 Pre-treatment of survey information

Each variable in the dataset corresponds to the response for a specific question in the survey. Each variable was labelled using the simple format: "F#Q*" where # corresponds to the factor number and * referenced the question. The cross reference between factor numbers and factor titles is provided in Table 5 below.

Table 5 – Cross reference between the factor numbers and the factor title in the dataset

Factor label	Factor
F00	General information
F01	Local job market
F02	Outside local job market
F03	Kinship responsibility
F04	Career orientation
F05	General training
F06	Job involvement
F07p	Positive affectivity
F07n	Negative affectivity
F08	Autonomy
F09	Distributive justice
F10	Procedural justice
F11	Job stress (Ambiguity)
F12	Job stress (Conflict)
F13	Job stress (Workload)
F14	Job stress (Inadequate resources)
F15	Promotional chances
F16	Job repetitiveness
F17	Job satisfaction
F18	Social support (Immediate supervisor)
F19	Social Support (Co-workers)
F20	Organisational commitment
F21	Search behaviour
F22	Intent to stay

The dataset was imported into Microsoft Excel and all the cases with missing data were removed because a reliable statistical model of the relationships between the factors can not be deduced from these partial cases. A total of 29 cases with missing values had to be deleted.

The responses were encoded as ordinal data as listed in Table 6 below. All questions that were set as the antitheses of the construct being tested as described in paragraph 4.4 were reverse scored using the following calculation:

$$NewResponse = 6 - OldResponse \quad (4)$$

Table 6 – Ordinal encoding of survey responses

Factor and question	Survey response	Encoding
F00Q1	Job grade 7	1
	Job grade 6	2
	Job grade 5	3
	Job grade 4	4
	Job grade 3 or higher	5
F00Q2	Male	1
	Female	2
F00Q3	Not involved	1
	Spouse	2
	Partner	3
F00Q4	Manufacturing	1
	Commercial	2
	Human Resources	3
	Finance	4
	Engineering	5
	Information Technology	6
F01 – F02 (All questions)	Very easily	1
	Good chance	2
	Neutral	3
	Some difficulty	4
	Very difficult	5
F03 – F22 (All questions)	Strongly disagree	1
	Disagree	2
	Indifferent	3
	Agree	4
	Strongly agree	5

4.6.2 Reliability of instrument

The internal reliability of the survey instrument was verified by calculating Cronbach's alpha statistic for each factor in the survey using NCSS 2007, Version 7. The survey instrument was considered reliable if the factor's alpha score was at least 0.70 as suggested by Carmines and Zeller (1990) and Gliem and Gliem (2003). Cronbach's alpha statistic for each factor in the survey is provided in Table 7 below.

The alpha statistic identified some weaknesses in the reliability of the survey instrument. Factors F03, F04, F05, F07n, F09 and F21 did not meet the minimum criteria of 0.70 to constitute a reliable survey for these specific factors.

Table 7 – Cronbach's alpha statistic for each factor of the survey

Factor	Cronbach's α	Revised Cronbach's α
F01	0.92	
F02	0.92	
F03	0.17	No improvement
F04	0.63	No improvement
F05	0.67	0.68
F06	0.80	
F07n	0.50	0.78
F07p	0.77	
F08	0.74	
F09	0.36	0.45
F10	0.77	
F11	0.71	
F12	0.73	
F13	0.70	
F14	0.70	
F15	0.78	
F16	0.81	
F17	0.86	
F18	0.90	
F19	0.90	
F20	0.82	
F21	0.59	0.78
F22	0.76	

The reliability of factor F03 could not be improved by excluding any of the responses related to this factor. The questions related to Kinship were not well designed, the respondents did not interpret the expected response to the questions reliably and no significant deductions could be made from this factor. This factor was not included in the training of the structural equation model (SEM).

Factor F04 could not be improved because it only had two items and a single item factor is not considered reliable. The internal reliability for this factor was very weak and it could not be used to train the SEM

The internal reliability of factor F05 could be improved to 0.68 if the responses to item F05Q3 were not taken into account. Although the improved reliability for factor F05 was still below the aim of 0.70 it was used to training the SEM.

Factor F07n's internal reliability could be improved significantly to 0.78 when the responses to item F07NQ1 were excluded from the analysis. This question was not well designed, the respondents did not interpret the expected response to this question reliably and no significant deductions could be made from item F07NQ1. The alpha statistic for the revised factor was above the minimum aim of 0.70 and the revised factor was used to train the SEM.

The internal reliability of factor F09 could be improved to 0.45 by ignoring the responses to item F09Q1. Although the improved reliability for factor F09 was still below the aim of 0.70 it was still used to train the SEM. The weakness in reliability of this factor will be taken into account when interpreting the results of the analysis.

Factor F21's internal reliability was improved significantly to 0.78 when the responses for item F21Q2 were excluded from the analysis. The alpha statistic for the revised factor was above the minimum aim of 0.70 and the revised factor was used to train the SEM.

4.7 Structural Equation Modelling

The causal relationships presented in Figure 2 were segregated into 3 sub-models to analyse. This was necessary because the full model provided in Figure 2 had too many factors in relation to the number of cases and the covariance matrix was unstable and not positive definite. Figure 4, Figure 5 and Figure 6 highlight the different sub-models used to test the research propositions.

The statistical software package LISREL, Version 8.8, was used to build the structural equation models. The survey data was imported into LISREL and the covariance matrix and asymptotic covariance matrix calculated. The model was defined using the SIMPLIS language and a path diagram was drawn of the output. Modifications proposed by LISREL to improve the model's fit were reviewed and applied where necessary. These modifications to the model entailed the introduction of factor correlations between the observed variables.

Following Bollen's (1990) recommendation the model's fit to the data was evaluated by several fit indices provided by LISREL. The χ^2 fit statistics of LISREL was supplemented by the root-mean-square residual (RMR; Jöreskog and Sörbom, 1984), the root-mean-square error of approximation (RMSEA; Jöreskog and Sörbom, 1984), the goodness-of-fit index (GFI; Jöreskog and Sörbom, 1984), normed fit index (NFI; Bentler and Bonett, 1980) and the comparative fit index (CFI; Bentler, 1990). To accept the model fit the RMR and RMSEA must be smaller than 0.08 and GFI, NFI and CFI should be greater than 0.9 (Bollen, 1990).

The path diagrams of the structural equation models are provided in Figure 11, Figure 12 and Figure 13, the project file and output of the LISREL modeller for each model are provided in Annexure E and results are summarised in paragraph 5.

Figure 4 – Sub-model 1 for Job satisfaction

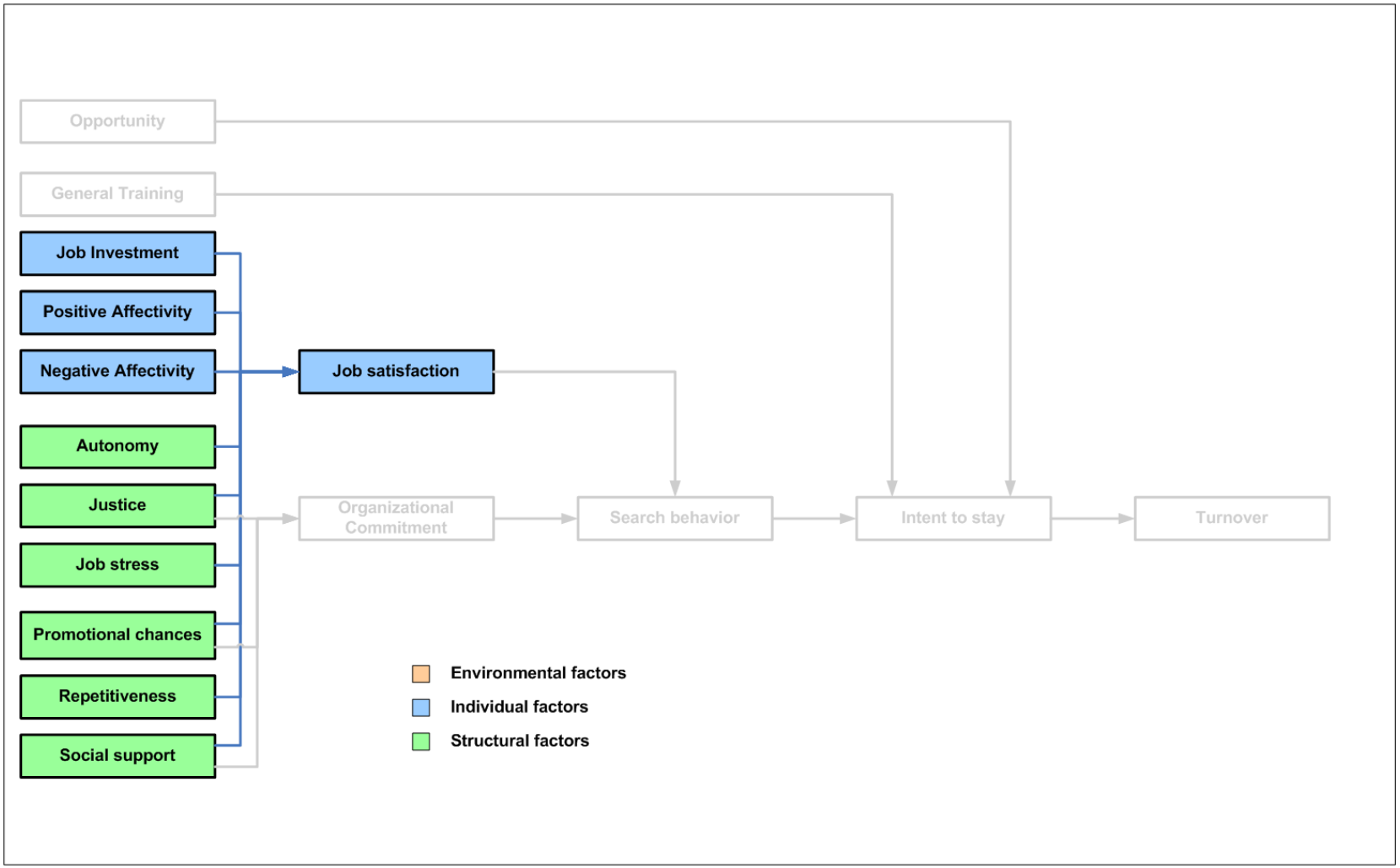


Figure 5 – Sub-model 2 for Organisational commitment

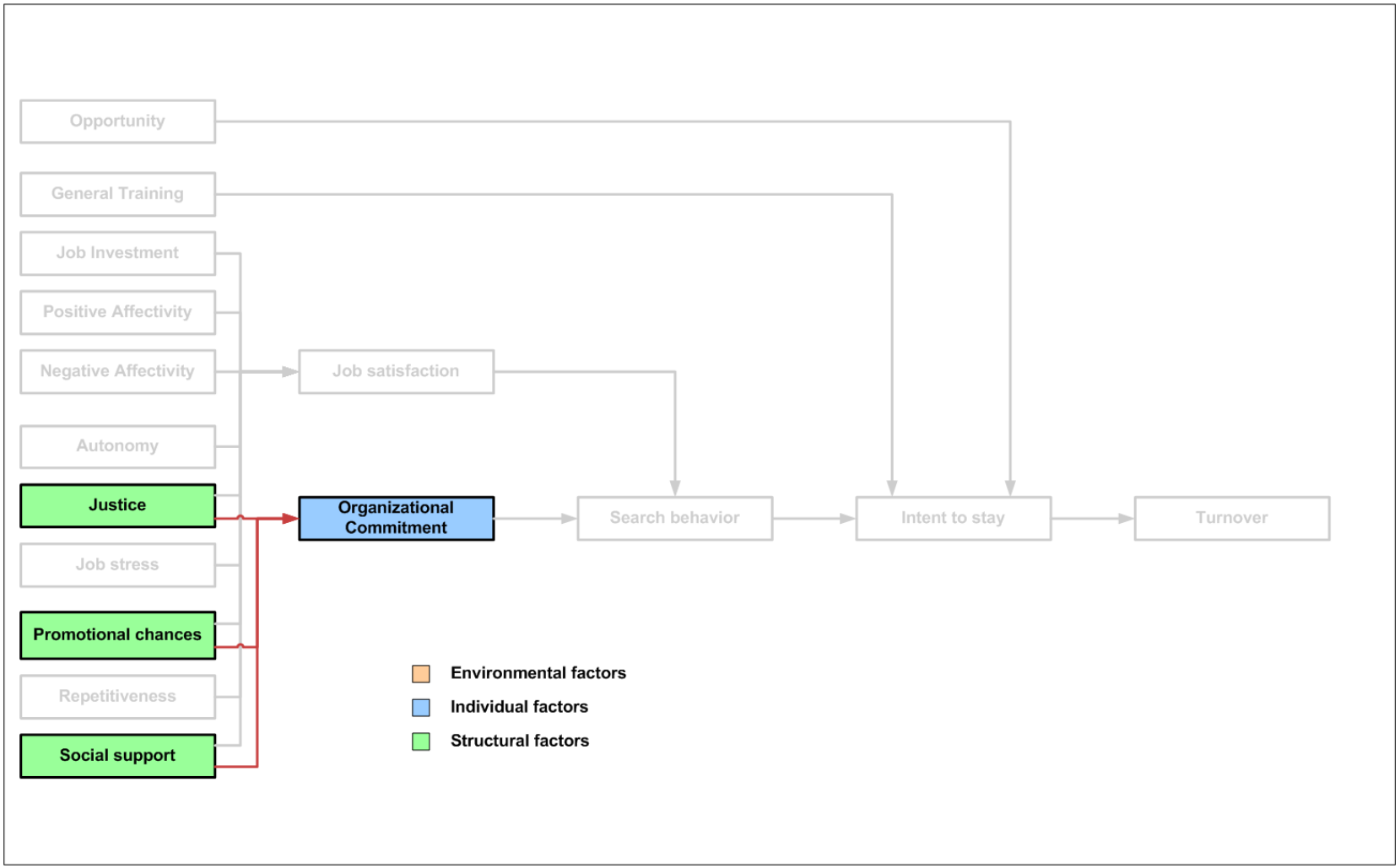
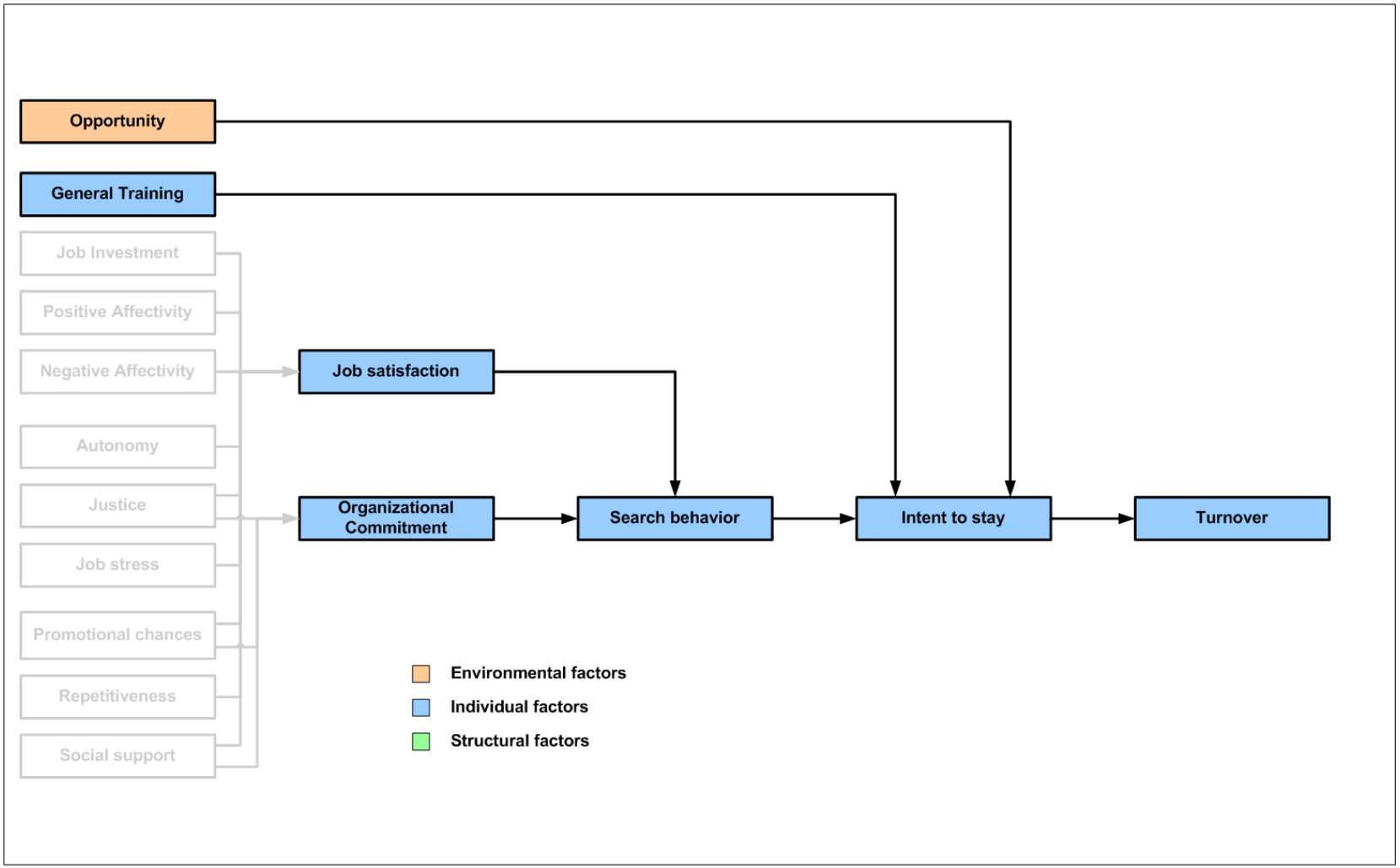


Figure 6 – Sub-model 3 for Turnover



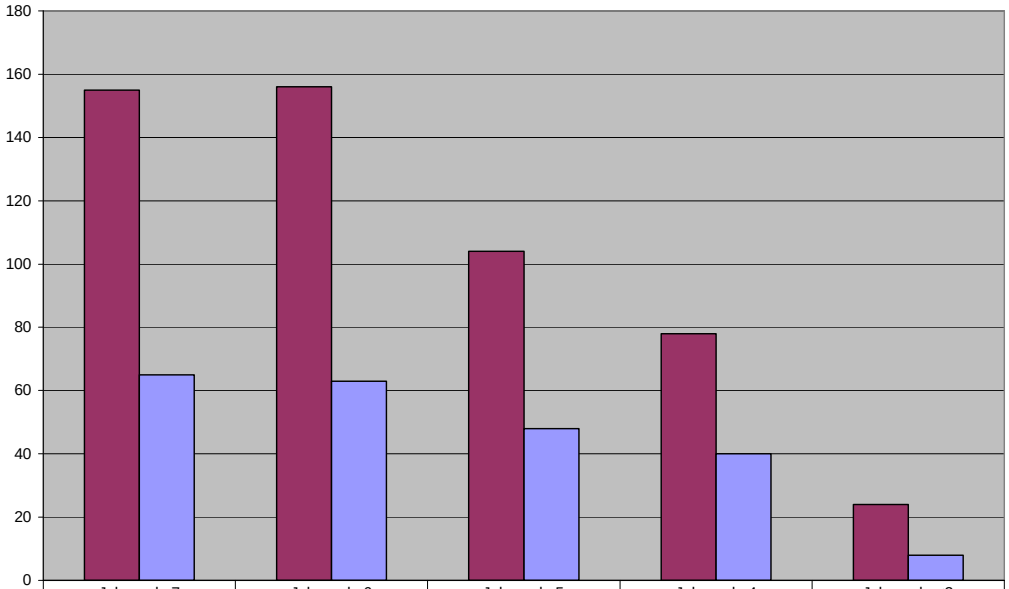
4.8 Research limitations

1. This study is conducted in a specific organisation and the findings can not be generalised to any other organisation or industry. Certain industry-, environmental- and socio-economical conditions may exist within the organisation that is specific to the organisation that may impact on the outcome of this study.
2. The research is a cross-sectional sample and no inferences can be made on the longitudinal validity of the findings. The organisational environment, the business climate and personal factors at the time the questionnaire was completed may influence the respondents' answers. These biases can be reduced if a longitudinal study is performed across multiple organisations.
3. Two of the factors could not be included in the structural equation model because the reliability of their survey responses was not adequate. The trained structural equation model could not provide any insight on the relationships between constructs Kinship and the Intent to Turnover or Career orientation and the Intent to Turnover.
4. Only the causal relationships suggested in Figure 2 were tested with the structural equation models. Other valid relationships may exist between the constructs but the existence of such relationships is not established in this study.
5. This study did not take any endogenous factors such as work environments, gender or kinship responsibilities into account. Distinct differences may be evident in the replies if the sample was clustered according these factors.

5. RESULTS

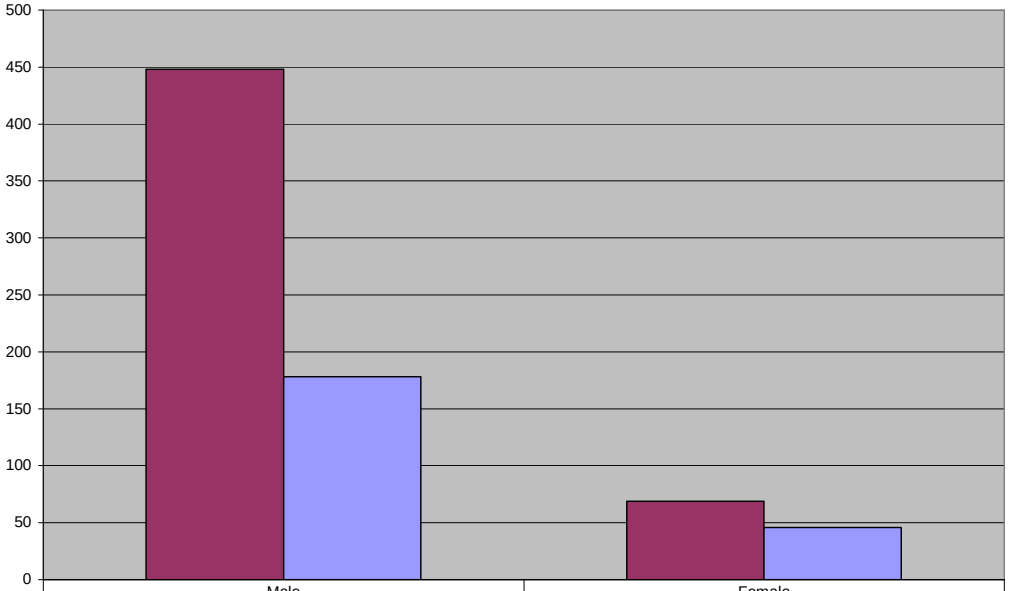
5.1 Summary statistics of the survey

Figure 7 – Job grade distribution of sample



	Job grade 7	Job grade 6	Job grade 5	Job grade 4	Job grade <3
Sampling frame	155	156	104	78	24
Responses	65	63	48	40	8

Figure 8 – Gender distribution of the sample



	Male	Female
Sampling frame	448	69
Responses	178	46

Figure 9 - Distribution of employee involvement in the sample

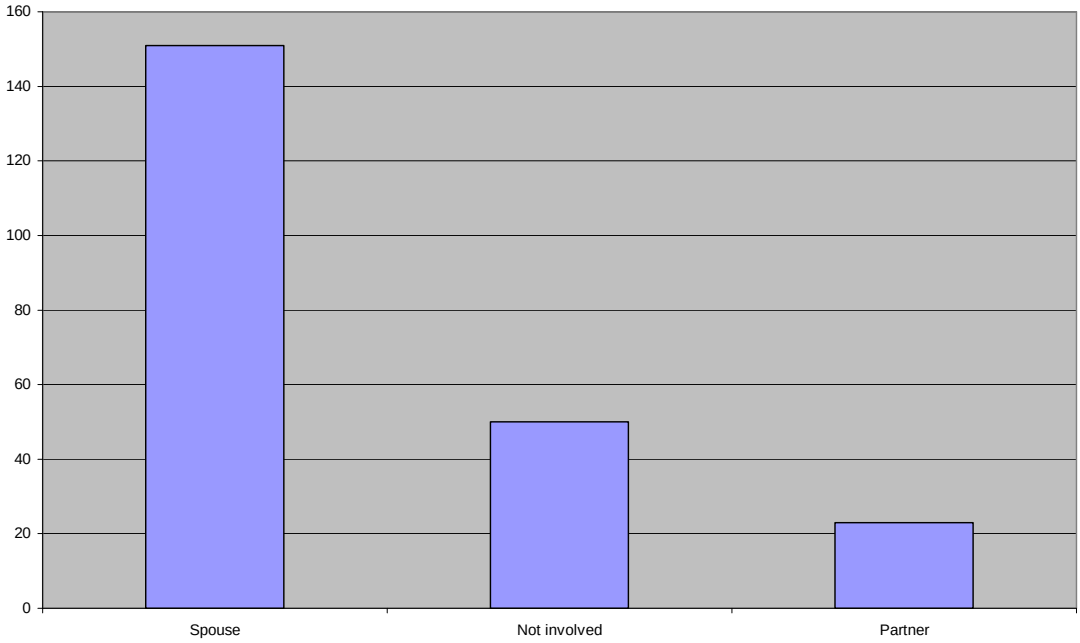
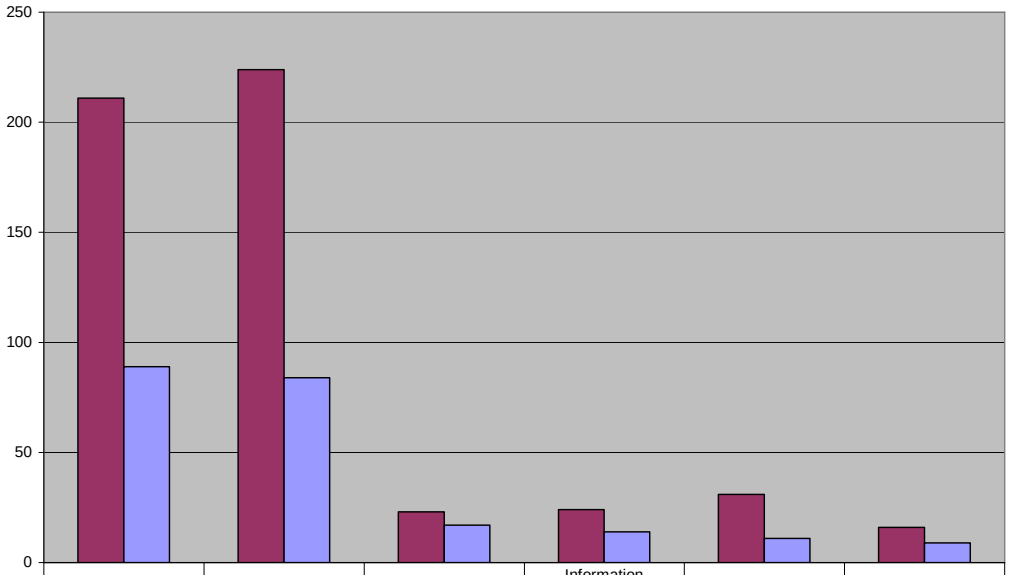


Figure 10 – Distribution of departments represented in survey



	Manufacturing	Engineering	Commercial	Information Technology	Finance	Human Resources
Sampling frame	211	224	23	24	31	16
Responses	89	84	17	14	11	9

5.2 Path diagrams of LISREL models

Figure 11 – LISREL path diagram for sub-model 1 (Job satisfaction)

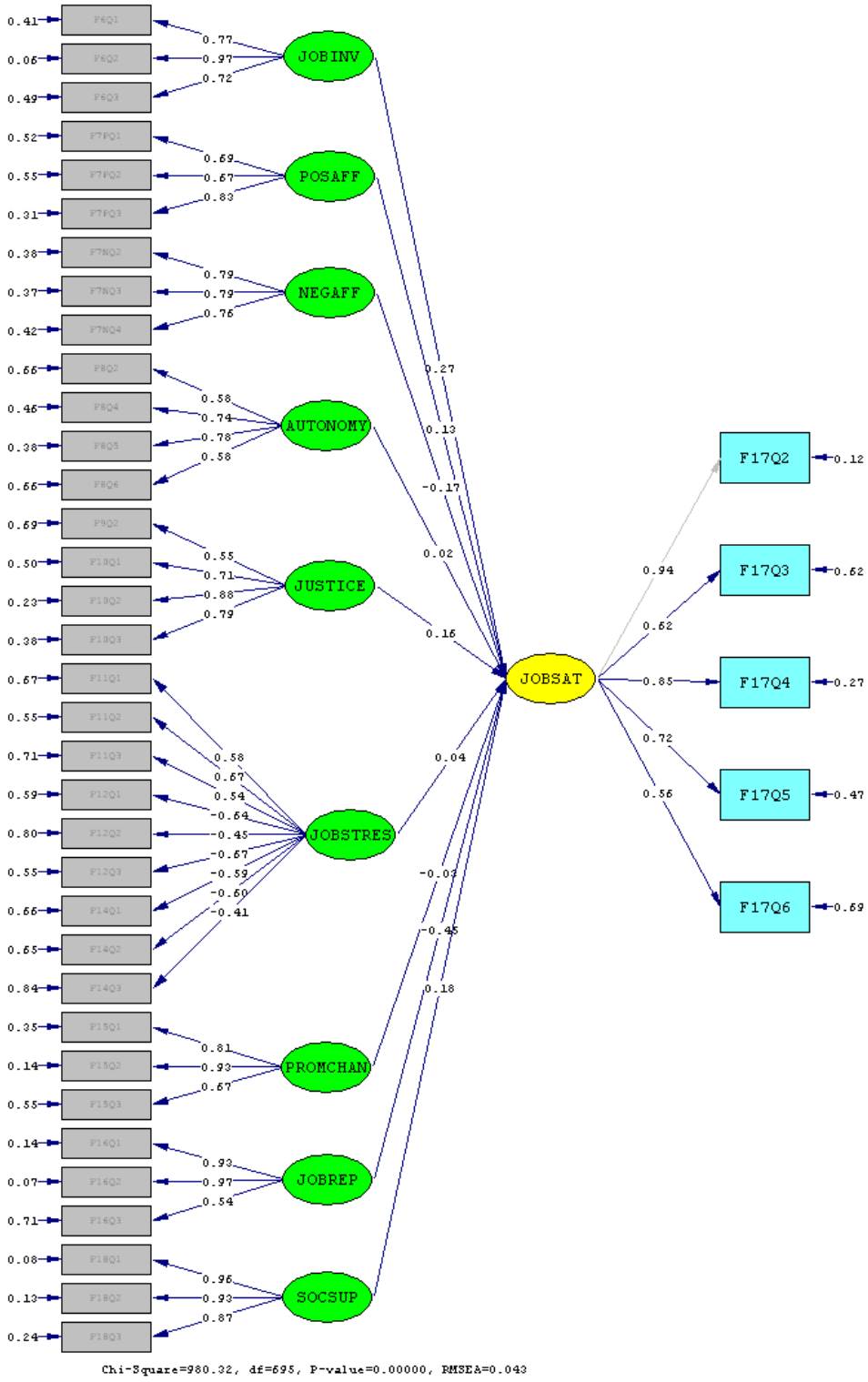


Figure 12 – LISREL path diagram for sub-model 2 (Organisational commitment)

