WORK COMMITMENT: ITS DIMENSIONS AND RELATIONSHIPS WITH ROLE STRESS AND INTENTION TO QUIT

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This work, unless otherwise indicated in the text, is the result of the individual effort of the author and is accordingly my own work.

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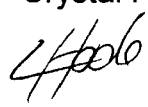

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ABSTRACT

A renewed interest in work has developed world-wide during the last decade. One of the reasons for this is that organizations are responding to the changing economic, social, technological and environmental demands in ways that are fundamentally transforming the nature of organizations and the meaning of work for employees. Work has changed tremendously, not only in nature but also its importance. The current demands placed on organizations and employees include, among others, global competition, cost-cutting, down-sizing and restructuring and information processing on a large scale. It is intuitive to think that these changes and demands will affect employees in some way or the other. For many employees changes brought different job descriptions, more roles to fulfil and more complicated tasks to complete with more uncertainty and less clear-cut instructions.

The work commitment construct has been part of a lively debate since Morrow's (1983) call for a moratorium on the development of further work commitment measures due to the existence of concept redundancy within and among the work commitment facets. It has been proposed that the work commitment construct consists of four main facets i.e. job involvement, organizational commitment, career commitment and work values. It has been unclear up to now on how these facets are interrelated. The relationships between the work commitment facets, role strain and intention to quit have also not been studied together in a single study before.

The current study investigated the underlying dimensions of the work commitment construct, the underlying dimensions of each proposed facet, as well as determined the relationships among the work commitment facets, role strain and intention to quit, based on a large diverse South African sample. This was done by using Exploratory and Confirmatory Factor Analyses, the calculation of intercorrelations and Structural Equation Modeling. Each instrument was standardized for South African conditions.

The results indicated that although the instruments were portable to South Africa, unique results and factors were obtained. Promising results were obtained with regard to the causal relationships among the variables.

Key words: Work commitment, job involvement, organizational commitment, career commitment, work values, role conflict, role ambiguity, intention to quit, redundancy, underlying dimensions.

EKSERP

'n Hernuude belangstelling in werk het wêreldwyd gedurende die laaste dekade ontwikkel. Een van die redes wat hiervoor aangevoer kan word is dat organisasies moet reageer op die veranderende ekonomie, sosiale, tegnologiese en omgewings eise op maniere wat die aard van organisasies transformeer asook die betekenis van werk vir werknemers. Werk het geweldig verander, in aard en belangrikheid. Die huidige eise wat aan organisasies en werknemers gestel word sluit onder andere in wêreldwye kompetisie, koste besnoeiing, afskaling en die herstrukturering van inligtingsprosesse op groot skaal. Dit is intuitief om te dink dat hierdie veranderinge en eise werknemers op een of ander wyse sal beïnvloed. Hierdie veranderinge het vir baie werknemers veranderende posbeskrywings meegebring, gepaardgaande met meer rolle om te vervul asook meer ingewikkelde take om te verrig wat meer onsekerheid en minder duidelike riglyne bevat.

Sommige navorsers is van mening dat hierdie veranderinge werknemers se lojalitiet en betrokkenheid verminder, terwyl ander meen dat dit eerder betrokkenheid vermeerder. Individue reageer verskillend op veranderinge. Sommige ervaar rolspanning en ander verlaat die diens van hulle organisasie.

Die werksbetrokkenheidkonstruk is al 'n geruime tyd deel van 'n lewendige debat sedert Morrow (1983) gevra het vir 'n moratorium op die ontwikkeling van verdere werksbetrokkenheid intrumente as gevolg van die bestaan van oorbodigheid in en tussen die werksbetrokkenheid fasette. Dit is veronderstel dat die werksbetrokkenheidkonstruk uit vier hoof fasette bestaan naamlik posbetrokkenheid, organisasie betrokkenheid, loopbaanbetrokkenheid en werkswaardes. Dit is tot op hede nog onseker oor hoe hierdie konstrukte aan mekaar verwant is. Die verwantskappe tussen die werksbetrokkenheid fasette, rol spanning en die intensie om te bedank was ook nog nie van te vore in een studie bestudeer nie.

Die huidige studie het die onderliggende dimensies van die werksbetrokkenheidkonstruk, die onderliggende dimensies van elke voorgestelde faset ondersoek asook die verwantskappe bepaal tussen die werksbetrokkenheidfasette, rolspanning en die intensie om te bedank, gebaseer op 'n groot diverse Suid Afrikaanse steekproef. Dit is gedoen deur gebruik te maak van Eksploratiewe en Bevestigende Faktorontleding, die berekening van interkorrelasies en die Struktuursvergelykende benadering. Elke instrument was vir Suid Afrikaanse toestande gehervalideer.

Die resultate toon dat alhoewel hierdie instrumente redelik oordraagbaar is vir Suid Afrikaanse toestande, unieke resultate en faktore verkry is. Die resultate hou groot belofte in vir toekomstige navorsing.

Sleutelwoorde: Werksbetrokkenheid, posbetrokkenheid, organisasie betrokkenheid, loopbaanbetrokkenheid, werk waardes, rolkonflik, rolverwarring, intensie om te bedank, oorbodigheid, onderliggende dimensies.

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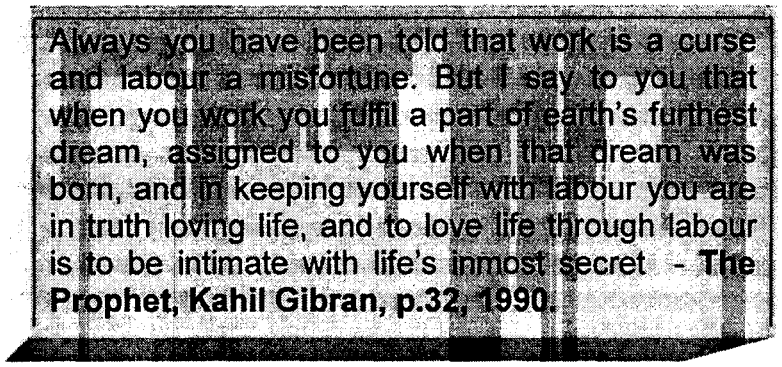

Chapter 1: The problem and its setting

1.1 Organizations and their environments are changing

We are living in a world of organizational turmoil with severe competitive pressures, rapidly changing markets and technologies and the ever increasing demands to do more with less influencing organizations. During the last decade a renewed interest in work has, under these circumstances, developed worldwide. One of the reasons for this renewed interest is that internationally organizations are responding to the changing economic, social, technological and environmental demands in ways that are fundamentally transforming the nature of organizations and the meaning of work for employees (Fay, 1995; Lawler, 1995; Wickens, 1995).

Organizations are under these circumstances rediscovering that people are their most important asset and consequently are looking for ways to increase their employees' levels of work commitment. As long as there have been human beings, work, in some form or the other, formed a central part of man's life. As the centuries passed on, as with many other things, work changed not only the nature of work but also the importance of work. The current demands placed on organizations and employees result in, amongst others, global competition, cost-cutting, down-sizing and restructuring, high percentages of unemployment and information processing on a large scale. Other changes occurred. Inside organizations knowledge became the sought after "prize", women entered the working force in rapidly increasing numbers and organizations continuously have to adapt to the changes around them and within themselves. Automation has replaced many jobs previously done by human beings; managers now have to retrench people while their task for many years was to recruit. New, flexible, constantly changing organizational structures came into being. How do these changes affect individuals in organizations? How do employees cope with the demands made upon them? For many employees changes brought different job descriptions, more roles to fulfil and more complicated tasks to carry out with more uncertainty and less

clear-cut instructions (Wickens, 1995). It is now not uncommon for one employee to fulfil various roles inside and even across the boundaries of an organization, to report to more than one manager and to be responsible for several projects at the same time.

1.2 What are the effects of these changes?

In earlier work (Lawler, 1986) it was argued that these changes increased commitment. Later authors (Shore, Brett & Reilly, 1994; Richer and Fay, 1995) stated that the opposite was true. Longitudinal studies in this regard are clearly needed. Individuals can react to these changes in various ways. They may experience higher levels of role conflict and role ambiguity, resulting in higher levels of stress, unexplained absence from work and in the "worst case" scenario, employees may leave the organizations in large numbers. Turnover has long been a serious problem for organizations. A high rate of employee turnover in an organization means increased recruiting, selection and training costs (Robbins, 1997). Although turnover is not always negative (for instance when an unproductive or under-performing employee leaves the organization) it is often highly skilled and valuable employees who tend to leave the organization. Employees suffering from role stress such as work overload, role conflict and role ambiguity may display a higher propensity to leave the organization.

The technological revolution of human work has been accompanied by fragmentation of labour and increasing complexity and bureaucratization of organizations (Super and Šverko, 1995). Consequently work has for some members of the workforce become a monotonous, repetitive and seemingly meaningless routine. For others it became a game of survival. This is partially reflected in the change of work patterns, as seen in the increasing number of people working part-time, working from home and working in the informal sector. Where work previously had important functions in an individual's life such as an economic function - earning a living -, a social function allowing people to meet, interact and socialize, and provided status and self-fulfilment (Super and Sverko, 1995), this may no longer be true. If this is true, and the

Redefining work project piloted by the Royal Society of Arts (RSA Journal, 1996, 1997) seems to be a good indication that it is, one cannot help to wonder how these changes in the importance of work are affecting employees' work commitment. Although the importance of work is not in the scope of the present study, it is valid to ask how committed people are to work today.

1.3 What is work commitment?

It is postulated that the levels of work commitment of employees can have serious implications for their organization's productivity. But what are we talking about when we talk about work commitment? According to a review of the literature, it is still unclear what work commitment consists of. Whilst extensive studies have been undertaken on the meaning or importance of work, for instance the Work Importance Study which started in 1979 and carried on until 1989 in which 21 countries participated at various stages (Super and Šverko, 1995), few studies investigated the different facets of work commitment in a single study, or investigated the relationships among all the work commitment facets and other variables such as role strain and intention to quit.

Morrow (1983) suggested that work commitment comprised of five different constructs / facets viz. organization, career, job, value and union. She further suggested that a certain degree of redundancy existed among these and other similar constructs. Various studies investigated the notion that some of these facets were redundant and both supporting and non-supporting results were obtained. Morrow, Eastman and McElroy (1991) investigated the validity of the proposed five work commitment constructs via content analysis. They included the Protestant Work Ethic, career salience, job involvement, work as a central life interest and organizational commitment facets in their study. They found that some degree of concept redundancy existed among three of the constructs namely between job involvement, career salience and work as a central life interest. Organizational commitment and Protestant Work Ethic scales demonstrated the least redundancy, i.e. appeared to clearly separate concepts.

Blau, Paul and St John (1993) also tested for work commitment redundancy among four facets i.e. career, job, value and organization. Union commitment was not included in their study due to the fact that not all the respondents were members of unions. They further endeavoured to develop a general work commitment index. Their results indicated that the four constructs represented distinctive work commitment facets. At a closer investigation of their results it was found that the career facet collapsed into a more specific occupational referent (Blau et al. 1993, p.311). They prompted researchers to use the same referent within a particular overall work commitment scale.

A review of the literature indicates that this aspect in particular caused some problems in certain work commitment constructs i.e. different definitions for the same construct are offered using different referents e.g. career commitment vs occupational commitment (Blau et al., 1993), job involvement vs work involvement (Kanungo, 1982) and organizational commitment vs group commitment (Reichers, 1985). It is difficult to measure these facets if we do not even agree on the definition of each facet.

In the light of the above discussion it is still not absolutely clear what work commitment consists of and, within the different work commitment facets, what the referent is of each of the facets (does job involvement use work or job as a referent and is career or occupation the referent of career commitment?) as well as what the interrelationships among these constructs are. According to Randall and Cote (1991, p.194) the theoretical linkages among the major forms of work commitment are not readily apparent and are not fully understood. Reichers (1986) stated that the systematic examination of multiple forms of work commitment is still in its infancy. Although a work commitment causal model was developed by Randall and Cote (1991), the fit between the model and the data was not very good. Possible reasons offered for the poor fit were random measurement error, flaws within the measures themselves, the influence of possible overlap between constructs, or the relationships among the constructs indicated in the model might be different from those specified.

1.4 What should be studied?

A review of the literature provides strong support for the notion of inadequate measuring instruments in the work commitment field (Kanungo, 1982; Morrow, 1983; Ramsey, Lassk & Marshall, 1995). The need to develop measures that meet conventional validity standards has often been emphasized (Osigwe, 1989; Venkatraman and Grant, 1986; Morrow, Eastman and McElroy, 1991). It is therefore crucial that the measures for each work commitment construct be revalidated and more clearly defined. This aspect is also especially important regarding the portability of instruments across different cultures and countries (Hoole and Boshoff, 1997; Stimpson, Huefner, Narayanan & Shanthakumar, 1992). The majority of instruments have been developed in the U.S.A and pose several problems with regard to interpretability and generalizabilty (Bhagat, Kedia, Crawford & Kaplan, 1990). There is clearly a need for better instruments to be developed (Blau et al., 1993).