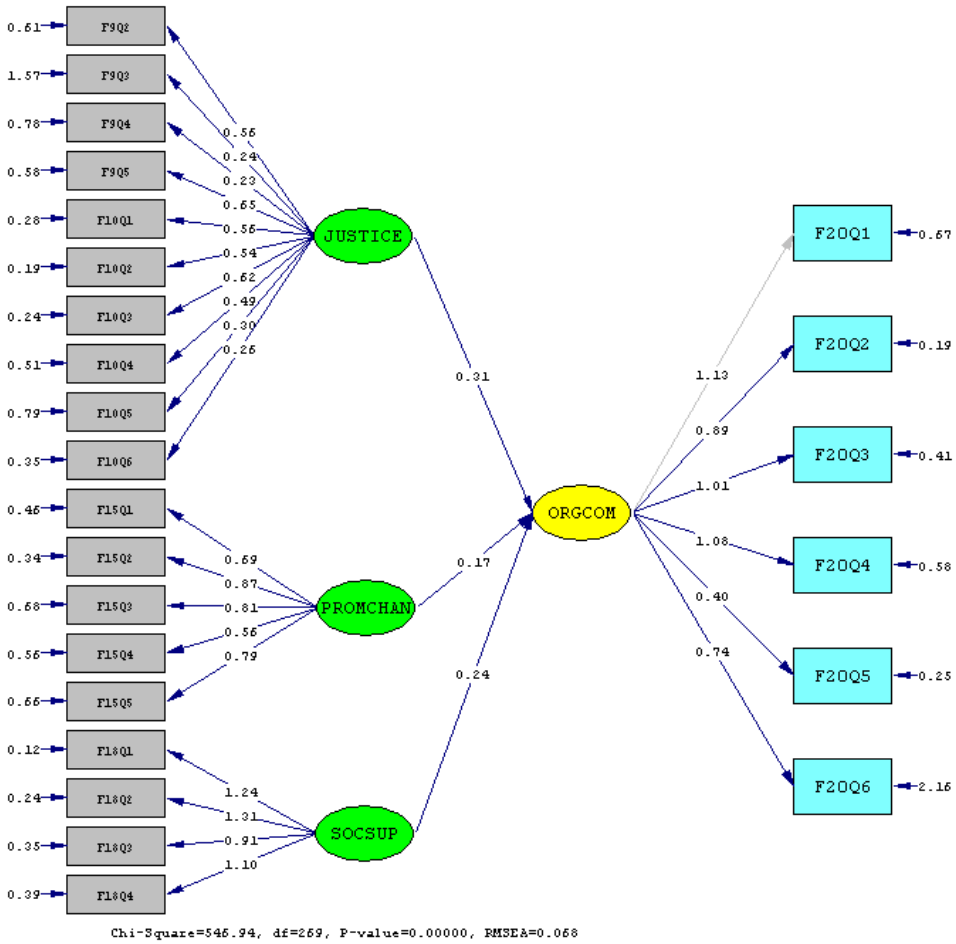
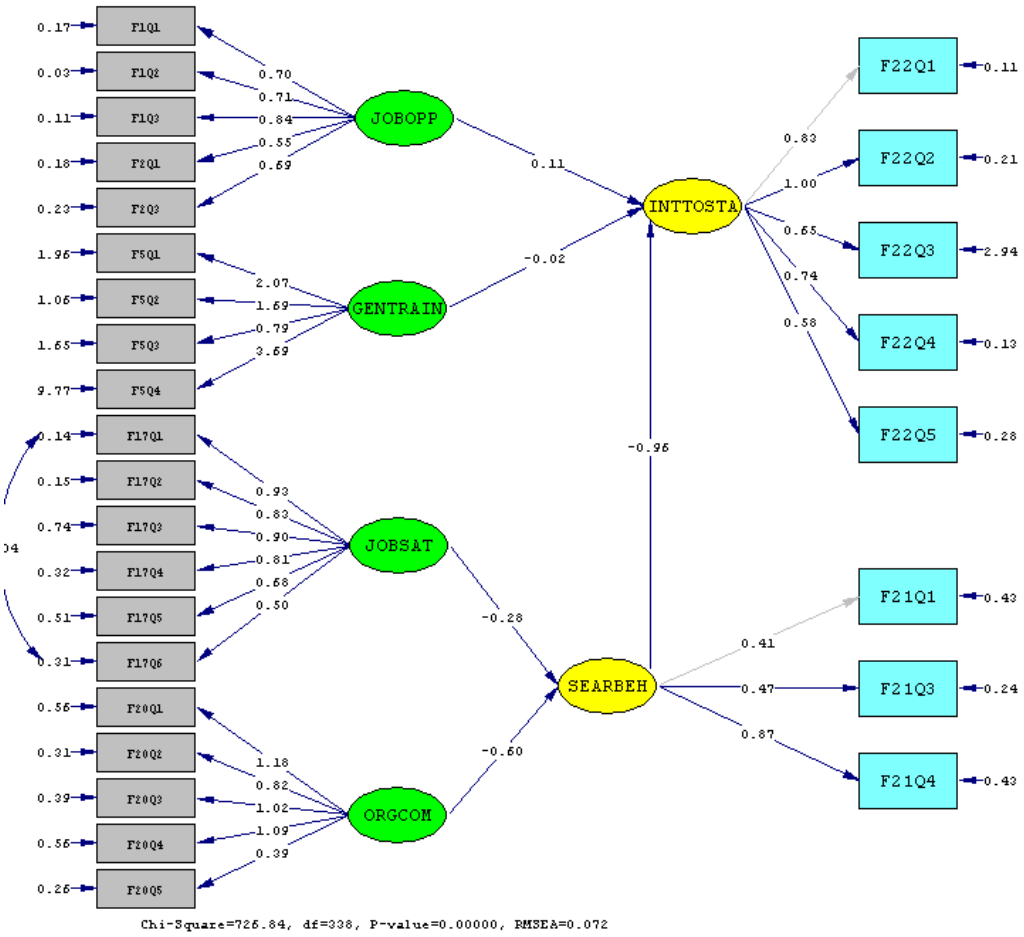


Figure 13 – LISREL path diagram for sub-model 3 (Turnover)



5.3 Results of the Structural equation models

5.3.1 Model fit statistics

Table 8 below summarises the fit statistics for the three models.

Table 8 - Model fit statistics for the structural equation models

Model fit statistic	Model1	Model 2	Model 3
χ^2 (df) (p)	980.32 (695) (p<0.0001)	451.36 (263) (p<0.0001)	726.84 (338) (p<0.0001)
RMR	0.067	0.090	0.16
RMSEA (p = 0.9)	0.043 [0.037 ; 0.049]	0.056 [0.047 ; 0.065]	0.072 [0.065 ; 0.079]
GFI	0.94	0.95	0.97
NFI	0.96	0.96	0.96
CFI	0.97	0.97	0.97

5.3.2 Sub-model 1 (Job Satisfaction)

5.3.2.1 Parameter estimates

Table 9 summarises the parameter estimates for all the relationships in the model. Three values are specified for each estimate. The top value denotes the actual estimate of the parameter, the middle value denotes the estimated parameter's standard error and the bottom value denotes the Wald statistic (The estimate divided by its standard error) for the estimate. The estimate is considered significance at an α - level of 0.05 if the Walt statistic is greater than 1.96 (Kaplan, 1995; Harrell, 2001).

Table 9 – Parameter estimates for sub-model 1

F17Q2	**= 0.86*JOBSAT,**	**Errorvar.= 0.10**	**, R2 = 0.88**
Std.Error		(0.17)	
Wald stat.		0.62	
F17Q3	**= 0.77*JOBSAT,**	**Errorvar.= 0.97**	**, R2 = 0.38**
Std.Error	(0.15)	(0.26)	
Wald stat.	5.13	3.69	
F17Q4	**= 0.84*JOBSAT,**	**Errorvar.= 0.26**	**, R2 = 0.73**
Std.Error	(0.12)	(0.16)	
Wald stat.	7.05	1.69	
F17Q5	**= 0.72*JOBSAT,**	**Errorvar.= 0.46**	**, R2 = 0.53**
Std.Error	(0.12)	(0.16)	
Wald stat.	5.92	2.86	
F17Q6	**= 0.42*JOBSAT,**	**Errorvar.= 0.38**	**, R2 = 0.31**
Std.Error	(0.091)	(0.090)	
Wald stat.	4.60	4.25	
F6Q1	**= 0.53*JOBINV,**	**Errorvar.= 0.20**	**, R2 = 0.59**
Std.Error	(0.056)	(0.097)	
Wald stat.	9.52	2.02	
F6Q2	**= 0.81*JOBINV,**	**Errorvar.= 0.042**	**, R2 = 0.94**
Std.Error	(0.045)	(0.11)	
Wald stat.	17.96	0.39	
F6Q3	**= 0.47*JOBINV,**	**Errorvar.= 0.21**	**, R2 = 0.51**
Std.Error	(0.054)	(0.076)	
Wald stat.	8.76	2.80	
F7PQ1	**= 0.99*POSAFF,**	**Errorvar.= 1.08**	**, R2 = 0.48**
Std.Error	(0.21)	(0.60)	
Wald stat.	4.65	1.78	
F7PQ2	**= 0.91*POSAFF,**	**Errorvar.= 1.01**	**, R2 = 0.45**
Std.Error	(0.14)	(0.34)	
Wald stat.	6.35	2.96	
F7PQ3	**= 0.64*POSAFF,**	**Errorvar.= 0.18**	**, R2 = 0.69**
Std.Error	(0.074)	(0.10)	
Wald stat.	8.57	1.82	
F7NQ2	**= 0.64*NEGAFF,**	**Errorvar.= 0.25**	**, R2 = 0.62**
Std.Error	(0.096)	(0.17)	
Wald stat.	6.71	1.44	
F7NQ3	**= 0.67*NEGAFF,**	**Errorvar.= 0.27**	**, R2 = 0.63**
Std.Error	(0.060)	(0.12)	
Wald stat.	11.27	2.33	
F7NQ4	**= 0.49*NEGAFF,**	**Errorvar.= 0.18**	**, R2 = 0.58**
Std.Error	(0.053)	(0.072)	
Wald stat.	9.34	2.49	
F8Q2	**= 0.45*AUTONOMY**	**Errorvar.= 0.40**	**, R2 = 0.34**
Std.Error	(0.080)	(0.12)	
Wald stat.	5.69	3.48	
F8Q4	**= 0.62*AUTONOMY**	**Errorvar.= 0.32**	**, R2 = 0.54**
Std.Error	(0.066)	(0.11)	
Wald stat.	9.38	2.88	
F8Q5	**= 0.81*AUTONOMY**	**Errorvar.= 0.41**	**, R2 = 0.62**
Std.Error	(0.092)	(0.18)	
Wald stat.	8.77	2.24	
F8Q6	**= 0.56*AUTONOMY**	**Errorvar.= 0.62**	**, R2 = 0.34**
Std.Error	(0.085)	(0.14)	
Wald stat.	6.59	4.40	
F9Q2	**= 0.53*JUSTICE,**	**Errorvar.= 0.64**	**, R2 = 0.31**
Std.Error	(0.075)	(0.17)	
Wald stat.	7.06	3.74	
F10Q1	**= 0.55*JUSTICE,**	**Errorvar.= 0.30**	**, R2 = 0.50**
Std.Error	(0.062)	(0.091)	
Wald stat.	8.83	3.25	
F10Q2	**= 0.61*JUSTICE,**	**Errorvar.= 0.11**	**, R2 = 0.77**
Std.Error	(0.042)	(0.063)	
Wald stat.	14.71	1.75	
F10Q3	**= 0.62*JUSTICE,**	**Errorvar.= 0.23**	**, R2 = 0.62**
Std.Error	(0.050)	(0.084)	
Wald stat.	12.56	2.79	
F11Q1	**= 0.76*JOBSTRES**	**Errorvar.= 1.18**	**, R2 = 0.33**
Std.Error	(0.12)	(0.35)	
Wald stat.	6.47	3.37	
F11Q2	**= 0.75*JOBSTRES**	**Errorvar.= 0.69**	**, R2 = 0.45**
Std.Error	(0.097)	(0.22)	
Wald stat.	7.66	3.16	

F11Q3	**= 0.78*JOBSTRES**	**Errorvar.= 1.49**	**, R2 = 0.29**
Std.Error	(0.17)	(0.41)	
Wald stat.	4.52	3.63	
F12Q1	**= - 0.38*JOBSTRES**	**Errorvar.= 0.21**	**, R2 = 0.41**
Std.Error	(0.067)	(0.056)	
Wald stat.	5.70	3.82	
F12Q2	**= - 0.25*JOBSTRES**	**Errorvar.= 0.25**	**, R2 = 0.20**
Std.Error	(0.060)	(0.043)	
Wald stat.	4.21	5.70	
F12Q3	**= - 0.40*JOBSTRES**	**Errorvar.= 0.20**	**, R2 = 0.45**
Std.Error	(0.061)	(0.054)	
Wald stat.	6.65	3.73	
F14Q1	**= - 0.30*JOBSTRES**	**Errorvar.= 0.18**	**, R2 = 0.34**
Std.Error	(0.065)	(0.039)	
Wald stat.	4.64	4.47	
F14Q2	**= - 0.36*JOBSTRES**	**Errorvar.= 0.24**	**, R2 = 0.35**
Std.Error	(0.057)	(0.054)	
Wald stat.	6.31	4.45	
F14Q3	**= - 0.21*JOBSTRES**	**Errorvar.= 0.22**	**, R2 = 0.16**
Std.Error	(0.085)	(0.042)	
Wald stat.	2.42	5.16	
F15Q1	**= 0.78*PROMCHAN**	**Errorvar.= 0.33**	**, R2 = 0.65**
Std.Error	(0.066)	(0.18)	
Wald stat.	11.91	1.82	
F15Q2	**= 0.97*PROMCHAN**	**Errorvar.= 0.16**	**, R2 = 0.86**
Std.Error	(0.056)	(0.18)	
Wald stat.	17.27	0.86	
F15Q3	**= 0.77*PROMCHAN**	**Errorvar.= 0.74**	**, R2 = 0.45**
Std.Error	(0.082)	(0.19)	
Wald stat.	9.47	3.91	
F16Q1	**= 0.53*JOBREP,**	**Errorvar.= 0.046**	**, R2 = 0.86**
Std.Error	(0.038)	(0.072)	
Wald stat.	14.17	0.65	
F16Q2	**= 0.48*JOBREP,**	**Errorvar.= 0.016**	**, R2 = 0.93**
Std.Error	(0.019)	(0.035)	
Wald stat.	24.63	0.46	
F16Q3	**= 0.40*JOBREP,**	**Errorvar.= 0.39**	**, R2 = 0.29**
Std.Error	(0.047)	(0.078)	
Wald stat.	8.44	4.94	
F18Q1	**= 1.24*SOCSUP,**	**Errorvar.= 0.13**	**, R2 = 0.92**
Std.Error	(0.053)	(0.27)	
Wald stat.	23.35	0.47	
F18Q2	**= 1.30*SOCSUP,**	**Errorvar.= 0.25**	**, R2 = 0.87**
Std.Error	(0.040)	(0.28)	
Wald stat.	32.50	0.91	
F18Q3	**= 0.95*SOCSUP,**	**Errorvar.= 0.28**	**, R2 = 0.76**
Std.Error	(0.036)	(0.17)	
Wald stat.	26.42	1.69	

5.3.2.2 Structural equation

	JOBSAT =	0.27*JOBINV	+ 0.13*POSAFF	- 0.17*NEGAFF	…
Estimation error	.45*	(0.065)	(0.075)	(0.081)	
Wald statistic		4.06	1.71	-2.12	
	+ 0.025*AUTONOMY		+ 0.16*JUSTICE	+ 0.036*JOBSTRES	…
Estimation error	(0.081)		(0.066)	(0.076)	
Wald statistic	0.30		2.39	0.48	
	- 0.033*PROMCHAN		- 0.45*JOBREP		…
Estimation error	(0.062)		(0.073)		
Wald statistic	-0.53		-6.11		
	+ 0.18*SOCSUP			, Errorvar.= 0.36	, R^2 = 0.64
Estimation error	(0.069)			(0.077)	
Wald statistic	2.66			4.61	

5.3.3 Sub-model 2 (Organisational commitment)

5.3.3.1 Parameter estimates

Table 10 summarises the parameter estimates for all the relationships in the model. Three values are specified for each estimate. The top value denotes the actual estimate of the parameter, the middle value denotes the estimated parameter's standard error and the bottom value denotes the Wald statistic for the estimate.

Table 10 – Parameter estimates for sub-model 2

F20Q1	**= 1.06*ORGCOM,**	**Errorvar.= 0.83**	**, R2 = 0.58**
Std.Error		(0.31)	
Wald stat.		2.67	
F20Q2	**= 0.93*ORGCOM,**	**Errorvar.= 0.12**	**, R2 = 0.88**
Std.Error	(0.081)	(0.15)	
Wald stat.	11.47	0.80	
F20Q3	**= 0.90*ORGCOM,**	**Errorvar.= 0.63**	**, R2 = 0.56**
Std.Error	(0.076)	(0.23)	
Wald stat.	11.89	2.72	
F20Q4	**= 0.99*ORGCOM,**	**Errorvar.= 0.76**	**, R2 = 0.57**
Std.Error	(0.087)	(0.28)	
Wald stat.	11.40	2.66	
F20Q5	**= 0.41*ORGCOM,**	**Errorvar.= 0.24**	**, R2 = 0.41**
Std.Error	(0.048)	(0.065)	
Wald stat.	8.55	3.76	
F20Q6	**= 0.74*ORGCOM,**	**Errorvar.= 2.16**	**, R2 = 0.20**
Std.Error	(0.14)	(0.42)	
Wald stat.	5.35	5.11	
F9Q2	**= 0.57*JUSTICE,**	**Errorvar.= 0.59**	**, R2 = 0.36**
Std.Error	(0.064)	(0.14)	
Wald stat.	8.95	4.25	
F9Q3	**= 0.24*JUSTICE,**	**Errorvar.= 1.57**	**, R2 = 0.036**
Std.Error	(0.12)	(0.22)	
Wald stat.	2.07	7.02	
F9Q4	**= 0.22*JUSTICE,**	**Errorvar.= 0.78**	**, R2 = 0.061**
Std.Error	(0.074)	(0.12)	
Wald stat.	3.04	6.78	
F9Q5	**= 0.66*JUSTICE,**	**Errorvar.= 0.56**	**, R2 = 0.44**
Std.Error	(0.072)	(0.16)	
Wald stat.	9.16	3.49	
F10Q1	**= 0.53*JUSTICE,**	**Errorvar.= 0.31**	**, R2 = 0.48**
Std.Error	(0.044)	(0.089)	
Wald stat.	12.15	3.47	
F10Q2	**= 0.55*JUSTICE,**	**Errorvar.= 0.18**	**, R2 = 0.62**
Std.Error	(0.036)	(0.074)	
Wald stat.	15.36	2.48	
F10Q3	**= 0.57*JUSTICE,**	**Errorvar.= 0.30**	**, R2 = 0.52**
Std.Error	(0.040)	(0.093)	
Wald stat.	14.08	3.22	
F10Q4	**= 0.43*JUSTICE,**	**Errorvar.= 0.56**	**, R2 = 0.25**
Std.Error	(0.075)	(0.12)	
Wald stat.	5.80	4.82	
F10Q5	**= 0.22*JUSTICE,**	**Errorvar.= 0.83**	**, R2 = 0.055**
Std.Error	(0.085)	(0.13)	
Wald stat.	2.58	6.54	
F10Q6	**= 0.22*JUSTICE,**	**Errorvar.= 0.37**	**, R2 = 0.12**
Std.Error	(0.053)	(0.062)	
Wald stat.	4.19	6.01	

F15Q1	**= 0.69*PROMCHAN,**	**Errorvar.= 0.46**	**, R2 = 0.51**
Std.Error	(0.057)	(0.15)	
Wald stat.	12.18	3.14	
F15Q2	**= 0.87*PROMCHAN,**	**Errorvar.= 0.34**	**, R2 = 0.69**
Std.Error	(0.054)	(0.17)	
Wald stat.	16.10	1.94	
F15Q3	**= 0.82*PROMCHAN,**	**Errorvar.= 0.67**	**, R2 = 0.50**
Std.Error	(0.074)	(0.21)	
Wald stat.	11.09	3.15	
F15Q4	**= 0.56*PROMCHAN,**	**Errorvar.= 0.56**	**, R2 = 0.35**
Std.Error	(0.066)	(0.14)	
Wald stat.	8.37	4.12	
F15Q5	**= 0.78*PROMCHAN,**	**Errorvar.= 0.66**	**, R2 = 0.48**
Std.Error	(0.078)	(0.21)	
Wald stat.	10.06	3.17	
F18Q1	**= 1.24*SOCSUP,**	**Errorvar.= 0.12**	**, R2 = 0.93**
Std.Error	(0.029)	(0.23)	
Wald stat.	42.62	0.52	
F18Q2	**= 1.31*SOCSUP,**	**Errorvar.= 0.24**	**, R2 = 0.88**
Std.Error	(0.030)	(0.27)	
Wald stat.	44.05	0.88	
F18Q3	**= 0.91*SOCSUP,**	**Errorvar.= 0.35**	**, R2 = 0.70**
Std.Error	(0.040)	(0.17)	
Wald stat.	22.59	2.00	
F18Q4	**= 1.10*SOCSUP,**	**Errorvar.= 0.39**	**, R2 = 0.76**
Std.Error	(0.044)	(0.24)	
Wald stat.	25.02	1.64	

5.3.3.2 Structural equation

	ORGCOM =	0.34*JUSTICE	+ 0.16*PROMCHAN	…
Estimation error	.45*	(0.11)	(0.093)	
Wald statistic		3.17	1.73	

	+ 0.24*SOCSUP	, Errorvar.= 0.63	, R^2 = 0.37
Estimation error	(0.10)	(0.098)	
Wald statistic	2.33	6.46	

5.3.4 Sub-model 3 (Turnover)

5.3.4.1 Parameter estimates

Table 11 summarises the parameter estimates for all the relationships in the model. Three values are specified for each estimate. The top value denotes the actual estimate of the parameter, the middle value denotes the estimated parameter's standard error and the bottom value denotes the Wald statistic for the estimate.

Table 11 – Parameter estimates for sub-model 3

F21Q1	**= 0.41*SEARBEH,**	**Errorvar.= 0.43**	**,R2 = 0.28**
Std. Error		(0.097)	
Wald stat.		4.49	
F21Q3	**= 0.47*SEARBEH,**	**Errorvar.= 0.24**	**,R2 = 0.47**
Std. Error	(0.069)	(0.071)	
Wald stat.	6.75	3.42	
F21Q4	**= 0.87*SEARBEH,**	**Errorvar.= 0.43**	**,R2 = 0.64**
Std. Error	(0.14)	(0.17)	
Wald stat.	6.23	2.44	
F22Q1	**= 0.83*INTTOSTA,**	**Errorvar.= 0.11**	**,R2 = 0.87**
Std. Error		(0.12)	
Wald stat.		0.86	
F22Q2	**= 1.00*INTTOSTA,**	**Errorvar.= 0.21**	**,R2 = 0.83**
Std. Error	(0.041)	(0.19)	
Wald stat.	24.65	1.10	
F22Q3	**= 0.65*INTTOSTA,**	**Errorvar.= 2.94**	**,R2 = 0.12**
Std. Error	(0.086)	(0.49)	
Wald stat.	7.49	5.95	
F22Q4	**= 0.74*INTTOSTA,**	**Errorvar.= 0.13**	**,R2 = 0.80**
Std. Error	(0.030)	(0.10)	
Wald stat.	24.77	1.30	
F22Q5	**= 0.58*INTTOSTA,**	**Errorvar.= 0.28**	**,R2 = 0.55**
Std. Error	(0.035)	(0.094)	
Wald stat.	16.72	2.96	
F1Q1	**= 0.70*JOBOPP,**	**Errorvar.= 0.17**	**,R2 = 0.75**
Std. Error	(0.022)	(0.098)	
Wald stat.	31.21	1.72	
F1Q2	**= 0.71*JOBOPP,**	**Errorvar.= 0.026**	**,R2 = 0.95**
Std. Error	(0.011)	(0.072)	
Wald stat.	63.14	0.36	
F1Q3	**= 0.84*JOBOPP,**	**Errorvar.= 0.11**	**,R2 = 0.86**
Std. Error	(0.017)	(0.11)	
Wald stat.	50.87	1.01	
F2Q1	**= 0.55*JOBOPP,**	**Errorvar.= 0.18**	**,R2 = 0.63**
Std. Error	(0.026)	(0.068)	
Wald stat.	21.25	2.60	
F2Q3	**= 0.69*JOBOPP,**	**Errorvar.= 0.23**	**,R2 = 0.67**
Std. Error	(0.032)	(0.098)	
Wald stat.	21.47	2.38	
F5Q1	**= 2.07*GENTRAIN,**	**Errorvar.= 1.96**	**,R2 = 0.69**
Std. Error	(0.24)	(1.38)	
Wald stat.	8.66	1.42	
F5Q2	**= 1.69*GENTRAIN,**	**Errorvar.= 1.06**	**,R2 = 0.73**
Std. Error	(0.14)	(0.70)	
Wald stat.	11.73	1.52	
F5Q3	**= 0.79*GENTRAIN,**	**Errorvar.= 1.65**	**,R2 = 0.27**
Std. Error	(0.13)	(0.34)	
Wald stat.	6.09	4.84	

F5Q4	**= 3.69*GENTRAIN,**	**Errorvar.= 9.77**	**,R2 = 0.58**
Std. Error	(0.42)	(4.12)	
Wald stat.	8.81	2.37	
F17Q1	**= 0.93*JOBSAT,**	**Errorvar.= 0.14**	**,R2 = 0.86**
Std. Error	(0.024)	(0.14)	
Wald stat.	38.53	0.96	
F17Q2	**= 0.83*JOBSAT,**	**Errorvar.= 0.15**	**,R2 = 0.82**
Std. Error	(0.025)	(0.12)	
Wald stat.	33.83	1.25	
F17Q3	**= 0.90*JOBSAT, E**	**Errorvar.= 0.74**	**,R2 = 0.52**
Std. Error	(0.11)	(0.26)	
Wald stat.	8.56	2.81	
F17Q4	**= 0.81*JOBSAT, E**	**Errorvar.= 0.32**	**,R2 = 0.67**
Std. Error	(0.042)	(0.15)	
Wald stat.	19.12	2.17	
F17Q5	**= 0.68*JOBSAT, E**	**Errorvar.= 0.51**	**,R2 = 0.48**
Std. Error	(0.067)	(0.16)	
Wald stat.	10.17	3.13	
F17Q6	**= 0.50*JOBSAT, E**	**Errorvar.= 0.31**	**,R2 = 0.44**
Std. Error	(0.052)	(0.086)	
Wald stat.	9.55	3.63	
F20Q1	**= 1.18*ORGCOM, E**	**Errorvar.= 0.56**	**,R2 = 0.71**
Std. Error	(0.064)	(0.32)	
Wald stat.	18.28	1.79	
F20Q2	**= 0.82*ORGCOM, E**	**Errorvar.= 0.31**	**,R2 = 0.68**
Std. Error	(0.035)	(0.14)	
Wald stat.	23.16	2.23	
F20Q3	**= 1.02*ORGCOM, E**	**Errorvar.= 0.39**	**,R2 = 0.73**
Std. Error	(0.050)	(0.21)	
Wald stat.	20.54	1.84	
F20Q4	**= 1.09*ORGCOM, E**	**Errorvar.= 0.56**	**,R2 = 0.68**
Std. Error	(0.064)	(0.27)	
Wald stat.	17.09	2.10	
F20Q5	**= 0.39*ORGCOM, E**	**Errorvar.= 0.26**	**,R2 = 0.36**
Std. Error	(0.044)	(0.063)	
Wald stat.	8.92	4.16	

5.3.4.2 Structural equations

	INTTOSTA =	- 0.96*SEARBEH	+ 0.11*JOBOPP	…
Estimation error		(0.16)	(0.055)	
Wald statistic		-6.01	2.00	

	- 0.025*GENTRAIN		, Errorvar.= 0.014 , R^2 = 0.99
Estimation error	(0.090)		(0.045)
Wald statistic	-0.28		0.31

	SEARBEH =	- 0.60*ORGCOM	- 0.28*JOBSAT	, Errorvar.= 0.30 , R^2 = 0.70
Estimation error		(0.23)	(0.23)	(0.12)
Wald statistic		-2.61	-1.20	2.40

6. DISCUSSION OF RESULTS

6.1 Reliability and validity of survey

The internal reliability of the survey results was tested using Cronbach's alpha statistic. Refer to Table 7 for the detailed alpha statistics. Based on the alpha statistic two of the constructs were found to be unreliable and could not be used in the model. The constructs Kinship responsibility and Career Orientation were not evaluated during the model training.

Figure 7 to Figure 10 compare the frequency distribution of responses in relation to Job grade, Gender and Department in relation to the sampling frame's frequency distributions. Only Involvement can not be verified against the sampling frame's frequency distribution because the data on involvement is not available. The frequency distribution of the sample is similar to the sampling frame and the sample is a good representation of the sampling frame.

6.2 Reliability and validity of the structural equation models

Table 8 summarises the fit statistics for the three models fit to the data. Biddle and Marlin (1987) warn against the sole reliance on the χ^2 statistics for the acceptance or rejection of model fit as this statistic is very sensitive to sample size and departures from multivariate normality of the observed variables. Bollen (1990) suggests that a multiple of fit criteria should be used to minimise the biases that may exist for any one measure of fit.

All three models exhibit satisfactory fit to the data based on the fit indexes. The χ^2 is significant below p = 0.05, RMR are estimated to be below 0.08, RMSEA are estimated to be below 0.08 with a greater than 90% confidence (p>0.9) and the GFI, NFI and CFI fit indexes are all estimated above 0.9 as suggested by Bollen (1990).

Table 9, Table 10 and Table 11 denote the regression equations for the constructs of Model 1, Model 2 and Model 3 respectively. Not all factors fit their constructs well as denoted by Wald statistic scores less than 1.96 and R^2 values less than 0.6 indicated in red in the tables. The effect of the factors' poor fit will be discussed when the propositions are evaluated.

Although the models have some weaknesses it can still be used to evaluate the structure of the survey data. These models are valid estimations of at least one plausible structure for the data.

It is important to note that only the data structure (structural equation model) related to the causal relationships depicted in Prince's (2001) model were tested. It is conceivable that other data structures exist that will fit the data as well or better but the exploration for other possible data structures was considered outside the scope of this research.

6.3 Research propositions

6.3.1 Research proposition 1

Research proposition 1 states that:

> *The extent to which an employee perceives his ability to get another job is negatively related to the employee's intent to stay.*

Paragraph 5.3.4.2 lists the structural equation for the construct Intent-to-Stay (INTTOSTA). The construct Job Opportunity (JOBOPP) is positively related to Intent-to-Stay with a factor loading of 0.11. The factor loading is significant for p = 0.05 with a Wald statistic equal to 2.00.

This surprising finding is contrary to the initial proposition. The survey factors related to construct F22 (Intent-to-Stay) were found to be internally reliable with a Cronbach's alpha statistic of 0.76 and the survey results seem not to be the source for this discrepancy. Table 11 denotes the parameter estimations for the individual factors for Model 3. The factors for F22 do not fit the regression models well and the factor loadings for F22Q1, F22Q2 and F22Q5 are not significant for p = 0.05. One explanation for the counter-intuitive result may thus be a poorly fit model.

Other plausible explanations exist. The organisational setting (culture, rewards, benefits, etc.) may mediate an employee's intent to stay even if job opportunities are available in the job market (Larsson, Brousseau, Kling, Sweet, 2007). Remuneration was not considered in this research and other authors have shown that there is a significant mediating influence from Remuneration on the Intent-to-Stay if the remuneration is market related or better (Fry, 1979; Blakemore, 1987).

6.3.2 Research proposition 2

Research proposition 2 states that:

> *The extent to which an employee perceives his responsibility towards kinship is negatively related to the employee's intent to stay.*

Research proposition 2 can not be evaluated successfully because the survey instrument proved to be unreliable for the constructs Kinship and Career orientation. No inferences can be made about this proposition.

6.3.3 Research proposition 3

Research proposition 3 states that:

> *The extent to which an employee perceives the quality of his training is negatively related to the employee's intent to stay.*

Paragraph 5.3.4.2 lists the structural equation for the construct Intent-to-Stay (INTTOSTA). The causal relationship between Intent-to-Stay and the construct General training (GENTRAIN) is not significant in the structural equation with a factor loading of -0.025 and the Wald statistic only equal to 0.28.

This study could not find any significant evidence of the positive correlation between an employee's perception of the adequacy of his training and his intent to stay. The result rather suggests that there is no significant causal relation between these two constructs. This is contrary to the findings of the literature study. Both Arthur (1994) and Huselid (1995) have found in their research that a strong negative relationship exists between the skills of employees and the rate of turnover.

Additional data is required before the causal relationship between the constructs Job Satisfaction and General training can be characterised.

6.3.4 Research proposition 4

Research proposition 4 states that:

> *The extent to which an employee enjoys his job is positively related to the employee's job satisfaction.*

Paragraph 5.3.2.2 lists the structural equation for the construct Job Satisfaction (JOBSAT). The construct Job Involvement (JOBINV) is positively related to Job Satisfaction with a factor loading of 0.27. The factor loading is significant for p = 0.05 with the Wald statistic equal to 4.06.

This result supports the proposition that an employee who is positive about his job and thus more involved will experience more job satisfaction. This positive correlation is supported by other authors. Abraham (1998) identified emotional dissonance as a key mediation variable on an employee's job satisfaction. McClelland *et al.* (1953) also linked job satisfaction to the person-job fit and their research have found that if employees are not involved in their jobs they tend to be less satisfied.

6.3.5 Research proposition 5

Research proposition 5 states that:

> *The extent to which an employee perceives his autonomy in his job is positively related to the employee's job satisfaction.*

Paragraph 5.3.2.2 lists the structural equation for the construct Job Satisfaction (JOBSAT). The causal relationship between Job Satisfaction and the construct Autonomy (AUTONOMY) is not significant in the structural equation with a factor loading of 0.025 and the Wald statistic only equal to 0.3.

This study could not find any significant evidence of the positive correlation between an employee's job satisfaction and their autonomy. The result rather suggests that there is no significant relation between and employee's autonomy and his job satisfaction.

The result is contrary to what other authors have found in previous research. Aubè *et al.* (2007) did identify a mediating role of job autonomy on job satisfaction. Putterill and Rohrer (1995) included autonomy as a mediating variable on job satisfaction in their Commitment-Performance (C-P) model.

The result is considered not valid and additional data is required before the causal relationship between the constructs Job Satisfaction and Autonomy can be characterised.

6.3.6 Research proposition 6

Research proposition 6 states that:

> *The extent to which an employee perceives justice in the distribution of rewards is positively related to the employee's job satisfaction.*

Paragraph 5.3.2.2 lists the structural equation for the construct Job Satisfaction (JOBSAT). The causal relationship between Job Satisfaction and the construct Perceived Justice (JUSTICE) was found to be significant with a Wald statistic equal to 2.39. The construct Perceived Justice is positively related to Job Satisfaction with a factor loading of 0.16.

The result of the structural equation support the proposition that employees who perceive the actions and procedures of the organisation as just experience higher job satisfaction. This is supported by the literature study. Homans (1961) and Adams (1965) highlight the positive causal relationship between job satisfaction and perceived procedural- and distributive justice in their research findings.

6.3.7 Research proposition 7

Research proposition 7 states that:

> *The extent to which an employee perceives the level of stress is negatively related to the employee's job satisfaction.*

Paragraph 5.3.2.2 lists the structural equation for the construct Job Satisfaction (JOBSAT). The causal relationship between Job Satisfaction and the construct Job Stress (JOBSTRES) is not significant in the structural equation with a factor loading of 0.076 and a Wald statistic only equal to 0.48.

This study could not find any significant evidence of the negative causal relationship between an employee's job satisfaction and the stress he experience in his job. The result rather suggests that there is no significant relation between and employee's autonomy and his job satisfaction.

This finding is in stark contrast to previous empirical studies on this subject. The literature study refers to several authors who established the relationship between job satisfaction and job stress (House, 1980, 1981; Parasuraman and Alutto, 1981; Goldstein and Rockart, 1984; Kemery *et al.*, 1985).

When evaluating the results tabulated in Table 9 more closely it is evident that Factor 11 (Job stress – Ambiguity), Factor 12 (Job stress – Conflict), Factor 13 (Job stress – Workload) and Factor 14 (Job stress – Inadequate resources) did not explain the variance in the respective regression equations very well with R^2 scores below 0.45. The weak causal relationship between Job Satisfaction and Job Stress may thus be related to a poor model fit.

It is also plausible that other factors not measured by this survey, such as organisational culture, the current economic climate, may have influenced the survey responses and the result can not be considered to be reliable.

The result is considered not valid and additional data is required before the causal relationship between the constructs Job Satisfaction and Job Stress can be characterised.

6.3.8 Research proposition 8

Research proposition 8 states that:

> *The extent to which an employee perceives his opportunity to be promoted is positively related to the employee's job satisfaction.*

Paragraph 5.3.2.2 lists the structural equation for the construct Job Satisfaction (JOBSAT). The causal relationship between Job Satisfaction and the construct Promotional Chances (PROMCHAN) is not significant in the structural equation with a factor loading of 0.062 and a Wald statistic only equal to 0.53.

This study could not find any significant evidence of the positive causal relationship between an employee's perception of promotion opportunities and the job satisfaction he experience in his job. The result rather suggests that there is no significant relation between an employee's promotion chances and his job satisfaction.

The literature study did identify a positive relationship between job satisfaction and promotion prospects. Munasinghe (2006) identified a significant relationship between job prospects and labour turnover in his extensive longitudinal study of 12,686 US employees.

The result from this study is considered not to be valid and additional data is required before the causal relationship between the constructs Job Satisfaction and perceived rewards can be characterised. It is also important to note that this study only focussed on promotion as a reward. Several other types of reward such as Quality of Life benefits, Kinship support, Education, etc. exist that needs further evaluation (Bokemeier and Lacy, 1987).

6.3.9 Research proposition 9

Research proposition 9 states that:

> *The extent to which an employee perceives the level of repetitiveness in his job is negatively related to the employee's job satisfaction.*

Paragraph 5.3.2.2 list the structural equation for the construct Job Satisfaction (JOBSAT). The causal relationship between Job Satisfaction and the construct Job Repetitiveness (JOBREP) was found to be significant with a Wald statistic equal to 6.11. The construct Job Repetitiveness is negatively related to Job Satisfaction with a factor loading of -0.45.

This result supports the view of the authors consulted in the literature review (Fullan, 1970, Co *et al.*, 1998). Jobs with high repetitiveness are not perceived well by employees and have a significant negative causal relationship with job satisfaction. This is particularly evident for the sampling frame chosen for this study: Professionals, Technical specialists and Management (Co *et al.*, 1998).

6.3.10 Research proposition 10

Research proposition 10 states that:

> *The extent to which an employee perceives the level of support of his superior in his job is positively related to the employee's job satisfaction.*

Paragraph 5.3.2.2 lists the structural equation for the construct Job Satisfaction (JOBSAT). The causal relationship between Job Satisfaction and the construct Social Support (SOCSUP) was found to be significant with the Wald statistic equal to 2.66 and a factor loading of 0.18.

This finding supports the observation of the literature review that there exists a positive causal relationship between Job Satisfaction and Social Support. This is in line with the results obtained by Griffin *et al.* (2001)

It is important to note that Factor 19 (Social support – Co-workers) was found not to be significant when the structural equation model was prepared. Prince (2001) suggested that social support from co-workers is not significant to job satisfaction.

6.3.11 Research proposition 11

Research proposition 11 states that:

> *The extent to which an employee perceives justice in the distribution of rewards is positively related to the employee's organisational commitment.*

Paragraph 5.3.3.2 lists the structural equation for the construct Organisational Commitment (ORGCOM). The causal relationship between Organisational Commitment and the construct Perceived Justice (JUSTICE) was found to be significant with a Wald statistic equal to 3.17. The construct Perceived Justice is positively related to Organisational Commitment with a factor loading of 0.34.

This result supports the proposition that employees who perceive the actions and procedures of the organisation as just are more committed towards the organisation.

The literature review defines the same causal relationship between Perceived justice and Organisational Commitment. Homans (1961) and Adams (1965) highlight in their research findings the positive causal relationship between organisational commitment and perceived procedural- and distributive justice.

Based on this result the proposition that perceived justice in the organisation is positively related to organisational commitment holds true in this empirical study.

6.3.12 Research proposition 12

Research proposition 12 states that:

> *The extent to which an employee perceives his opportunity to be promoted is positively related to the employee's organisational commitment.*

Paragraph 5.3.3.2 lists the structural equation for the construct Organisational Commitment (ORGCOM). The causal relationship between Organisational Commitment and the construct Promotional Chances (PROMCHAN) is weak with a factor loading of 0.16 and a Wald statistic only equal to 1.73. Although the factor loading is not significant for p = 0.05 it is significant for p = 0.1 and the causal relationship will still be evaluated.

This result supports Munasinghe's (2006) findings on the causal relationship between Organisational Commitment and Promotional Chances. Employees who perceive their opportunities for promotion to be good are more committed towards the organisation.

6.3.13 Research proposition 13

Research proposition 13 states that:

> *The extent to which an employee perceives the level of support from his superior in his job is positively related to the employee's organisational commitment.*

Paragraph 5.3.3.2 lists the structural equation for the construct Organisational Commitment (ORGCOM). The causal relationship between Organisational Commitment and the construct Social Support (SOCSUP) was found to be significant with a Wald statistic equal to 2.33 and a factor loading of 0.24.

This finding supports the view of previous authors that a positive causal relationship exists between Organisational Commitment and Social Support.

It is important to note that Factor 19 (Social support – Co-workers) was again found not to be significant when the structural equation model was prepared. This reinforces the finding in paragraph 6.3.10 that social support from co-workers is not significant to job satisfaction or organisational commitment as suggested by Prince (2001). This is an important confirmation of Prince's (2001) hypotheses that co-worker support does not play a significant role in labour turnover in an organisation.

6.4 Limitations of research

Some weaknesses were identified in the validity of the structural equation models' fit of the underlying structure of the data. The poor fit of some factors may be related to a too small sample size or it may be that the data supports other data structures (structural equation model configurations). The poor fit of key factors reduced this study's ability to comment of the causal relationships between Kinship responsibilities and the Intent-to-Stay, General training and the Intent-to-Stay, Autonomy and Job Satisfaction, Job Stress and Job Satisfaction, and Promotional Chances and Job Satisfaction.

More data is required before any conclusions can be drawn about these relationships.

7. CONCLUSIONS

This study was only partially successful in validating Prince's (2001) causal model for turnover. Only the causal relationships between Job Involvement and Job Satisfaction, Perceived Justice and Job Satisfaction, Job repetitiveness and Job Satisfaction, Social support and Job satisfaction, Perceived Justice and Organisational Commitment, Promotional chances and Organisational Commitment and Social Support and Organisational Commitment could be validated by this study. These causal relations are depicted in Figure 14.

Some key learnings are still relevant to business even though the study was not successful in validating the full model of Prince (2001):

1) Prince's (2001) model highlights the inter-activeness of the individual-, organisation structural- and business environmental factors on an employee's intent to stay at an organisation. The unique combination of all these factors for each individual suggests that there are not a single set of human resource practices that will consistently translate into optimal employee performance.

   The contingency view of high performance human resource practises suggests that the business environment, organisational strategy and structure and individual requirements must be taken into account before an individualised plan is drawn up for each important employee.

2) Human resources systems and practises must ensure that jobs are well defined and that jobs have enough variety to keep employees satisfied.

3) Social support from management is far more important than support from peers. If managers do not support their subordinates employees will be more inclined to turn over than when peer support is not evident.
4) Perceived distributive- and procedural justice are important to employees. Organisations must ensure that policies are just and consistently applied by all in the organisation.
5) Promotion opportunities were found to be important to employees. It is imperative that all key employees have a view of his future role in the organisation otherwise he may decide to leave the organisation for a career elsewhere.

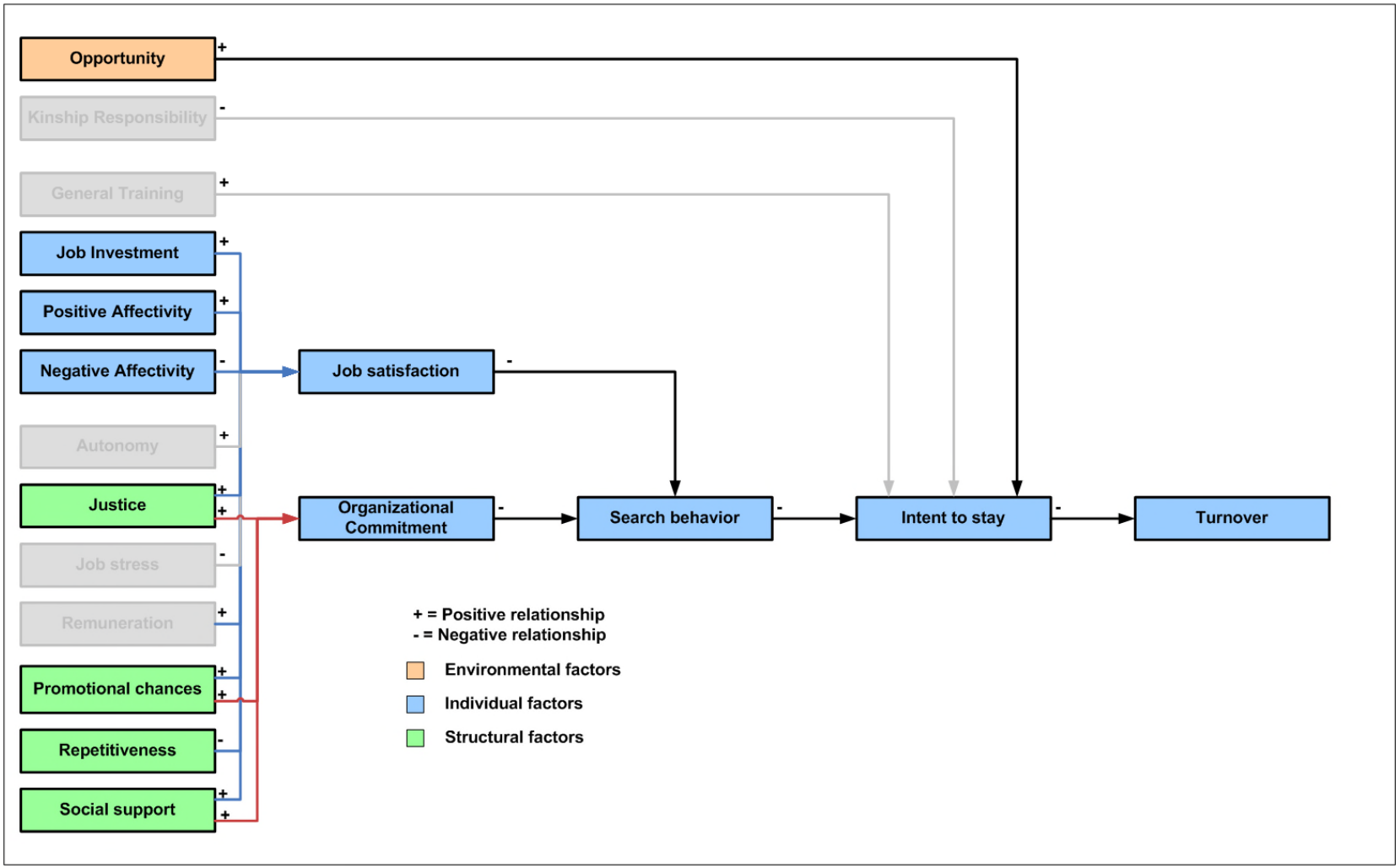
Several opportunities exist for future research to expand on the topic covered by this study:

1) Structural equation modelling was found to be a very powerful statistical tool to model the underlying structure of the data. Research scope exists to test other plausible causal models for turnover using exploratory statistical methods such as exploratory factoral analysis.
2) Constructs such as Kinship responsibility, Job stress and Autonomy were not adequately assessed by the survey tool. An improvement of the survey questionnaire may improve the data gathered and this will allow better analysis of the causal relationships not validated by this study.
3) The fact that social support from peers proved to be insignificant when setting up the structural equation models for Job Satisfaction and Organisation Commitment suggests that peer support are not important to employees. More empirical research is necessary to evaluate the validity of this statement.

4) Only promotion as a method of reward other than remuneration was evaluated in this study. The impact of the many other forms of reward on and employee's intent to stay must still be evaluated.

This study must conclude as so many other authors has done before it and suggest that more empirical studies are necessary to test the principal constructs of labour turnover as this research could not confirm all the factors postulated by Prince (2001).

Figure 14 - Validated causal relationships of Prince's (2001) model



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ANNEXURE A – APPLICATION FOR ETHICAL CLEARANCE

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

UNIVERSITY OF PRETORIA
Gordon Institute of Business Science
("GIBS")

APPLICATION FOR ETHICAL CLEARANCE

Researchers using HUMAN respondents as sources of information for data capturing must complete ALL the sections.

Researchers using NON HUMAN resources of information for data capturing must complete ONLY sections 1, 2.2, 10 and 11.

An application will only be approved if all the required documentation is provided, including a copy of the Research Proposal.

1. RESEARCH PROJECT INFORMATION

PLEASE PRINT CLEARLY

NAME	M Lewis
STUDENT NO	89353511
Telephone / Cell phone	0828027558
E-mail	mc21@telkomsa.net
TITLE OF STUDY	The influence of Remuneration, Job Enrichment, Employee satisfaction and Job Mobility on Turnover intention in a skill constrained labour market
RESEARCH SUPERVISOR	
FIRST APPLICATION	**Yes** **No**

2. SOURCES OF INFORMATION

Are human subjects used as sources of information to capture data from?

Yes ☑ No □

***If yes**, continue with question **2.1: Human Subjects** and complete the form.*

***If no**, only complete question **2.2: Non-human Subjects**/Secondary Data.*

2.1 HUMAN SOURCES OF INFORMATION

2.1.1 If subjects are to be recruited, please confirm that no inducement is to be offered.
I confirm ☑

2.1.2 If subjects' records are to be used, specify the nature of these records and indicate how they will
be selected.

No personal records will be used

2.1.3 Has permission been obtained to study and report on these records?

Yes □ No Not applicable ☑
- *If* **Yes**, *attach letters.*

2.1.4 List proposed procedures to be carried out with subjects to obtain data required by marking the applicable box(es):

- □ **Record review**
- □ **Interview schedule** (*Attach)*
- ☑ **Questionnaire** (*Attach, if applicable)*
- □ **Intervention** (e.g. training). *Please describe*
- □ **Other** *Please specify*

2.2 NON-HUMAN SOURCES OF INFORMATION

2.2.1 If records are to be used, e.g. company financial or marketing reports, specify the nature of these records and indicate how they will be selected.

Not applicable

2.2.2 Has permission been obtained to study and report on these records?

Yes □ No □ Not applicable ☑
- If Yes*, attach letters.*

3. INFORMED CONSENT

3.1 Attach copy of the consent statement on the relevant document.

3.2 If the researcher is not competent in the mother tongue of the subjects, how will full comprehension of the content of the consent form by the subjects be ensured? *Please specify*.

4. RISKS AND POSSIBLE DISADVANTAGES TO THE SUBJECTS

4.1 Do subjects risk any potential harm or disadvantage (e.g. financial, legal, social) by participating in the research?

No ☑ Yes □ *Please specify.*

5. DECEPTION OF SUBJECTS

5.1 Are there any aspects of the research about which the subjects are not to be informed?

No ☑ Yes □ *Please justify.*

6. CONFIDENTIALITY

6.1 How will confidentiality and/or anonymity be assured? .

☑ No names will be recorded ☑ Data will be stored without identifiers

□ No names will be requested ☑ Only aggregated information will be provided ☑

Other, *Please specify*

7. DISSEMINATION OF RESEARCH RESULTS

7.1 To whom will results be made available?

GIBS and the participating companies. Only Aggregate information will be made available to the companies and only information obtained from the company will be used for their feedback.

7.2 In which format do you envisage the results to be made available?

Please mark all those that may now or in the future be applicable:

☑ research report
□ scientific article
□ lay article
□ conference papers
□ TV
□ radio
□ book
□ other, *please describe.*

8. STORAGE OF RESEARCH DATA

8.1 In what format will the data be stored?

☑ Electronically □ Physically □ *Other, Please specify.*

8.2 How will subjects' permission for further use of the data be obtained?

☑ Subsequent informed consent form □ Other, P*lease specify.*

8.3 Have the above issues been addressed in the letter of informed consent?

☑ Yes □ No

8.4 Please confirm that the data will be stored for a minimum period of 10 years.

☑ I confirm

9. OTHER INFORMATION

Please describe any other information which may be of value to the Committee in reviewing your application. Use a separate sheet if necessary.

10. APPROVAL OF APPLICATION FOR ETHICAL CLEARANCE

RESEARCHER/APPLICANT:
I affirm that all relevant information has been provided and that all statements made are correct.

Name in capital letters: M Lewis **Signature:** _____ **Date:** _____

STUDY SUPERVISOR:
I am of the opinion that the proposed research project is ethically acceptable

No ethical implications □ **Ethical implications** □ **If so give details:**

Name in capital letters: _____ **Signature:** _____ **Date:** _____

GIBS RESEARCH ETHICS COMMITTEE

Name in capital letters: _____ **Signature:** _____ **Date:** _____

ACCEPTED □ **REJECTED** □ **REASONS:**

11. CHECKLIST OF ATTACHMENTS

- □ Introductory letter to respondent company and signed by the company, explaining purpose of research
- □ Informed Consent from human subjects to take part in the research **OR**
- □ Questionnaire, with tick box where respondents indicate their consent to participate
- □ Interview schedule
- □ Subject instructions
- □ Other, *please specify*.

ANNEXURE B – ORIGINAL SURVEY INSTRUMENT

Opportunity

This section of Kim *et al.*'s questionnaire is entitled "The job market'. The following definition precedes the questions: "The local job market is the geographical area in which you can work without changing your residence. Everything outside this area is the non lo cal job market'.

There are three questions for each job market. The first question for the local job market is the following: "How easy would it be for you to find a job with another employer in this geographical area that is as good as the one you now have?'. Rather than "as good as'', the next two questions, respectively, substitute "better'' and "much better'. The first questions for the nonlocal job market are the following: "How easy would it be for you to find a job with another employer outside this geographical area that is as good as the one you now have?'. Rather than "as good as', the next two questions, respectively, substitute "better' and "much better'.

The six questions use the following responses: "very easy, quite easy, somewhat easy, quite difficult, and very difficult'. "Very easy' is scored as five. In this instance, it is better, for comparative purposes, to average the five responses. The employee may, of course, refer to different units of analysis for the employers. Examples from the US Census would be the "firm' or "establishment''. Early in the questionnaire, the meaning of employer should be specified for the respondents by the researcher.
Source: Adapted from Kim *et al.* (1996).

Kinship responsibility

People have different ideas about the rights and duties within the family. Please indicate your agreement or disagreement regarding the following statements about family rights and duties. (Answer these questions even if you do not have a husband/wife and children. The questions are intended to measure your general ideas about family rights and duties, irrespective of your present situation.) Five questions are suggested:

1. Children should look after their old and/or sick parents, even if the children have to make some sacrifices;
2. Since children benefit the most from a college education, they should be primarily responsible for financing this type of schooling;
3. Parents should be willing to provide considerable financial assistance to enable their children, when they first marry, to buy a home;
4. It is almost unthinkable to obtain a divorce; and
5. It is understandable that a husband/wife might not be totally sexually loyal to each other during their marriage.

Agree on the first item is scored as more kinship responsibility; on the second item, agree is scored as less kinship responsibility; agree on the third item should be scored as more kinship responsibility; on the fourth item, agree indicates more kinship responsibility; and agree on the fifth item indicates less kinship responsibility. The scoring is based on kinship responsibility versus responsibility from outside the network of kin, such as from the government. Each agree response should be scored as one; the scores should be summed.
Source: New Questions.

Career orientation

For the following four questions, define career as a line of work that an employee plans to pursue for many years. A career is different from a job taken mostly to earn income. Four questions are used:

1. Compared to other people in the same job, to what extent do you view your job as a career;
2. Compared to other people in the same job, to what extent does your partner (usually a husband or wife) view his/her job as a career;
3. Compared to other people generally, to what extent do you view your job as a career; and
4. Compared to other people generally, to what extent does your partner (usually a husband or wife) view his/her job as a career?

Five responses are provided for each question: to a very great extent, to a great extent, to some extent, to a little extent, and to no extent. The scoring is from five to one, with "to a very great extent' scored as five. For the self and partner, the scores should be averaged. There will thus be two scores. The second and fourth questions have the following item after the five responses: no partner/single-income earner.
Source: Adapted form Gurney *et al.* (1997).

Kinship responsive employer

Employers vary by the extent to which they are responsive to the kinship concerns of their employees. Please indicate which of the following features characterizes your present employer:

1. On-site child care facilities for employees;
2. Leave for childbirth;
3. Paid leave for childbirth;
4. Leave for childbirth of at least three months;
5. Unpaid leave for family matters; and
6. Flexible work schedules.

Each of the features has a yes or no response. Yes and no, respectively, should be scored as 1 and 0. The scores should be summed.
Source: New Questions.

General training
Four questions are used:

1. The skills and knowledge used in my job are needed with other employers;
2. Most of my present job skills and knowledge would be useful to me if I left my present employer;
3. It would be difficult to use the skills and knowledge of my job outside of my present employer (R); and
4. My job skills and knowledge are mostly limited to my present employer (R).

Reverse-scored items are indicated by an R. As previously indicated in the introductory section, unless indicated otherwise, all the questions use an agree-disagree format with agree receiving the highest score.
Source: Adapted from Kim *et al.* (1996).

Job involvement
Five statements are provided:

1. The most important things that happen to me involve my job;
2. I live, eat, and breathe my job;
3. Most of my interests are centred around my job;
4. I have very strong ties with my present job which would be difficult to break; and
5. I consider my job to be very central to my existence.

The introductory statement preceding these five questions refers to "your present job".
Cyphert (1990), the source of this measurement, measured general involvement before specific involvement.
Source: Cyphert (1990).

Positive and negative affectivity
Ten questions are presented:

1. I live a very interesting life;
2. I usually find ways to liven up my day;
3. Most days I have moments of real fun;
4. Every day interesting things happen to me;
5. For me, life is a great adventure;
6. Often I get irritated at little annoyances;
7. I suffer from nervousness;
8. My mood often goes up and down;
9. Minor setbacks sometimes irritate me too much; and
10. There are days when I'm "on edge' all the time.

These ten items were provided, in personal communication, from Professor David Watson. Watson's format, however, has been changed. The introductory statement preceding these ten questions refers to "self-view". The first five questions are for positive affectivity.

See Price (1997) for a later version of these questions.

Autonomy
Six responses are provided:
1. I am able to choose the way to go about my job;
2. I am able to modify what my job objectives are;
3. Generally, I can control the time at which I start working for the day;
4. My job is such that I cannot decided when to do particular work activities (R);
5. I have no control over the sequencing of my work activities (R); and
6. Generally, I do not have any control over the time at which I stop working for the day (R).

Source: Kim *et al.* (1996).

Distributive justice
Please indicate the extent of your agreement or disagreement concerning the degree to which your employer operates by ability/merit. Six questions are suggested:
1. Promotions by my employer are almost totally based on seniority (R);
2. Raises by my employer heavily depend on who you know (R);
3. The hiring of new employees by my employer is strictly determined by job-related ability;
4. The employees who do well for my employer are those who contribute the most to its success;
5. One sure way to get fired by my employer is to fail to do your work in a competent manner;
6. Very competent employees are well rewarded by my employer.

Source: New questions.

Procedural justice
Please indicate the extent of your agreement or disagreement with the following statements concerning the extent to which your employer enforces its rules and regulations equally among employees. Six questions are suggested:
1. Rules and regulations are applied equally to all employees;
2. Employees of high rank are easily able to avoid the enforcement of many rules and regulations (R);
3. Little effort is made by my employer to apply seriously its rules and regulations to everyone (R);
4. Many exceptions are made by my employer in applying its rules and regulations (R);
5. An employee must obey the rules and regulations, even if he/she is close friends with their supervisors; and
6. No one who works for my employer can escape conformity to its rules and regulations.

Source: New questions.

Job stress (ambiguity)
Four statements are provided:
1. I know what procedures to use to get my job done;
2. I know exactly what is expected of me in my job;
3. I do not know what my responsibilities are in performing my job (R); and
4. I have to work under vague directives (R).

Source: Kim *et al.* (1996).

Job stress (conflict)
Four statements are provided:
1. I often get conflicting job requests from different supervisors;
2. I often get conflicting job requests from different co-workers;
3. My immediate supervisor and co-workers have the same ideas about how my job should be done (R); and
4. I get consistent job requests from my immediate supervisor (R).

Source: Kim *et al.* (1996).

Job stress (workload)
The questionnaire lists four statements:
1. I have enough time to get everything done in my job (R);
2. My workload is not heavy on my job (R);
3. I have to work very hard in my job; and
4. I have to work very fast in my job.

Source: Adapted from Kim *et al.* (1996).

Job stress (inadequate resources)
Four statements are on the questionnaire:
1. I do not have enough room to do my job;
2. I have difficulty getting supplies I need on my job;
3. I have adequate equipment to do my job (R); and
4. I have enough support services to do my job (R).

Source: Kim *et al.* (1996).

Pay
Roughly, what is your total yearly income at the present time from (employer"s name) before taxes and other deductions are made? (If you have not worked for a full year, please estimate what your total yearly income will be.) Seven income-brackets are provided; these seven brackets are not included, since they must be adjusted for time period, industry, and country. In the analysis, the midpoints of the different brackets are used.
Source: Adapted from Price and Mueller (1986).

Promotional chances
Five questions are provided:
1. Promotions are regular with my employer;
2. There is a very good chance to get ahead with my employer;
3. The practice of beginning at the bottom and working up is widespread with my employer;
4. The practice of internal promotion is not widespread with my employer (R); and
5. I am in a dead-end job (R).

The introductory statement should refer to "promotional chances for a person with your qualifications somewhere with your employer."
Source: Kim *et al.* (1996).

Routinization
Four statements are listed:
1. My job has variety (R);
2. I have the opportunity to do a number of different things in my job (R);
3. My duties are repetitious in my job; and
4. Every day I encounter the same situations in performing my job.

Source: Adapted from Kim *et al.* (1996).