Additional theoretical development and empirical determination of the contents of the facets and their relationships are therefore necessary. The nomological net surrounding the work commitment constructs must in other words be more extensively investigated and redefined.

A multivariate approach to work commitment research will advance understanding of how the various pieces in the work commitment puzzle fit together and how constellations of work commitment facets influence outcome variables such as absenteeism, performance and productivity (Randall and Cote, 1991). More light needs to be shed on the relationship among work commitment facets and variables such as role strain and intention to quit.

It is therefore the aim of the present study to a) try and determine the underlying dimensions of work commitment and its facets and b) to investigate the relationships among the work commitment facets, role stress (role conflict and role ambiguity) and intention to quit. To facilitate this process the following research questions must be answered:

- What are the underlying dimensions of each of the four (?) main work commitment facets?
- What are the main underlying dimensions of the work commitment construct?
- What are the relationships among the work commitment facets, role stress (role conflict and role ambiguity) and intention to quit?

In order to be able to answer these questions, a large and diverse sample (three South African organizational subgroups) will be studied. It is felt that the diverse nature of the sample will greatly enhance the results, for instance, greater generalizability will be achieved. Powerful statistical analysis approaches such as structural equation modeling in the form of Confirmatory Factor Analysis and the testing of causal relationships among a number of variables require large samples. Factor loadings tend, for instance, to be much more stable in larger samples than in smaller samples (Thorndike, 1982). Another benefit is that the results can be cross validated, adding to the validity and reliability of the results of the study.

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Chapter 2: Literature study

2.1 Overview of the work commitment construct, its facets and their relationships.

2.1.1 Job Involvement

2.1.1.1 Definition

The job involvement facet of work commitment has received considerable attention from researchers over the last three decades. A review of the literature reveals a lack of consensus of what job involvement consists of. Morrow (1983) stated that the literature regarding job involvement was ambiguous, resulting in inconclusive findings and inconsistent measuring of job involvement.

It seems as if the differences of opinion originated in the definition of job involvement, developed by Lodahl and Kejner (1965). Although previous work on job involvement had been done (Allport, 1943; Vroom, 1962), Lodahl and Kejner (1965) were the first to attempt to define job involvement precisely and to develop an instrument to operationalize the construct. They defined job involvement as "the degree to which a person is identified psychologically with his work" and as "the degree to which a person's work performance affects his self-esteem" (Lodahl and Kejner, 1965, p.25).

To amount to further confusion, a proliferation of terms existed, resulting in studies lacking agreement concerning what job involvement represented. For instance, Allport (1943) stated that job involvement is defined in terms of the degree to which employees are participating in their jobs, meeting needs such as prestige and autonomy. This was supported by Wickert (1951) and Bass (1965). Dubin (1956) defined job involvement as the degree to which the job situation is a central life-interest where the job is perceived as the main source for the satisfaction of important needs, versus non-job orientated activities. This was similar to the views of Lodahl and Kejner (1965) and later Lawler and Hall (1970) who defined job involvement as the degree to which the job satisfaction is central to the person and his psychological identity. Another

conceptualization was posed by Gurin, Veroff and Feld (1960) and French and Kahn (1962) who defined job involvement as the degree to which the employee perceives that job performance is central to his self-esteem.

Kanungo defined job involvement as the degree to which one psychologically identifies with one's job, a cognitive or belief state of psychological identification with a particular job (Kanungo, 1982, p.342). He further argued that a person's psychological identification with the job depends on both need saliency and perceptions about the job's potential for satisfying the salient needs.

Other terms which have been used in almost synonymous fashion with job involvement are ego-involvement performance (Vroom, 1962), intrinsic motivation (Lawler and Hall, 1970) and Protestant Work Ethic (Weber, 1947).

Researchers seem to agree that the psychological identification dimension is part of the job involvement construct (Kanungo, 1982; Lawler and Hall, 1970; Saleh and Hosek, 1976) but disagree whether the performance self-esteem element and active participation are dimensions of job involvement. The literature indicates a conceptual overlap between performance self-esteem job involvement, Protestant Work Ethic and intrinsic motivation, between active participation job involvement and participative leadership and task perceptions such as autonomy and skill variety (Blau, 1985a). Blau (1985a) investigated the possible overlap between intrinsic motivation (as measured by Lawler and Hall (1972), job involvement as the psychological identification with one's job (as proposed by Kanungo, 1982), and job involvement as proposed by Lodahl and Kejner (1965) where the performance self-esteem contingency and psychological identification dimensions are operationalized. Principal Factor Analysis was carried out on the responses of the participants and a two factor solution was obtained. Blau (1985a) found that all Kanungo's items except for the negative worded item loaded on one factor. The items of the Lodahl and Kejner (1965) scale were confounded with the intrinsic motivation items. In order to retest his initial findings, Blau (1985a) conducted a second study where he investigated the possible overlap among the performance-self-

esteem contingency dimension of job involvement (as proposed by French and Kahn, 1962), active participation dimension (developed by Allport, 1943), central life-interest dimension (Lawler and Hall, 1970), Protestant Work Ethic (Weber, 1947), skill variety (Job Characteristic Inventory by Sims, Szilagyi & Keller, 1976), participative leadership (Leader Behaviour Description Questionnaire developed by Hemphill and Coons, 1957) and intrinsic motivation (Lawler, 1969). A series of factor analyses were carried out to determine the discriminant validity of the various dimensions and to test their independence. Multiple loading problems were found between the performance-self-esteem job involvement dimension and intrinsic motivation, and between participative leadership and decision influence job involvement items. Blau (1985a) reported that only the psychological identification job involvement conceptualization was empirically independent.

According to Morrow (1983), this low epistemic correlation (weak link between its conceptual definition and its operationalization (Northrop, 1959)) which existed in earlier definitions led to confusion in related research resulting in inconclusive findings and the development of poor measuring instruments. Kaplan (1990, p.76) suggested that for research to be cumulative and directed, a clear definition and a common purpose are necessary. This is in accordance with the views expressed in this regard by Kerlinger (1986).

2.1.1.2 Measuring instruments

Lodahl and Kejner (1965)

As mentioned earlier on, Lodahl and Kejner (1965) were the first to attempt to operationalize the concept and develop an instrument for measuring job involvement. They defined job involvement as "the degree to which a person is identified psychologically with his work, or the importance of work in his total self-image" (Lodahl and Kejner, 1965, p.24).

Lodahl and Kejner (1965) developed a 20-item scale. They originally collected 110 statements from interview protocols, existing questionnaires, other researchers and self-invented items. All duplicate items were eliminated until

87 items were left over. These items were reviewed by judges who were asked to rate each item on a scale of one to eleven (one represents a very low degree of job involvement and eleven represents a very high degree of job involvement). Forty seven items were eliminated. The remaining forty items were cast into a four point Likert scale and administered to 137 nursing personnel. A total job involvement score was calculated for each respondent. The total score and the data from the 40 items were intercorrelated and factor analyzed. Lodahl and Kejner (1965) extracted seven factors (using Varimax rotation) containing at least more than two items each loading .30 or higher. The seven factors accounted for 77% of the communality. The last two factors had zero loadings for the total job involvement score and were subsequently not interpreted.

The items were further reduced to 20 items based on the item-total correlations, the communality of an item and the factorial clarity of the item. The items were then administered to a sample of engineers (N=70). For comparison purposes, the responses to the final 20 items were rescored for the nurses. The total and item scores were then intercorrelated and factor analyzed. Lodahl and Kejner (1965) found in both samples that the most variance in the total job involvement score appeared on the first axis (.99 for the nurses and .96 for the engineers respectively), indicating a general job involvement factor. However, for the nurses only six items had their highest loadings on this general factor and for the engineers eleven items. More factors were extracted and a three factor solution was found for the nurses and a four factor solution for the engineers. The first two factors were very similar (although the second and third factor for the engineer sample had opposite signs). The first factor was interpreted as high job involvement, the second factor as an indifferent response to work, and the third factor as the "rejection of extra duties and of the general notion of work as a measure of self" (Lodahl and Kejner, 1965, p. 30). The fourth factor for the engineers seemed to deal with boredom and the unimportance of work.

Lodahl and Kejner (1965) found their scale to have adequate reliability (corrected split-half correlations for the total scale in different samples ranged

between .72 and .89) with some discriminant ability. They further stated that job involvement was multidimensional and probably not a very internally consistent attitude.

Other researchers such as Lefkowitz (1967) offered support for the multidimensional nature of job involvement, Schwyhart and Smith (1972) and Wood (1974) who used the Lodahl and Kejner (1965) scale.

The Lodahl and Kejner (1965) scale has often been under considerable scrutiny and criticism. According to Rabinowitz and Hall (1977), Lodahl and Kejner never clearly named the dimensions of job involvement (Lodahl and Kejner (1965) never indicated whether they recommended a three or four factor solution). Other studies found that its factor structure was not stable across different samples. Schwyhart and Smith (1972) found three interpretable factors of which only one of the factor was similar to one of the factors found by Lodahl and Kejner (1965). Wood (1974) found five factors using the 20-item scale of Lodahl and Kejner (1965).

According to Morrow (1983), the measures resulting from Lodahl and Kejner's (1965) definition were not deductively formulated in order to operationalize either conceptual notion included in the original definition. They arrived at their measures inductively through factor analytic procedures. The Lodahl and Kejner measures were thus not based on any apriori definition or theoretical framework.

Lodahl and Kejner also developed shorter scales (from the original 20-item scale) with six and four items respectively. The six-item scale was composed by using the six items with the highest loadings on the first factor from the 20-item scale developed by Lodahl and Kejner (1965). Lodahl and Kejner (1965) reported a correlation of .87 between the 20-item and the six-item scale. The six-item version had in later studies multiple loading problems on psychological identification of job involvement and intrinsic motivation (Cummings and Bigelow, 1976; Lawler and Hall, 1970).

Ramsey, Lassk and Marshall (1995) critically evaluated the use of the Lodahl and Kejner (1965) scales (20-, 6-, and 3-item scales respectively) by means of the LISREL 7 programme (Jöreskog and Sorbom, 1989) on a sample of 290 salespeople employed by an insurance company. The Cronbach Alphas for the three versions were .79, .70 and .69 for the 20-item, 6-item and 4-item versions respectively. In order to assess the dimensionality of the three scales, the sample was split in halves and the results were cross validated. Hypothesis tests by means of Chi-square for the twenty- and six-item scale led to the rejection of the null hypothesis but the null-hypothesis could not be rejected for the four-item scale. It seemed as if the four-item scale was more representative of a unidimensional construct of job involvement than the other two versions and provided the best fit of the three scales. The fit indices obtained from the subsample were at comparable levels and the scales therefore all appeared to be stable.

In order to assess the validity of the three scales, the correlations among job involvement, job satisfaction, job performance (using the Behrman and Perreault (1982) five-dimension measure of salesperson job performance), motivation and the seven dimensions of a reduced version of the INDSALES scale (Comer, Machleit & Lagace, 1989) were calculated. The twenty-item job involvement scale was significantly correlated with all seven dimensions of the INDSALES scale. The six-item scale correlated significantly with all the dimensions of the INDSALES scale except satisfaction with co-workers and the four-item scale correlated significantly with all the dimensions but two dimensions of job satisfaction (i.e. pay and co-workers). None of the job involvement scales correlated significantly with the job performance dimension of providing input to the company. However, the twenty-item job involvement scale correlated significantly positively with three dimensions of the job performance scale i.e. meeting objectives, technical expertise and controlling expenses. The six-item scale correlated significantly with four dimensions of job performance i.e. meeting objectives, technical expertise, controlling expenses and customer interaction. The four-item scale correlated significantly with the meeting objectives and customer interaction dimensions of job performance. The six and four-item scales correlated significantly with

intrinsic and extrinsic motivation, and the twenty-item scale correlated significantly with intrinsic motivation. The authors did not provide the values of the correlation coefficients. With N=290 a correlation coefficient could be indicating very little common variance and still be significant.

Ramsey et al. (1995) concluded that the assessment of the three versions of the Lodahl and Kejner (1965) scale yielded generally acceptable reliabilities, unstable dimensionalities and mixed results in terms of validities. They further concluded that although more studies would be needed, the results strongly implied that caution should be taken in the use of Lodahl and Kejner (1965) scale. It is unclear from the Ramsey et al. (1995) description of their study how they reached the conclusion regarding the instability of the dimensionality of the scales.

Kanungo (1982) stated that the biggest cause for conceptual ambiguity is the excess meaning attached to job involvement. As a result, the measurement instruments lack construct validity. According to Kanungo (1982) the excess meaning of job involvement can be seen in past conceptualizations where job involvement was confused with intrinsic motivation, researchers have confused the antecedent conditions with the state of job involvement and its subsequent effects and the terms work and job were used interchangeably (Kanungo, 1982, p.341).

Kanungo (1982)

Kanungo (1982) proposed a ten-item measure of job involvement which he felt was more representative of the psychological identification conceptualization of job involvement. Kanungo's (1982) scale built on Lodahl and Kejner's (1965) work and included four of the items of the original scale that appeared to tap the "psychological identification" dimension unambiguously (Kaplan, 1990, p. 78).