Social support (spouse)
This part of Kim *et al.*'s questionnaire is entitled "Support in work'. An introductory statement follows the section heading: "Please indicate your agreement or disagreement with each of the following statements about support in your work.' The first set of questions is labelled: "Support from spouse" and the respondent is asked to check even if he/she has "no spouse". Four questions are provided:
(1) My spouse is not willing to listen to my job-related problems (R);
(2) My spouse does not show a lot of concern for me on my job (R);
(3) My spouse can be relied on when things get tough on my job; and
(4) My spouse is helpful to me in getting my job done.

Source: Kim *et al.* (1996).

Social support (immediate supervisor)
"Support from your immediate supervisor' (consider as your immediate supervisor the most important person who judges your job performance.) Four statements are provided:
1. My immediate supervisor is willing to listen to my job-related problems;
2. My immediate supervisor shows a lot of concern for me on my job;
3. My immediate supervisor cannot be relied on when things get tough on my job (R); and
4. My immediate supervisor really does not care about my well-being.

Source: Adapted from Kim *et al.* (1996).

Social support (co-workers)
"Support from your co-workers' (your co-workers consist of the people with whom you have the most contact in the company. Do not consider your immediate supervisor as a co-worker.) Four questions are listed:
1. I am very friendly with one or more of my co-workers;
2. I regularly do things outside of work with one or more of my co-workers;
3. I rarely discuss important personal problems with my co-workers (R); and
4. I know almost nothing about my co-workers as persons (R).

Source: Kim *et al.* (199?).

Job satisfaction
Six statements are provided:
1. I am fairly well satisfied with my job;
2. Most days, I am enthusiastic about my job;
3. I like working here better than most other people I know who work for this employer;
4. I do not find enjoyment in my job (R);
5. I am often bored with my job (R); and (6) I would consider taking another kind of job (R).

Source: Adapted from Kim *et al.* (1996).

Organizational commitment
The following six statements are provided:
1. I think that my present employer is a great organization to work for;
2. My present employer inspires the very best in me in the way of job performance;
3. I am glad that I chose this present employer to work for over others I was considering at the time I joined;
4. I am not proud to tell others I work for my present employer (R);
5. I really do not care about the fate of my present employer (R); and
6. My present employer is not the best of all possible places to work for me (R).

For organizational commitment, it is very important that the respondent knows the meaning of employer, since the respondent may refer to different units with this label. As previously indicated, the meaning of employer should be specified early in the questionnaire.
Source: Adapted from Kim *et al.* (1996).

Search behaviour
Four statements are provided:
1. I rarely seek out information about job opportunities with other employers (R);
2. There are few chances that I will search for a job with other employers (R);
3. I almost always follow up on job leads with other employers that I hear about; and
4. Within the next year, I intend to search for a job with other employers.

Source: Adapted from Kim *et al.* (1996).

Intent to stay
Four questions assess intent:
1. I would like to leave my present employer (R);
2. I plan to leave my present employer as soon as possible (R);
3. I plan to stay with my present employer as long as possible; and
4. Under no circumstances will I voluntarily leave my present employer.

It is best not to include a specific time period in the questions, since some employees may be near retirement and this will distort the intended meaning of this question.
Source: Adapted from Kim *et al.* (1996).

Turnover
Data for the measurement of turnover is always collected from organizational records, supplemented by interviews. Price (1997) has a discussion of the collection of turnover data from organizational records

ANNEXURE C – ADAPTED SURVEY INSTRUMENT

Corporate climate survey

UNIVERSITEIT VAN PRETORIA
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1. General information

This questionnaire will gather information on the reasons why people might leave the organization.

This questionnaire is completed anonymously and there is absolutely no reference back to the person who completed the questionnaire. It is vital that you complete the questionnaire honestly to ensure value will come from this exercise.

Your contribution to this survey will be used to complete a MBA research project and the outcome will be presented to the executive.

Thank you for your valued contribution

* 1. Job grade?

- ◯ 7
- ◯ 6
- ◯ 5
- ◯ 4
- ◯ 3 or higher

* 2. Gender?

- ◯ Male
- ◯ Female

* 3. Spouse or partner?

- ◯ Not involved
- ◯ Spouse (Husband/Wife)
- ◯ Partner

* 4. Job environment

- ◯ Manufacturing
- ◯ Commercial
- ◯ Human Resources
- ◯ Finance
- ◯ Engineering
- ◯ Information Technology

* 5. By ticking this box I hereby give consent that the information I provide in this questionnaire can be used for research purposes at an aggregated level. I understand that no information will be saved with the data that will identify me as an individual in any way.

- ◯ I accept

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2. Local job market

Local Job market
==========
The local job market is the area in which you can work without changing where you stay. Everything outside this area is the non local job market.

* 6. How easy would it be for you to find a job with another company in the local job market that is as good than the one you now have?

Very easily | Good chance | Neutral | Some difficulty | Very difficult

* 7. How easy would it be for you to find a job with another company in the local job market that is better than the one you now have?

Very easily | Good chance | Neutral | Some difficulty | Very difficult

* 8. How easy would it be for you to find a job with another company in the local job market that is much better than the one you now have?

Very easily | Good chance | Neutral | Some difficulty | Very difficult

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3. Outside local job market

Outside local job market
==========
The local job market is the area in which you can work without changing where you stay. Everything outside this area is the non local job market.

* 9. How easy would it be for you to find a job with another company outside the local job market that is as good as the one you now have?

Very easily | Good chance | Neutral | Some difficulty | Very difficult

* 10. How easy would it be for you to find a job with another company outside the local job market that is better than the one you now have?

Very easily | Good chance | Neutral | Some difficulty | Very difficult

* 11. How easy would it be for you to find a job with another company outside the local job market that is much better than the one you now have?

Very easily | Good chance | Neutral | Some difficulty | Very difficult

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4. Kinship responsibility

People have different ideas about the rights and duties within the family. Please indicate your agreement or disagreement regarding the following statements about family rights and duties. (Answer these questions even if you do not have a husband, wife or children.)

* 12. Children should look after their elderly parents

◯ Strongly disagree ◯ Disagree ◯ Indifferent ◯ Agree ◯ Strongly agree

* 13. Since children benefit the most from a college education, they should be primarily responsible for financing this type of schooling

◯ Strongly disagree ◯ Disagree ◯ Indifferent ◯ Agree ◯ Strongly agree

* 14. Parents should be willing to provide considerable financial assistance to enable their children, when they first get married, to buy a home

◯ Strongly disagree ◯ Disagree ◯ Indifferent ◯ Agree ◯ Strongly agree

* 15. It is almost unthinkable to obtain a divorce

◯ Strongly disagree ◯ Disagree ◯ Indifferent ◯ Agree ◯ Strongly agree

5. Career orientation

A job is a line of work that an employee intends to do for only a few years.
A career is a line of work that an employee plans to pursue for many years.

* 16. Compared to other people in the same job, I view my job as a career

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 17. My partner view his/her job as a career

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

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6. General training

* 18. The skills and knowledge used in my job are needed by other companies

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 19. Most of my present job skills and knowledge would be useful to me if I left the company

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 20. My job skills and knowledge are mostly limited to my present company

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 21. It would be difficult to use the skills and knowledge of my job outside of my present company

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

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7. Job involvement/engagement

* 22. The most important things that happen to me involve my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 23. I live, eat, and breathe my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 24. Most of my interests are centred around my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 25. I have very strong ties with my present job which would be difficult to break

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 26. I consider my job to be very important to the rest of my life

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

Corporate climate survey

8. Affectivity

Your reply on the listed questions below should reflect your view on life in general.

* 27. I live a very interesting life

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 28. I usually find ways to brighten up my day

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 29. Most days I have moments of real fun

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 30. Interesting things happen to me every day

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 31. For me, life is a great adventure

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 32. I often get irritated at little annoyances

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 33. My mood often goes up and down

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 34. Minor setbacks sometimes irritate me too much

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

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9. Autonomy

* 35. I am able to choose the way to go about my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 36. I am able to modify what my job objectives are

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 37. Generally, I can control the time at which I start working for the day

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 38. My job is such that I cannot decide when to do particular work activities

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 39. I have no control over the sequencing of my work activities

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 40. I do not have any control over the time at which I stop working for the day

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

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10. Distributive justice

* 41. Promotions by my company are almost always based on seniority

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 42. Raises by my company heavily depend on who you know

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 43. The hiring of new employees is strictly determined by job-related ability

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 44. One sure way to get fired is to fail to do your work in a competent manner

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 45. Very competent employees are well rewarded by my company

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

11. Procedural justice

* 46. Rules and regulations are applied equally to all employees

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 47. Senior employees are able to easily avoid the enforcement of some rules and regulations

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 48. Little effort is made by the company to consistently apply its rules and regulations to everyone

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 49. Many exceptions are made by my company in applying its rules and regulations

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 50. An employee must obey the rules and regulations, even if he/she is close friends with their supervisors

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 51. No one who works for the company can escape adherence to the rules and regulations

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

12. Job stress (Ambiguity)

* 52. I know what procedures to use to get my job done

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 53. I know exactly what is expected of me in my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 54. I do not know what my responsibilities are in performing my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 55. I have to work under vague directives

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

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13. Job stress (Conflict)

* 56. I often get conflicting job requests from different supervisors

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 57. I often get conflicting job requests from different co-workers

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 58. My immediate supervisor and co-workers have the same ideas about how my job should be done

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 59. Job requests from my immediate supervisor are consistent.

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

14. Job stress (Workload)

* 60. I have enough time to get everything done in my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 61. My workload is not heavy in my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 62. I have to work very hard in my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 63. I have to work very fast in my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

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15. Job stress (Inadequate resources)

* 64. I do not have enough space to do my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 65. I have difficulty getting supplies that I need for my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 66. I have adequate tools to do my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 67. I have enough support from other departments to do my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

16. Promotional chances

* 68. Promotions are regular with my company

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 69. There is a very good chance to get promoted in the company

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 70. The practice of beginning at the bottom and working yourself up is common

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 71. The practice of internal promotion is not common in the company

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 72. I am in a dead-end job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

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17. Job Repetitiveness

* 73. My job has variety

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 74. I have the opportunity to do a number of different things in my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 75. My duties are repetitious in my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 76. I encounter the same situations every day in performing my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

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18. Job satisfaction

* 77. I am very satisfied with my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 78. Most days, I am enthusiastic about my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 79. I enjoy working at the company, more than most of my co-workers

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 80. I do not find enjoyment in my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 81. I am often bored with my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 82. I would consider taking a job that requires different skills than my current job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

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19. Social support (Immediate supervisor)

Support from your immediate supervisor (Consider as your immediate supervisor the most important person who judges your job performance)

* 83. My immediate supervisor is willing to listen to my job-related problems

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 84. My immediate supervisor shows a lot of concern for me and my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 85. My immediate supervisor cannot be relied on when things are get tough in my job

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 86. My immediate supervisor does not care about my well-being

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

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20. Social support (Co-workers)

Support from your co-workers (Your co-workers are the people with whom you have the most contact in the company. Do not consider your immediate supervisor as a co-worker)

* 87. I am friends with one or more of my co-workers

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 88. I regularly do things outside of work with one or more of my co-workers

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 89. I rarely discuss important personal problems with my co-workers

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 90. I know almost nothing about my co-workers as persons

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

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21. Organizational commitment/affiliation

Your honest feedback is very important for this section

* 91. I think that my present company is a great organization to work for

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 92. My present company inspires the very best job performance in me

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 93. I am glad that I chose my present company to work for

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 94. I am proud to tell others I work for my present company

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 95. My present company is not the best of all possible companies I can work for

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 96. I really do not care if the company is successful or not

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

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22. Search behaviour

Your honest feedback is very important for this section

* 97. I rarely look for information about job opportunities with other companies

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 98. There is a small chance that I will search for a job with other companies

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 99. I almost always follow up on job leads with other companies that I hear about

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 100. Within the next year, I intend to search for a job with other companies

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

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23. Intent to stay

Your honest feedback is very important for this section

* 101. I would like to leave my present company

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 102. I plan to leave my present company as soon as possible

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 103. I plan to leave my present company and emigrate

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 104. I plan to stay with my present company as long as possible

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

* 105. Under no circumstances will I voluntarily leave my present company

Strongly disagree | Disagree | Indifferent | Agree | Strongly agree

24. Thank you

Thank you for your honest feedback.

Know that this information will greatly assist to improve the way we manage people at Columbus

ANNEXURE D – RESPONSE FREQUENCIES FOR SURVEY QUESTIONS

F0Q1	Frequency	Percentage	Bar Chart
1	65	29.0	
2	63	28.1	
3	48	21.4	
4	40	17.9	
5	8	3.6	

F0Q2	Frequency	Percentage	Bar Chart
1	178	79.5	
2	46	20.5	

F0Q3	Frequency	Percentage	Bar Chart
1	50	22.3	
2	151	67.4	
3	23	10.3	

F0Q4	Frequency	Percentage	Bar Chart
1	89	39.7	
2	17	7.6	
3	9	4.0	
4	11	4.9	
5	84	37.5	
6	14	6.2	

F1Q1	Frequency	Percentage	Bar Chart
1	48	21.4	
2	102	45.5	
3	27	12.1	
4	35	15.6	
5	12	5.4	

F1Q2	Frequency	Percentage	Bar Chart
1	23	10.3	
2	99	44.2	
3	38	17.0	
4	47	21.0	
5	17	7.6	

F1Q3	Frequency	Percentage	Bar Chart
1	17	7.6	
2	66	29.5	
3	50	22.3	
4	51	22.8	
5	40	17.9	

F2Q1	Frequency	Percentage	Bar Chart
1	52	23.2	
2	118	52.7	
3	22	9.8	
4	25	11.2	
5	7	3.1	

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F2Q2	Frequency	Percentage	Bar Chart
1	40	17.9	• • • • • • • • • • • • • • • •
2	115	51.3	• •
3	31	13.8	• • • • • • • • • • • • •
4	28	12.5	• • • • • • • • • • •
5	10	4.5	• • • •

F2Q3	Frequency	Percentage	Bar Chart
1	27	12.1	• • • • • • • • • • • • • • •
2	86	38.4	• •
3	56	25.0	• •
4	36	16.1	• • • • • • • • • • • • • • • • • • • •
5	19	8.5	• • • • • • • • • •

F3Q1	Frequency	Percentage	Bar Chart
1	12	5.4	• • • • •
2	34	15.2	• • • • • • • • • • • • • •
3	24	10.7	• • • • • • • • • •
4	111	49.6	• •
5	43	19.2	• • • • • • • • • • • • • • • • • •

F3Q2	Frequency	Percentage	Bar Chart
1	8	3.6	• • •
2	39	17.4	• • • • • • • • • • • • • • • • •
3	34	15.2	• • • • • • • • • • • • • • •
4	110	49.1	• •
5	33	14.7	• • • • • • • • • • • • • •

F3Q3	Frequency	Percentage	Bar Chart
1	36	16.1	• • • • • • • • • • • • • • • •
2	108	48.2	• •
3	46	20.5	• • • • • • • • • • • • • • • • • • • •
4	26	11.6	• • • • • • • • • • •
5	8	3.6	• • •

F3Q4	Frequency	Percentage	Bar Chart
1	12	5.4	• • • • • • • • •
2	55	24.6	• •
3	30	13.4	• •
4	66	29.5	• •
5	61	27.2	• •

F4Q1	Frequency	Percentage	Bar Chart
1	6	2.7	• •
2	21	9.4	• • • • • • • •
3	15	6.7	• • • • •
4	129	57.6	• •
5	53	23.7	• • • • • • • • • • • • • • • • • • •

F4Q2	Frequency	Percentage	Bar Chart
1	5	2.2	• •
2	30	13.4	• • • • • • • • • • • • • •
3	47	21.0	• •
4	102	45.5	• •
5	40	17.9	• • • • • • • • • • • • • • • • • •

F5Q1	Frequency	Percentage	Bar Chart
1	1	0.4	
2	2	0.9	•
3	3	1.3	•
4	106	47.3	• •
5	112	50.0	• •

F5Q2	Frequency	Percentage	Bar Chart
1	2	0.9	•
2	5	2.2	• •
3	6	2.7	• • •
4	100	44.6	• •
5	111	49.6	• •

F5Q3	Frequency	Percentage	Bar Chart
1	6	2.7	• • •
2	17	7.6	• • • • • • •
3	14	6.2	• • • • • •
4	112	50.0	• •
5	75	33.5	• •

F5Q4	Frequency	Percentage	Bar Chart
1	3	1.3	•
2	2	0.9	•
3	6	2.7	• •
4	100	44.6	• •
5	113	50.4	• •

F6Q1	Frequency	Percentage	Bar Chart
1	13	5.8	• • • • • • •
2	88	39.3	• •
3	39	17.4	• •
4	75	33.5	• •
5	9	4.0	• • • • •

F6Q2	Frequency	Percentage	Bar Chart
1	35	15.6	• • • • • • • • • • • • • • • • • •
2	93	41.5	• •
3	44	19.6	• •
4	44	19.6	• •
5	8	3.6	• • • •

F6Q3	Frequency	Percentage	Bar Chart
1	22	9.8	• • • • • • • • •
2	110	49.1	• •
3	38	17.0	• • • • • • • • • • • • • • • •
4	50	22.3	• •
5	4	1.8	• •

F6Q4	Frequency	Percentage	Bar Chart
1	18	8.0	• • • • • • • • • •
2	81	36.2	• •
3	39	17.4	• •
4	68	30.4	• •
5	18	8.0	• • • • • • • • • •

F6Q5	Frequency	Percentage	Bar Chart
1	8	3.6	• • •
2	40	17.9	• • • • • • • • • • • • • • • • •
3	30	13.4	• • • • • • • • • • • •
4	113	50.4	• •
5	33	14.7	• • • • • • • • • • • • • •

F7PQ1	Frequency	Percentage	Bar Chart
1	4	1.8	•
2	14	6.2	• • • • •
3	30	13.4	• • • • • • • • • •
4	144	64.3	• •
5	32	14.3	• • • • • • • • • •

F7PQ2	Frequency	Percentage	Bar Chart
1	0	0.0	
2	9	4.0	• • •
3	26	11.6	• • • • • • • •
4	161	71.9	• •
5	28	12.5	• • • • • • • •

F7PQ3	Frequency	Percentage	Bar Chart
1	2	0.9	•
2	30	13.4	• • • • • • • • • • •
3	39	17.4	• • • • • • • • • • • • • • •
4	126	56.2	• •
5	27	12.1	• • • • • • • • • •

F7PQ4	Frequency	Percentage	Bar Chart
1	3	1.3	• •
2	39	17.4	• • • • • • • • • • • • • • • • • • • •
3	75	33.5	• •
4	91	40.6	• •
5	16	7.1	• • • • • • • •

F7NQ1	Frequency	Percentage	Bar Chart
1	3	1.3	•
2	18	8.0	• • • • • • •
3	35	15.6	• • • • • • • • • • • • •
4	122	54.5	• •
5	46	20.5	• • • • • • • • • • • • • • • • • •

F7NQ2	Frequency	Percentage	Bar Chart
1	14	6.2	• • • • • • •
2	71	31.7	• •
3	27	12.1	• • • • • • • • • • • • •
4	98	43.8	• •
5	14	6.2	• • • • • • •

F7NQ3	Frequency	Percentage	Bar Chart
1	23	10.3	• • • • • • • • • • • • •
2	81	36.2	• •
3	44	19.6	• •
4	71	31.7	• •
5	5	2.2	• • •

F7NQ4	Frequency	Percentage	Bar Chart
1	13	5.8	• • • • • •
2	96	42.9	• •
3	35	15.6	• • • • • • • • • • • • • • • • •
4	73	32.6	• •
5	7	3.1	• • •

F8Q1	Frequency	Percentage	Bar Chart
1	3	1.3	•
2	25	11.2	• • • • • • • •
3	26	11.6	• • • • • • • •
4	145	64.7	• •
5	25	11.2	• • • • • • • •

F8Q2	Frequency	Percentage	Bar Chart
1	6	2.7	• •
2	52	23.2	• • • • • • • • • • • • • • • • • • • •
3	36	16.1	• • • • • • • • • • • • • •
4	122	54.5	• •
5	8	3.6	• • •

F8Q3	Frequency	Percentage	Bar Chart
1	31	13.8	• • • • • • • • • • • • • • • •
2	72	32.1	• •
3	19	8.5	• • • • • • • • • •
4	91	40.6	• •
5	11	4.9	• • • • • •

F8Q4	Frequency	Percentage	Bar Chart
1	7	3.1	• • •
2	49	21.9	• • • • • • • • • • • • • • • • • • •
3	30	13.4	• • • • • • • • • • • •
4	119	53.1	• •
5	19	8.5	• • • • • • • •

F8Q5	Frequency	Percentage	Bar Chart
1	9	4.0	• • •
2	40	17.9	• • • • • • • • • • • • • • •
3	24	10.7	• • • • • • • • •
4	129	57.6	• •
5	22	9.8	• • • • • • • •

F8Q6	Frequency	Percentage	Bar Chart
1	11	4.9	• • • •
2	49	21.9	• • • • • • • • • • • • • • • • • •
3	15	6.7	• • • • • •
4	126	56.2	• •
5	23	10.3	• • • • • • • • •

F9Q1	Frequency	Percentage	Bar Chart
1	13	5.8	• • • • • • •
2	59	26.3	• •
3	37	16.5	• • • • • • • • • • • • • • • • • • •
4	91	40.6	• •
5	24	10.7	• • • • • • • • • • • •

F9Q2	Frequency	Percentage	Bar Chart
1	37	16.5	•••••••••••••••••••••
2	81	36.2	•••
3	37	16.5	•••••••••••••••••••••
4	59	26.3	••••••••••••••••••••••••••••••••••
5	10	4.5	••••••

F9Q3	Frequency	Percentage	Bar Chart
1	28	12.5	•••••••••••••
2	52	23.2	•••••••••••••••••••••••••
3	33	14.7	••••••••••••••••
4	99	44.2	•••
5	12	5.4	••••••

F9Q4	Frequency	Percentage	Bar Chart
1	24	10.7	•••••••••••••••
2	75	33.5	•••
3	44	19.6	••••••••••••••••••••••••••••
4	69	30.8	•••
5	12	5.4	••••••••

F9Q5	Frequency	Percentage	Bar Chart
1	32	14.3	••••••••••••••••••••
2	74	33.0	•••
3	47	21.0	••••••••••••••••••••••••••••••
4	61	27.2	•••••••••••••••••••••••••••••••••••••••
5	10	4.5	••••••

F10Q1	Frequency	Percentage	Bar Chart
1	36	16.1	••••••••••••••••
2	103	46.0	•••
3	29	12.9	•••••••••••••
4	55	24.6	•••••••••••••••••••••••••
5	1	0.4	

F10Q2	Frequency	Percentage	Bar Chart
1	20	8.9	•••••••••
2	100	44.6	•••
3	48	21.4	•••••••••••••••••••••••
4	50	22.3	••••••••••••••••••••••••
5	6	2.7	•••

F10Q3	Frequency	Percentage	Bar Chart
1	18	8.0	••••••••••
2	82	36.6	•••
3	53	23.7	••••••••••••••••••••••••••••••
4	60	26.8	••••••••••••••••••••••••••••••••••
5	11	4.9	••••••

F10Q4	Frequency	Percentage	Bar Chart
1	23	10.3	••••••••••••••
2	79	35.3	•••
3	53	23.7	••••••••••••••••••••••••••••••••
4	64	28.6	••••••••••••••••••••••••••••••••••••••
5	5	2.2	•••

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F10Q5	Frequency	Percentage	Bar Chart
1	3	1.3	• •
2	25	11.2	• • • • • • • • • • • • • •
3	26	11.6	• • • • • • • • • • • • • •
4	84	37.5	• •
5	86	38.4	• •

F10Q6	Frequency	Percentage	Bar Chart
1	5	2.2	• • •
2	67	29.9	• •
3	36	16.1	• •
4	72	32.1	• •
5	44	19.6	• •

F11Q1	Frequency	Percentage	Bar Chart
1	1	0.4	
2	6	2.7	• •
3	8	3.6	• • •
4	145	64.7	• •
5	64	28.6	• •

F11Q2	Frequency	Percentage	Bar Chart
1	3	1.3	•
2	18	8.0	• • • • • • •
3	19	8.5	• • • • • • • •
4	118	52.7	• •
5	66	29.5	• •

F11Q3	Frequency	Percentage	Bar Chart
1	10	4.5	• • • •
2	25	11.2	• • • • • • • • • •
3	10	4.5	• • • •
4	120	53.6	• •
5	59	26.3	• •

F11Q4	Frequency	Percentage	Bar Chart
1	7	3.1	• • •
2	46	20.5	• • • • • • • • • • • • • • • • • • •
3	32	14.3	• • • • • • • • • • • • •
4	113	50.4	• •
5	26	11.6	• • • • • • • • • • •

F12Q1	Frequency	Percentage	Bar Chart
1	18	8.0	• • • • • • •
2	117	52.2	• •
3	29	12.9	• • • • • • • • • • • •
4	52	23.2	• •
5	8	3.6	• • •

F12Q2	Frequency	Percentage	Bar Chart
1	14	6.2	• • • • •
2	121	54.0	• •
3	33	14.7	• • • • • • • • • • • • •
4	48	21.4	• • • • • • • • • • • • • • • • • • •
5	8	3.6	• • •

F12Q3	Frequency	Percentage	Bar Chart
1	14	6.2	• • • • • •
2	109	48.7	• •
3	37	16.5	• • • • • • • • • • • • • • • •
4	55	24.6	• •
5	9	4.0	• • • •

F12Q4	Frequency	Percentage	Bar Chart
1	22	9.8	• • • • • • • •
2	125	55.8	• •
3	31	13.8	• • • • • • • • • • • •
4	40	17.9	• • • • • • • • • • • • • • •
5	6	2.7	• •

F13Q1	Frequency	Percentage	Bar Chart
1	12	5.4	• • • • • •
2	95	42.4	• •
3	31	13.8	• • • • • • • • • • • • • • •
4	73	32.6	• •
5	13	5.8	• • • • • •

F13Q2	Frequency	Percentage	Bar Chart
1	6	2.7	• • •
2	46	20.5	• • • • • • • • • • • • • • • • • • • •
3	38	17.0	• • • • • • • • • • • • • • • •
4	110	49.1	• •
5	24	10.7	• • • • • • • • • •

F13Q3	Frequency	Percentage	Bar Chart
1	1	0.4	
2	20	8.9	• • • • • •
3	26	11.6	• • • • • • • •
4	152	67.9	• •
5	25	11.2	• • • • • • • •

F13Q4	Frequency	Percentage	Bar Chart
1	1	0.4	
2	26	11.6	• • • • • • • • •
3	33	14.7	• • • • • • • • • • • •
4	130	58.0	• •
5	34	15.2	• • • • • • • • • • • •

F14Q1	Frequency	Percentage	Bar Chart
1	30	13.4	• • • • • • • • • •
2	148	66.1	• •
3	20	8.9	• • • • • •
4	21	9.4	• • • • • • •
5	5	2.2	• •

F14Q2	Frequency	Percentage	Bar Chart
1	23	10.3	• • • • • • • • •
2	122	54.5	• •
3	29	12.9	• • • • • • • • • • •
4	37	16.5	• • • • • • • • • • • • • •
5	13	5.8	• • • • •

F14Q3	Frequency	Percentage	Bar Chart
1	20	8.9	• • • • • • •
2	144	64.3	• •
3	21	9.4	• • • • • • •
4	28	12.5	• • • • • • • • •
5	11	4.9	• • • •

F14Q4	Frequency	Percentage	Bar Chart
1	11	4.9	• • • •
2	117	52.2	• •
3	38	17.0	• • • • • • • • • • • • • • •
4	46	20.5	• • • • • • • • • • • • • • • • • •
5	12	5.4	• • • • •

F15Q1	Frequency	Percentage	Bar Chart
1	30	13.4	• • • • • • • • • • • • • • • • • • •
2	75	33.5	• •
3	46	20.5	• •
4	70	31.2	• •
5	3	1.3	• •

F15Q2	Frequency	Percentage	Bar Chart
1	42	18.8	• •
2	76	33.9	• •
3	42	18.8	• •
4	62	27.7	• •
5	2	0.9	•

F15Q3	Frequency	Percentage	Bar Chart
1	26	11.6	• • • • • • • • • • • • • •
2	57	25.4	• •
3	44	19.6	• •
4	87	38.8	• •
5	10	4.5	• • • • •

F15Q4	Frequency	Percentage	Bar Chart
1	12	5.4	• • • • •
2	54	24.1	• •
3	39	17.4	• • • • • • • • • • • • • • • • •
4	107	47.8	• •
5	12	5.4	• • • • •

F15Q5	Frequency	Percentage	Bar Chart
1	31	13.8	• • • • • • • • • • • • • • • • • • •
2	63	28.1	• •
3	38	17.0	• •
4	75	33.5	• •
5	17	7.6	• • • • • • • • • • •

F16Q1	Frequency	Percentage	Bar Chart
1	52	23.2	• • • • • • • • • • • • • • • • • •
2	137	61.2	• •
3	16	7.1	• • • • •
4	13	5.8	• • • •
5	6	2.7	• •

F16Q2	Frequency	Percentage	Bar Chart
1	44	19.6	• • • • • • • • • • • • • •
2	153	68.3	• •
3	12	5.4	• • • •
4	13	5.8	• • • •
5	2	0.9	•

F16Q3	Frequency	Percentage	Bar Chart
1	16	7.1	• • • • • • • • •
2	86	38.4	• •
3	46	20.5	• •
4	66	29.5	• •
5	10	4.5	• • • • •

F16Q4	Frequency	Percentage	Bar Chart
1	15	6.7	• • • • • •
2	114	50.9	• •
3	31	13.8	• • • • • • • • • • • • •
4	59	26.3	• •
5	5	2.2	• •

F17Q1	Frequency	Percentage	Bar Chart
1	8	3.6	• • •
2	39	17.4	• • • • • • • • • • • • • • • •
3	35	15.6	• • • • • • • • • • • • • •
4	115	51.3	• •
5	27	12.1	• • • • • • • • • • •

F17Q2	Frequency	Percentage	Bar Chart
1	4	1.8	•
2	31	13.8	• • • • • • • • • • •
3	38	17.0	• • • • • • • • • • • • • •
4	129	57.6	• •
5	22	9.8	• • • • • • • •

F17Q3	Frequency	Percentage	Bar Chart
1	6	2.7	• •
2	23	10.3	• • • • • • • • •
3	46	20.5	• • • • • • • • • • • • • • • • • •
4	119	53.1	• •
5	30	13.4	• • • • • • • • • • • •

F17Q4	Frequency	Percentage	Bar Chart
1	4	1.8	•
2	27	12.1	• • • • • • • • •
3	32	14.3	• • • • • • • • • • •
4	134	59.8	• •
5	27	12.1	• • • • • • • • •

F17Q5	Frequency	Percentage	Bar Chart
1	8	3.6	• • •
2	40	17.9	• • • • • • • • • • • • • • • •
3	30	13.4	• • • • • • • • • • • •
4	114	50.9	• •
5	32	14.3	• • • • • • • • • • • • •

F17Q6	Frequency	Percentage	Bar Chart
1	22	9.8	• • • • • • • • • • •
2	94	42.0	• •
3	32	14.3	• • • • • • • • • • • • • • • •
4	66	29.5	• •
5	10	4.5	• • • • •