Kanungo (1982) made a very important distinction between work and job involvement. He stated that due to the conceptual confusion between work centrality and job involvement that is seen in the literature, instruments

designed to measure these constructs suffer from construct validity problems. Later researchers also indicated that some instruments measure involvement with the present job, others involvement with work in general (Pauley, Alliger and Stone-Ramero, 1994) but most measure both of these constructs without distinguishing between the two (i.e. measures developed by Lodahl and Kejner, 1965; Saleh and Hosek, 1976). Some of the items in the Lodahl and Kejner (1965) scale clearly illustrate this. Items such as "I live, eat, breath my job" refer to the importance of a job while other items such as "Most things in life are more important than work" refer to the importance of work in general (Paulley, Alliger and Stone-Ramero, 1994). Work involvement is seen as a relatively enduring belief about the value of work in one's life, transcending a specific job (Kanungo, 1982) and involving psychological identification and engagement with one's career or work in general. Job involvement should be seen as including the worker's psychological identification with a specific job context (Blau, 1985a; Kanungo, 1982). Evidence for the distinction between job and work involvement was obtained when Kanungo (1982, p.344) found two clearly separate factors when the items in his job and work involvement scales were factorily analyzed together.

Kanungo (1982) used three different measurement formats in the development of his job involvement scale namely a questionnaire, semantic differential and a graphic technique. Questionnaire items that reflected a cognitive state of psychological identification with one's job were judged by 10 graduate students. There was complete agreement on twelve items, however, after item analyses, two items were dropped. For the semantic differential, six graduate students identified eleven bipolar items (using available literature and dictionaries for synonyms and antonyms) on which there were total agreement. Three items were dropped on the basis of inter-item and item-total correlation. Two graphic items representing psychological identification were selected for the graphic scale. The final questionnaire was administered to 900 French and English speaking employees who were enrolled for extension courses at three different universities. Seven hundred and three questionnaires were returned. A parallel study (N=63) was performed at two

of the universities to establish test-retest reliabilities of the measures. The questionnaires were in this part of the study administered three weeks apart.

The Alpha coefficients for the three measures of job involvement were .81 (semantic differential), .87 (questionnaire) and .70 (graphic items). The test-retest coefficients were .74, .85 and .82 respectively (in the same order).

Kanungo (1982) reported after further analysis of this data that his job involvement scale had acceptable convergent and discriminant validity and indicated that job involvement proved to be a unidimensional construct. This was supported by various studies (Blau, 1985; Blau, Paul & St John, 1993; Brooke, Russel & Price, 1988; Boshoff and Hoole (1998); Kaplan, 1990). The reported internal reliabilities for the Kanungo scale are uniformly high, generally between .83 and .87 (Kaplan, 1990, p.157). Kaplan (1990) further reported that Kanungo's (1982) job involvement scale's factor structure seemed to be stable across samples and even cultures. Similar factor structures were obtained using French and English Canadian employees (Kanungo, 1982), American nurses and several categories of university employees (Blau, 1985) and English and Afrikaans South African professionals (Boshoff, Bennett & Kellerman, 1994; Kamfer and Venter, 1997; Kaplan, 1990).

Studies of Kanungo's (1982) scale have therefore shown this instrument to be superior to previous measures of job involvement (Blau, 1985a; Boshoff and Bennett, 1991; Morrow, 1993; Paterson and O'Driscoll, 1990; Paulley, Alliger & Stone-Ramero, 1994). Some studies reported that one of the items (Item 7) made a poor contribution to the job involvement scale (Paterson and O'Driscoll, 1990; Blau, 1985a). Blau et al. (1993) reported that items 3, 6, and 7 respectively exhibited multiple loading problems in a study performed by them. Kanungo was further criticized for the fact that his sample consisted of mainly educated people (Paulley, Alliger & Stone-Ramero, 1994). Paulley et al. (1994) further argued that the theory behind Kanungo's framework that job involvement is the cognitive aspect of job satisfaction was somewhat problematic and that his results pointed to a redundancy possibility between

job involvement and job satisfaction rather than the distinction between the two constructs.

Other less frequently used job involvement instruments

Vroom

Vroom (1962) developed a one-item measure to determine a respondent's level of job involvement. He asked the respondents one question namely, "if a problem comes up in your work and it isn't all settled by the time you go home, how likely is it that you will find yourself thinking about it after work?" He gave his respondents four possible choice responses i.e. I am almost sure to think about it after work; there is a pretty good chance I'll think about it; I probably wouldn't think about it; and I am almost sure I wouldn't think about it (Vroom, 1962). Saal (1978) correlated the Lodahl and Kejner (1965) scale with the one item proposed by Vroom to determine whether they measured the same concept. He found that the two measures had 17,6 % variance in common. Vroom's (1962) measure suffers from restricted range of measurement and cannot be recommended for further use. The reliability of a one-item measure must obviously be in serious doubt due to the degree of error variance included.

Saleh and Hosek

Saleh and Hosek (1976) assembled a 65-item job involvement scale including all measures used in previous studies (Dubin, 1955; French and Kahn, 1962; Iverson and Reuder, 1956; Lodahl and Kejner, 1965; Vroom, 1962, 1964; and Wickert, 1951). The formats of a few items were changed so that all the items could be answered on a five-point Likert scale. Two different samples were used. The first sample consisted of 140 male and 105 female undergraduate university students and the second sample consisted of 380 respondents from the sales department of a large insurance company (Saleh and Hosek, 1976).

Factor analysis was performed on responses of both samples and a three factor structure was the clearest and most interpretable solution. The three factors could be interpreted as active participation, central life interest and the

importance of performance with valued-self items. The three factors only accounted for 37% of variance in the student sample and 29% in the employee sample. In order to reduce the error variance, Saleh and Hosek (1976) eliminated all items not loading .4 on one factor and less than .35 on the other factors. The remaining items (with 16, 19, 10 items respectively per scale) were administered twice to 24 university students and the test-retest coefficient were .70, .79 and .77 for the three factors respectively. The test-retest reliability of the total scale was .82. The final three factors were interpreted as active participation in the job, central life interest and perceiving performance as central to self-esteem.

Kanungo (1982) criticised the Saleh and Hosek (1976) scale by pointing out that they confused the antecedent conditions of job involvement with the state of job involvement.

Brown (1996) reported that the Saleh and Hosek (1976) measure incorporates considerable extraneous conceptual content, in addition to the core meaning of the cognitive state of psychological identification with one's job. Brown (1996) further concluded that it had little empirical use and cannot be recommended for measuring job involvement.

Farrell and Rusbult

Farrell and Rusbult, 1981; Rusbult and Farell, 1983) developed a job commitment approach. They viewed job commitment as a function of job satisfaction, job alternatives and the magnitude of the individual's investment in a job. They defined job commitment as the extent to which an employee perceives he/she is connected to a job.

Rusbult and Farrell (1983) suggested that job commitment is a complex, multi-determined phenomenon. Commitment referred to the likelihood that an individual will stick with a job, and feel psychologically attached to it, whether it is satisfying or not. Their usage of job commitment included both a behavioural and attitudinal commitment component. They developed five items for their commitment scale (see Farrell and Rusbult, 1983).

Koslowski, Caspy & Lazar (1990) conducted a factor analytical study to investigate the intercorrelations among six jobs, organizational and value commitment scales. Koslowski et al. (1990) found redundancy between Rusbult and Farrell's job commitment scale and measures of organizational commitment. They concluded, however, that the redundancy might more be the result of the quality of the measuring instruments used than due to conceptual overlap, since each scale had its highest loadings on a different factor in a simultaneous (all items from all scales included) factor analysis.

Jans

Jans (1985) distinguished between job involvement (psychological identification with the job or position occupied at a specific time) and specialization involvement (psychological identification with the specialization or employment area of which the job is part). Jans (1985) conducted a study on 360 military personnel to investigate the influence of organizational factors (based on Schein's (1978) career cone concepts of three ways of career movement in an organization, i.e. vertical, horizontal and radial) on job involvement and specialization involvement. Jans (1985) used rank and career factors as the vertical representation, participation in decision making as the radial representation and self-expression as the horizontal dimension.

Jans (1985) used hierarchical multiple regression to assess the contribution of each independent variable to the variance of the dependent variable. His sample consisted of 360 military officers. He found that rank had no influence on job involvement. Participation in decision-making and career factors had significant relationships with job involvement but did not contribute to the explained variance when self-expression was included in the equation. Jans (1985) further found that self-expression and career factors accounted for the same amount of variance in explaining specialization involvement. These relationships appeared to be somewhat unstable when the sample was broken up in hierarchical subsamples.

Jans (1985) further stated that when a person is doing a job where his self-image can be expressed, the person becomes involved in that job. This job

involvement influences feelings about the wider specialization of which that job is part, enhancing specialization involvement. Job involvement is influenced by the congruence between the person and his functional place in the organization. Specialization involvement is influenced by both the person's functional position and other factors such as changes in ranking, authority and pay.

Morrow (1993) pointed out that the value and generalizability of Jans' (1985) measure is limited by the exclusive use of military samples. It may be useful to replicate Jans' (1985) study on other than military samples.

2.1.1.3 Summary

Although there are quite a few job involvement measuring instruments available, it seems as if the Lodahl and Kejner (1965) and Kanungo (1982) instruments are the most widely used. One cannot, however, ignore the fact that both these instruments, as well as the other job involvement instruments have been criticised.

In the light of the discussion of the various instruments, it seems as if the main problem is the lack of a well-defined conceptual framework for each instrument. How can one measure job involvement if it is not clear what job involvement conceptually consists of? Some instruments clearly carry excess meaning, for instance the Saleh and Hosek (1976) scale which included eight different measures in one instrument. Other reasons can be offered for existing problems due to the methodology used in various studies. Firstly, the samples consisted mainly of fairly educated people and pose some problems in terms of representativeness and generalizability. In some cases the sample sizes were too small, especially with regard to the item-respondent ratio which should be 5-10 times the number of respondents to the number of items. It is also quite possible that the available instruments do not measure the whole concept of job involvement, in other words the instruments suffer from restriction in breadth of measurement.

However, Kanungo's instrument seems to have very strong psychometric properties and can be used very fruitfully. The Lodahl and Kejner (1965) scale is also a wider measurement of job involvement although it is not sure exactly what it measures.

It is fair to conclude that more refinement of the job involvement facet is necessary. One cannot expect to measure job involvement and study its relationships with other variables if it is not clear what job involvement represents and how it should be measured.

2.1.2 Organizational commitment

2.1.2.1 Definition

Organizational commitment is probably the most widely studied facet of work commitment. However, several researchers have over a long period voiced their concern with regard to the lack of conceptual clarity in the organizational commitment facet (Akhtar & Chan, 1997; Morrow, 1983; Oliver, 1990; Reichers, 1985). O'Reilly and Chatman (1986) noted that the lack of consensus is manifested in the remarkable degree of variation in how commitment is defined. Oliver (1990) suggested that one reason for the definitional problems is that researchers tend to define the concept in terms of its outcomes and antecedents rather than what it conceptually represents.

Two main approaches have been followed in studying organizational commitment namely attitudinal and behavioural. In the attitudinal approach, commitment is seen as the result of a combination of work experiences, perceptions of the organization and personal characteristics which leads to positive feelings about the organization (Mowday, Porter & Steers, 1982). Angle and Perry (1983) used exchange theory to explain how commitment is in terms of the attitudinal approach established through the receipt of rewards from the organization.

The behavioural approach to organizational commitment is concerned with the process by which individuals come to develop a sense of commitment to their

own actions or, put differently, as a result of engaging in committing behaviours (Becker, 1964; Brown, 1996; Hrebiniak and Alutto, 1972; Oliver, 1990).

Both the attitudinal/affective and the behavioural approaches seem to have a common basis namely the link between the individual and the organization and his/her desire to remain with the organization.

Types of commitment

Affective commitment (Attitudinal approach)

Affective commitment is the most widely used and studied form of organizational commitment. It seems as if the attitudinal or affective dimension originated in the work of Buchanan (1974). He divided commitment into three components i.e. "identification -adopting the goals and values of the organization, involvement - psychological immersion or absorption in the activities of one's work role, and finally loyalty - a feeling of affection for and attachment to the organization" (Buchanan, 1974,p.533). He viewed commitment as essentially a partisan, affective attachment to the goals and values of the organization of an organization, to one's role in relation to goals and values and to the organization for its own sake (Buchanan, 1974, p.533).

Porter, Steers, Mowday & Boulian (1974, p.604) in line with Buchanan's (1974) views defined organizational commitment as a strong belief in and acceptance of the organization's goals and values, a willingness to exert considerable effort on behalf of the organization and a definite desire to maintain organizational membership, containing an attitudinal as well as a strong behavioural component. To operationalize their definition they developed the Organizational Commitment Questionnaire which will be discussed under the subheading dimensions and measuring instruments.

Calculative/Continuance commitment (Behavioural approach)

Calculative commitment has its roots in the work of Becker (1960). Becker tried to identify the core of organizational commitment and saw the notion of

consistent behaviour as underpinning it. According to Becker (1960), the level of commitment is determined by side bets made. He further stated that there are three elements central to the commitment process. Firstly, the individual's decision has consequences for other interests and activities (not necessarily related to his/her work), secondly the person placed her/himself in that position through earlier actions, and thirdly the person is aware of the fact that (s) he has made a side bet which may have consequences. The consistent line of activity or behaviour refers to maintaining membership in the organization. The side bet (or several side bets) can refer to anything of value the individual has invested (e.g. time, money) that would be lost if the person would leave the organization (Meyer and Allen, 1984). The cost to the individual of leaving the organization may be too great when calculated resulting in ongoing commitment. Calculative commitment has also been called continuance commitment. The two concepts are very similar in nature. According to Morrow (1993, p.99) the only distinction is that in addition to the perceived losses associated with leaving the organization, continuance commitment includes the determination of the perceived ease of movement from one organization to another.

Becker's (1960) side bet theory has been operationalized by Ritzer and Trice (1969) and Hrebiniak and Alutto (1972). Building on the work of Becker (1960), Ritzer and Trice (1969) originally developed an instrument to measure this form of commitment. This instrument was later refined by Hrebiniak and Alutto (1972). Hrebiniak and Alutto (1972) defined organizational commitment as a structural phenomenon which occurs as a result of individual-organizational transactions and alterations in side bets or investments over time (Hrebiniak and Alutto, 1972, p.556).

Meyer and Allen (1984) proposed a different form of continuance commitment since they felt that the scale developed by Hrebiniak and Alutto (1972) measured affective/attitudinal commitment rather than continuance commitment. They argued that an alternative explanation for an individual's willingness to maintain membership when the attractiveness of other opportunities is high, might be his/her level of affective commitment to the

organization. In other words an individual whose commitment is based on continuance commitment will also remain with his/her organization because he/she needs to do so. Meyer and Allen (1984) further stated that existing measures of calculative/continuance commitment did not make provision for this alternative explanation.

Normative commitment

This kind of commitment is the belief that one has a responsibility to the organization in which you are employed. Normative commitment has been conceptualized for the first time by Etzioni (1961). Individuals experiencing this kind of commitment regard themselves as bound to an organization of which they are members because they have internalized the norms and identified with organizational values. Wiener defined this kind of commitment as the "totality of internalized normative pressures to act in a way which meets organizational goals and interests" (Wiener, 1982, p.421). It has been further proposed that normative commitment is influenced by past socialization and working experiences (Allen and Meyer, 1990).

Alienative commitment

This form of commitment seems to represent a contradiction in terms. It was also identified by Etzioni (1961) who argued that individuals might be members of an organization while not preferring to be in the organization but without the possibility to leave. This means that alienative commitment occurs when individuals' choices are severely constrained as is the case with inmates of prisons, individuals in prisoner of war camps or even non-voluntary members of military organizations. Whilst such organization members do not want to be part of the organization they cannot leave the organization as they are deliberately prevented from doing so by the organization of which an important task is to prevent "escape" by the non-voluntary members. Penley and Gould (1988) developed a scale to measure this form of commitment. This kind of commitment has not received the same amount of attention as the other kinds of commitment and Penley and Gould did not provide adequate psychometric qualities for their instruments.

The description of elements or dimensions of organizational commitment does not provide us with a clear or final picture of the construct.

In the following part attention will be given to the way in which the organizational commitment construct is measured and how better understanding of the measures can bring about more clarity about the construct.

2.1.2.2 Dimensions and measuring instruments

The main conceptualizations of organizational commitment will now be summarized and where applicable the instruments to measure the notions will also be discussed.

Hrebiniak and Alutto (1972)

Hrebiniak and Alutto (1972) developed a scale to measure organizational commitment which they defined as a structural phenomenon which occurs as a result of individual-organizational transactions and alterations in side bets or investment over time. The concept of commitment which they used in their study is "an attitudinal one dealing with perceived utility of continued participation in the employing organization (Hrebiniak and Alutto, 1972, p.560). Their sample included 328 teachers and 395 nurses. Hrebibiak and Alutto (1972) developed their index by asking respondents to indicate whether they would 1) definitely not; 2) be uncertain or 3) would definitely change organizations in the situations where they are offered the same job by another organization, but under different conditions, e.g. a job with no more status, slightly more status or with much more status.

Results of the calculation of the item-total correlations showed that the four items indicating a slight improvement in the respondent's condition correlated highest with the total score. According to Hrebiniak and Alutto (1972) the commitment index is primarily concerned with the levels of a respondent's calculative involvement in a utilitarian employment system. The reliability of the Hrebiniak and Alutto scale has generally been found to be acceptable.

Mathieu and Zajac (1990) conducted a meta-analysis including 15 studies in which the scale had been used and found an average internal consistency coefficient of .88 for the Hrebiniak and Alutto scale.

However, Meyer and Allen (1984) investigated the usefulness of the Hrebiniak and Alutto scale to test Beckers' (1960) side bets theory. They were able to demonstrate that the Hrebiniak and Alutto (1972) scale was more closely related to affective organizational commitment than to continuance organizational commitment. The Hrebiniak and Alutto (1972) scale scores correlated significantly with scores on the Meyer and Allen scale measuring affective organizational commitment. Meyer and Allen (1984) argued that respondents were asked whether they would change organizations when given various inducements - e.g. status and pay. In this way the perceived threat of losing their investments in their present organization is eliminated or reduced. It is then suggested that employees under these circumstances will remain with the organization because they are affectively committed. Meyer and Allen (1984) concluded that the Hrebiniak and Alutto scale was not suitable to measure commitment based on Becker's (1960) conceptualization.

Organizational Commitment Questionnaire (Mowday, Steers and Porter, 1979)

Mowday et al. (1979, p.226) in an overview of research with their instrument defined organizational commitment as "the relative strength of an individual's identification with and involvement in a particular organization". Their definition can be characterized by three related factors i.e. a strong belief in and acceptance of the organization's goals and values, a willingness to exert considerable effort on behalf of the organization and a strong desire to maintain membership in the organization. This form of commitment represents more than just a mere loyalty to an organization but an active relationship with the organization.

The approach Mowday et al. (1979) initially followed to develop their Organizational Commitment Questionnaire (OCQ) was to identify 15 items that

appeared to tap the three dimensions of their definition. In order to examine the psychometric properties of the instrument, Mowday et al. (1979) used a widely diverse sample. The OCQ was completed by 2563 employees from nine different organizations (government agencies, a university, hospital, bank, telephone company, research laboratory, automotive manufacturing firm, mental hospital and a retail sales organization).

In terms of validity and reliability, Alpha coefficients of the scale ranged between .82 and .93 for different organizational samples. Each item had a positive average correlation over the different samples with the total score of the OCQ the correlation coefficients varying between .36 and .72, suggesting a relatively homogeneous measure. Factor analysis revealed a single factor structure, indicating a unidimensional attitudinal construct. Test-retest reliabilities of the scores of the sample of psychiatric technicians for which multiple data points were available were .53, .63 and .75 over 2, 3 and 4 months respectively. Corresponding figures for a sample of retail management trainees were .72 and .62 over respectively two and three month periods.

Mowday et al. (1979) presented several lines of evidence of convergent validity. The OCQ correlated between .63 and .74 with the scores on a questionnaire which measures perceived influence of various aspects of the job, work environment and organization on the individual's desire to remain with the organization. Secondly, significant correlations were found between the scores on the OCQ and intent to remain in all the samples studied. Scores on the OCQ were correlated with three other measures i.e. job involvement, career satisfaction and job satisfaction. Correlations between commitment and job involvement ranged between .30 and .56 across four samples, the correlations between organizational commitment and career satisfaction ranged between .39 and .40 over two samples and lastly, the correlations between organizational commitment and job satisfaction ranged between .01 and .68.

It seems as if these relationships were generally weak, with common variance usually not exceeding 20%. What is measured by the OCQ seems therefore relatively independent from what is included in other job related constructs – especially if the effects of mono-method bias (using questionnaires to measure all the different variables) is taken into account.

Evidence of the predictive validity of the OCQ was provided by relatively consistent relationships in the predicted direction between commitment and measures of employee turnover, absenteeism, tenure in the organization and performance on the job, although the magnitude of the relationships were not very high.

In a report on a meta analysis performed by Mathieu and Zajac (1990), it is pointed out that the desire to remain component of the OCQ cannot clearly be distinguished from other variables e.g. intention to remain and therefore needs further clarification. Some doubt must therefore be expressed about the construct validity of the OCQ.

Two and three component model of organizational commitment

Allen and Meyer (1990) developed an affective and a continuance commitment scale in an attempt to combine the main approaches to organizational commitment. They acknowledged the existence of the two main approaches to studying commitment i.e. behavioural and attitudinal, but stated that although both views reflected a link between employee and the organization that decreases the likelihood of turnover, the nature of the links was quite different (Allen and Meyer, 1990).

In a literature review, Meyer and Allen (1991) identified a third theme with regard to the existing definitions of organizational commitment (commitment as an affective attachment to an organization, and commitment as a perceived cost associated with leaving the organization) namely commitment as an obligation to remain in the organization. They labelled the three components as affective, continuance and normative commitment respectively. Employees

with a strong affective commitment remain with the organization because they want to, employees with strong continuance commitment remain because they need to and employees with a strong normative commitment remain because they feel they ought to (Meyer, Allen and Smith, 1993). As a result Meyer and Allen (1991) developed a three-component model of organizational commitment.

According to their model, employees can experience various degrees of all three forms of commitment. Affective organizational commitment would develop if an employee's experiences in an organization are consistent with his/her expectations and satisfy his/her basic needs. Continuance commitment may develop once the employee recognizes the accumulation of side bets or investments that would be lost if (s)he was to leave the organization. Normative commitment may develop as a result of socialization experiences that emphasizes the correctness of remaining loyal to one's organization or a sense of obligation due to the receipt of benefits (Meyer et al., 1993).

Allen and Meyer (1990) stated that affective, continuance and normative commitment are best viewed as separate components rather than types and that they develop independently from each other due to different antecedents.

They further suggested that the development of continuance commitment is based on two factors namely the number of investments or side bets, and a perceived lack of alternatives (Allen and Meyer, 1990). They drew on the work of Becker's (1960) side bet theory and the investment model of Farrel and Rusbult (1981). Employees make bets such as investing time and energy into their work or learning job-organizational-specific skills which they believe will be beneficial to them. The less alternatives there are, e.g. a lack of alternative employment or positions requiring the specific skill the employee possesses, the less likely it will be that an employee will leave the organization.

Normative commitment is influenced by previous socialization experiences. This form of commitment was, as indicated before, originally conceptualized

by Etzioni (1961). Individuals experiencing this kind of commitment regard themselves as bound to an organization of which they are members because they internalized the norms and values of the organization.

Meyer and Allen's (1991) Three-dimensional Affective, Continuance and Normative Organizational Commitment Scale

Meyer and Allen (1984) developed an eight-item ACS using a 7-point Likert-type scale, including items such as "This organization has a great deal of personal meaning for me". They also developed an eight-item CCS with items such as "It would be very hard for me to leave my organization right now, even if I wanted to", in order to assess the extent to which employees feel committed to their organizations by virtue of the costs that they feel are associated with leaving.

The reliability coefficients for the ACS and CCS were .87 and .77 respectively. Further results showed that the ACS correlated .78 with the Organizational Commitment Questionnaire (OCQ). The CCS was not significantly correlated with the OCQ.

Allen and Meyer (1990) extended their two-component model by adding a third scale measuring normative commitment. Their sample consisted of 256 full-time, non-unionized employees in three organizations. The authors generated in total 51 items some of which were items modified from previous studies and using self-written items. Elimination of items was based on the criteria of item-total correlations, item endorsement proportion (where endorsement proportion were > .75) and direction of keying as well as content redundancy. The number of items selected for each scale was set equal to that for the scale with the minimum number of items surviving the set of criteria stated above. As a result each scale contained eight items. The internal reliabilities for the affective, continuance and normative scales as determined by Alpha coefficients were .87, .75 and .79 respectively. The 24 items were subjected

to factor analysis (Principal Factor method). All the items loaded highest on the factor representing the appropriate construct.

Allen and Meyer (1990) also found that the Mowday et al. (1979) Organizational Commitment Questionnaire scores correlated significantly (.83 p<.001) with the affective commitment scale indicating 68.9% overlap in variance. They suggested that although the desire to remain with an organization is not synonymous with the feeling or obligation to do so, there is the tendency for these feelings to co-occur.

Support for the distinctiveness of the three forms of commitment identified by Allen and Meyer (1990) is given by various studies (Dunham, Grube and Casteneda, 1994; Hackett, Bycio and Hausdorf, 1994; McGee and Ford, 1987; Reilly and Orsak, 1991).