F18Q1	Frequency	Percentage	Bar Chart
1	7	3.1	• •
2	24	10.7	• • • • • • • •
3	24	10.7	• • • • • • • •
4	137	61.2	• •
5	32	14.3	• • • • • • • • • • •

F18Q2	Frequency	Percentage	Bar Chart
1	13	5.8	• • • • • •
2	31	13.8	• • • • • • • • • • • • •
3	42	18.8	• • • • • • • • • • • • • • • • • •
4	110	49.1	• •
5	28	12.5	• • • • • • • • • • • •

F18Q3	Frequency	Percentage	Bar Chart
1	6	2.7	• • •
2	29	12.9	• • • • • • • • • • • •
3	39	17.4	• • • • • • • • • • • • • • • • •
4	111	49.6	• •
5	39	17.4	• • • • • • • • • • • • • • • • •

F18Q4	Frequency	Percentage	Bar Chart
1	5	2.2	• •
2	20	8.9	• • • • • • • •
3	37	16.5	• • • • • • • • • • • • • •
4	120	53.6	• •
5	42	18.8	• • • • • • • • • • • • • • • •

F19Q1	Frequency	Percentage	Bar Chart
1	8	3.6	• • •
2	26	11.6	• • • • • • • •
3	18	8.0	• • • • • •
4	148	66.1	• •
5	24	10.7	• • • • • • • •

F19Q2	Frequency	Percentage	Bar Chart
1	25	11.2	• • • • • • • • • • • • • • •
2	75	33.5	• •
3	38	17.0	• •
4	80	35.7	• •
5	6	2.7	• • • •

F19Q3	Frequency	Percentage	Bar Chart
1	35	15.6	• • • • • • • • • • • • • • • • • •
2	94	42.0	• •
3	37	16.5	• • • • • • • • • • • • • • • • • • •
4	50	22.3	• •
5	8	3.6	• • • •

F19Q4	Frequency	Percentage	Bar Chart
1	5	2.2	• •
2	28	12.5	• • • • • • • • •
3	27	12.1	• • • • • • • • •
4	143	63.8	• •
5	21	9.4	• • • • • • •

F20Q1	Frequency	Percentage	Bar Chart
1	3	1.3	•
2	12	5.4	• • • •
3	38	17.0	• • • • • • • • • • • • •
4	137	61.2	• •
5	34	15.2	• • • • • • • • • • • •

F20Q2	Frequency	Percentage	Bar Chart
1	8	3.6	• • • •
2	40	17.9	• • • • • • • • • • • • • • • • • • •
3	62	27.7	• •
4	98	43.8	• •
5	16	7.1	• • • • • • • •

F20Q3	Frequency	Percentage	Bar Chart
1	2	0.9	•
2	12	5.4	• • • •
3	33	14.7	• • • • • • • • • • •
4	147	65.6	• •
5	30	13.4	• • • • • • • • • •

F20Q4	Frequency	Percentage	Bar Chart
1	2	0.9	•
2	10	4.5	• • •
3	35	15.6	• • • • • • • • • • • •
4	139	62.1	• •
5	38	17.0	• • • • • • • • • • • • •

F20Q5	Frequency	Percentage	Bar Chart
1	17	7.6	• • • • • • • •
2	106	47.3	• •
3	36	16.1	• • • • • • • • • • • • • • • •
4	53	23.7	• •
5	12	5.4	• • • • •

F20Q6	Frequency	Percentage	Bar Chart
1	1	0.4	
2	4	1.8	• •
3	3	1.3	•
4	99	44.2	• •
5	117	52.2	• •

F21Q1	Frequency	Percentage	Bar Chart
1	18	8.0	• • • • • • • • • •
2	84	37.5	• •
3	27	12.1	• • • • • • • • • • • • • • •
4	80	35.7	• •
5	15	6.7	• • • • • • • •

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F21Q2	Frequency	Percentage	Bar Chart
1	17	7.6	• • • • • •
2	126	56.2	• •
3	27	12.1	• • • • • • • • • •
4	41	18.3	• • • • • • • • • • • • • • •
5	13	5.8	• • • • •

F21Q3	Frequency	Percentage	Bar Chart
1	27	12.1	• • • • • • • • • • •
2	112	50.0	• •
3	33	14.7	• • • • • • • • • • • • • •
4	44	19.6	• • • • • • • • • • • • • • • • • •
5	8	3.6	• • •

F21Q4	Frequency	Percentage	Bar Chart
1	31	13.8	• •
2	66	29.5	• •
3	41	18.3	• •
4	64	28.6	• •
5	22	9.8	• • • • • • • • • • • • • • • •

F22Q1	Frequency	Percentage	Bar Chart
1	5	2.2	• •
2	37	16.5	• • • • • • • • • • • • • • • • • •
3	46	20.5	• •
4	99	44.2	• •
5	37	16.5	• • • • • • • • • • • • • • • • • •

F22Q2	Frequency	Percentage	Bar Chart
1	4	1.8	• •
2	22	9.8	• • • • • • • • • •
3	37	16.5	• • • • • • • • • • • • • • • •
4	107	47.8	• •
5	54	24.1	• •

F22Q3	Frequency	Percentage	Bar Chart
1	11	4.9	• • • • • • •
2	19	8.5	• • • • • • • • • • • •
3	52	23.2	• •
4	77	34.4	• •
5	65	29.0	• •

F22Q4	Frequency	Percentage	Bar Chart
1	5	2.2	• • •
2	43	19.2	• •
3	50	22.3	• •
4	84	37.5	• •
5	42	18.8	• •

F22Q5	Frequency	Percentage	Bar Chart
1	19	8.5	• • • • • • • • • • •
2	84	37.5	• •
3	44	19.6	• •
4	48	21.4	• •
5	29	12.9	• • • • • • • • • • • • • • • •

ANNEXURE E – OUTPUT OF LISREL STRUCTURAL EQUATION MODELS

Model 1 – Job satisfaction

SIMPLIS project file

```
Job satisfaction SEM
Observed variables:
F6Q1   F6Q2   F6Q3   F6Q4   F6Q5
F7PQ1  F7PQ2  F7PQ3  F7PQ4
F7NQ1  F7NQ2  F7NQ3  F7NQ4
F8Q1   F8Q2   F8Q3   F8Q4   F8Q5   F8Q6
F9Q1   F9Q2   F9Q3   F9Q4   F9Q5
F10Q1  F10Q2  F10Q3  F10Q4  F10Q5  F10Q6
F11Q1  F11Q2  F11Q3  F11Q4
F12Q1  F12Q2  F12Q3  F12Q4
F13Q1  F13Q2  F13Q3  F13Q4
F14Q1  F14Q2  F14Q3  F14Q4
F15Q1  F15Q2  F15Q3  F15Q4  F15Q5
F16Q1  F16Q2  F16Q3  F16Q4
F17Q1  F17Q2  F17Q3  F17Q4  F17Q5  F17Q6
F18Q1  F18Q2  F18Q3  F18Q4
F19Q1  F19Q2  F19Q3  F19Q4
Covariance Matrix from file JobSatisfaction2.COV
Asymptotic Covariance Matrix From File JobSatisfaction2.ACM
Sample Size = 224
Latent Variables  JOBSAT JOBINV POSAFF NEGAFF AUTONOMY JUSTICE JOBSTRES PROMCHAN
JOBREP
SOCSUP
Relationships
F17Q2 = JOBSAT
F17Q3 = JOBSAT
F17Q4 = JOBSAT
F17Q5 = JOBSAT
F17Q6 = JOBSAT
F6Q1 = JOBINV
F6Q2 = JOBINV
F6Q3 = JOBINV
F7PQ1 = POSAFF
F7PQ2 = POSAFF
F7PQ3 = POSAFF
F7NQ2 = NEGAFF
F7NQ3 = NEGAFF
F7NQ4 = NEGAFF
F8Q2 = AUTONOMY
F8Q4 = AUTONOMY
F8Q5 = AUTONOMY
F8Q6 = AUTONOMY
F9Q2 = JUSTICE
F10Q1 = JUSTICE
F10Q2 = JUSTICE
F10Q3 = JUSTICE
F11Q1 = JOBSTRES
F11Q2 = JOBSTRES
F11Q3 = JOBSTRES
F12Q1 = JOBSTRES
F12Q2 = JOBSTRES
F12Q3 = JOBSTRES
F14Q1 = JOBSTRES
F14Q2 = JOBSTRES
F14Q3 = JOBSTRES
F15Q1 = PROMCHAN
F15Q2 = PROMCHAN
F15Q3 = PROMCHAN
F16Q1 = JOBREP
F16Q2 = JOBREP
F16Q3 = JOBREP
F18Q1 = SOCSUP
F18Q2 = SOCSUP
F18Q3 = SOCSUP
JOBSAT = JOBINV POSAFF NEGAFF AUTONOMY JUSTICE JOBSTRES PROMCHAN JOBREP SOCSUP
Set the Variance of JOBINV to 1.00
```

```
Set the Variance of POSAFF to 1.00
Set the Variance of NEGAFF to 1.00
Set the Variance of AUTONOMY to 1.00
Set the Variance of JUSTICE to 1.00
Set the Variance of JOBSTRES to 1.00
Set the Variance of PROMCHAN to 1.00
Set the Variance of JOBREP to 1.00
Set the Variance of SOCSUP to 1.00
Path Diagram
Print Residuals
Method of Estimation: Diagonally Weighted Least Squares
End of Problem
```

LISREL output

L I S R E L 8.80

BY

Karl G. Jöreskog & Dag Sörbom

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The following lines were read from file C:\LISREL\Research\1.0 Job satisfaction\JobSatisfaction.SPJ:

```
Job satisfaction SEM
Observed variables:
F6Q1 F6Q2 F6Q3 F6Q4 F6Q5
F7PQ1 F7PQ2 F7PQ3 F7PQ4
F7NQ1 F7NQ2 F7NQ3 F7NQ4
F8Q1 F8Q2 F8Q3 F8Q4 F8Q5 F8Q6
F9Q1 F9Q2 F9Q3 F9Q4 F9Q5
F10Q1 F10Q2 F10Q3 F10Q4 F10Q5 F10Q6
F11Q1 F11Q2 F11Q3 F11Q4
F12Q1 F12Q2 F12Q3 F12Q4
F13Q1 F13Q2 F13Q3 F13Q4
F14Q1 F14Q2 F14Q3 F14Q4
F15Q1 F15Q2 F15Q3 F15Q4 F15Q5
F16Q1 F16Q2 F16Q3 F16Q4
F17Q1 F17Q2 F17Q3 F17Q4 F17Q5 F17Q6
F18Q1 F18Q2 F18Q3 F18Q4
F19Q1 F19Q2 F19Q3 F19Q4
Covariance Matrix from file JobSatisfaction2.COV
Asymptotic Covariance Matrix From File JobSatisfaction2.ACM
Sample Size = 224
Latent Variables  JOBSAT JOBINV POSAFF NEGAFF AUTONOMY JUSTICE JOBSTRES PROMCHAN
JOBREP SOCSUP
Relationships
F17Q2 = JOBSAT
F17Q3 = JOBSAT
F17Q4 = JOBSAT
F17Q5 = JOBSAT
F17Q6 = JOBSAT
F6Q1 = JOBINV
F6Q2 = JOBINV
F6Q3 = JOBINV
F7PQ1 = POSAFF
F7PQ2 = POSAFF
F7PQ3 = POSAFF
F7NQ2 = NEGAFF
F7NQ3 = NEGAFF
F7NQ4 = NEGAFF
F8Q2 = AUTONOMY
F8Q4 = AUTONOMY
F8Q5 = AUTONOMY
F8Q6 = AUTONOMY
F9Q2 = JUSTICE
F10Q1 = JUSTICE
F10Q2 = JUSTICE
F10Q3 = JUSTICE
F11Q1 = JOBSTRES
F11Q2 = JOBSTRES
```

```
F11Q3 = JOBSTRES
F12Q1 = JOBSTRES
F12Q2 = JOBSTRES
F12Q3 = JOBSTRES
F14Q1 = JOBSTRES
F14Q2 = JOBSTRES
F14Q3 = JOBSTRES
F15Q1 = PROMCHAN
F15Q2 = PROMCHAN
F15Q3 = PROMCHAN
F16Q1 = JOBREP
F16Q2 = JOBREP
F16Q3 = JOBREP
F18Q1 = SOCSUP
F18Q2 = SOCSUP
F18Q3 = SOCSUP
JOBSAT = JOBINV POSAFF NEGAFF AUTONOMY JUSTICE JOBSTRES PROMCHAN JOBREP SOCSUP
Set the Variance of JOBINV to 1.00
Set the Variance of POSAFF to 1.00
Set the Variance of NEGAFF to 1.00
Set the Variance of AUTONOMY to 1.00
Set the Variance of JUSTICE to 1.00
Set the Variance of JOBSTRES to 1.00
Set the Variance of PROMCHAN to 1.00
Set the Variance of JOBREP to 1.00
Set the Variance of SOCSUP to 1.00
Path Diagram
Print Residuals
Method of Estimation: Diagonally Weighted Least Squares
End of Problem

Sample Size =   224

Job satisfaction SEM
```

Covariance Matrix

	F17Q2	F17Q3	F17Q4	F17Q5	F17Q6	F6Q1
F17Q2	0.84					
F17Q3	0.72	1.56				
F17Q4	0.71	0.63	0.98			
F17Q5	0.60	0.42	0.64	0.98		
F17Q6	0.37	0.33	0.36	0.34	0.56	
F6Q1	0.13	0.16	0.14	0.15	0.11	0.48
F6Q2	0.27	0.26	0.21	0.21	0.19	0.43
F6Q3	0.17	0.15	0.07	0.04	0.12	0.26
F7PQ1	0.31	0.27	0.47	0.26	0.13	0.08
F7PQ2	0.18	0.10	0.25	0.17	-0.13	0.13
F7PQ3	0.20	0.25	0.27	0.13	0.00	-0.01
F7NQ2	-0.22	-0.25	-0.21	-0.24	0.01	0.05
F7NQ3	-0.23	-0.20	-0.28	-0.24	-0.04	0.09
F7NQ4	-0.12	-0.17	-0.19	-0.15	-0.03	0.07
F8Q2	0.21	0.25	0.15	0.26	0.11	0.12
F8Q4	0.24	0.31	0.30	0.12	0.11	0.05
F8Q5	0.24	0.11	0.36	0.15	0.11	0.08
F8Q6	0.05	0.14	0.23	0.13	0.08	0.01
F9Q2	0.15	0.07	0.11	0.19	0.08	-0.01
F10Q1	0.20	0.16	0.12	0.16	0.10	0.01
F10Q2	0.22	0.14	0.18	0.19	0.11	0.05
F10Q3	0.18	0.18	0.12	0.14	0.13	0.06
F11Q1	0.37	0.25	0.34	0.20	0.08	0.27
F11Q2	0.37	0.22	0.39	0.29	0.12	0.18
F11Q3	0.30	0.11	0.41	0.15	0.07	0.05
F12Q1	-0.19	-0.21	-0.18	-0.10	-0.08	0.05
F12Q2	-0.07	-0.04	-0.10	-0.05	-0.06	0.01
F12Q3	-0.18	-0.10	-0.14	-0.08	-0.08	-0.06
F14Q1	-0.09	-0.04	-0.11	-0.05	-0.02	0.00
F14Q2	-0.17	-0.12	-0.19	-0.10	-0.06	-0.03
F14Q3	-0.11	-0.12	-0.09	-0.03	-0.08	-0.03
F15Q1	0.17	0.11	0.06	0.11	0.09	-0.01
F15Q2	0.22	0.20	0.09	0.13	0.15	-0.01
F15Q3	0.11	0.09	-0.02	0.27	0.12	-0.01

F16Q1	-0.24	-0.27	-0.23	-0.29	-0.15	-0.01
F16Q2	-0.23	-0.27	-0.22	-0.25	-0.11	-0.02
F16Q3	-0.15	-0.09	-0.18	-0.30	-0.12	0.04
F18Q1	0.50	0.31	0.45	0.33	0.22	0.04
F18Q2	0.56	0.51	0.55	0.30	0.24	0.07
F18Q3	0.44	0.31	0.46	0.28	0.22	0.03

Covariance Matrix

	F6Q2	F6Q3	F7PQ1	F7PQ2	F7PQ3	F7NQ2
F6Q2	0.71					
F6Q3	0.37	0.43				
F7PQ1	0.17	-0.05	2.06			
F7PQ2	0.14	0.03	1.01	1.83		
F7PQ3	0.04	0.01	0.50	0.64	0.59	
F7NQ2	0.06	0.06	-0.20	-0.29	-0.15	0.66
F7NQ3	0.02	0.11	-0.30	-0.28	-0.14	0.43
F7NQ4	0.02	0.07	-0.21	-0.23	-0.15	0.31
F8Q2	0.11	0.03	0.17	0.29	0.05	-0.09
F8Q4	0.07	0.02	0.28	0.22	0.13	-0.18
F8Q5	0.11	0.00	0.36	0.17	0.16	-0.21
F8Q6	-0.01	-0.02	0.39	0.31	0.11	-0.14
F9Q2	-0.05	-0.06	0.06	0.00	0.09	-0.09
F10Q1	0.06	0.02	0.12	0.00	0.11	-0.11
F10Q2	0.11	0.09	0.09	0.07	0.10	-0.04
F10Q3	0.14	0.08	0.04	0.06	0.09	-0.04
F11Q1	0.42	0.24	0.41	0.46	0.27	-0.03
F11Q2	0.23	0.09	0.33	0.17	0.26	0.04
F11Q3	0.11	0.08	0.34	0.21	0.24	-0.05
F12Q1	0.04	-0.01	-0.13	-0.07	-0.10	0.11
F12Q2	-0.01	-0.01	0.04	0.19	0.04	0.03
F12Q3	-0.10	-0.06	-0.09	-0.06	-0.07	0.00
F14Q1	0.01	-0.02	-0.05	-0.10	-0.05	0.05
F14Q2	-0.04	-0.01	-0.07	-0.14	-0.07	0.08
F14Q3	-0.01	-0.01	-0.01	-0.05	-0.05	-0.03
F15Q1	0.02	0.09	0.07	0.00	0.03	0.05
F15Q2	0.04	0.09	0.09	0.01	0.03	-0.04
F15Q3	0.02	0.03	0.16	-0.07	-0.01	-0.09
F16Q1	-0.09	-0.03	-0.10	0.02	-0.03	0.13
F16Q2	-0.08	-0.01	-0.08	0.03	0.01	0.09
F16Q3	-0.02	0.05	-0.08	0.05	0.01	0.17
F18Q1	0.05	0.19	0.09	0.08	0.13	-0.16
F18Q2	0.12	0.15	0.21	0.16	0.24	-0.12
F18Q3	0.05	0.12	0.12	0.11	0.15	-0.14

Covariance Matrix

	F7NQ3	F7NQ4	F8Q2	F8Q4	F8Q5	F8Q6
F7NQ3	0.72					
F7NQ4	0.34	0.42				
F8Q2	-0.08	-0.01	0.61			
F8Q4	-0.14	-0.14	0.21	0.71		
F8Q5	-0.12	-0.18	0.22	0.59	1.06	
F8Q6	-0.09	-0.15	0.28	0.34	0.54	0.93
F9Q2	-0.01	-0.07	0.02	0.09	0.26	0.19
F10Q1	-0.09	-0.03	0.06	0.04	0.14	0.07
F10Q2	-0.09	-0.06	0.07	0.09	0.18	0.13
F10Q3	-0.07	-0.03	0.12	0.11	0.19	0.15
F11Q1	-0.09	-0.12	0.17	0.27	0.23	0.04
F11Q2	-0.10	-0.04	0.21	0.11	0.21	0.12
F11Q3	-0.14	-0.17	0.18	0.28	0.53	0.21
F12Q1	0.16	0.09	-0.06	-0.11	-0.15	-0.09
F12Q2	0.09	0.03	0.00	-0.09	-0.10	-0.03
F12Q3	0.06	0.02	-0.06	-0.07	-0.12	-0.08
F14Q1	0.02	0.03	-0.09	-0.17	-0.17	-0.13
F14Q2	0.06	0.06	-0.09	-0.15	-0.14	-0.11
F14Q3	-0.05	-0.02	-0.06	-0.08	-0.05	-0.01
F15Q1	0.10	0.04	-0.08	-0.01	0.02	0.09
F15Q2	0.05	-0.04	0.06	0.02	0.08	0.18
F15Q3	-0.09	-0.02	0.05	0.02	0.16	0.15
F16Q1	0.09	0.06	-0.16	-0.10	-0.11	0.01

F16Q2	0.08	0.05	-0.15	-0.06	-0.09	0.01
F16Q3	0.12	0.09	-0.14	-0.11	-0.09	0.01
F18Q1	-0.13	0.00	0.12	0.11	0.20	0.27
F18Q2	-0.11	-0.05	0.13	0.13	0.24	0.20
F18Q3	-0.02	-0.03	0.18	0.24	0.31	0.34

Covariance Matrix

	F9Q2	F10Q1	F10Q2	F10Q3	F11Q1	F11Q2
F9Q2	0.92					
F10Q1	0.26	0.59				
F10Q2	0.19	0.31	0.49			
F10Q3	0.18	0.39	0.41	0.62		
F11Q1	-0.07	0.05	0.02	0.12	1.77	
F11Q2	0.21	0.21	0.22	0.15	1.01	1.24
F11Q3	0.08	0.10	0.19	0.15	0.74	0.87
F12Q1	-0.15	-0.08	-0.11	-0.05	-0.11	-0.16
F12Q2	-0.09	-0.07	-0.07	-0.04	-0.10	-0.15
F12Q3	-0.18	-0.11	-0.13	-0.12	-0.26	-0.29
F14Q1	-0.15	-0.03	-0.02	-0.03	-0.22	-0.10
F14Q2	-0.10	-0.06	-0.04	-0.04	-0.23	-0.14
F14Q3	-0.04	-0.09	-0.03	-0.06	-0.16	-0.13
F15Q1	0.28	0.07	0.07	0.06	0.06	0.06
F15Q2	0.38	0.17	0.11	0.13	-0.02	0.03
F15Q3	0.53	0.34	0.21	0.22	-0.09	0.11
F16Q1	-0.05	-0.03	-0.03	-0.02	-0.15	-0.07
F16Q2	-0.05	-0.02	-0.01	-0.01	-0.19	-0.13
F16Q3	-0.05	0.05	0.05	0.07	-0.07	-0.03
F18Q1	0.35	0.26	0.37	0.27	0.28	0.49
F18Q2	0.39	0.26	0.38	0.33	0.27	0.51
F18Q3	0.27	0.22	0.26	0.24	0.29	0.31

Covariance Matrix

	F11Q3	F12Q1	F12Q2	F12Q3	F14Q1	F14Q2
F11Q3	2.11					
F12Q1	-0.25	0.36				
F12Q2	-0.15	0.21	0.31			
F12Q3	-0.20	0.13	0.15	0.36		
F14Q1	-0.20	0.10	0.09	0.10	0.27	
F14Q2	-0.15	0.12	0.11	0.13	0.20	0.37
F14Q3	-0.13	0.08	0.08	0.06	0.08	0.15
F15Q1	0.07	-0.05	0.01	-0.09	-0.09	-0.13
F15Q2	0.00	-0.03	0.02	-0.08	-0.09	-0.13
F15Q3	-0.02	-0.15	-0.09	-0.14	-0.08	-0.04
F16Q1	-0.19	0.05	0.01	0.05	0.05	0.04
F16Q2	-0.15	0.05	0.03	0.05	0.06	0.06
F16Q3	0.00	0.05	0.08	0.02	0.04	0.00
F18Q1	0.60	-0.29	-0.17	-0.31	-0.15	-0.15
F18Q2	0.53	-0.30	-0.14	-0.37	-0.11	-0.17
F18Q3	0.57	-0.25	-0.15	-0.29	-0.15	-0.17

Covariance Matrix

	F14Q3	F15Q1	F15Q2	F15Q3	F16Q1	F16Q2
F14Q3	0.26					
F15Q1	-0.02	0.94				
F15Q2	-0.02	0.82	1.10			
F15Q3	-0.02	0.48	0.63	1.34		
F16Q1	0.04	-0.08	-0.09	-0.14	0.33	
F16Q2	0.03	-0.07	-0.10	-0.14	0.25	0.24
F16Q3	0.00	-0.03	-0.09	-0.10	0.23	0.18
F18Q1	-0.07	0.22	0.22	0.26	-0.17	-0.19
F18Q2	-0.07	0.36	0.35	0.25	-0.17	-0.18
F18Q3	-0.09	0.26	0.40	0.24	-0.16	-0.13

Covariance Matrix

	F16Q3	F18Q1	F18Q2	F18Q3
F16Q3	0.55			
F18Q1	-0.10	1.66		
F18Q2	-0.08	1.66	1.95	
F18Q3	-0.13	1.12	1.14	1.18

Job satisfaction SEM

Number of Iterations = 17

LISREL Estimates (Robust Diagonally Weighted Least Squares)
Measurement Equations

F17Q2 = 0.86*JOBSAT, Errorvar.= 0.10 , R^2 = 0.88
(0.17)
0.62

F17Q3 = 0.77*JOBSAT, Errorvar.= 0.97 , R^2 = 0.38
(0.15) (0.26)
5.13 3.69

F17Q4 = 0.84*JOBSAT, Errorvar.= 0.26 , R^2 = 0.73
(0.12) (0.16)
7.05 1.69

F17Q5 = 0.72*JOBSAT, Errorvar.= 0.46 , R^2 = 0.53
(0.12) (0.16)
5.92 2.86

F17Q6 = 0.42*JOBSAT, Errorvar.= 0.38 , R^2 = 0.31
(0.091) (0.090)
4.60 4.25

F6Q1 = 0.53*JOBINV, Errorvar.= 0.20 , R^2 = 0.59
(0.056) (0.097)
9.52 2.02

F6Q2 = 0.81*JOBINV, Errorvar.= 0.042, R^2 = 0.94
(0.045) (0.11)
17.96 0.39

F6Q3 = 0.47*JOBINV, Errorvar.= 0.21 , R^2 = 0.51
(0.054) (0.076)
8.76 2.80

F7PQ1 = 0.99*POSAFF, Errorvar.= 1.08 , R^2 = 0.48
(0.21) (0.60)
4.65 1.78

F7PQ2 = 0.91*POSAFF, Errorvar.= 1.01 , R^2 = 0.45
(0.14) (0.34)
6.35 2.96

F7PQ3 = 0.64*POSAFF, Errorvar.= 0.18 , R^2 = 0.69
(0.074) (0.10)
8.57 1.82

F7NQ2 = 0.64*NEGAFF, Errorvar.= 0.25 , R^2 = 0.62
(0.096) (0.17)
6.71 1.44

F7NQ3 = 0.67*NEGAFF, Errorvar.= 0.27 , R^2 = 0.63
(0.060) (0.12)
11.27 2.33

F7NQ4 = 0.49*NEGAFF, Errorvar.= 0.18 , R^2 = 0.58
(0.053) (0.072)
9.34 2.49

F8Q2 = 0.45*AUTONOMY, Errorvar.= 0.40 , R^2 = 0.34
(0.080) (0.12)
5.69 3.48

F8Q4 = 0.62*AUTONOMY, Errorvar.= 0.32 , R^2 = 0.54
(0.066) (0.11)
9.38 2.88

F8Q5 = 0.81*AUTONOMY, Errorvar.= 0.41 , R^2 = 0.62
(0.092) (0.18)
8.77 2.24

F8Q6 = 0.56*AUTONOMY, Errorvar.= 0.62 , R^2 = 0.34
(0.085) (0.14)
6.59 4.40

F9Q2 = 0.53*JUSTICE, Errorvar.= 0.64 , R^2 = 0.31
(0.075) (0.17)
7.06 3.74

F10Q1 = 0.55*JUSTICE, Errorvar.= 0.30 , R^2 = 0.50
(0.062) (0.091)
8.83 3.25

F10Q2 = 0.61*JUSTICE, Errorvar.= 0.11 , R^2 = 0.77
(0.042) (0.063)
14.71 1.75

F10Q3 = 0.62*JUSTICE, Errorvar.= 0.23 , R^2 = 0.62
(0.050) (0.084)
12.56 2.79

F11Q1 = 0.76*JOBSTRES, Errorvar.= 1.18 , R^2 = 0.33
(0.12) (0.35)
6.47 3.37

F11Q2 = 0.75*JOBSTRES, Errorvar.= 0.69 , R^2 = 0.45
(0.097) (0.22)
7.66 3.16

F11Q3 = 0.78*JOBSTRES, Errorvar.= 1.49 , R^2 = 0.29
(0.17) (0.41)
4.52 3.63

F12Q1 = - 0.38*JOBSTRES, Errorvar.= 0.21 , R^2 = 0.41
(0.067) (0.056)
-5.70 3.82

F12Q2 = - 0.25*JOBSTRES, Errorvar.= 0.25 , R^2 = 0.20
(0.060) (0.043)
-4.21 5.70

F12Q3 = - 0.40*JOBSTRES, Errorvar.= 0.20 , R^2 = 0.45
(0.061) (0.054)
-6.65 3.73

F14Q1 = - 0.30*JOBSTRES, Errorvar.= 0.18 , R^2 = 0.34
(0.065) (0.039)
-4.64 4.47

F14Q2 = - 0.36*JOBSTRES, Errorvar.= 0.24 , R^2 = 0.35
(0.057) (0.054)
-6.31 4.45

F14Q3 = - 0.21*JOBSTRES, Errorvar.= 0.22 , R^2 = 0.16
(0.085) (0.042)
-2.42 5.16

F15Q1 = 0.78*PROMCHAN, Errorvar.= 0.33 , R^2 = 0.65
(0.066) (0.18)
11.91 1.82

F15Q2 = 0.97*PROMCHAN, Errorvar.= 0.16 , R^2 = 0.86
(0.056) (0.18)
17.27 0.86

F15Q3 = 0.77*PROMCHAN, Errorvar.= 0.74 , R^2 = 0.45
(0.082) (0.19)
9.47 3.91

F16Q1 = 0.53*JOBREP, Errorvar.= 0.046 , R^2 = 0.86
(0.038) (0.072)
14.17 0.65

F16Q2 = 0.48*JOBREP, Errorvar.= 0.016 , R^2 = 0.93
(0.019) (0.035)
24.63 0.46

F16Q3 = 0.40*JOBREP, Errorvar.= 0.39 , R^2 = 0.29
(0.047) (0.078)
8.44 4.94

F18Q1 = 1.24*SOCSUP, Errorvar.= 0.13 , R^2 = 0.92
(0.053) (0.27)
23.35 0.47

F18Q2 = 1.30*SOCSUP, Errorvar.= 0.25 , R^2 = 0.87
(0.040) (0.28)
32.50 0.91

F18Q3 = 0.95*SOCSUP, Errorvar.= 0.28 , R^2 = 0.76
(0.036) (0.17)
26.42 1.69

Structural Equations

JOBSAT = 0.27*JOBINV + 0.13*POSAFF - 0.17*NEGAFF + 0.025*AUTONOMY + 0.16*JUSTICE

.45* (0.065) (0.075) (0.081) (0.081) (0.066)
4.06 1.71 -2.12 0.30 2.39

+ 0.036*JOBSTRES - 0.033*PROMCHAN
(0.076) (0.062)
0.48 -0.53

- 0.45*JOBREP + 0.18*SOCSUP, Errorvar.= 0.36 , R^2 = 0.64
(0.073) (0.069) (0.077)
-6.11 2.66 4.61