However, McGee and Ford (1987) re-examined the Allen and Meyer (1984) two-dimensional scale and found the continuance commitment scale (CCS) to be two-dimensional, measuring two separate constructs i.e. low perceived alternatives and high personal sacrifice. Their sample consisted of 350 faculty members of colleges and universities. They factor analyzed the 16 items of the Allen and Meyer (1990) scale. Where a two factor solution was specified, all eight items of the ACS loaded on one factor and six of the eight items of the CCS loaded on the second factor. When no number of factors were specified, a four factor solution was obtained of which only three factors could be interpreted. Seven of the eight ACS items loaded on the first factor. Items loading on the second factor resembled the role of available alternatives in the decision to remain in one's job. The items loading on the third factor reflected personal sacrifice that would result from leaving the organization. Two CCS items were eliminated and the remaining items were re-analyzed (the ACS, the original CCS and the two new forms of CCS). Cronbach Alpha coefficients were .88, .70, .72 and .71 respectively.

They suggested that the development of additional items for the two new continuance commitment subscales would be beneficial and strengthen the

scale. McGee and Ford (1987) further found that ACS was positive significantly related to CCS - high sacrifice and negative significantly related to CCS - low alternatives. This is in contrast with the findings of Allen and Meyer (1990) who found no significant relation between ACS and CCS.

In an attempt to test McGee and Ford's (1987) findings Meyer, Allen and Gellatly (1990) examined the nature of the relations between affective and continuance commitment. They applied linear structural relations analysis to both cross-sectional and longitudinal data. The first sample consisted of 337 full-time, non-unionized employees in three organizations i.e. a retail department store, a hospital and a university library. The second sample consisted of 292 full-time employees in several organizations (university, community college, petroleum company, administration office of a union, hospital, clothing company and 54 part-time university students). Longitudinal data was gathered from 308 university graduates. Questionnaires were sent out after 1, 6, and 11 months. The response was N=276, N=247 and N=210 respectively.

Confirmatory Factor Analysis performed on the CCS alone and analysis of the CCS and ACS, revealed the model that divided CCS in two factors provided the best solution. Across samples there were, however, covariances between the two forms of continuance commitment.

Meyer et al. (1990) also obtained similar results as McGee and Ford (1987) with regard to the correlation between affective commitment and the two forms of continuance commitment. A significant negative association between CCS-low alternative and ACS was found in two of the three samples as well as a positive significant relation between ACS and CCS-high sacrifice. The two-dimensionality of continuance commitment in the 1990 version of the Allen and Meyer scale was also supported by results of Dunham, Grube and Casteneda (1994).

In Meyer et al.'s (1990) attempt to identify causal links between affective commitment and the two components of continuance commitment, they found

that the differential correlations observed from the Confirmatory Factor Analysis, may reflect differences in the direction of influence. A negative correlation was found between affective commitment and continuance commitment (low alternatives) suggesting a negative influence of affective attachment on the tendency to report being bound to the organization by a lack of available alternatives. They suggested that this finding may be a viable opportunity for further research.

Lastly, Allen and Meyer (1996) evaluated their affective, continuance and normative scales. They reviewed over 40 studies using their affective, continuance and normative scales in order to investigate evidence for construct validity (internal consistency, test-retest reliabilities and factor analytical evidence). On the basis of their factor analytical findings, it appeared that the three measures are distinguishable from each other. The average reliability coefficients obtained for the three measures were .85, .79, and .73 for affective, continuance and normative commitment respectively.

Although Meyer and Allen have received considerable support for their affective, continuance and normative measures, Dunham, Grube and Casteneda (1994) stated that there have not been enough studies including al three dimensions. In one such a study, Randall, Fedor and Longenecker (1990) found Allan and Meyer's affective and normative scales to be significantly correlated to committed behaviour and very little correlation between continuance commitment and committed behaviour. This was supported by the findings of Akhtar and Chan (1997).

Dunham et al. (1994) suggested that further attention must be given to the normative organizational commitment scale which has received very little attention. They felt that the scale focused mainly on remaining with an organization. The possibility that an employee might remain because he feel it is the right thing to do is not adequately considered. Only two items of the normative commitment scale deal with an obligation to be loyal. Dunham et al. (1994) also suggested that more items should be developed that focus on commitment as a social norm.

Multidimensional model of organizational commitment

Reichers (1985) suggested that organizational commitment be reconceptualized due to its multiple foci. She viewed commitment as a process of identification with the goals of an organization's multiple constituencies which may include top management, clients, unions and the public. Reichers (1985) criticised previous definitions of organizational commitment by pointing out that there was a lack of emphasis on the individual's own experiences of being committed. She further stated that previously used definitions also did not take into account the nature of organizations. Reichers (1985) argued that organizational commitment could be best understood as a collection of multiple commitments to various groups that comprise an organization. An organization is not a "monolithic undifferentiated entity" as viewed by many researchers, but as "composites of coalitions and constituencies, each of which espouses a unique set of goals and values that may be in conflict with the goals and values of other organizational groups" (Reichers, 1985, p.470). According to Reichers (1985) this coalition nature of organizations is often overlooked by organization theorists and researchers.

She further pointed out that the kind of commitment experienced by employees in the same organization may be very different from each other. Reichers (1985) concluded that it was necessary to proceed to a next step in this research area where the orientation of organizational commitment became specific rather than general.

Global and constituency-specific model of organizational commitment

Hunt and Morgan (1994) attempted to reconceptualize organizational commitment to accommodate both global and constituency-specific commitment. They built on the work of Reichers (1985) who suggested that commitment in an organization may be best understood as a general (global) and a specific (commitment to a constituency) construct. The non-redundancy

between the global and constituency-specific commitment was supported by Becker (1992).

Hunt and Morgan (1994) argued that if constituency-specific commitments are independent of global organizational commitment and such commitments negatively influence outcomes important to an organization, development of such commitments is not desirable. They hypothesized that global organizational commitment and each form of constituency-specific commitment influence outcomes independently. They further hypothesized that constituency-specific organizational commitment only influence outcomes through their impact on global commitment. Results of their structural equation modeling provided support for their hypotheses (Hunt and Morgan, 1994).

O'Reilly and Chatman (1986)

O'Reilly and Chatman (1986) noted a central theme in existing definitions of and approaches to organizational commitment namely the individual's psychological attachment to his/her organization. They tried to determine the basis of this psychological attachment to an organization. O'Reilly and Chatman (1986) argued that one mechanism is the process of identification with the attitudes, values and goals of the organization. The degree of identification may vary as can the reasons for attachments. They incorporated Kelman's (1958) taxonomy of attitude change noting that individuals can accept influence in three conceptual ways i.e. compliance/exchange; identification/affiliation and internalization or value congruence. An employee will develop attachment to an organization through compliance for specific external rewards, identification or involvement based on a desire for affiliation and internalization determined by the congruence between individual and organizational values.

O'Reilly and Chatman (1986) developed an instrument to measure these three dimensions of organizational commitment viz. compliance, identification and internalization. The validation sample consisted of 82 employees on

administrative level from five academic units. They selected 21 items from previous studies and self-developed items to represent the three proposed dimensions. Principal component analysis was performed on the 21 items. Twelve of the 21 items reflected a four factor solution. The reduced numbers of items were subjected to further factor analysis and a clear three factor solution emerged. A similar pattern emerged in second study performed by O'Reilly and Chatman (1986).

Three dimensional attitude theory

Akhtar and Tan (1994) examined the item content of Allen and Meyer's (1990) scale and suggested an overlap between the continuance component of organizational commitment and the withdrawal constructs. Due to the noticed redundancy in the Allen and Meyer model, Akhtar and Tan (1994) proposed a three dimensional attitude theory of commitment. Akhtar and Tan (1994) built on the work of Rosenberg and Hovland (1960) and Osgood, Suci and Tannenbaum (1957). Rosenberg and Hovland (1960) saw attitudes as being predispositioned to respond to sets of stimuli and responses with cognitive, affective and conative meanings. Cognitive responses reflect beliefs about or perceptions of the attitude object, affective responses reflect feelings or psychological reactions to the object, and conative responses indicate the expressions of behavioural inclination and intention towards the object. Osgood et al's (1957) research suggested three basic meaning factors on which attitude towards a particular concept can be rated. Osgood and his co-authors named the three factors evaluative, potency and activity (Osgood et al., 1957). Akhtar and Tan (1994) found that an examination of the underlying clusters of Osgood et al's (1957) three factors indicated that they were very similar to the affective, conative and cognitive meanings of attitude.

Akhtar and Tan (1994) proposed three dimensions of organizational commitment i.e. normative (amount of cognitive consonance with organizational norms), affective (emotional attachment to the organization and volitive commitment (extent of conative orientation towards organizational

goals). According to Akhtar and Tan (1994) each dimension has its own psychological state, psychosocial needs and psychosocial processes.

Akhtar and Tan (1994) drew from both Allen and Meyer (1990) and Porter's et al (1974) conceptualizations of organizational commitment, in order to eliminate the concept confusion that resulted from items measuring withdrawal e.g. from the Organizational Commitment Questionnaire (Porter et al., 1974).

In order to test the three dimensional attitude model of Akhtar and Tan (1994), Akhtar and Chan (1997) measured the organizational commitment of 126 engineers, using 22 scales of organizational commitment measures patterned on Osgood et al.'s (1957) semantic differential technique. Factor analysis indicated a clear three factor solution interpretable as affective, volitive and normative commitment. The Cronbach Alpha coefficients for the three factors were .85, .79 and .76 respectively. The three dimensions were also found to be moderately correlated with each other and strongly related to the same attitude namely organizational commitment.

Other approaches

Some other less used and supported approaches to the definition of organizational commitment will be mentioned briefly. De Cotiis and Summers (1987) viewed organizational commitment as a two-dimensional construct centred on organizational goal and value internalization, and role involvement in terms of these goals and values. They defined organizational commitment as the extent to which an individual accepts and internalizes the goals and values of an organization and views his/her organizational role in terms of its contribution to those goals and values, apart from any personal instrumentalities that may attend his or her contribution (De Cotiis and Summers, 1987, p.448).

Vardi, Wiener and Popper (1989) proposed two different conceptual approaches to defining organizational commitment. The instrumental-calculative approach viewed commitment as the individual's intention to

remain with the organization. This intention is determined by side bets - rewards and costs associated with staying with the organization.

According to the normative approach, organizational commitment is the "totality of internalized normative pressures to act in a way that meets organizational interests" (Vardi et al, 1989,p.27). Normative commitment is associated with attitudes and behavioural tendencies such as pride, obligation, identification and self-sacrifice (Vardi et al., 1989).

R.B. Brown (1996) offered another approach to organizational commitment. R.B. Brown (1996) argued that commitment to a particular entity is a distinct and complex phenomenon that may differ depending on how an individual evaluates and perceives certain factors pertinent to commitment. He based his argument on the core meaning of commitment, namely "a pledge to some value cause or goal" (R.B.Brown, 1996, p.233). R.B.Brown (1996) further stated that all commitments have an object of focus (e.g. organization), include some idea of terms (what must be done to uphold the commitment) and that anyone can have more than one commitment.

According to R.B.Brown (1996) a person's commitment is influenced by the way he evaluates and interprets the commitment. The evaluation process is influenced by current attitudes and circumstances and the development of the commitment (circumstances that led to making a commitment). The evaluation can affect the strength of the commitment through the actions the person take to meet the commitment. Negative attitudes may lead to actions to withdraw from the commitment.

2.1.2.3 Summary

It is quite clear from discussion up to now that organizational commitment is a very complex phenomenon. The majority of evidence also suggest that the organizational commitment facet is multidimensional, while Meyer and Allen's (1991) affective, normative and continuance scales are probably currently the most widely used. Apart from some methodological problems such as small

sample sizes and mono-method bias, what still remains unclear is the number of dimensions and how these dimensions are related (Meyer, 1997). The Meyer and Allen (1991) measurement scales need more refinement, especially the normative and continuance commitment scale. Another very important question to be considered is how these measurements will perform in countries outside Northern America. The majority of studies on this topic were conducted in North America and other Western countries. The present study will provide information with regard to this question, as well as with regard to the dimensionality of organizational commitment.

2.1.3 Career Commitment

Although career commitment has been identified as one of the facets of work commitment by several researchers (see, for instance, Morrow, 1983; Blau, 1985), it is surprising how few studies on this topic include a definition of what a career is. Besides the lack of clarity on what a working career embodies, the field suffers from fragmentation and a lack of integrating theory (Arnold, 1997; Carson and Bedeian, 1994; Driver, 1994; Morrow, 1983; Schein, 1986).

For the purpose of this study the focus with regard to career commitment will be on commitment to a career in an organization, although it is recognized that the boundaries of careers are much broader than organizations.

Before the different conceptualizations of career commitment can be discussed, it is important to try and define a career.

2.1.3.1 What is a career?

In order for us to understand career commitment, we need to know what a career is. One way to explain the "birth" of a career is by means of Schein's (1978) career development perspective.

Schein (1978) described an individual-organizational symbiosis where both the organization and the individual have certain needs. Organizations have needs to recruit, manage and develop human resources in order to maintain their effectiveness, to survive and to grow. Individuals have needs to find work

situations which provide security, challenge and opportunities for self-development throughout their life cycles. One's career in an organization effectively starts in the convergence of these two sets of needs and then continues as an interaction between the individual and the organization over time.

Individuals enter organizations through many kinds of occupations e.g. sales, engineering, medicine and office work. Some occupations become more specialized while others become more of a craftsmanship. According to Schein (1978, p.36) the term career is not meant to be limited to professions or to occupations that have clear upward progressions associated with them. It applies equally to the less skilled occupations. Although most academics will, according to Arnold (1997) agree on this point, the definitions employed by some of them still reflect the notion of upward mobility. For instance, Perlmutter and Hall (1992) defined a career as occupations that are characterized by interrelated training and work experiences, in which a person moves upward through a series of positions that require greater mastery and responsibility, and that provides increasing financial return (In Arnold, 1997).

Greenhaus and Callanan (1994) stated that in broad terms a career can be viewed in two ways. One approach views a career as a structural property of an occupation or an organization (Barley, 1989). A career can in this approach also be seen as a mobility path within a single organization.

The other approach views a career as a property of an individual rather than an organization. Since everybody has a unique series of jobs, positions and experiences, this approach provides room for the idea that each person can pursue a unique career.

According to Greenhaus and Callanan (1994) there are generally three themes observable in most of the career definitions i.e. an advancement theme, career as a profession and career as a source of stability. Definitions reflecting an advancement theme implies that the pursuit of a career has meaning only if a person rapidly advances in aspects such as status and money. The emphasis

on a profession as a career implies that only certain occupations will qualify as careers where others will not be considered as careers. In the context of career as a source of stability it is viewed that a person's pursuit of closely connected jobs constitute a career while a series of unrelated jobs will not be considered as such. All three views pose restrictions on the meaning of a career, excluding some forms of occupations and positions from being part of a career (Greenhaus and Callanan, 1994).

Greenhaus and Callanan (1994, p.5) defined a career as "the pattern of work-related experiences that span the course of a person's life". They stated that their definition includes objective events or situations such as a series of job positions, and subjective interpretations of work-related events such as work aspirations, expectations and needs. They further noted that a person's work roles do not have to be of a professional nature, or be stable within a single occupation or be characterized by upward mobility to be seen as representing a career.

A very important point that should be taken into consideration when defining a career is the changing nature of careers inside and outside organizations. Pressures brought by globalization of economies and advances in technology have led to dramatic changes and transformations in organizations (Arnold, 1997). Bridges (1995) argued that traditional employment and jobs are gone forever. Handy (1994) noted that various organizational forms now exist, employing full-time, casual, skilled and semi-skilled workers. Hutton (1995) describes the 30/30/40 society: 30% will be unemployed or economically inactive, 30% will be in uncertain employment with few benefits and 40% in relative stable employment or self-employment. Some careers have been made obsolete due to the great advances made in technology. More and more people are becoming self-employed. Arnold (1997) noted that the number of small and medium enterprises has increased in many countries. It is perhaps Arthur (1994) who best described a new view of a career and coined the term "boundaryless" career which may take a person across different types of organizations and even different types of work during one's lifetime. It therefore seems as if a less than fully defined phenomenon i.e. the

work career is currently subject to influences which may change conventional thinking in this field significantly.

2.1.3.2 Definition of career commitment

Hall (1971) made the first distinction between commitment to a job, an organization and a career. He suggested that these constructs are independent and that one can for instance, be weakly committed to one's job and organization yet be highly committed to one's profession or career. Hall (1971, p.59) defined career commitment as "the strength of one's motivation to work in a chosen career role. Commitment to the entire career field or role is to be distinguished from commitment to the job (i.e. job involvement as described by Lodahl and Kejner, 1965), or to one's organization (i.e. organizational identification as described by Hall, Schneider & Nygren, 1970). These three forms of commitment are often correlated, but they are theoretically distinct and may often have different causes and consequences.

Two major conceptualizations of career commitment have dominated the career commitment field i.e. Greenhaus's (1973) concept of career salience and Blau's (1985b) view as operationalized in his career commitment measure. Greenhaus (1971,1973) defined career salience as the importance of work and a career in one's life. Greenhaus (1973) extended his earlier work by dividing his career salience concept into three dimensions i.e. general attitude towards work, vocational planning and thought, and the relative importance of work. Morrow (1983) pointed out that the item content of these subscales overlapped with other work commitment concepts such as work as a central life interest, Protestant Work Ethic and job involvement. This is reflected in some of the items in the three subscales such as "it is difficult to find satisfaction in life unless you enjoy your job" (job focus), and "work is one of those necessary evils" (value focus).

In attempt to overcome the problem of overlap between career commitment and other work commitment facets in previous measuring instruments (Greenhaus, 1971; Marshall and Wijting, 1982), Blau (1985b) conceptualized career commitment as one's attitude towards one's profession or vocation.

Blau (1985b) stated that although the referents of profession and vocation are somewhat restricting, they are necessary in order to ensure that the career commitment definition does not overlap with other work commitment facets and that the definition is broader than one's job or organization and more specific than work in general. However, Blau (1988, p.295) suggested in his later work that the definition of career commitment be revised to "one's attitude towards one's vocation, including a profession", since profession is a special type of vocation. He suggested that the term profession be used to describe vocations which possess over all the six identified characteristics by Kerr, Von Glinow and Schriesheim (1977). These authors identified six characteristics which are present in an ideal profession i.e. expertise, autonomy, commitment to work and the profession, identification with the profession, ethics and finally collegial maintenance of standards.

Blau (1988) further suggested that the minimum level of professional characteristics required in a vocation, below which a measure of career commitment may no longer be useful, should be determined.

Other approaches to career commitment

A brief discussion of professional commitment seems to be appropriate here. "Professionalism / professional commitment is a career focus form of work commitment that emphasizes the importance of a profession in one's total life, although the precise meaning has not been well articulated" (Morrow, 1993, p.33). She further stated that researchers formulated their own definitions of professional commitment without building on the work of others. A review of the literature indicates three approaches to the studying of professional commitment construct i.e. locals/cosmopolitans, professionalism and modified professional commitment (Morrow, 1993).

The notion of professional commitment originated from the work of Gouldner (1957). Gouldner (1957) identified two latent identities in organizations namely cosmopolitans and locals. Cosmopolitans refer to those individuals low on loyalty to the employing organization, high on commitment to

specialized role skills, and likely to have an outside reference group orientation. Locals refer to those high on loyalty to the organization, low on commitment to specialized role skills, and likely to have an inside reference group orientation (Gouldner, 1957, p.290).

A review of earlier studies indicated that professionalism has been operationalized as a global, unidimensional concept or as one end of the cosmopolitan/local dichotomy (Gouldner, 1957; Bartol, 1979). Other researchers such as Kerr et al. (1977) suggested that professionalism should be seen as a multidimensional construct, identifying five dimensions viz. desire for professional autonomy, commitment to the profession, identification with the profession, professional ethics and belief in collegial maintenance of standards. Aranya, Pollock and Amernic (1981) defined professionalism as the relative strength of identification with, and involvement in one's profession. According to Aranya et al. (1981) building on the work of Porter et al. (1974), with regard to organizational commitment, professional commitment entails the beliefs and acceptance of the goals and values of the profession, a willingness to exert considerable effort on behalf of the profession and a desire to maintain membership of the profession.

Although there has been an increase in studies investigating professional commitment (Morrow and Wirth, 1989; Von Glinow, 1988), one has to note the limitations of the professional commitment approach. Whilst it is true that there is a growing number of occupations which are considered as professions, not all occupations can be considered as such. As Morrow and Goetz (1988) noted, there is no consensus on how to distinguish professions from other occupations. Morrow and Wirth (1989) suggested that it might be more desirable to work towards a generic career focus concept. Blau (1988) revised his definition of career commitment to include one's attitude towards one's vocation, including a profession, since profession is a special type of vocation. In a review of the literature (Morrow, 1993) concluded that evidence favors a general career commitment approach, hence, for the purpose of the current study, professional commitment will not be treated as a separate form of commitment.

Carson and Bedeian (1994) built on the work of Hall (1971) and London (1983) and defined career commitment as one's motivation to work in a chosen vocation. They conceptualized career commitment as a multidimensional construct composed of three elements i.e. career identity (establishing a close emotional association with one's career), career planning (determining one's developmental needs and setting career goals) and career resilience (resisting career disruption in the face of adversity). Carson and Bedeian (1994) developed, in terms of their conceptualization, a career commitment measure in an attempt to provide a psychometrically sound instrument as opposed to previous measures which they considered to be overlapping with other concepts, and some concern about the contents of Blau's (1985b) measure of career commitment. Carson and Bedeian (1994) suggested that the high correspondence found between Blau's (1985b) measure and career withdrawal cognitions may be due to items in his scale tapping intention to remain in one's vocation. (Carson and Bedeian's scale was used in the measurement of career commitment in the current study).

As part of an attempt to develop a multidimensional conceptualization of commitment that can be applied across domains, Meyer et al. (1993) extended their three-component conceptualization of organizational commitment to occupational commitment. These authors felt that it was reasonable to expect that their conceptualization of organizational commitment might apply to other domains as well. They chose to use the word occupation instead of career since they believed that both professionals and non-professionals could experience commitment to the work they do. They also used occupational instead of career commitment due to the ambiguity in the meaning of career. Meyer et al. (1993) were more interested in commitment to a particular line of work (career has a much broader connotation), and therefore tried to measure occupational rather than career commitment.

According to Meyer et al. (1993, p.540) a multidimensional approach will give a much better understanding of a person's "tie to his or her occupation". They also argued that the nature of a person's commitment to his occupation might

differ depending on which form of commitment is dominant, making a multidimensional approach to the measurement of occupational commitment necessary.

2.1.3.3 Measuring instruments

Career Salience Inventory

Greenhaus (1971) developed a 28-item career salience questionnaire, of which 27 items were on a five-point Likert type format. Greenhaus (1971) used a sample of 377 students from two Eastern universities in the United States of America to validate his instrument. The content of the items represented three areas i.e. a general attitude towards work, a degree of vocationally relevant planning and thought and the relative importance of work. The Alpha coefficient of the career salience inventory was .81.

One of the goals of this study was to investigate the role of career salience in occupational choice and occupational satisfaction. Greenhaus (1971) hypothesized that there would be a positive relation between career salience and the degree of congruence between the self-concept and the occupational concept. Greenhaus (1971) found a positive relationship between career salience and congruence between the ideal occupation and the current occupation for males but not for females. Career salience was also, for both males and females, significantly related to the degree to which respondents considered themselves to have chosen an ideal occupation. Greenhaus (1971) suggested that a possible explanation for the significant relation between career salience and occupational congruence for males and not for females might be that high career salient men are motivated to choose an ideal occupation which is congruent with their self concept, where for females this might not necessarily be the case. It seems as if the results obtained by Greenhaus in 1971 may, due to among other factors, the changing occupational roles of women at the end of the twentieth century not be replicable today.

Greenhaus (1971) further stated that more research was needed to investigate the causal nature between career salience and aspects such as congruence.

Greenhaus (1973) noted that his earlier concept of career salience neglected the dimensionality of the career salience construct. He re-evaluated his earlier hypothesis regarding the factor structure of the career salience concept by using 104 female and 99 male respondents drawn from the Greenhaus (1971) study.

The career salience items were subjected to principal axis analysis. A three-factor solution was preferred. The first factor reflected the relative priority of a career, the second factor reflected general attitudes toward work and the third factor reflected a concern with career advancement and planning for a career. Only factor two correlated significantly with the degree of congruence and for males only. Factor two was also highly correlated with the choice of an ideal occupation for both males and females. Greenhaus (1973) concluded that is seemed that career salience is related to the evaluative component of the self-concept.

Morrow (1983) commented that the item content of the Greenhaus (1973) measure overlapped with other work commitment constructs such as work ethic endorsement, job involvement and central life interest. She further noted that six of the career salience inventory items required respondents to choose between a career and other aspects such as family, leisurely pursuits and religious activities, thus necessarily precluding high commitment in other areas. In her review of the commitment literature (Morrow, 1993) concluded that there was little evidence to evaluate the scale's convergent and discriminant validity and that the scale could not be recommended for further research.

Career Involvement (Gould, 1979)

Gould (1979) developed an eight-item scale to measure the extent to which one's career is a central part of one's identity. His sample consisted of 277 municipal employees in upwardly mobile occupations of a large Southwestern city in the USA. The respondents included in his study were technicians, sales workers, professionals and managers/administrators. The Alpha coefficient of the scale was reported to be .83. The results of the factor analysis indicated that career involvement could be differentiated from three other career related variables i.e. career planning, identity resolution and job adaptability.

Steffy and Jones (1988) provided support for Gould's (1979) scale. They investigated the independence of career, organizational and community commitment. Their sample consisted of 139 employees from a large psychiatric hospital. Principal Factor Analysis was performed to assess the independence of the three commitment scales. The results indicated that the three commitment scales were independent from each other. The Alpha coefficient for career commitment was .79.

Although these two studies provide support for the internal reliability of Gould's measure, the results are limited by the lack of enough studies to come to a conclusion (Morrow, 1993). Another limitation might be that in both studies only occupations with upward mobilities were included and further research is needed where non-professional careers and careers without any possibility of progression are included.