Correlation Matrix of Independent Variables

	JOBINV	POSAFF	NEGAFF	AUTONOMY	JUSTICE	JOBSTRES
JOBINV	1.00					
POSAFF	0.10	1.00				
	(0.10)					
	1.01					
NEGAFF	0.16	-0.42	1.00			
	(0.10)	(0.10)				
	1.54	-4.18				
AUTONOMY	0.14	0.40	-0.36	1.00		
	(0.09)	(0.10)	(0.10)			
	1.62	3.93	-3.57			
JUSTICE	0.15	0.17	-0.18	0.33	1.00	
	(0.10)	(0.15)	(0.13)	(0.14)		
	1.50	1.14	-1.34	2.37		
JOBSTRES	0.21	0.29	-0.22	0.48	0.38	1.00
	(0.10)	(0.13)	(0.12)	(0.11)	(0.10)	
	2.20	2.36	-1.84	4.57	3.88	
PROMCHAN	0.06	0.05	0.01	0.10	0.36	0.18
	(0.09)	(0.10)	(0.09)	(0.09)	(0.10)	(0.13)
	0.71	0.50	0.09	1.10	3.59	1.45
JOBREP	-0.12	-0.05	0.31	-0.30	-0.04	-0.29
	(0.08)	(0.09)	(0.08)	(0.10)	(0.14)	(0.11)
	-1.65	-0.59	3.76	-2.86	-0.30	-2.69
SOCSUP	0.12	0.17	-0.12	0.30	0.44	0.52
	(0.09)	(0.09)	(0.09)	(0.09)	(0.10)	(0.09)
	1.46	1.90	-1.29	3.20	4.62	5.52

Correlation Matrix of Independent Variables

	PROMCHAN	JOBREP	SOCSUP
PROMCHAN	1.00		
JOBREP	-0.22	1.00	
	(0.09)		
	-2.48		
SOCSUP	0.30	-0.28	1.00
	(0.08)	(0.07)	
	3.67	-3.69	

Covariance Matrix of Latent Variables

	JOBSAT	JOBINV	POSAFF	NEGAFF	AUTONOMY	JUSTICE
JOBSAT	1.00					
JOBINV	0.36	1.00				
POSAFF	0.33	0.10	1.00			
NEGAFF	-0.39	0.16	-0.42	1.00		
AUTONOMY	0.43	0.14	0.40	-0.36	1.00	
JUSTICE	0.36	0.15	0.17	-0.18	0.33	1.00
JOBSTRES	0.46	0.21	0.29	-0.22	0.48	0.38
PROMCHAN	0.21	0.06	0.05	0.01	0.10	0.36
JOBREP	-0.61	-0.12	-0.05	0.31	-0.30	-0.04
SOCSUP	0.47	0.12	0.17	-0.12	0.30	0.44

Covariance Matrix of Latent Variables

	JOBSTRES	PROMCHAN	JOBREP	SOCSUP
JOBSTRES	1.00			
PROMCHAN	0.18	1.00		
JOBREP	-0.29	-0.22	1.00	
SOCSUP	0.52	0.30	-0.28	1.00

Goodness of Fit Statistics

Degrees of Freedom = 695
Normal Theory Weighted Least Squares Chi-Square = 2224.25 (P = 0.0)
Satorra-Bentler Scaled Chi-Square = 980.32 (P = 0.00)
Estimated Non-centrality Parameter (NCP) = 285.32
90 Percent Confidence Interval for NCP = (206.55 ; 372.12)

Minimum Fit Function Value = 3.39
Population Discrepancy Function Value (F0) = 1.28
90 Percent Confidence Interval for F0 = (0.93 ; 1.67)
Root Mean Square Error of Approximation (RMSEA) = 0.043
90 Percent Confidence Interval for RMSEA = (0.037 ; 0.049)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.97

Expected Cross-Validation Index (ECVI) = 5.52
90 Percent Confidence Interval for ECVI = (5.16 ; 5.91)
ECVI for Saturated Model = 7.35
ECVI for Independence Model = 44.03

Chi-Square for Independence Model with 780 Degrees of Freedom = 9738.98
Independence AIC = 9818.98
Model AIC = 1230.32
Saturated AIC = 1640.00
Independence CAIC = 9995.44
Model CAIC = 1781.78
Saturated CAIC = 5257.55

Normed Fit Index (NFI) = 0.90
Non-Normed Fit Index (NNFI) = 0.96
Parsimony Normed Fit Index (PNFI) = 0.80
Comparative Fit Index (CFI) = 0.97
Incremental Fit Index (IFI) = 0.97
Relative Fit Index (RFI) = 0.89

Critical N (CN) = 179.49

Root Mean Square Residual (RMR) = 0.067
Standardized RMR = 0.079
Goodness of Fit Index (GFI) = 0.95
Adjusted Goodness of Fit Index (AGFI) = 0.94
Parsimony Goodness of Fit Index (PGFI) = 0.80

Job satisfaction SEM

Fitted Covariance Matrix

	F17Q2	F17Q3	F17Q4	F17Q5	F17Q6	F6Q1
F17Q2	0.84					
F17Q3	0.66	1.56				
F17Q4	0.72	0.65	0.98			
F17Q5	0.62	0.55	0.61	0.98		
F17Q6	0.36	0.32	0.35	0.30	0.56	
F6Q1	0.16	0.15	0.16	0.14	0.08	0.48
F6Q2	0.25	0.23	0.25	0.21	0.12	0.43
F6Q3	0.15	0.13	0.14	0.12	0.07	0.25
F7PQ1	0.28	0.25	0.27	0.23	0.14	0.05
F7PQ2	0.26	0.23	0.25	0.21	0.12	0.05
F7PQ3	0.18	0.16	0.18	0.15	0.09	0.03
F7NQ2	-0.22	-0.19	-0.21	-0.18	-0.11	0.05
F7NQ3	-0.23	-0.20	-0.22	-0.19	-0.11	0.06
F7NQ4	-0.17	-0.15	-0.16	-0.14	-0.08	0.04
F8Q2	0.17	0.15	0.16	0.14	0.08	0.03
F8Q4	0.23	0.21	0.23	0.19	0.11	0.05
F8Q5	0.30	0.27	0.29	0.25	0.15	0.06
F8Q6	0.21	0.19	0.20	0.17	0.10	0.04
F9Q2	0.16	0.15	0.16	0.14	0.08	0.04
F10Q1	0.17	0.15	0.17	0.14	0.08	0.04
F10Q2	0.19	0.17	0.19	0.16	0.09	0.05
F10Q3	0.19	0.17	0.19	0.16	0.09	0.05
F11Q1	0.30	0.27	0.30	0.25	0.15	0.09
F11Q2	0.30	0.27	0.29	0.25	0.14	0.08
F11Q3	0.31	0.28	0.30	0.26	0.15	0.09
F12Q1	-0.15	-0.14	-0.15	-0.13	-0.07	-0.04
F12Q2	-0.10	-0.09	-0.10	-0.08	-0.05	-0.03
F12Q3	-0.16	-0.14	-0.16	-0.13	-0.08	-0.05
F14Q1	-0.12	-0.11	-0.12	-0.10	-0.06	-0.03
F14Q2	-0.14	-0.13	-0.14	-0.12	-0.07	-0.04
F14Q3	-0.08	-0.07	-0.08	-0.07	-0.04	-0.02
F15Q1	0.14	0.13	0.14	0.12	0.07	0.03
F15Q2	0.17	0.16	0.17	0.15	0.08	0.03
F15Q3	0.14	0.12	0.14	0.12	0.07	0.03
F16Q1	-0.28	-0.25	-0.27	-0.23	-0.14	-0.04
F16Q2	-0.25	-0.22	-0.25	-0.21	-0.12	-0.03
F16Q3	-0.21	-0.19	-0.21	-0.18	-0.10	-0.03
F18Q1	0.50	0.45	0.49	0.42	0.24	0.08
F18Q2	0.53	0.47	0.52	0.44	0.26	0.09
F18Q3	0.38	0.34	0.38	0.32	0.19	0.06

Fitted Covariance Matrix

	F6Q2	F6Q3	F7PQ1	F7PQ2	F7PQ3	F7NQ2
F6Q2	0.71					
F6Q3	0.38	0.43				
F7PQ1	0.08	0.05	2.06			
F7PQ2	0.07	0.04	0.90	1.83		
F7PQ3	0.05	0.03	0.63	0.58	0.59	
F7NQ2	0.08	0.05	-0.27	-0.24	-0.17	0.66
F7NQ3	0.09	0.05	-0.28	-0.25	-0.18	0.43
F7NQ4	0.06	0.04	-0.20	-0.19	-0.13	0.32
F8Q2	0.05	0.03	0.18	0.16	0.12	-0.10
F8Q4	0.07	0.04	0.24	0.22	0.16	-0.14
F8Q5	0.09	0.05	0.32	0.29	0.20	-0.19
F8Q6	0.07	0.04	0.22	0.20	0.14	-0.13
F9Q2	0.06	0.04	0.09	0.08	0.06	-0.06
F10Q1	0.06	0.04	0.09	0.09	0.06	-0.06
F10Q2	0.07	0.04	0.10	0.10	0.07	-0.07
F10Q3	0.07	0.04	0.11	0.10	0.07	-0.07
F11Q1	0.13	0.08	0.22	0.20	0.14	-0.11
F11Q2	0.13	0.07	0.22	0.20	0.14	-0.11
F11Q3	0.14	0.08	0.23	0.21	0.15	-0.11
F12Q1	-0.07	-0.04	-0.11	-0.10	-0.07	0.05
F12Q2	-0.04	-0.03	-0.07	-0.07	-0.05	0.04
F12Q3	-0.07	-0.04	-0.12	-0.11	-0.08	0.06

F14Q1	-0.05	-0.03	-0.09	-0.08	-0.06	0.04
F14Q2	-0.06	-0.04	-0.11	-0.10	-0.07	0.05
F14Q3	-0.04	-0.02	-0.06	-0.06	-0.04	0.03
F15Q1	0.04	0.02	0.04	0.04	0.02	0.00
F15Q2	0.05	0.03	0.05	0.04	0.03	0.01
F15Q3	0.04	0.02	0.04	0.03	0.02	0.00
F16Q1	-0.05	-0.03	-0.03	-0.03	-0.02	0.11
F16Q2	-0.05	-0.03	-0.02	-0.02	-0.02	0.10
F16Q3	-0.04	-0.02	-0.02	-0.02	-0.01	0.08
F18Q1	0.13	0.07	0.21	0.19	0.13	-0.10
F18Q2	0.13	0.08	0.22	0.20	0.14	-0.10
F18Q3	0.10	0.06	0.16	0.15	0.10	-0.07

Fitted Covariance Matrix

	F7NQ3	F7NQ4	F8Q2	F8Q4	F8Q5	F8Q6
F7NQ3	0.72					
F7NQ4	0.33	0.42				
F8Q2	-0.11	-0.08	0.61			
F8Q4	-0.15	-0.11	0.28	0.71		
F8Q5	-0.19	-0.14	0.37	0.50	1.06	
F8Q6	-0.14	-0.10	0.25	0.35	0.45	0.93
F9Q2	-0.06	-0.05	0.08	0.11	0.14	0.10
F10Q1	-0.06	-0.05	0.08	0.11	0.14	0.10
F10Q2	-0.07	-0.05	0.09	0.13	0.16	0.11
F10Q3	-0.07	-0.05	0.09	0.13	0.17	0.12
F11Q1	-0.11	-0.08	0.17	0.23	0.30	0.21
F11Q2	-0.11	-0.08	0.16	0.22	0.29	0.20
F11Q3	-0.12	-0.09	0.17	0.23	0.30	0.21
F12Q1	0.06	0.04	-0.08	-0.12	-0.15	-0.10
F12Q2	0.04	0.03	-0.06	-0.08	-0.10	-0.07
F12Q3	0.06	0.04	-0.09	-0.12	-0.16	-0.11
F14Q1	0.05	0.03	-0.07	-0.09	-0.12	-0.08
F14Q2	0.05	0.04	-0.08	-0.11	-0.14	-0.10
F14Q3	0.03	0.02	-0.05	-0.06	-0.08	-0.06
F15Q1	0.00	0.00	0.03	0.05	0.06	0.04
F15Q2	0.01	0.00	0.04	0.06	0.08	0.05
F15Q3	0.00	0.00	0.03	0.05	0.06	0.04
F16Q1	0.11	0.08	-0.07	-0.10	-0.13	-0.09
F16Q2	0.10	0.07	-0.06	-0.09	-0.11	-0.08
F16Q3	0.08	0.06	-0.05	-0.07	-0.10	-0.07
F18Q1	-0.10	-0.07	0.17	0.23	0.30	0.21
F18Q2	-0.11	-0.08	0.18	0.24	0.32	0.22
F18Q3	-0.08	-0.06	0.13	0.18	0.23	0.16

Fitted Covariance Matrix

	F9Q2	F10Q1	F10Q2	F10Q3	F11Q1	F11Q2
F9Q2	0.92					
F10Q1	0.29	0.59				
F10Q2	0.33	0.33	0.49			
F10Q3	0.33	0.34	0.38	0.62		
F11Q1	0.15	0.16	0.18	0.18	1.77	
F11Q2	0.15	0.15	0.17	0.17	0.57	1.24
F11Q3	0.16	0.16	0.18	0.18	0.60	0.58
F12Q1	-0.08	-0.08	-0.09	-0.09	-0.29	-0.29
F12Q2	-0.05	-0.05	-0.06	-0.06	-0.19	-0.19
F12Q3	-0.08	-0.08	-0.09	-0.09	-0.31	-0.30
F14Q1	-0.06	-0.06	-0.07	-0.07	-0.23	-0.23
F14Q2	-0.07	-0.07	-0.08	-0.08	-0.28	-0.27
F14Q3	-0.04	-0.04	-0.05	-0.05	-0.16	-0.15
F15Q1	0.15	0.15	0.17	0.17	0.11	0.11
F15Q2	0.19	0.19	0.21	0.22	0.14	0.13
F15Q3	0.15	0.15	0.17	0.17	0.11	0.11
F16Q1	-0.01	-0.01	-0.01	-0.01	-0.12	-0.12
F16Q2	-0.01	-0.01	-0.01	-0.01	-0.11	-0.10
F16Q3	-0.01	-0.01	-0.01	-0.01	-0.09	-0.09
F18Q1	0.29	0.30	0.34	0.34	0.49	0.48
F18Q2	0.31	0.31	0.35	0.36	0.52	0.51
F18Q3	0.22	0.23	0.26	0.26	0.38	0.37

Fitted Covariance Matrix

	F11Q3	F12Q1	F12Q2	F12Q3	F14Q1	F14Q2
F11Q3	2.11					
F12Q1	-0.30	0.36				
F12Q2	-0.20	0.10	0.31			
F12Q3	-0.31	0.15	0.10	0.36		
F14Q1	-0.24	0.12	0.08	0.12	0.27	
F14Q2	-0.28	0.14	0.09	0.15	0.11	0.37
F14Q3	-0.16	0.08	0.05	0.08	0.06	0.07
F15Q1	0.11	-0.05	-0.04	-0.06	-0.04	-0.05
F15Q2	0.14	-0.07	-0.04	-0.07	-0.05	-0.06
F15Q3	0.11	-0.05	-0.04	-0.06	-0.04	-0.05
F16Q1	-0.12	0.06	0.04	0.06	0.05	0.06
F16Q2	-0.11	0.05	0.04	0.06	0.04	0.05
F16Q3	-0.09	0.05	0.03	0.05	0.04	0.04
F18Q1	0.51	-0.25	-0.16	-0.26	-0.20	-0.23
F18Q2	0.53	-0.26	-0.17	-0.27	-0.21	-0.25
F18Q3	0.39	-0.19	-0.12	-0.20	-0.15	-0.18

Fitted Covariance Matrix

	F14Q3	F15Q1	F15Q2	F15Q3	F16Q1	F16Q2
F14Q3	0.26					
F15Q1	-0.03	0.94				
F15Q2	-0.04	0.76	1.10			
F15Q3	-0.03	0.61	0.75	1.34		
F16Q1	0.03	-0.09	-0.11	-0.09	0.33	
F16Q2	0.03	-0.08	-0.10	-0.08	0.25	0.24
F16Q3	0.02	-0.07	-0.09	-0.07	0.21	0.19
F18Q1	-0.13	0.29	0.36	0.29	-0.18	-0.16
F18Q2	-0.14	0.30	0.38	0.30	-0.19	-0.17
F18Q3	-0.10	0.22	0.27	0.22	-0.14	-0.12

Fitted Covariance Matrix

	F16Q3	F18Q1	F18Q2	F18Q3
F16Q3	0.55			
F18Q1	-0.14	1.66		
F18Q2	-0.14	1.61	1.94	
F18Q3	-0.10	1.18	1.23	1.18

Fitted Residuals

	F17Q2	F17Q3	F17Q4	F17Q5	F17Q6	F6Q1
F17Q2	0.00					
F17Q3	0.06	0.00				
F17Q4	-0.02	-0.02	0.00			
F17Q5	-0.02	-0.13	0.04	0.00		
F17Q6	0.01	0.01	0.00	0.04	0.00	
F6Q1	-0.03	0.01	-0.03	0.02	0.02	0.00
F6Q2	0.02	0.04	-0.04	0.00	0.07	0.00
F6Q3	0.03	0.02	-0.07	-0.08	0.04	0.01
F7PQ1	0.04	0.02	0.20	0.02	-0.01	0.03
F7PQ2	-0.08	-0.13	0.00	-0.04	-0.25	0.08
F7PQ3	0.02	0.09	0.09	-0.02	-0.08	-0.05
F7NQ2	-0.01	-0.06	0.00	-0.06	0.11	-0.01
F7NQ3	-0.01	0.00	-0.06	-0.05	0.07	0.03
F7NQ4	0.04	-0.02	-0.02	-0.01	0.05	0.03
F8Q2	0.04	0.10	-0.01	0.12	0.03	0.09
F8Q4	0.01	0.11	0.07	-0.07	0.00	0.01
F8Q5	-0.06	-0.15	0.07	-0.10	-0.03	0.02
F8Q6	-0.16	-0.05	0.02	-0.05	-0.02	-0.03
F9Q2	-0.01	-0.08	-0.05	0.05	0.00	-0.05
F10Q1	0.03	0.01	-0.05	0.02	0.01	-0.03
F10Q2	0.03	-0.03	0.00	0.03	0.02	0.00
F10Q3	-0.01	0.01	-0.07	-0.02	0.03	0.01
F11Q1	0.07	-0.02	0.04	-0.06	-0.07	0.19
F11Q2	0.08	-0.04	0.10	0.04	-0.02	0.10

F11Q3	-0.01	-0.17	0.10	-0.11	-0.08	-0.04
F12Q1	-0.03	-0.07	-0.03	0.03	-0.01	0.09
F12Q2	0.03	0.05	0.00	0.04	-0.01	0.03
F12Q3	-0.02	0.04	0.01	0.06	0.00	-0.02
F14Q1	0.03	0.07	0.01	0.05	0.04	0.03
F14Q2	-0.02	0.01	-0.05	0.02	0.01	0.01
F14Q3	-0.03	-0.04	-0.01	0.03	-0.04	-0.01
F15Q1	0.03	-0.02	-0.07	-0.01	0.03	-0.03
F15Q2	0.04	0.04	-0.08	-0.02	0.07	-0.05
F15Q3	-0.03	-0.04	-0.15	0.16	0.06	-0.03
F16Q1	0.04	-0.02	0.05	-0.06	-0.01	0.02
F16Q2	0.02	-0.04	0.03	-0.05	0.01	0.01
F16Q3	0.06	0.10	0.03	-0.13	-0.02	0.06
F18Q1	0.00	-0.14	-0.04	-0.09	-0.02	-0.04
F18Q2	0.03	0.04	0.04	-0.13	-0.02	-0.02
F18Q3	0.06	-0.03	0.08	-0.04	0.03	-0.03

Fitted Residuals

	F6Q2	F6Q3	F7PQ1	F7PQ2	F7PQ3	F7NQ2
F6Q2	0.00					
F6Q3	-0.01	0.00				
F7PQ1	0.09	-0.10	0.00			
F7PQ2	0.06	-0.01	0.11	0.00		
F7PQ3	-0.01	-0.02	-0.14	0.06	0.00	
F7NQ2	-0.02	0.02	0.07	-0.04	0.02	0.00
F7NQ3	-0.07	0.06	-0.02	-0.03	0.04	-0.01
F7NQ4	-0.05	0.03	-0.01	-0.04	-0.02	-0.01
F8Q2	0.06	0.00	-0.01	0.13	-0.06	0.02
F8Q4	0.00	-0.02	0.03	0.00	-0.02	-0.04
F8Q5	0.02	-0.06	0.04	-0.12	-0.05	-0.03
F8Q6	-0.07	-0.06	0.16	0.11	-0.03	-0.01
F9Q2	-0.11	-0.10	-0.03	-0.09	0.03	-0.03
F10Q1	0.00	-0.02	0.03	-0.09	0.05	-0.05
F10Q2	0.04	0.04	-0.01	-0.02	0.03	0.03
F10Q3	0.06	0.04	-0.07	-0.04	0.02	0.03
F11Q1	0.29	0.16	0.18	0.26	0.13	0.08
F11Q2	0.10	0.02	0.11	-0.03	0.12	0.15
F11Q3	-0.03	0.01	0.11	0.00	0.09	0.06
F12Q1	0.10	0.03	-0.02	0.03	-0.02	0.05
F12Q2	0.04	0.01	0.12	0.26	0.09	0.00
F12Q3	-0.03	-0.02	0.03	0.05	0.00	-0.05
F14Q1	0.06	0.01	0.04	-0.02	0.01	0.00
F14Q2	0.02	0.03	0.04	-0.04	0.00	0.03
F14Q3	0.03	0.01	0.05	0.01	-0.01	-0.06
F15Q1	-0.02	0.06	0.03	-0.03	0.01	0.04
F15Q2	-0.01	0.06	0.04	-0.03	0.00	-0.05
F15Q3	-0.02	0.00	0.12	-0.10	-0.04	-0.10
F16Q1	-0.04	0.00	-0.08	0.05	-0.01	0.02
F16Q2	-0.04	0.01	-0.06	0.05	0.02	0.00
F16Q3	0.02	0.08	-0.06	0.06	0.02	0.09
F18Q1	-0.08	0.12	-0.12	-0.11	-0.01	-0.06
F18Q2	-0.02	0.07	-0.01	-0.04	0.09	-0.02
F18Q3	-0.05	0.07	-0.04	-0.04	0.05	-0.07

Fitted Residuals

	F7NQ3	F7NQ4	F8Q2	F8Q4	F8Q5	F8Q6
F7NQ3	0.00					
F7NQ4	0.01	0.00				
F8Q2	0.03	0.07	0.00			
F8Q4	0.00	-0.03	-0.07	0.00		
F8Q5	0.07	-0.04	-0.15	0.09	0.00	
F8Q6	0.05	-0.05	0.03	-0.01	0.09	0.00
F9Q2	0.05	-0.02	-0.06	-0.02	0.12	0.09
F10Q1	-0.02	0.01	-0.02	-0.08	0.00	-0.03
F10Q2	-0.02	0.00	-0.02	-0.04	0.02	0.01
F10Q3	0.01	0.02	0.03	-0.02	0.02	0.03
F11Q1	0.03	-0.04	0.00	0.04	-0.06	-0.17
F11Q2	0.01	0.04	0.05	-0.11	-0.08	-0.08
F11Q3	-0.02	-0.09	0.01	0.04	0.23	0.00
F12Q1	0.10	0.05	0.03	0.01	0.00	0.01
F12Q2	0.05	0.00	0.05	-0.02	0.00	0.04
F12Q3	0.00	-0.02	0.03	0.05	0.04	0.03
F14Q1	-0.02	-0.01	-0.02	-0.08	-0.05	-0.05
F14Q2	0.00	0.02	-0.01	-0.04	0.00	-0.02
F14Q3	-0.08	-0.05	-0.01	-0.01	0.03	0.04
F15Q1	0.10	0.04	-0.11	-0.05	-0.04	0.05
F15Q2	0.04	-0.05	0.01	-0.04	0.00	0.12
F15Q3	-0.09	-0.02	0.01	-0.02	0.09	0.10
F16Q1	-0.03	-0.02	-0.09	-0.01	0.01	0.10
F16Q2	-0.02	-0.03	-0.08	0.02	0.03	0.09
F16Q3	0.04	0.03	-0.08	-0.03	0.01	0.07
F18Q1	-0.03	0.07	-0.05	-0.12	-0.10	0.06
F18Q2	-0.01	0.02	-0.05	-0.11	-0.07	-0.02
F18Q3	0.06	0.02	0.05	0.06	0.08	0.18

Fitted Residuals

	F9Q2	F10Q1	F10Q2	F10Q3	F11Q1	F11Q2
F9Q2	0.00					
F10Q1	-0.03	0.00				
F10Q2	-0.14	-0.02	0.00			
F10Q3	-0.15	0.05	0.03	0.00		
F11Q1	-0.22	-0.11	-0.16	-0.06	0.00	
F11Q2	0.06	0.06	0.05	-0.02	0.43	0.00
F11Q3	-0.08	-0.06	0.01	-0.04	0.14	0.29
F12Q1	-0.07	0.00	-0.02	0.04	0.18	0.12
F12Q2	-0.04	-0.02	-0.01	0.02	0.10	0.04
F12Q3	-0.10	-0.03	-0.04	-0.02	0.05	0.01
F14Q1	-0.08	0.03	0.05	0.04	0.01	0.12
F14Q2	-0.03	0.01	0.05	0.05	0.05	0.13
F14Q3	0.00	-0.05	0.02	-0.01	-0.01	0.03
F15Q1	0.13	-0.08	-0.10	-0.12	-0.05	-0.04
F15Q2	0.19	-0.02	-0.10	-0.09	-0.15	-0.10
F15Q3	0.38	0.19	0.04	0.04	-0.20	0.01
F16Q1	-0.04	-0.01	-0.02	-0.01	-0.03	0.05
F16Q2	-0.04	-0.01	0.00	0.00	-0.08	-0.02
F16Q3	-0.04	0.06	0.06	0.08	0.02	0.06
F18Q1	0.06	-0.04	0.04	-0.07	-0.22	0.00
F18Q2	0.09	-0.06	0.02	-0.03	-0.25	0.00
F18Q3	0.05	-0.01	0.01	-0.02	-0.09	-0.06

Fitted Residuals

	F11Q3	F12Q1	F12Q2	F12Q3	F14Q1	F14Q2
F11Q3	0.00					
F12Q1	0.05	0.00				
F12Q2	0.04	0.11	0.00			
F12Q3	0.11	-0.03	0.05	0.00		
F14Q1	0.03	-0.02	0.01	-0.02	0.00	
F14Q2	0.13	-0.02	0.02	-0.02	0.09	0.00
F14Q3	0.03	0.00	0.03	-0.02	0.02	0.08
F15Q1	-0.05	0.01	0.04	-0.04	-0.04	-0.08

F15Q2	-0.14	0.03	0.07	-0.01	-0.04	-0.06
F15Q3	-0.13	-0.10	-0.05	-0.08	-0.04	0.01
F16Q1	-0.06	-0.01	-0.03	-0.01	0.01	-0.01
F16Q2	-0.04	0.00	0.00	-0.01	0.02	0.01
F16Q3	0.10	0.01	0.05	-0.03	0.01	-0.04
F18Q1	0.10	-0.04	-0.01	-0.05	0.05	0.09
F18Q2	0.00	-0.04	0.03	-0.09	0.10	0.08
F18Q3	0.18	-0.06	-0.03	-0.09	0.00	0.01

Fitted Residuals

	F14Q3	F15Q1	F15Q2	F15Q3	F16Q1	F16Q2
F14Q3	0.00					
F15Q1	0.01	0.00				
F15Q2	0.02	0.07	0.00			
F15Q3	0.01	-0.13	-0.12	0.00		
F16Q1	0.01	0.01	0.02	-0.05	0.00	
F16Q2	0.01	0.01	0.01	-0.05	0.00	0.00
F16Q3	-0.02	0.04	-0.01	-0.03	0.02	-0.02
F18Q1	0.07	-0.07	-0.14	-0.03	0.01	-0.03
F18Q2	0.07	0.06	-0.03	-0.06	0.02	-0.01
F18Q3	0.01	0.04	0.12	0.02	-0.02	-0.01

Fitted Residuals

	F16Q3	F18Q1	F18Q2	F18Q3
F16Q3	0.00			
F18Q1	0.04	0.00		
F18Q2	0.07	0.05	0.00	
F18Q3	-0.02	-0.06	-0.09	0.00

Summary Statistics for Fitted Residuals

```
Smallest Fitted Residual =   -0.25
  Median Fitted Residual =    0.00
 Largest Fitted Residual =    0.43
```

Stemleaf Plot

```
- 2|55
- 2|220
- 1|776655555
- 1|444443333332222211111100000000000
- 0|999999999998888888888888888887777777777777776666666666666666666666665+30
- 0|444444444444444444444444444444444444444444444333333333333333333333333333+99
  0|111111111111111111111111111111111111111111111111111111111111111222222222222+33
  0|555555555555555555555555555555555566666666666666666666666677777777777+34
  1|000000000000001111111122222222222333334
  1|56668888999
  2|03
  2|6699
  3|
  3|8
  4|3
```

Standardized Residuals

	F17Q2	F17Q3	F17Q4	F17Q5	F17Q6	F6Q1
F17Q2	- -					
F17Q3	0.80	- -				
F17Q4	-0.59	-0.25	- -			
F17Q5	-0.28	-1.22	0.56	- -		
F17Q6	0.38	0.17	0.09	0.68	- -	
F6Q1	-0.68	0.11	-0.50	0.28	0.58	- -
F6Q2	0.33	0.41	-0.70	0.02	1.59	0.26
F6Q3	0.50	0.33	-1.39	-1.40	1.11	0.57
F7PQ1	0.32	0.09	1.68	0.19	-0.07	0.34
F7PQ2	-0.67	-0.88	-0.04	-0.40	-2.86	0.98
F7PQ3	0.37	1.04	1.52	-0.32	-1.89	-1.20
F7NQ2	-0.13	-0.68	0.03	-0.98	2.06	-0.12

F7NQ3	-0.12	-0.03	-0.91	-0.80	1.42	0.66
F7NQ4	0.89	-0.28	-0.45	-0.14	1.33	0.69
F8Q2	0.62	1.17	-0.18	2.08	0.59	1.97
F8Q4	0.11	1.37	1.08	-1.09	0.05	0.12
F8Q5	-0.75	-1.30	0.85	-1.12	-0.49	0.30
F8Q6	-2.00	-0.42	0.26	-0.54	-0.33	-0.50
F9Q2	-0.16	-0.87	-0.73	0.75	0.06	-0.96
F10Q1	0.60	0.17	-0.82	0.32	0.31	-0.70
F10Q2	0.54	-0.45	-0.04	0.61	0.36	-0.06
F10Q3	-0.15	0.16	-1.07	-0.31	0.60	0.30
F11Q1	0.69	-0.16	0.35	-0.48	-0.77	2.69
F11Q2	1.03	-0.34	1.19	0.47	-0.35	1.82
F11Q3	-0.13	-1.19	0.85	-0.91	-0.96	-0.44
F12Q1	-0.85	-1.38	-0.69	0.55	-0.24	2.86
F12Q2	0.62	0.74	0.07	0.77	-0.35	1.03
F12Q3	-0.43	0.63	0.28	1.10	-0.11	-0.52
F14Q1	0.83	1.20	0.16	1.10	1.39	1.23
F14Q2	-0.51	0.21	-1.04	0.32	0.25	0.40
F14Q3	-0.68	-0.77	-0.23	0.74	-1.14	-0.29
F15Q1	0.52	-0.20	-1.07	-0.14	0.48	-0.63
F15Q2	0.64	0.43	-1.17	-0.26	1.21	-0.85
F15Q3	-0.28	-0.30	-1.55	1.64	0.76	-0.43
F16Q1	1.06	-0.46	1.11	-1.53	-0.45	0.62
F16Q2	0.74	-0.98	0.69	-1.19	0.24	0.29
F16Q3	1.05	1.26	0.43	-2.31	-0.47	1.38
F18Q1	0.00	-1.02	-0.40	-0.95	-0.31	-0.54
F18Q2	0.41	0.30	0.42	-1.33	-0.20	-0.22
F18Q3	1.04	-0.35	1.28	-0.56	0.49	-0.53