Career Commitment Measure (Blau, 1985b)

Blau (1985b) developed a career commitment measure, which was administered twice on a voluntary basis to registered staff nurses from a large Midwestern city hospital. Two hundred and twenty one nurses completed the questionnaire at time one and 228 nurses at time two, seven months later. One hundred and nineteen nurses from the second sample also completed the

questionnaire at time one. The results were only based on the 119 repeat respondents.

Blau defined career commitment as one's attitude towards one's profession or vocation. He used eight items to measure career commitment on a five-point Likert scale. The items were drawn form a pool of items based on previous studies, which measured professional commitment (Price and Mueller, 1981), occupational commitment (Downing, Dunlap, Hadley and Ferrell, 1978) and career orientation (Liden and Green, 1980).

Factor analysis was used to investigate the discriminant validity of career commitment. Principal Components Analysis was performed to determine the dimensions measured by the career commitment items. Measures of job involvement and organizational commitment were included to investigate the discriminant validity of career commitment. A three-factor solution was obtained showing career commitment to be operationally distinguishable from job involvement and organizational commitment. A factor congruency coefficient of .80 was reported for the career commitment scale.

Blau (1988) investigated the generalizability of his career commitment measure using a sample of 137 first-level supervisors from the circulation department of a large Eastern United States city newspaper company. A second sample of field office personnel in an insurance company was used to collect longitudinal data. At time one, 129 respondents again completed the questionnaire and six months later 106 of the 129 respondents completed the questionnaire. One item which was considered as inappropriate ("I spent a significant amount of time reading nurse-related journals of books") was left out.

A three-factor structure again provided the best solution. Results also showed that career commitment was operationally distinguishable from job involvement and organizational commitment. The factor congruency coefficient was .84, indicating that the career commitment items remained stable over time. To test for evidence of discriminant and convergent validity,

the relationship between career commitment and job and career withdrawal cognitions scales was compared to the relationships among job involvement, organizational commitment and withdrawal cognition scales. Further evidence of discriminant validity was obtained when the relationships between career commitment and job withdrawal cognition scales were weaker than the relationships between job involvement and withdrawal cognition scales and organizational commitment and withdrawal cognition scales.

Further support for the usefulness of his measure was offered by Blau (1989), Arnold (1990) and McGinnis and Morrow (1990). Morrow (1993) strongly recommended that Blau's (1985b) measure of career commitment be used for future research.

However as mentioned earlier on, Carson and Bedeian (1994) voiced some concern with Blau's career commitment measure. They noted that the high correspondence between career commitment and withdrawal cognitions may be due to the item content of his scale where some of the items seem to tap the intention to remain within one's vocation. They further stated that Blau extracted items from existing instruments, but unless final item selection is based on systematic development procedures, there is no assurance that the intended measure possesses content validity. Morrow and Goetz (1988) also questioned the extent to which the item content of the Blau measure reflects the career commitment domain. Carson and Bedeian (1994, p.240) concluded that due to the uncertain content validity of Blau's measure, the "internal statistics of the Blau measure may well represent upper-bound or inflated estimates".

Career Commitment: Carson and Bedeian (1994)

In an attempt to overcome some of the problems experienced by other career commitment instruments (see above discussion), Carson and Bedeian (1994) attempted to develop and evaluate a psychometrically sound career commitment measure. They conceptualized career commitment as a

multidimensional construct and defined it as one's motivation to work in a chosen vocation.

The development of their measure took place in three phases. As a first step 87 items were generated to represent the full range of the career commitment domain. All items indicating some degree of overlap and concept redundancy with other work commitment constructs were eliminated. Four judges reviewed all the items and a total of 36 items were retained. Two studies were conducted to investigate the factor structure and the reliabilities of the intended measure. A third study was performed to test the discriminant, convergent and construct validity of the measure.

For the two pilot studies, individuals representing various work settings and selected MBA students and undergraduates completed the questionnaire. For the field test (phase three) 476 questionnaires were returned. The field test sample consisted of respondents from various work settings with varying attributes such as technical training, advance education, professional associations, codes of conduct and sense of calling.

In the first phase (pilot study A), six factors were extracted of which factor four (three items with negative loadings) and factor six, which contained only one item, were dropped. The other factors could be interpreted as career identity, career resilience, career planning and conscientiousness. Alpha coefficients for the four remaining factor scales were all above .78.

In the second phase the psychometric properties of the remaining 20 items were examined. Principal Factor Analysis was carried out and all items not loading > .40 were eliminated. Four factors were obtained but factor four was dropped because of its low reliability (Alpha coefficient = .69). The other three factors could be interpreted as career identity, career resilience and career planning. The Cronbach Alpha coefficients for the three factors were all above .81 and 12 items remained in total.

In the field test, a three-factor solution was chosen and all the items except one loaded above .50. A correlation of .63 (corrected value = .75) between Blau's (1985b) measure and the new career commitment measure provided evidence for convergent validity. Further results showed that the new career commitment measure was "clean" from overlapping problems with withdrawal cognitions. All three the included withdrawal items loaded with the seven items of Blau's (1985b) career commitment scale, where none of the items of the new scale loaded with the withdrawal items.

The career commitment measure was also able to detect differences in career commitment levels associated with varying degrees of professionalism across occupational groups. To assess the distinctiveness of the contents of the career commitment measure, factor analysis was performed on the responses to the career commitment measure and responses to a measure of affective commitment and a measure of job involvement, to discern whether the constructs are distinguishable. All items loaded cleanly on the factor they were intended to measure. The results taken together indicated a valid and reliable measure of career commitment which seems promising for use in future research.

Three component occupational commitment scale (Meyer, Allen & Smith, 1993)

As mentioned earlier, Meyer, Allen and Smith (1993) extended their three component model of organizational commitment to occupational commitment. Meyer et al. (1993) felt that there was a lack of systematic approaches to develop a multidimensional conceptualization of commitment, which could be applied across different domains. They attempted to develop measures of affective, continuance and normative commitment to occupations.

Meyer et al. (1993) collected data from student nurses involved in a four-year nursing training programme as well as registered nurses. For the student nurses the first questionnaire was completed by 366 students. Two hundred and ninety six students completed the second questionnaire approximately six

months later. In the registered nurses group, 603 usable questionnaires were collected.

The questionnaires administered to the student nurses included 30 items to assess the affective, normative and continuance commitment to the nursing profession as well as the Meyer and Allen (1991) scale to measure organizational commitment in terms of these dimensions.

For inclusion in the final scale, items with consistent high loadings and which were not redundant with any other items were included. Six items for each scale were selected. A three-factor structure provided the best solution. Confirmatory Factor Analysis was conducted to determine whether occupational commitment could be distinguished from organizational commitment using the samples of registered nurses. A six factor solution was compared with a three factor solution where all affective, normative and continuance items were put together as three factors respectively. A six factor solution seemed to provide the best fit (RNI = .972; PNFI = .893). The largest correlation across domains tended to be between corresponding forms of commitment. Career commitment seemed to be distinct from organizational commitment.

The results of the Confirmatory Factor Analysis indicated that it is possible to distinguish among the three aspects of commitment in and across domains. Consistent with previous results, positive correlations were found between affective and normative commitment and between normative and continuance commitment. The correlation between affective and continuance commitment was negative but small. Meyer et al. (1993) concluded that their measure provided preliminary evidence for the generalizability of Meyer and Allen's (1991) three component model of organizational commitment.

2.1.3.4 Summary

Altogether a lot of development has taken place within the career commitment domain, unlike the other commitment foci several new career commitment

scales have been developed during the last five years. This in it self poses some problems in terms of the number of studies available for evaluation of the validity of the instruments. Some career commitment scales such as the Carson and Bedeian (1994) measure seems quite promising but further studies are needed to come to a conclusion about the quality of the instrument.

There still seems to be a lack of integrating theory within the career commitment domain, a lack of consensus whether career commitment is unidimensional as proposed by Blau (1985, 1988, 1989) or multidimensional as proposed by Meyer et al. (1993) and Carson and Bedeian (1994), or just simply about what a career embodies and what the boundaries of career commitment are.

It is also quite noticeable that the majority of studies were conducted in Western countries, particularly North America. More studies are needed to provide us with information on the portability of the career commitment instruments in other than North American countries. In studies where career commitment was investigated across different domains it seemed as if the occupational categories were restricted to a few e.g. nurses and a more diverse sample seems to be in order. Hopefully the current study will shed more light on some of these problems.

2.1.4 Work Ethic and values

Values lay the foundation for the understanding of attitudes and motivation because they influence our perceptions (Robbins, 1996). Values are organized sets of general beliefs, opinions and attitudes about what is right and preferable (Super and Sverko, 1995). Work values can therefore be described as general and relatively stable goals that people try to reach through their work.

A review of the literature on what is generally known as work values seems to indicate the presence of a consensual work ethic operating in modern

industrial societies (Giorgi and Marsh, 1990). The origin of the framework against which most research on this point has been conducted can be dated back to the seminal thesis of Max Weber 's (1904) "The Protestant Ethic and Spirit of Capitalism". His writings have been so influential that most modern studies of the Protestant Work Ethic (hereafter PWE) tend to assume rather than test its existence (Giorgi and Marsh, 1990).

The heavy emphasis on the PWE has resulted in an overwhelming number of studies on work values concentrating on one single approach and that is the studying of the meaning and importance of work in people's lives. Other studies concentrated on what people value in their work e.g. pay, autonomy i.e. work values (Elizur, 1984). What seems to be absent is an integrating theory of the different approaches to studying work values. Buchholz (1977) felt that there was a need for studies dealing with the underlying concepts and beliefs people hold and comparing and relating the work ethic to other work values. Pryor (1982) noted that the literature on work values is fragmented and that the lack of integration can mainly be attributed to the disparity in conceptual approaches and the proliferation of confusing terms. Billings and Cornelius (1980) emphasized the need for basic research on the nature of work values that will lead to a more integrating theoretical framework.
It would perhaps be meaningful to start a discussion on work values with a brief look at the importance of work in people's lives.

The ancient Greeks regarded work as a curse reserved only for the slaves and the poor (Tilgher, 1962). Under the influence of religious indoctrination these negative attitudes toward work gradually changed. With the rise of Catholicism the more positive aspects of work were emphasized. Work was seen as "good for the moral and spiritual integrity whereas leisure and idleness brought about all kinds of weaknesses" (Super and Sverko, 1995). The greatest glorification of work came with the Reformation. Hard work was (based on the views of Luther) perceived as the best way to serve God, a pathway to salvation. These ideas were further developed by Calvin and work became to many a religious obligation and the highest virtue. These teachings led to the rise of a moral code called the Protestant Ethic.

In other words, other than often thought, work has been the foundation of the Protestant Work Ethic and the keystone of the economic structure built upon Lutheranism and Calvinism (Super, 1982) and not the other way round. The PWE was and still is not prevalent in all societies. One needs only to look at the highly productive Eastern countries. Strictly speaking PWE as defined by Weber does not influence individuals outside the Christian world. It can therefore not readily be seen as a primary cause of the economic success achieved by societies in the Far East, unless a factor with a similar influence operated in those countries.

In earlier studies attention was given to the economic and societal importance of work, but recent studies in the domain of work focus more on the differing meanings of work or the values sought in work in different societies (Hofstede, 1980; MOW, 1981). Together with the rise in general educational levels, the influence of religious indoctrinations have weakened considerably. This leads to the question of how prevalent the PWE is today as many researchers felt that a more secularized view of the PWE has developed, as will be shown later in this section.

Most research in the work values domain can be categorized into trying to answer two basic but different questions i.e. the importance of work in one's life (labelled as work ethic) and what a person is seeking in a job or work in general (labelled as work values).

A more detailed view of the Protestant Work Ethic will now be presented.

2.1.4.1 The Protestant Work Ethic

Max Weber (1958) used the term Protestant Ethic to describe attitudes of the early Puritans in New England to work and to money. Weber tried to explain the relationship between, on the one hand, Protestant religious values and a distinctive ideology of economic activity on the other (Giorgi and Marsh, 1990). Central to his thesis was the idea that the "PWE provided moral justification for

the accumulation of wealth", the belief that "the honest acquisition of capital in a calling was a testament to man's glorification of God", and that "economic success was a sign of election to a state of grace" (Mirels and Garrett, 1971, p.40). In the same instance that the acquisition of money was emphasized, immoderate consumption and the participation in worldly pleasures were rejected.

Therefore, the principal aspects of the PWE as described by Weber (1958) are asceticism, individualism and industriousness. The emphasis placed on man's industriousness or "duty" to work hard (own emphasis) is probably the most dominant aspect of the PWE. According to Fullerton (1959, p.16) this tendency to encourage hard work was based on the view that disciplined work was:

"The best prophylactic against what the Puritan called the "unclean life" against the sloth and sensuality which riches so often engender. Work in one's calling (was a) prescription against sexual temptation as well as against religious doubts".