Standardized Residuals

	F6Q2	F6Q3	F7PQ1	F7PQ2	F7PQ3	F7NQ2
F6Q2	- -					
F6Q3	-0.83	- -				
F7PQ1	0.97	-1.15	- -			
F7PQ2	0.77	-0.18	0.84	- -		
F7PQ3	-0.21	-0.47	-2.39	1.54	- -	
F7NQ2	-0.45	0.36	0.82	-0.54	0.43	- -
F7NQ3	-1.34	1.30	-0.25	-0.26	0.76	-0.21
F7NQ4	-1.05	0.93	-0.13	-0.58	-0.54	-0.33
F8Q2	1.20	0.05	-0.09	1.62	-1.14	0.31
F8Q4	0.01	-0.43	0.36	0.01	-0.46	-0.77
F8Q5	0.31	-1.00	0.34	-1.05	-0.72	-0.39
F8Q6	-1.12	-1.10	1.49	0.95	-0.58	-0.15
F9Q2	-2.07	-2.16	-0.23	-0.83	0.52	-0.56
F10Q1	-0.02	-0.48	0.33	-1.07	1.07	-0.96
F10Q2	1.00	1.27	-0.12	-0.29	0.77	0.66
F10Q3	1.33	0.87	-0.80	-0.40	0.40	0.51
F11Q1	3.88	2.28	1.07	1.62	1.39	0.92
F11Q2	1.44	0.27	0.82	-0.24	1.66	1.99
F11Q3	-0.29	0.08	0.65	0.01	1.08	0.62
F12Q1	2.63	1.00	-0.28	0.50	-0.63	1.38
F12Q2	0.98	0.46	1.74	4.42	2.46	-0.03
F12Q3	-0.97	-0.51	0.41	0.71	0.10	-1.23
F14Q1	2.03	0.41	0.61	-0.26	0.18	0.14
F14Q2	0.63	0.74	0.47	-0.53	-0.05	0.85
F14Q3	0.87	0.28	0.71	0.11	-0.29	-1.68
F15Q1	-0.38	1.42	0.29	-0.33	0.12	0.73
F15Q2	-0.17	1.30	0.38	-0.30	0.03	-0.79
F15Q3	-0.32	0.08	1.03	-0.70	-0.62	-1.16
F16Q1	-1.33	-0.01	-1.29	0.75	-0.39	0.55
F16Q2	-1.40	0.59	-0.99	0.85	0.80	-0.04
F16Q3	0.43	1.99	-0.69	0.69	0.56	2.04
F18Q1	-1.08	1.76	-0.79	-0.70	-0.13	-0.72
F18Q2	-0.20	1.06	-0.08	-0.25	1.18	-0.22
F18Q3	-0.74	1.21	-0.32	-0.33	0.92	-0.92

Standardized Residuals

	F7NQ3	F7NQ4	F8Q2	F8Q4	F8Q5	F8Q6
F7NQ3	- -					
F7NQ4	0.50	- -				
F8Q2	0.43	1.70	- -			
F8Q4	0.08	-0.67	-1.56	- -		
F8Q5	1.05	-0.81	-2.10	1.49	- -	
F8Q6	0.71	-1.06	0.44	-0.14	1.60	- -
F9Q2	0.78	-0.48	-0.91	-0.27	1.68	1.14
F10Q1	-0.47	0.38	-0.39	-1.29	-0.02	-0.50
F10Q2	-0.39	-0.10	-0.51	-0.79	0.33	0.22
F10Q3	0.10	0.54	0.57	-0.27	0.33	0.54
F11Q1	0.31	-0.56	0.05	0.44	-0.51	-1.36
F11Q2	0.09	0.65	0.65	-1.34	-0.90	-0.89
F11Q3	-0.20	-1.27	0.13	0.41	2.27	-0.01
F12Q1	2.77	1.51	0.77	0.13	-0.10	0.22
F12Q2	1.37	-0.02	1.34	-0.41	0.05	0.76
F12Q3	0.01	-0.68	0.59	1.12	0.75	0.48
F14Q1	-0.55	-0.23	-0.48	-2.15	-1.16	-1.04
F14Q2	0.03	0.69	-0.32	-0.95	-0.02	-0.27
F14Q3	-2.04	-1.69	-0.32	-0.34	0.56	0.89
F15Q1	1.69	0.85	-1.91	-0.85	-0.57	0.68
F15Q2	0.66	-0.98	0.20	-0.60	0.05	1.65
F15Q3	-1.19	-0.38	0.15	-0.28	0.94	1.08
F16Q1	-0.66	-0.80	-2.40	-0.14	0.29	2.07
F16Q2	-0.47	-0.95	-2.43	0.71	0.66	1.92
F16Q3	0.78	0.66	-1.87	-0.67	0.10	1.22
F18Q1	-0.33	0.97	-0.56	-1.35	-0.88	0.55
F18Q2	-0.09	0.34	-0.56	-1.27	-0.65	-0.16
F18Q3	0.73	0.41	0.75	0.94	1.01	2.46

Standardized Residuals

	F9Q2	F10Q1	F10Q2	F10Q3	F11Q1	F11Q2
F9Q2	- -					
F10Q1	-0.67	- -				
F10Q2	-3.02	-0.74	- -			
F10Q3	-2.70	2.02	- -	- -		
F11Q1	-1.89	-1.22	-1.91	-0.63	- -	
F11Q2	0.80	0.95	0.84	-0.28	4.93	- -
F11Q3	-0.70	-0.63	0.17	-0.36	0.76	2.17
F12Q1	-1.80	-0.02	-0.72	1.00	2.37	2.40
F12Q2	-0.85	-0.43	-0.35	0.61	1.30	0.75
F12Q3	-2.13	-0.68	-1.16	-0.57	0.85	0.20
F14Q1	-2.28	0.78	1.53	1.23	0.21	2.32
F14Q2	-0.57	0.41	1.35	1.12	0.77	2.63
F14Q3	0.06	-1.47	0.55	-0.37	-0.10	0.56
F15Q1	1.90	-1.49	-2.03	-2.10	-0.37	-0.51
F15Q2	2.63	-0.31	-2.07	-1.57	-1.18	-1.18
F15Q3	4.96	3.03	0.57	0.57	-1.51	0.09
F16Q1	-0.83	-0.40	-0.66	-0.25	-0.48	0.94
F16Q2	-0.92	-0.16	-0.03	0.03	-1.27	-0.49
F16Q3	-0.84	1.51	1.45	1.65	0.27	1.00
F18Q1	0.58	-0.58	0.72	-0.91	-1.50	0.03
F18Q2	0.89	-0.82	0.40	-0.35	-1.61	0.04
F18Q3	0.64	-0.22	0.16	-0.29	-0.88	-0.70

Standardized Residuals

	F11Q3	F12Q1	F12Q2	F12Q3	F14Q1	F14Q2
F11Q3	- -					
F12Q1	0.83	- -				
F12Q2	0.65	3.82	- -			
F12Q3	1.75	-0.82	2.27	- -		
F14Q1	0.57	-0.66	0.39	-0.79	- -	
F14Q2	2.01	-0.73	0.65	-0.78	5.51	- -
F14Q3	0.47	0.15	1.00	-0.74	0.66	3.16
F15Q1	-0.40	0.19	0.98	-0.81	-1.11	-1.76
F15Q2	-1.16	0.75	1.45	-0.13	-0.84	-1.29
F15Q3	-0.90	-1.97	-0.98	-1.30	-0.67	0.20
F16Q1	-1.00	-0.50	-0.93	-0.36	0.21	-0.43
F16Q2	-0.80	-0.11	-0.06	-0.19	0.67	0.50
F16Q3	1.08	0.15	1.42	-0.71	0.23	-1.17
F18Q1	0.69	-0.70	-0.09	-0.80	0.77	1.39
F18Q2	0.01	-0.70	0.61	-1.60	1.56	1.28
F18Q3	1.82	-1.53	-0.65	-2.01	0.03	0.30

Standardized Residuals

	F14Q3	F15Q1	F15Q2	F15Q3	F16Q1	F16Q2
F14Q3	- -					
F15Q1	0.32	- -				
F15Q2	0.35	3.97	- -			
F15Q3	0.11	-2.03	-2.39	- -		
F16Q1	0.32	0.26	0.46	-0.76	- -	
F16Q2	0.22	0.29	0.18	-1.06	-0.27	- -
F16Q3	-0.62	0.70	-0.14	-0.41	0.90	-0.63
F18Q1	1.06	-0.76	-1.40	-0.21	0.22	-0.46
F18Q2	1.13	0.62	-0.32	-0.44	0.31	-0.13
F18Q3	0.21	0.54	1.67	0.25	-0.46	-0.23

Standardized Residuals

	F16Q3	F18Q1	F18Q2	F18Q3
F16Q3	- -			
F18Q1	0.54	- -		
F18Q2	0.89	4.00	- -	
F18Q3	-0.40	-1.51	-2.88	- -

Summary Statistics for Standardized Residuals

```
 Smallest Standardized Residual =   -3.02
   Median Standardized Residual =    0.00
  Largest Standardized Residual =    5.51
```

Stemleaf Plot

```
- 3|0
- 2|997
- 2|4444332111111000000
- 1|99999887766665555555
- 1|444444333333333333222222222222222111111111111111000000000000000
- 0|999999999999999999888888888888888888888888888777777777777777777777777+63
- 0|444444444444444444444444444444433333333333333333333333333333333333332+27
  0|111111111111111111111112222222222222222222222222233333333333333333333333+40
  0|555555555555555555566666666666666666666666666666666666666677777777777777+61
  1|000000000000000000011111111111111111222222222233333333333344444444444
  1|555555556666667777777788899
  2|00000001112333344
  2|55666789
  3|02
  3|89
  4|004
  4|9
  5|0
  5|5
```

Largest Negative Standardized Residuals

Residual for	F7PQ2	and	F17Q6	-2.86
Residual for	F10Q2	and	F9Q2	-3.02
Residual for	F10Q3	and	F9Q2	-2.70
Residual for	F18Q3	and	F18Q2	-2.88

Largest Positive Standardized Residuals

Residual for	F11Q1	and	F6Q1	2.69
Residual for	F11Q1	and	F6Q2	3.88
Residual for	F11Q2	and	F11Q1	4.93
Residual for	F12Q1	and	F6Q1	2.86
Residual for	F12Q1	and	F6Q2	2.63
Residual for	F12Q1	and	F7NQ3	2.77
Residual for	F12Q2	and	F7PQ2	4.42
Residual for	F12Q2	and	F12Q1	3.82
Residual for	F14Q2	and	F11Q2	2.63
Residual for	F14Q2	and	F14Q1	5.51
Residual for	F14Q3	and	F14Q2	3.16
Residual for	F15Q2	and	F9Q2	2.63
Residual for	F15Q2	and	F15Q1	3.97
Residual for	F15Q3	and	F9Q2	4.96
Residual for	F15Q3	and	F10Q1	3.03
Residual for	F18Q2	and	F18Q1	4.00

Time used: 110.859 Seconds

Model 2 – Organisational commitment

SIMPLIS project file

```
Organisational commitment
Observed Variables
F9Q1 F9Q2 F9Q3 F9Q4 F9Q5
F10Q1 F10Q2 F10Q3 F10Q4 F10Q5  F10Q6
F15Q1 F15Q2 F15Q3 F15Q4 F15Q5
F18Q1 F18Q2 F18Q3 F18Q4
F19Q1 F19Q2 F19Q3 F19Q4
F20Q1 F20Q2 F20Q3 F20Q4 F20Q5 F20Q6
Covariance Matrix from file OrgCommitment.COV
Asymptotic Covariance Matrix From File OrgCommitment.ACM
Sample Size = 224
Latent Variables  ORGCOM JUSTICE PROMCHAN SOCSUP
Relationships
F20Q1 = 1.13*ORGCOM
F20Q2 = ORGCOM
F20Q3 = ORGCOM
F20Q4 = ORGCOM
F20Q5 = ORGCOM
F20Q6 = ORGCOM
F9Q2 = JUSTICE
F9Q3 = JUSTICE
F9Q4 = JUSTICE
F9Q5 = JUSTICE
F10Q1 = JUSTICE
F10Q2 = JUSTICE
F10Q3 = JUSTICE
F10Q4 = JUSTICE
F10Q5 = JUSTICE
F10Q6 = JUSTICE
F15Q1 = PROMCHAN
F15Q2 = PROMCHAN
F15Q3 = PROMCHAN
F15Q4 = PROMCHAN
F15Q5 = PROMCHAN
F18Q1 = SOCSUP
F18Q2 = SOCSUP
F18Q3 = SOCSUP
F18Q4 = SOCSUP
ORGCOM = JUSTICE PROMCHAN SOCSUP
Path Diagram
Print Residuals
Method of Estimation: Diagonally Weighted Least Squares
End of Problem
```

LISREL output

L I S R E L 8.80

BY

Karl G. Jöreskog & Dag Sörbom

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7383 N. Lincoln Avenue, Suite 100
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The following lines were read from file C:\LISREL\Research\2.0 Organizational commitment\OrgCommitment.SPJ:

```
 Organisational commitment
 Observed Variables
 F9Q1 F9Q2 F9Q3 F9Q4 F9Q5
 F10Q1 F10Q2 F10Q3 F10Q4 F10Q5  F10Q6
 F15Q1 F15Q2 F15Q3 F15Q4 F15Q5
 F18Q1 F18Q2 F18Q3 F18Q4
 F19Q1 F19Q2 F19Q3 F19Q4
 F20Q1 F20Q2 F20Q3 F20Q4 F20Q5 F20Q6
 Covariance Matrix from file OrgCommitment.COV
 Asymptotic Covariance Matrix From File OrgCommitment.ACM
 Sample Size = 224
 Latent Variables  ORGCOM JUSTICE PROMCHAN SOCSUP
 Relationships
 F20Q1 = 1.13*ORGCOM
 F20Q2 = ORGCOM
 F20Q3 = ORGCOM
 F20Q4 = ORGCOM
 F20Q5 = ORGCOM
 F20Q6 = ORGCOM
 F9Q2 = JUSTICE
 F9Q3 = JUSTICE
 F9Q4 = JUSTICE
 F9Q5 = JUSTICE
 F10Q1 = JUSTICE
 F10Q2 = JUSTICE
 F10Q3 = JUSTICE
 F10Q4 = JUSTICE
 F10Q5 = JUSTICE
 F10Q6 = JUSTICE
 F15Q1 = PROMCHAN
 F15Q2 = PROMCHAN
 F15Q3 = PROMCHAN
 F15Q4 = PROMCHAN
 F15Q5 = PROMCHAN
 F18Q1 = SOCSUP
 F18Q2 = SOCSUP
 F18Q3 = SOCSUP
 F18Q4 = SOCSUP
 ORGCOM = JUSTICE PROMCHAN SOCSUP
 Path Diagram
 Print Residuals
 Method of Estimation: Diagonally Weighted Least Squares
 End of Problem

 Sample Size =   224
```

Organisational commitment

Covariance Matrix

	F20Q1	F20Q2	F20Q3	F20Q4	F20Q5	F20Q6
F20Q1	1.95					
F20Q2	0.98	0.98				
F20Q3	1.30	0.87	1.44			
F20Q4	1.32	0.89	1.28	1.74		
F20Q5	0.48	0.31	0.35	0.39	0.41	
F20Q6	0.99	0.46	0.66	0.55	0.38	2.72

F9Q2	0.23	0.31	0.24	0.24	0.13	0.16
F9Q3	0.15	0.11	0.00	0.15	-0.02	0.01
F9Q4	0.27	0.25	0.10	0.12	0.07	-0.13
F9Q5	0.41	0.35	0.33	0.47	0.20	0.10
F10Q1	0.31	0.31	0.29	0.31	0.09	0.10
F10Q2	0.21	0.24	0.24	0.24	0.13	0.18
F10Q3	0.31	0.29	0.31	0.31	0.11	0.16
F10Q4	0.18	0.17	0.12	0.21	0.09	0.15
F10Q5	0.22	0.26	0.21	0.34	0.09	0.11
F10Q6	0.19	0.19	0.14	0.21	0.05	0.21
F15Q1	0.25	0.20	0.12	0.22	0.16	0.35
F15Q2	0.34	0.30	0.25	0.28	0.17	0.30
F15Q3	0.28	0.42	0.24	0.15	0.23	0.22
F15Q4	0.22	0.24	0.15	0.11	0.15	0.27
F15Q5	0.48	0.47	0.48	0.48	0.20	0.34
F18Q1	0.41	0.50	0.48	0.50	0.24	0.54
F18Q2	0.46	0.46	0.50	0.65	0.23	0.45
F18Q3	0.31	0.43	0.41	0.39	0.14	0.33
F18Q4	0.61	0.52	0.57	0.67	0.20	0.70

Covariance Matrix

	F9Q2	F9Q3	F9Q4	F9Q5	F10Q1	F10Q2
F9Q2	0.92					
F9Q3	0.03	1.63				
F9Q4	0.10	0.22	0.83			
F9Q5	0.42	0.24	0.13	1.00		
F10Q1	0.26	0.22	0.12	0.26	0.59	
F10Q2	0.19	0.06	0.09	0.16	0.31	0.49
F10Q3	0.18	0.13	0.18	0.15	0.39	0.41
F10Q4	0.20	0.11	0.09	0.06	0.42	0.32
F10Q5	0.15	-0.06	0.18	0.06	0.08	0.04
F10Q6	0.12	0.09	0.11	0.13	0.11	0.08
F15Q1	0.28	0.05	0.05	0.44	0.07	0.07
F15Q2	0.38	0.13	0.01	0.57	0.17	0.11
F15Q3	0.53	0.27	0.11	0.52	0.34	0.21
F15Q4	0.32	0.26	-0.06	0.29	0.20	0.17
F15Q5	0.44	0.19	-0.03	0.38	0.23	0.20
F18Q1	0.35	0.12	0.16	0.36	0.26	0.37
F18Q2	0.39	0.06	0.14	0.39	0.26	0.38
F18Q3	0.27	0.10	0.07	0.36	0.22	0.26
F18Q4	0.42	0.00	0.13	0.37	0.25	0.28

Covariance Matrix

	F10Q3	F10Q4	F10Q5	F10Q6	F15Q1	F15Q2
F10Q3	0.62					
F10Q4	0.48	0.75				
F10Q5	0.10	0.14	0.88			
F10Q6	0.12	0.12	0.40	0.42		
F15Q1	0.06	0.10	0.01	-0.08	0.94	
F15Q2	0.13	0.17	0.05	-0.04	0.82	1.10
F15Q3	0.22	0.21	0.11	0.10	0.48	0.63
F15Q4	0.18	0.13	0.06	0.07	0.32	0.43
F15Q5	0.15	0.18	0.13	0.16	0.38	0.52
F18Q1	0.27	0.13	0.09	0.16	0.22	0.22
F18Q2	0.33	0.23	0.08	0.13	0.36	0.35
F18Q3	0.24	0.15	0.03	0.10	0.26	0.40
F18Q4	0.29	0.16	0.10	0.11	0.28	0.31

Covariance Matrix

	F15Q3	F15Q4	F15Q5	F18Q1	F18Q2	F18Q3
F15Q3	1.34					
F15Q4	0.55	0.87				
F15Q5	0.54	0.33	1.28			
F18Q1	0.26	0.24	0.38	1.66		
F18Q2	0.25	0.15	0.49	1.66	1.95	
F18Q3	0.24	0.27	0.42	1.12	1.14	1.18
F18Q4	0.16	0.20	0.46	1.30	1.42	1.02

Covariance Matrix

	F18Q4
F18Q4	1.60

Organisational commitment

Number of Iterations = 13

LISREL Estimates (Robust Diagonally Weighted Least Squares)
Measurement Equations

F20Q1 = 1.13*ORGCOM, Errorvar.= 0.67 , R^2 = 0.66
(0.31)
2.17

F20Q2 = 0.89*ORGCOM, Errorvar.= 0.19 , R^2 = 0.81
(0.057) (0.14)
15.67 1.38

F20Q3 = 1.01*ORGCOM, Errorvar.= 0.41 , R^2 = 0.72
(0.066) (0.22)
15.34 1.81

F20Q4 = 1.08*ORGCOM, Errorvar.= 0.58 , R^2 = 0.67
(0.068) (0.28)
15.72 2.04

F20Q5 = 0.40*ORGCOM, Errorvar.= 0.25 , R^2 = 0.40
(0.040) (0.062)
10.08 4.04

F20Q6 = 0.74*ORGCOM, Errorvar.= 2.16 , R^2 = 0.20
(0.12) (0.42)
6.02 5.19

F9Q2 = 0.56*JUSTICE, Errorvar.= 0.61 , R^2 = 0.34
(0.070) (0.16)
8.05 3.71

F9Q3 = 0.24*JUSTICE, Errorvar.= 1.57 , R^2 = 0.036
(0.13) (0.23)
1.85 6.88

F9Q4 = 0.23*JUSTICE, Errorvar.= 0.78 , R^2 = 0.062
(0.083) (0.11)
2.73 6.95

F9Q5 = 0.65*JUSTICE, Errorvar.= 0.58 , R^2 = 0.42
(0.076) (0.17)
8.55 3.48

F10Q1 = 0.56*JUSTICE, Errorvar.= 0.28 , R^2 = 0.52
(0.045) (0.088)
12.32 3.21

F10Q2 = 0.54*JUSTICE, Errorvar.= 0.19 , R^2 = 0.61
(0.034) (0.067)
15.81 2.85

F10Q3 = 0.62*JUSTICE, Errorvar.= 0.24 , R^2 = 0.61
(0.038) (0.086)
16.24 2.81

F10Q4 = 0.49*JUSTICE, Errorvar.= 0.51 , R^2 = 0.32
(0.078) (0.11)
6.27 4.72

F10Q5 = 0.30*JUSTICE, Errorvar.= 0.79 , R^2 = 0.10
(0.092) (0.13)
3.25 6.26

F10Q6 = 0.26*JUSTICE, Errorvar.= 0.35 , R^2 = 0.17
(0.056) (0.061)
4.72 5.75

F15Q1 = 0.69*PROMCHAN, Errorvar.= 0.46 , R^2 = 0.51
(0.058) (0.17)
11.85 2.74

F15Q2 = 0.87*PROMCHAN, Errorvar.= 0.34 , R^2 = 0.69
(0.048) (0.18)
18.37 1.85

F15Q3 = 0.81*PROMCHAN, Errorvar.= 0.68 , R^2 = 0.50

```
          (0.077)                  (0.20)
           10.57                    3.32

    F15Q4 = 0.56*PROMCHAN, Errorvar.= 0.56 , R² = 0.35
          (0.071)                  (0.13)
           7.85                     4.48

    F15Q5 = 0.79*PROMCHAN, Errorvar.= 0.66 , R² = 0.48
          (0.078)                  (0.20)
           10.13                    3.33

    F18Q1 = 1.24*SOCSUP, Errorvar.= 0.12 , R² = 0.93
          (0.032)                 (0.24)
           38.82                   0.50

    F18Q2 = 1.31*SOCSUP, Errorvar.= 0.24 , R² = 0.88
          (0.029)                 (0.27)
           44.88                   0.88

    F18Q3 = 0.91*SOCSUP, Errorvar.= 0.35 , R² = 0.70
          (0.040)                 (0.17)
           22.62                   2.04

    F18Q4 = 1.10*SOCSUP, Errorvar.= 0.39 , R² = 0.76
          (0.045)                 (0.23)
           24.55                   1.65
```

Structural Equations

```
   ORGCOM = 0.31*JUSTICE + 0.17*PROMCHAN + 0.24*SOCSUP, Errorvar.= 0.67  , R² = 0.33
          (0.11)         (0.092)         (0.10)                  (0.094)
           2.94           1.83            2.43                    7.12
```

Correlation Matrix of Independent Variables

	JUSTICE	PROMCHAN	SOCSUP
JUSTICE	1.00		
PROMCHAN	0.53	1.00	
	(0.07)		
	7.46		
SOCSUP	0.45	0.36	1.00
	(0.07)	(0.08)	
	6.40	4.31	

Covariance Matrix of Latent Variables

	ORGCOM	JUSTICE	PROMCHAN	SOCSUP
ORGCOM	1.01			
JUSTICE	0.51	1.00		
PROMCHAN	0.42	0.53	1.00	
SOCSUP	0.44	0.45	0.36	1.00

Goodness of Fit Statistics

Degrees of Freedom = 269
Normal Theory Weighted Least Squares Chi-Square = 1264.33 (P = 0.0)
Satorra-Bentler Scaled Chi-Square = 546.94 (P = 0.0)
Estimated Non-centrality Parameter (NCP) = 277.94
90 Percent Confidence Interval for NCP = (214.98 ; 348.67)

Minimum Fit Function Value = 2.37
Population Discrepancy Function Value (F0) = 1.25
90 Percent Confidence Interval for F0 = (0.96 ; 1.56)
Root Mean Square Error of Approximation (RMSEA) = 0.068
90 Percent Confidence Interval for RMSEA = (0.060 ; 0.076)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.00022

Expected Cross-Validation Index (ECVI) = 2.95
90 Percent Confidence Interval for ECVI = (2.67 ; 3.27)
ECVI for Saturated Model = 2.91
ECVI for Independence Model = 28.58

Chi-Square for Independence Model with 300 Degrees of Freedom = 6322.60
Independence AIC = 6372.60
Model AIC = 658.94
Saturated AIC = 650.00
Independence CAIC = 6482.90
Model CAIC = 905.99
Saturated CAIC = 2083.78

Normed Fit Index (NFI) = 0.91
Non-Normed Fit Index (NNFI) = 0.95
Parsimony Normed Fit Index (PNFI) = 0.82
Comparative Fit Index (CFI) = 0.95
Incremental Fit Index (IFI) = 0.95
Relative Fit Index (RFI) = 0.90

Critical N (CN) = 133.87

Root Mean Square Residual (RMR) = 0.095
Standardized RMR = 0.094
Goodness of Fit Index (GFI) = 0.95
Adjusted Goodness of Fit Index (AGFI) = 0.94
Parsimony Goodness of Fit Index (PGFI) = 0.79

Organisational commitment

Fitted Covariance Matrix

	F20Q1	F20Q2	F20Q3	F20Q4	F20Q5	F20Q6
F20Q1	1.95					
F20Q2	1.01	0.98				
F20Q3	1.15	0.90	1.44			
F20Q4	1.22	0.96	1.10	1.74		
F20Q5	0.46	0.36	0.41	0.44	0.41	
F20Q6	0.84	0.66	0.75	0.80	0.30	2.72
F9Q2	0.32	0.25	0.29	0.31	0.12	0.21
F9Q3	0.14	0.11	0.12	0.13	0.05	0.09
F9Q4	0.13	0.10	0.12	0.12	0.05	0.09
F9Q5	0.37	0.29	0.33	0.35	0.13	0.24
F10Q1	0.32	0.25	0.29	0.30	0.11	0.21
F10Q2	0.31	0.24	0.28	0.30	0.11	0.20
F10Q3	0.35	0.28	0.32	0.34	0.13	0.23
F10Q4	0.28	0.22	0.25	0.27	0.10	0.18
F10Q5	0.17	0.14	0.15	0.16	0.06	0.11
F10Q6	0.15	0.12	0.14	0.14	0.05	0.10
F15Q1	0.33	0.26	0.29	0.31	0.12	0.22
F15Q2	0.41	0.32	0.37	0.39	0.15	0.27
F15Q3	0.39	0.30	0.35	0.37	0.14	0.25
F15Q4	0.26	0.21	0.24	0.25	0.09	0.17
F15Q5	0.37	0.29	0.33	0.36	0.13	0.24
F18Q1	0.62	0.49	0.56	0.59	0.22	0.41
F18Q2	0.66	0.51	0.59	0.62	0.23	0.43
F18Q3	0.46	0.36	0.41	0.44	0.16	0.30
F18Q4	0.55	0.43	0.50	0.53	0.20	0.36

Fitted Covariance Matrix

	F9Q2	F9Q3	F9Q4	F9Q5	F10Q1	F10Q2
F9Q2	0.92					
F9Q3	0.14	1.63				
F9Q4	0.13	0.05	0.83			
F9Q5	0.36	0.16	0.15	1.00		
F10Q1	0.31	0.13	0.13	0.36	0.59	
F10Q2	0.31	0.13	0.12	0.35	0.30	0.49
F10Q3	0.35	0.15	0.14	0.40	0.34	0.33
F10Q4	0.27	0.12	0.11	0.31	0.27	0.26
F10Q5	0.17	0.07	0.07	0.19	0.17	0.16
F10Q6	0.15	0.06	0.06	0.17	0.15	0.14
F15Q1	0.21	0.09	0.08	0.24	0.20	0.20
F15Q2	0.26	0.11	0.10	0.30	0.26	0.25
F15Q3	0.24	0.10	0.10	0.28	0.24	0.23
F15Q4	0.17	0.07	0.07	0.19	0.16	0.16
F15Q5	0.23	0.10	0.09	0.27	0.23	0.22
F18Q1	0.31	0.13	0.13	0.36	0.31	0.30
F18Q2	0.33	0.14	0.13	0.38	0.33	0.32
F18Q3	0.23	0.10	0.09	0.27	0.23	0.22
F18Q4	0.28	0.12	0.11	0.32	0.28	0.27

Fitted Covariance Matrix

	F10Q3	F10Q4	F10Q5	F10Q6	F15Q1	F15Q2
F10Q3	0.62					
F10Q4	0.30	0.75				
F10Q5	0.19	0.15	0.88			
F10Q6	0.16	0.13	0.08	0.42		
F15Q1	0.23	0.18	0.11	0.10	0.94	
F15Q2	0.28	0.22	0.14	0.12	0.60	1.10
F15Q3	0.27	0.21	0.13	0.11	0.56	0.71
F15Q4	0.18	0.14	0.09	0.08	0.39	0.49
F15Q5	0.26	0.20	0.12	0.11	0.54	0.69
F18Q1	0.34	0.27	0.17	0.15	0.31	0.39
F18Q2	0.36	0.29	0.18	0.15	0.32	0.41
F18Q3	0.25	0.20	0.12	0.11	0.23	0.28
F18Q4	0.31	0.24	0.15	0.13	0.27	0.34

Fitted Covariance Matrix

	F15Q3	F15Q4	F15Q5	F18Q1	F18Q2	F18Q3
F15Q3	1.34					
F15Q4	0.45	0.87				
F15Q5	0.64	0.44	1.28			
F18Q1	0.36	0.25	0.35	1.66		
F18Q2	0.38	0.26	0.37	1.62	1.94	
F18Q3	0.27	0.18	0.26	1.13	1.19	1.18
F18Q4	0.32	0.22	0.31	1.37	1.44	1.01

Fitted Covariance Matrix

	F18Q4
F18Q4	1.60

Fitted Residuals

	F20Q1	F20Q2	F20Q3	F20Q4	F20Q5	F20Q6
F20Q1	0.00					
F20Q2	-0.03	0.00				
F20Q3	0.15	-0.03	0.00			
F20Q4	0.10	-0.07	0.19	0.00		
F20Q5	0.03	-0.05	-0.06	-0.05	0.00	
F20Q6	0.15	-0.20	-0.10	-0.25	0.08	0.00
F9Q2	-0.09	0.06	-0.05	-0.07	0.01	-0.05
F9Q3	0.01	0.00	-0.13	0.02	-0.07	-0.08
F9Q4	0.14	0.15	-0.02	0.00	0.03	-0.22
F9Q5	0.04	0.06	-0.01	0.12	0.07	-0.15
F10Q1	-0.01	0.06	0.00	0.01	-0.03	-0.11
F10Q2	-0.10	0.00	-0.04	-0.05	0.02	-0.03
F10Q3	-0.05	0.01	0.00	-0.03	-0.02	-0.07
F10Q4	-0.10	-0.04	-0.13	-0.06	-0.01	-0.03
F10Q5	0.04	0.12	0.06	0.17	0.02	-0.01
F10Q6	0.04	0.07	0.00	0.06	0.00	0.12
F15Q1	-0.07	-0.05	-0.17	-0.10	0.04	0.13
F15Q2	-0.08	-0.02	-0.12	-0.11	0.02	0.03

F15Q3	-0.11	0.12	-0.11	-0.22	0.09	-0.03
F15Q4	-0.04	0.03	-0.08	-0.15	0.05	0.10
F15Q5	0.10	0.18	0.14	0.13	0.06	0.09
F18Q1	-0.21	0.01	-0.08	-0.10	0.02	0.14
F18Q2	-0.20	-0.05	-0.09	0.03	0.00	0.02
F18Q3	-0.14	0.07	0.00	-0.04	-0.03	0.03
F18Q4	0.06	0.09	0.07	0.14	0.00	0.34

Fitted Residuals

	F9Q2	F9Q3	F9Q4	F9Q5	F10Q1	F10Q2
F9Q2	0.00					
F9Q3	-0.11	0.00				
F9Q4	-0.03	0.16	0.00			
F9Q5	0.05	0.08	-0.01	0.00		
F10Q1	-0.06	0.08	0.00	-0.10	0.00	
F10Q2	-0.12	-0.07	-0.03	-0.19	0.01	0.00
F10Q3	-0.17	-0.02	0.03	-0.25	0.05	0.08
F10Q4	-0.08	0.00	-0.02	-0.25	0.15	0.06
F10Q5	-0.02	-0.14	0.11	-0.13	-0.08	-0.12
F10Q6	-0.03	0.03	0.05	-0.05	-0.03	-0.07
F15Q1	0.08	-0.04	-0.04	0.20	-0.13	-0.13
F15Q2	0.12	0.01	-0.10	0.27	-0.08	-0.14
F15Q3	0.29	0.16	0.01	0.24	0.10	-0.03
F15Q4	0.15	0.19	-0.13	0.11	0.04	0.01
F15Q5	0.20	0.09	-0.12	0.11	0.00	-0.02
F18Q1	0.03	-0.02	0.03	0.00	-0.05	0.07
F18Q2	0.06	-0.08	0.00	0.01	-0.07	0.06
F18Q3	0.04	0.00	-0.03	0.09	-0.01	0.04
F18Q4	0.14	-0.12	0.02	0.05	-0.02	0.01

Fitted Residuals

	F10Q3	F10Q4	F10Q5	F10Q6	F15Q1	F15Q2
F10Q3	0.00					
F10Q4	0.18	0.00				
F10Q5	-0.08	0.00	0.00			
F10Q6	-0.04	-0.01	0.32	0.00		
F15Q1	-0.17	-0.07	-0.10	-0.17	0.00	
F15Q2	-0.15	-0.05	-0.09	-0.16	0.22	0.00
F15Q3	-0.05	0.00	-0.02	-0.01	-0.09	-0.08
F15Q4	0.00	-0.01	-0.02	-0.01	-0.07	-0.05
F15Q5	-0.11	-0.02	0.00	0.05	-0.16	-0.17
F18Q1	-0.07	-0.14	-0.07	0.01	-0.09	-0.17
F18Q2	-0.03	-0.05	-0.10	-0.02	0.04	-0.06
F18Q3	-0.01	-0.05	-0.09	-0.01	0.04	0.11
F18Q4	-0.01	-0.08	-0.05	-0.02	0.00	-0.03

Fitted Residuals

	F15Q3	F15Q4	F15Q5	F18Q1	F18Q2	F18Q3
F15Q3	0.00					
F15Q4	0.09	0.00				
F15Q5	-0.10	-0.11	0.00			
F18Q1	-0.10	0.00	0.03	0.00		
F18Q2	-0.14	-0.11	0.12	0.04	0.00	
F18Q3	-0.02	0.08	0.16	-0.02	-0.05	0.00
F18Q4	-0.16	-0.02	0.15	-0.07	-0.02	0.02

Fitted Residuals

	F18Q4
F18Q4	0.00

Summary Statistics for Fitted Residuals

```
Smallest Fitted Residual =   -0.25
  Median Fitted Residual =    0.00
 Largest Fitted Residual =    0.34
```

Stemleaf Plot

```
- 2|555
- 2|22100
- 1|9777777666555
- 1|444443333332222211111110000000000
- 0|99999988888888887777777777776666555555555555555555
- 0|44444443333333333333332222222222222222221111111111110000000000000000000+29
  0|11111111111122222222333333333334444444444
  0|555555666666666677777888888999999
  1|000011112222223344444
  1|55555566678899
  2|0024
  2|79
  3|24
```

Standardized Residuals

	F20Q1	F20Q2	F20Q3	F20Q4	F20Q5	F20Q6
F20Q1	- -					
F20Q2	-0.37	- -				
F20Q3	1.98	-0.68	- -			
F20Q4	0.69	-1.26	2.64	- -		
F20Q5	0.43	-1.21	-1.25	-0.88	- -	
F20Q6	0.74	-1.42	-0.51	-1.19	1.21	- -
F9Q2	-0.80	0.83	-0.59	-0.65	0.20	-0.40
F9Q3	0.05	-0.02	-1.01	0.10	-1.09	-0.45
F9Q4	1.18	2.10	-0.21	-0.03	0.59	-1.72
F9Q5	0.34	0.87	-0.05	1.12	1.62	-0.98
F10Q1	-0.19	1.22	0.00	0.12	-0.74	-1.01
F10Q2	-1.21	-0.07	-0.56	-0.68	0.53	-0.29
F10Q3	-0.55	0.17	-0.06	-0.38	-0.51	-0.77
F10Q4	-1.04	-0.63	-1.53	-0.59	-0.23	-0.31
F10Q5	0.39	1.70	0.62	1.73	0.50	-0.04
F10Q6	0.55	1.52	0.04	0.91	-0.02	1.43
F15Q1	-0.75	-0.75	-2.25	-0.97	0.85	1.02
F15Q2	-0.76	-0.32	-1.39	-1.02	0.37	0.22
F15Q3	-0.76	1.38	-0.84	-1.67	1.62	-0.21
F15Q4	-0.45	0.48	-0.89	-1.26	1.24	0.84
F15Q5	0.93	2.47	1.54	1.20	1.12	0.67
F18Q1	-1.25	0.15	-0.62	-0.69	0.30	0.78
F18Q2	-1.15	-0.46	-0.74	0.16	-0.01	0.11
F18Q3	-1.10	0.86	-0.03	-0.37	-0.48	0.22
F18Q4	0.37	1.03	0.63	1.10	0.01	2.05

Standardized Residuals

	F9Q2	F9Q3	F9Q4	F9Q5	F10Q1	F10Q2
F9Q2	- -					
F9Q3	-1.08	- -				
F9Q4	-0.40	1.77	- -			
F9Q5	0.84	0.78	-0.19	- -		
F10Q1	-1.09	1.08	-0.07	-1.79	- -	
F10Q2	-2.39	-0.95	-0.67	-3.48	0.33	- -
F10Q3	-2.90	-0.23	0.63	-3.95	1.58	6.02
F10Q4	-1.25	-0.04	-0.33	-3.63	3.96	1.39
F10Q5	-0.27	-1.33	1.55	-1.99	-1.55	-2.21
F10Q6	-0.57	0.42	1.06	-0.96	-0.94	-1.85
F15Q1	1.10	-0.41	-0.54	3.14	-2.34	-2.40
F15Q2	1.59	0.15	-1.33	4.71	-1.49	-2.56
F15Q3	3.76	1.33	0.14	3.21	1.64	-0.38
F15Q4	2.15	2.01	-1.86	1.51	0.70	0.19
F15Q5	2.76	0.83	-1.46	1.35	-0.03	-0.37
F18Q1	0.35	-0.10	0.34	-0.03	-0.70	1.25
F18Q2	0.64	-0.50	0.05	0.13	-0.96	0.95
F18Q3	0.54	0.02	-0.37	1.34	-0.19	0.89
F18Q4	1.62	-0.86	0.18	0.57	-0.34	0.12

Standardized Residuals

	F10Q3	F10Q4	F10Q5	F10Q6	F15Q1	F15Q2
F10Q3	- -					
F10Q4	3.94	- -				
F10Q5	-1.40	-0.06	- -			
F10Q6	-0.98	-0.26	9.70	- -		
F15Q1	-2.86	-1.11	-1.41	-3.21	- -	
F15Q2	-2.63	-0.80	-1.23	-3.12	7.19	- -
F15Q3	-0.62	0.00	-0.23	-0.20	-1.13	-1.19
F15Q4	-0.05	-0.19	-0.34	-0.11	-0.94	-0.74

F15Q5	-1.49	-0.29	0.03	0.98	-2.34	-2.52
F18Q1	-0.90	-1.47	-0.66	0.15	-0.92	-1.59
F18Q2	-0.38	-0.55	-0.86	-0.30	0.39	-0.60
F18Q3	-0.13	-0.62	-0.98	-0.10	0.46	1.44
F18Q4	-0.18	-0.95	-0.47	-0.29	0.02	-0.33

Standardized Residuals

	F15Q3	F15Q4	F15Q5	F18Q1	F18Q2	F18Q3
F15Q3	- -					
F15Q4	1.27	- -				
F15Q5	-1.15	-1.35	- -			
F18Q1	-0.79	-0.03	0.31	- -		
F18Q2	-1.06	-1.12	1.13	2.39	- -	
F18Q3	-0.24	1.13	1.86	-0.33	-1.20	- -
F18Q4	-1.35	-0.17	1.45	-1.12	-0.56	0.29

Standardized Residuals

	F18Q4
F18Q4	- -

Summary Statistics for Standardized Residuals

Smallest Standardized Residual = -3.95
Median Standardized Residual = -0.06
Largest Standardized Residual = 9.70

Stemleaf Plot

```
- 3|96521
- 2|996654433320
- 1|998776655555444443333333322222221111111110000000000
- 0|99999999988888888777777777666666666665555555554444444444443333333333333+66
  0|11111111122222223333334444444555555666666777788888889999999
  1|000111111112222223333444445555566666677789
  2|001114568
  3|1289
  4|07
  5|
  6|0
  7|2
  8|
  9|7
```

Largest Negative Standardized Residuals

Residual for	F10Q2	and	F9Q5	-3.48
Residual for	F10Q3	and	F9Q2	-2.90
Residual for	F10Q3	and	F9Q5	-3.95
Residual for	F10Q4	and	F9Q5	-3.63
Residual for	F15Q1	and	F10Q3	-2.86
Residual for	F15Q1	and	F10Q6	-3.21
Residual for	F15Q2	and	F10Q3	-2.63
Residual for	F15Q2	and	F10Q6	-3.12

Largest Positive Standardized Residuals

Residual for	F20Q4	and	F20Q3	2.64
Residual for	F10Q3	and	F10Q2	6.02
Residual for	F10Q4	and	F10Q1	3.96
Residual for	F10Q4	and	F10Q3	3.94
Residual for	F10Q6	and	F10Q5	9.70
Residual for	F15Q1	and	F9Q5	3.14
Residual for	F15Q2	and	F9Q5	4.71
Residual for	F15Q2	and	F15Q1	7.19
Residual for	F15Q3	and	F9Q2	3.76
Residual for	F15Q3	and	F9Q5	3.21
Residual for	F15Q5	and	F9Q2	2.76

Time used: 5.422 Seconds

Model 3 – Organisational commitment

SIMPLIS project file

```
Turnover
Observed Variables
F1Q1 F1Q2 F1Q3 F2Q1 F2Q2 F2Q3 F5Q1 F5Q2 F5Q3 F5Q4
F17Q1 F17Q2 F17Q3 F17Q4 F17Q5 F17Q6 F20Q1 F20Q2 F20Q3
F20Q4 F20Q5 F20Q6 F21Q1 F21Q2 F21Q3 F21Q4 F22Q1 F22Q2
F22Q3 F22Q4 F22Q5
Covariance Matrix from file Turnover.COV
Asymptotic Covariance Matrix From File Turnover.ACM
Sample Size = 224
Latent Variables  INTTOSTA SEARBEH JOBOPP JOBOPP2 GENTRAIN ORGCOM JOBSAT
Relationships
F21Q1 = 0.41*SEARBEH
F21Q3 = SEARBEH
F21Q4 = SEARBEH
F22Q1 = 0.83*INTTOSTA
F22Q2 = INTTOSTA
F22Q3 = INTTOSTA
F22Q4 = INTTOSTA
F22Q5 = INTTOSTA
F1Q1 = JOBOPP
F1Q2 = JOBOPP
F1Q3 = JOBOPP
F2Q1 = JOBOPP
F2Q3 = JOBOPP
F5Q1 = GENTRAIN
F5Q2 = GENTRAIN
F5Q3 = GENTRAIN
F5Q4 = GENTRAIN
F17Q1 = JOBSAT
F17Q2 = JOBSAT
F17Q3 = JOBSAT
F17Q4 = JOBSAT
F17Q5 = JOBSAT
F17Q6 = JOBSAT
F20Q1 = ORGCOM
F20Q2 = ORGCOM
F20Q3 = ORGCOM
F20Q4 = ORGCOM
F20Q5 = ORGCOM
INTTOSTA = SEARBEH
INTTOSTA = JOBOPP GENTRAIN
SEARBEH = ORGCOM JOBSAT
Set the Variance of JOBOPP to 1.00
Set the Variance of GENTRAIN to 1.00
Set the Variance of ORGCOM to 1.00
Set the Variance of JOBSAT to 1.00
Set the Error Covariance of F17Q6 and F17Q1 Free
Path Diagram
Method of Estimation: Diagonally Weighted Least Squares
End of Problem
```

LISREL output

L I S R E L 8.80

BY

Karl G. Jöreskog & Dag Sörbom

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7383 N. Lincoln Avenue, Suite 100
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The following lines were read from file C:\LISREL\Research\3.0 Turnover\Turnover.SPJ:

```
Turnover
Observed Variables
F1Q1 F1Q2 F1Q3 F2Q1 F2Q2 F2Q3 F5Q1 F5Q2 F5Q3 F5Q4
F17Q1 F17Q2 F17Q3 F17Q4 F17Q5 F17Q6 F20Q1 F20Q2 F20Q3
F20Q4 F20Q5 F20Q6 F21Q1 F21Q2 F21Q3 F21Q4 F22Q1 F22Q2
F22Q3 F22Q4 F22Q5
Covariance Matrix from file Turnover.COV
Asymptotic Covariance Matrix From File Turnover.ACM
Sample Size = 224
Latent Variables  INTTOSTA SEARBEH JOBOPP JOBOPP2 GENTRAIN ORGCOM JOBSAT
Relationships
F21Q1 = 0.41*SEARBEH
F21Q3 = SEARBEH
F21Q4 = SEARBEH
F22Q1 = 0.83*INTTOSTA
F22Q2 = INTTOSTA
F22Q3 = INTTOSTA
F22Q4 = INTTOSTA
F22Q5 = INTTOSTA
F1Q1 = JOBOPP
F1Q2 = JOBOPP
F1Q3 = JOBOPP
F2Q1 = JOBOPP
F2Q3 = JOBOPP
F5Q1 = GENTRAIN
F5Q2 = GENTRAIN
F5Q3 = GENTRAIN
F5Q4 = GENTRAIN
F17Q1 = JOBSAT
F17Q2 = JOBSAT
F17Q3 = JOBSAT
F17Q4 = JOBSAT
F17Q5 = JOBSAT
F17Q6 = JOBSAT
F20Q1 = ORGCOM
F20Q2 = ORGCOM
F20Q3 = ORGCOM
F20Q4 = ORGCOM
F20Q5 = ORGCOM
INTTOSTA = SEARBEH
INTTOSTA = JOBOPP GENTRAIN
SEARBEH = ORGCOM JOBSAT
Set the Variance of JOBOPP to 1.00
Set the Variance of GENTRAIN to 1.00
Set the Variance of ORGCOM to 1.00
Set the Variance of JOBSAT to 1.00
```

Set the Error Covariance of F17Q6 and F17Q1 Free
Path Diagram
Method of Estimation: Diagonally Weighted Least Squares
End of Problem

Sample Size = 224

Turnover

Covariance Matrix

	F21Q1	F21Q3	F21Q4	F22Q1	F22Q2	F22Q3
F21Q1	0.60					
F21Q3	0.35	0.46				
F21Q4	0.45	0.47	1.18			
F22Q1	-0.34	-0.40	-0.68	0.80		
F22Q2	-0.37	-0.46	-0.86	0.87	1.22	
F22Q3	-0.34	-0.23	-0.44	0.54	0.63	3.36
F22Q4	-0.31	-0.32	-0.62	0.58	0.69	0.62
F22Q5	-0.20	-0.17	-0.48	0.45	0.48	0.48
F1Q1	-0.11	-0.06	-0.25	0.19	0.26	0.11
F1Q2	-0.08	-0.09	-0.27	0.21	0.30	0.15
F1Q3	-0.14	-0.14	-0.39	0.32	0.45	0.07
F2Q1	-0.04	-0.05	-0.19	0.16	0.18	0.12
F2Q3	-0.09	-0.07	-0.27	0.23	0.29	0.05
F5Q1	0.18	0.12	0.41	-0.11	-0.02	-0.71
F5Q2	0.33	0.27	0.51	-0.19	-0.19	-0.17
F5Q3	0.10	-0.13	0.03	-0.01	-0.04	0.16
F5Q4	0.25	0.20	1.21	-0.47	-0.56	0.49
F17Q1	-0.20	-0.30	-0.55	0.60	0.71	0.14
F17Q2	-0.20	-0.29	-0.47	0.50	0.60	0.26
F17Q3	-0.18	-0.27	-0.52	0.68	0.79	0.44
F17Q4	-0.19	-0.27	-0.53	0.52	0.61	0.14
F17Q5	-0.14	-0.28	-0.48	0.40	0.54	0.07
F17Q6	-0.09	-0.14	-0.39	0.34	0.38	0.22
F20Q1	-0.36	-0.43	-0.79	0.81	0.99	0.91
F20Q2	-0.21	-0.25	-0.53	0.50	0.67	0.50
F20Q3	-0.29	-0.40	-0.62	0.63	0.80	0.54
F20Q4	-0.24	-0.30	-0.57	0.69	0.79	0.80
F20Q5	-0.18	-0.15	-0.32	0.25	0.29	0.30

Covariance Matrix

	F22Q4	F22Q5	F1Q1	F1Q2	F1Q3	F2Q1
F22Q4	0.68					
F22Q5	0.49	0.62				
F1Q1	0.13	0.19	0.66			
F1Q2	0.13	0.12	0.53	0.53		
F1Q3	0.21	0.17	0.59	0.61	0.82	
F2Q1	0.15	0.20	0.32	0.27	0.32	0.49
F2Q3	0.16	0.14	0.34	0.34	0.52	0.48
F5Q1	-0.15	-0.13	-0.65	-0.54	-0.70	-0.59
F5Q2	-0.29	-0.29	-0.53	-0.40	-0.56	-0.51
F5Q3	0.08	0.02	-0.21	-0.06	-0.11	-0.20
F5Q4	-0.57	-0.52	-1.29	-0.76	-1.14	-1.01
F17Q1	0.48	0.37	0.06	0.15	0.24	0.09
F17Q2	0.42	0.31	0.08	0.12	0.18	0.06
F17Q3	0.58	0.44	0.14	0.13	0.17	0.00
F17Q4	0.43	0.32	0.08	0.13	0.19	0.05
F17Q5	0.31	0.19	0.05	0.13	0.22	0.07
F17Q6	0.29	0.31	0.04	0.07	0.11	0.10
F20Q1	0.73	0.60	0.27	0.23	0.36	0.25
F20Q2	0.48	0.39	0.11	0.14	0.20	0.13
F20Q3	0.58	0.44	0.17	0.13	0.23	0.18
F20Q4	0.67	0.58	0.22	0.17	0.26	0.21
F20Q5	0.22	0.19	0.15	0.12	0.15	0.15

Covariance Matrix

	F2Q3	F5Q1	F5Q2	F5Q3	F5Q4	F17Q1
F2Q3	0.71					
F5Q1	-0.60	6.25				
F5Q2	-0.61	3.35	3.91			
F5Q3	-0.26	1.65	1.17	2.27		
F5Q4	-0.98	7.34	5.61	4.44	23.42	
F17Q1	0.15	0.31	0.17	0.22	-0.16	1.01
F17Q2	0.11	0.24	0.23	0.19	-0.03	0.81
F17Q3	0.06	0.21	0.01	-0.07	-0.26	0.77
F17Q4	0.11	0.50	0.21	0.32	0.19	0.77
F17Q5	0.11	0.40	0.15	0.21	-0.12	0.63
F17Q6	0.11	-0.04	-0.06	0.04	-0.17	0.43
F20Q1	0.25	-0.46	-0.52	-0.04	-0.49	0.67
F20Q2	0.10	0.01	0.00	0.13	0.25	0.63
F20Q3	0.13	0.18	0.04	0.15	0.21	0.69
F20Q4	0.20	-0.33	0.10	0.03	0.31	0.77
F20Q5	0.17	-0.26	-0.19	-0.14	-0.41	0.19

Covariance Matrix

	F17Q2	F17Q3	F17Q4	F17Q5	F17Q6	F20Q1
F17Q2	0.84					
F17Q3	0.72	1.56				
F17Q4	0.71	0.63	0.98			
F17Q5	0.60	0.42	0.64	0.98		
F17Q6	0.37	0.33	0.36	0.34	0.56	
F20Q1	0.59	0.85	0.53	0.44	0.32	1.95
F20Q2	0.58	0.62	0.44	0.50	0.33	0.98
F20Q3	0.62	0.79	0.61	0.57	0.36	1.30
F20Q4	0.68	0.88	0.64	0.51	0.41	1.32
F20Q5	0.21	0.16	0.22	0.20	0.11	0.48

Covariance Matrix

	F20Q2	F20Q3	F20Q4	F20Q5
F20Q2	0.98			
F20Q3	0.87	1.44		
F20Q4	0.89	1.28	1.74	
F20Q5	0.31	0.35	0.39	0.41

Turnover

Number of Iterations = 30

LISREL Estimates (Robust Diagonally Weighted Least Squares)
Measurement Equations

F21Q1 = 0.41*SEARBEH, Errorvar.= 0.43 , R^2 = 0.28
(0.097)
4.49

F21Q3 = 0.47*SEARBEH, Errorvar.= 0.24 , R^2 = 0.47
(0.069) (0.071)
6.75 3.42

F21Q4 = 0.87*SEARBEH, Errorvar.= 0.43 , R^2 = 0.64
(0.14) (0.17)
6.23 2.44

F22Q1 = 0.83*INTTOSTA, Errorvar.= 0.11 , R^2 = 0.87
(0.12)
0.86

F22Q2 = 1.00*INTTOSTA, Errorvar.= 0.21 , R^2 = 0.83
(0.041) (0.19)
24.65 1.10

F22Q3 = 0.65*INTTOSTA, Errorvar.= 2.94 , R^2 = 0.12
(0.086) (0.49)
7.49 5.95

F22Q4 = 0.74*INTTOSTA, Errorvar.= 0.13 , R^2 = 0.80
(0.030) (0.10)
24.77 1.30

F22Q5 = 0.58*INTTOSTA, Errorvar.= 0.28 , R^2 = 0.55
(0.035) (0.094)
16.72 2.96

F1Q1 = 0.70*JOBOPP, Errorvar.= 0.17 , R^2 = 0.75
(0.022) (0.098)
31.21 1.72

F1Q2 = 0.71*JOBOPP, Errorvar.= 0.026 , R^2 = 0.95
(0.011) (0.072)
63.14 0.36

F1Q3 = 0.84*JOBOPP, Errorvar.= 0.11 , R^2 = 0.86
(0.017) (0.11)
50.87 1.01

F2Q1 = 0.55*JOBOPP, Errorvar.= 0.18 , R^2 = 0.63
(0.026) (0.068)
21.25 2.60

F2Q3 = 0.69*JOBOPP, Errorvar.= 0.23 , R^2 = 0.67
(0.032) (0.098)
21.47 2.38

F5Q1 = 2.07*GENTRAIN, Errorvar.= 1.96 , R^2 = 0.69
(0.24) (1.38)
8.66 1.42

F5Q2 = 1.69*GENTRAIN, Errorvar.= 1.06 , R^2 = 0.73
(0.14) (0.70)
11.73 1.52

F5Q3 = 0.79*GENTRAIN, Errorvar.= 1.65 , R^2 = 0.27
(0.13) (0.34)
6.09 4.84

F5Q4 = 3.69*GENTRAIN, Errorvar.= 9.77 , R^2 = 0.58
(0.42) (4.12)
8.81 2.37

F17Q1 = 0.93*JOBSAT, Errorvar.= 0.14 , R^2 = 0.86
(0.024) (0.14)
38.53 0.96

F17Q2 = 0.83*JOBSAT, Errorvar.= 0.15 , R^2 = 0.82
(0.025) (0.12)
33.83 1.25

F17Q3 = 0.90*JOBSAT, Errorvar.= 0.74 , R^2 = 0.52
(0.11) (0.26)
8.56 2.81

F17Q4 = 0.81*JOBSAT, Errorvar.= 0.32 , R^2 = 0.67
(0.042) (0.15)
19.12 2.17

F17Q5 = 0.68*JOBSAT, Errorvar.= 0.51 , R^2 = 0.48
(0.067) (0.16)
10.17 3.13

F17Q6 = 0.50*JOBSAT, Errorvar.= 0.31 , R^2 = 0.44
(0.052) (0.086)
9.55 3.63

F20Q1 = 1.18*ORGCOM, Errorvar.= 0.56 , R^2 = 0.71
(0.064) (0.32)
18.28 1.79

F20Q2 = 0.82*ORGCOM, Errorvar.= 0.31 , R^2 = 0.68
(0.035) (0.14)
23.16 2.23

F20Q3 = 1.02*ORGCOM, Errorvar.= 0.39 , R^2 = 0.73
(0.050) (0.21)
20.54 1.84

F20Q4 = 1.09*ORGCOM, Errorvar.= 0.56 , R^2 = 0.68
(0.064) (0.27)
17.09 2.10

F20Q5 = 0.39*ORGCOM, Errorvar.= 0.26 , R^2 = 0.36
(0.044) (0.063)
8.92 4.16

Error Covariance for F17Q6 and F17Q1 = -0.04
(0.031)
-1.18

Structural Equations

INTTOSTA = - 0.96*SEARBEH + 0.11*JOBOPP - 0.025*GENTRAIN, Errorvar.= 0.014,R^2= 0.99
(0.16) (0.055) (0.090) (0.045)
-6.01 2.00 -0.28 0.31

SEARBEH = - 0.60*ORGCOM - 0.28*JOBSAT, Errorvar.= 0.30 , R^2 = 0.70
(0.23) (0.23) (0.12)
-2.61 -1.20 2.40

Reduced Form Equations

INTTOSTA = 0.11*JOBOPP - 0.025*GENTRAIN + 0.58*ORGCOM + 0.27*JOBSAT, Errorvar.= 0.29, R^2 = 0.71
(0.055) (0.090) (0.21) (0.22)
2.00 -0.28 2.81 1.23

SEARBEH = 0.0*JOBOPP + 0.0*GENTRAIN - 0.60*ORGCOM - 0.28*JOBSAT, Errorvar.= 0.30, R^2 = 0.70
(0.23) (0.23)
-2.61 -1.20

Correlation Matrix of Independent Variables

	JOBOPP	GENTRAIN	ORGCOM	JOBSAT
JOBOPP	1.00			
GENTRAIN	-0.41	1.00		
	(0.07)			
	-5.95			
ORGCOM	0.33	-0.11	1.00	
	(0.08)	(0.09)		
	4.39	-1.30		
JOBSAT	0.22	0.08	0.73	1.00
	(0.08)	(0.09)	(0.09)	
	2.67	0.82	8.53	

Covariance Matrix of Latent Variables

	INTTOSTA	SEARBEH	JOBOPP	GENTRAIN	ORGCOM	JOBSAT
INTTOSTA	1.00					
SEARBEH	-0.98	0.99				
JOBOPP	0.37	-0.26	1.00			
GENTRAIN	-0.11	0.05	-0.41	1.00		
ORGCOM	0.82	-0.81	0.33	-0.11	1.00	
JOBSAT	0.72	-0.72	0.22	0.08	0.73	1.00

Goodness of Fit Statistics

Degrees of Freedom = 338
Normal Theory Weighted Least Squares Chi-Square = 1933.66 (P = 0.0)
Satorra-Bentler Scaled Chi-Square = 726.84 (P = 0.0)
Estimated Non-centrality Parameter (NCP) = 388.84
90 Percent Confidence Interval for NCP = (314.98 ; 470.44)

Minimum Fit Function Value = 1.94
Population Discrepancy Function Value (F0) = 1.74
90 Percent Confidence Interval for F0 = (1.41 ; 2.11)
Root Mean Square Error of Approximation (RMSEA) = 0.072
90 Percent Confidence Interval for RMSEA = (0.065 ; 0.079)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.00

Expected Cross-Validation Index (ECVI) = 3.87
90 Percent Confidence Interval for ECVI = (3.54 ; 4.24)
ECVI for Saturated Model = 3.64
ECVI for Independence Model = 57.04

Chi-Square for Independence Model with 378 Degrees of Freedom = 12664.90
Independence AIC = 12720.90
Model AIC = 862.84
Saturated AIC = 812.00
Independence CAIC = 12844.43
Model CAIC = 1162.83
Saturated CAIC = 2603.13

Normed Fit Index (NFI) = 0.94
Non-Normed Fit Index (NNFI) = 0.96
Parsimony Normed Fit Index (PNFI) = 0.84
Comparative Fit Index (CFI) = 0.97
Incremental Fit Index (IFI) = 0.97
Relative Fit Index (RFI) = 0.94

Critical N (CN) = 124.16

Root Mean Square Residual (RMR) = 0.16
Standardized RMR = 0.076
Goodness of Fit Index (GFI) = 0.98
Adjusted Goodness of Fit Index (AGFI) = 0.97
Parsimony Goodness of Fit Index (PGFI) = 0.81

Time used: 13.344 Seconds