McClelland (1961) apparently equated the PWE with achievement motivation, which he saw as closely related to capitalism and the driving force behind economic success of societies. McClelland (1961, 1969) in a sense introduced the PWE into Psychology. His arguments are today not generally accepted but do provide some substance to the operational and instrumental importance of the PWE in societies.

Although many researchers have questioned the validity of Weber's argument that Protestantism was one of the main causes of capitalism, one cannot deny the influence of the PWE on what one can call the work ideology of society. Whether researchers have accurately interpreted Weber's controversial writings, argued against it or accepted it as a constant, many researchers have developed their own definitions of the PWE and work values of which some might convey quite a different meaning from what was originally meant by the concept.

The Protestant Work Ethic has in other words been modified and then operationalized in various ways.

Wollack, Goodale, Wijting and Smith (1971) developed the Survey of Work Values which was intended to be an index of a person's attitudes toward work in general, rather than his/her feelings about a specific job. According to Wollack et al. (1971) the concept of work values, referring to general attitudes regarding the meaning that an individual attaches to his work role is different from the attitude towards one's own job (job satisfaction). These authors further stated that their scale differed from some other scales in the sense that it is "directed toward separate areas of values and is limited to the construct of secularized Protestant Ethic with which work values seem to be closely linked" (Wollack et al., 1971, p.331). This view was apparently accepted by other authors in this field.

In a study of 366 managers, Buchholz (1977) suggested that a new orientation towards work based on humanistic beliefs rather than the traditional PWE emerged among the managers. Buchholz (1977) pointed out that many studies had indicated that some change has taken place in the traditional meaning people attached to their work (Editorial Research Reports, 1973; Gooding, 1972; Special Task Force, 1973). In one study conducted for the Department of Labour in Michigan during 1969, a survey of 1533 employees revealed that the nature of work itself is one of the foremost causes for dissatisfaction. A large part of the workers felt that the nature of the work was more important than security or pay. Buchholz (1977) referred to another study done by Tarnowieski (1973) where 83 % of 2821 American businessmen agreed that the attitudes toward success are changing. Few felt that success was represented by individualism, development of character and material well-being, all traditional work ethic values.

On the basis of the results of his own survey, Buchholz concluded that the managers upheld most strongly the humanistic belief system. Although most

responses on the Work Ethic items were quite similar, this ethic was not strongly endorsed by Buchholz's respondents.

It is reasonable to believe, at least partially, that the nature of the PWE has changed considerably and that it would today be more correct to talk about a general work ethic rather than a PWE. This does not imply that there are not people who uphold the PWE within a religious framework or that people do not value work as important anymore. One possible way of explaining the different meanings people attach to their work is the way in which individuals come to attach importance to their work roles. According to Super and Sverko (1995) the importance of the work role is determined by three basic components viz. commitment (conative component), participation (behavioural component) and knowledge (cognitive component).

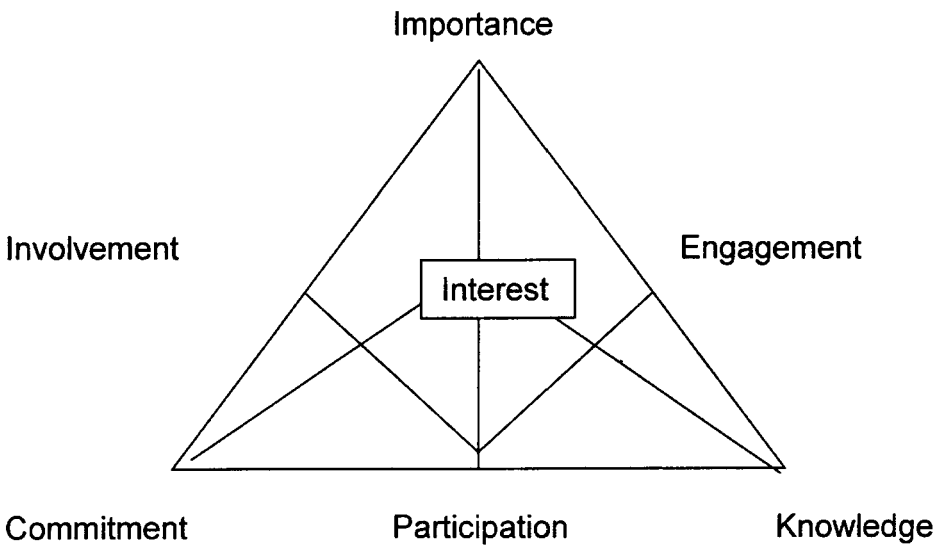


Figure 1: Work importance model

On the baseline are the three basic parts of importance i.e. commitment (conative component), participation (behavioural component), and knowledge (cognitive component). The second level is a more complex level where a combination of the basic components exist e.g. job involvement (a combination between participation and commitment), engagement (a combination between participation and knowledge) and interest (a combination

between commitment and knowledge). All of these components together and in integration with each other determine the importance of that role.

2.1.4.2 Work values

Rokeach (1973) differentiated between two types of values namely terminal values (desirable end-states of existence such as exciting life, self-respect and a comfortable life) and instrumental values (preferred modes of behaviour such as logical, responsible and broad-minded). Other researchers divided work values into extrinsic and intrinsic categories. Intrinsic values are concerned with the job content and work itself. Extrinsic values are concerned with the job context, such as the working conditions, pay and prestige.

In this context valuable research on work values was done by Elizur (1984). He built on the work of Levy and Guttman (1976) who saw values as distinct from attitudes and ascribed an item to the universe of values if "its domain asks estimation of the degree of importance of a goal or behaviour in life area and the range is ordered from very important to obtain to very important to avoid the goal". In the work context, an item belongs to the universe of work values if its domain asks for an assessment of the importance of a goal in the work context and the range is ordered from very important to very unimportant (Elizur, 1984, p.379).

Elizur referred to the debate between the extrinsic-intrinsic nature of work values and the fact that this dichotomy was questioned by many researchers (Dyer and Parker, 1975). In an attempt to clarify the intrinsic-extrinsic debate, to analyze the contents of the work value items and to construct an explicit definition of work values, Elizur (1984) did a study in which he conducted a facet analysis to try and answer these questions.

To better understand the work value domain, a content analysis of the literature on work values revealed the presence of two basic facets i.e. modality of outcome and the relation to task performance. With regard to the modality of outcome, various work outcomes are materialistic or instrumental

(e.g. pay, work conditions). There are also many outcomes such as supervisor relations which are not materialistic but rather affective in nature. A third class of outcomes can be referred to as psychological outcomes i.e. outcomes such as responsibility and independence.

The second facet "classifies items according to the outcome-performance relationship , and its elements specify whether it is a resource in the organizational environment, or it is rather given as rewarding performance" (Elizur, 1984, p.381). Elizur's definition of work values by using a mapping sentence can be schematically illustrated as was done by Wheeler (1994).

Mapping sentence definition of work values

The extent to which subject x assesses the importance to her or him

	Facet A: Modality of outcome	**Facet B: Relation to performance**
	1. Instrumental	1. rewards
Of having	2. Affective/social	2. resources
	3. Psychological	

very high

importance to her or him for a sense of well being at work

very low

To summarize, Elizur (1984) defined work values as either rewards or as resources where rewards can be material, affective or psychological, and he stressed the importance of work values as a source of a sense of well being at work (Wheeler, 1994).

One other approach relevant to the work values domain needs mentioning, and that is Kanungo's (1982) work involvement approach. Kanungo (1982) observed that existing job involvement measures did not distinguish between job and work, where job involvement refers to one's psychological identification with one's job (a specific job) and work involvement refers to one's psychological identification with work in general. Kanungo (1982) also distinguished between work involvement and other forms of work ethic endorsements. He argued that the Work Ethic was the result of the Protestant Ethic type socialization whereas work involvement could also be the result of

other types of socialization. However, Morrow (1993) commented that this distinction has not been made adequately and that Kanungo's work involvement concept continues to be seen as a narrower conceptualization of the PWE.

2.1.4.3 Measuring instruments

Blood (1969)

Blood (1969) as one of the pioneers in measuring the PWE, developed one of the best-known earlier PWE scales. His respondents consisted of 420 airmen and noncommissioned officers from the United Stated Air Force. The Protestant Ethic scale had four items that were intended to reflect the Protestant Ethic and four items, which were to measure disagreement with the Protestant Ethic. Respondents had to rate each item on a scale from one to six, where 1=disagree completely and 6=agree completely.

A component analysis of the eight items with Varimax rotation demonstrated that the two subsets of items were appropriately interrelated. The four items that loaded on the first scale were called the pro Protestant Ethic score and the four items that loaded on the second scale were called the non-Protestant Ethic score. Aldag and Brief (1975) reported that although the second scale is basically the reverse wording of the first scale, results indicated that the scales warranted separate use. Martelli (1988) and Waters and Zakrajsek (1991) also supported this view.

Morrow (1983) commented that one of the items of the non Protestant Ethic scale overlapped with career salience and job involvement i.e. ("The principal purpose of a man's job is to provide him with the means of enjoying his free time" (Blood, 1969, p.457)). In her review of the work commitment literature, Morrow (1993) noted that Blood's (1969) scale was very little used during the last few years and that some measurement problems were reported. Further research with and with regard to the measurements obtained by means of this scale therefore seemed warranted.

Survey of work values (Wollack, Goodale, Wijting and Smith, 1971)

Wollack et al. (1971) developed a Survey of Work Values (SWV) which was intended to be an index of a person's attitudes toward work in general. The SWV was directed toward separate areas of values and is limited to the construct of a secularized Protestant Ethic. The categories of the SWV were selected on the basis of the apparent relevance of each category to the secularized interpretation of the PWE and the categories had to be relevant to the Protestant Ethic literature. According to Wollack et al. (1971), the accepted notion underlying the PWE is the intrinsic nature of work or work as its own reward.

These authors selected three dimensions of the PWE to cover the intrinsic aspects of work i.e. pride in work, job involvement and activity preference. Due to the considerable emphasis placed on the extrinsic rewards as well, two subscales were included to reflect that notion namely attitude toward earnings and social status of a job. Two other dimensions of the Ethic were also included viz. upward striving and responsibility of work.

General definitions were written for each subscale and presented for scrutiny to 58 employees of a glass-manufacturing company in the Midwest of the USA. Judges were given 91 statements to allocate to the category they believed it belonged to. They were also asked to indicate which items they felt fitted poorly into any of the categories.

Items were retained if it was allocated to a single category by at least 70% of the judges and by no more than 20% to a second category. The subscales were subsequently submitted for reallocation by two different groups of 56 and 57 undergraduates. The same rules for item elimination were followed. In order to substantiate the scale values the remaining items were re-evaluated by 45 undergraduates. Finally, the remaining 67 items were presented to a group of 495 employees at three plants of a glass manufacturing company.
The item analysis based on the responses of this group resulted in six subscales each containing nine items. The Cronbach Alpha coefficients for

the six subscales i.e. status, activity, striving, earnings, pride and involvement were .63; .63; .59; .63; .63 and .53 respectively. Test-retest reliabilities with about one month interval were .71; .71; .76; .65; .69 and .68 respectively. Wollack et al. (1971) reported that the data indicated support for the intrinsic-extrinsic dichotomy of work values. The correlations among pride job involvement and activity preference (intrinsic values) were positive and significant. The correlations among the extrinsic values – attitudes toward earnings, status and striving, were either negative or non-significant.

Principal Components Analysis revealed the presence of six factors that could be interpreted as an intrinsic values dimension (included loadings from the pride in work, job involvement and activity preference scales), attitude towards earnings, social status of the job, upward striving, conventional ethic and organization-man ethic.

In their discussion, Wollack et al. (1971) noted that although a high degree of rater agreement was obtained, the internal consistencies of the scales were not as high as one would hope for. In order to investigate the discriminant validity of the SWV scale, Wollack (1968) tried to determine whether the SWV could distinguish between occupational groups. In a discriminant analysis on members of five occupational groups (total N=449) ranging from unskilled employees to professionals, the groups could be classified satisfactorily in terms of activity preference and attitude toward earnings. In a second discriminant analysis the discriminant function included scores on job involvement and social status, thus providing some discriminant validity evidence.

The Protestant Ethic Scale (Mirels and Garrett, 1971)

Mirels and Garrett (1971) developed a 19-item measure representing the Protestant Work Ethic. The authors developed a large number of items whose endorsement or non-endorsement could be considered as consistent with the PWE. Respondents had to indicate on a six point Likert type scale (3 = I

disagree strongly and +3 = I agree strongly. The items were together with other scales administered to 117 undergraduates in an introductory psychology course.

After inspection of the intercorrelation matrix of the responses 30 of the items were subjected to Principal Components Factor Analysis. Four factors were extracted and 12 of the 30 items showed overlap with other items (e.g. loading on more that one factor) indicating the presence of a single general component. The 30 PWE items were administered to a new sample of 222 male introductory psychology students divided into two groups for the purpose of analysis. Principal Components Analysis was again carried out. Nineteen items loading .25 or higher on the largest component generated by each of the three unrotated solutions were selected to represent the unidimensional PWE scale. The Kuder-Richardson reliability coefficient for the PWE scale was .79. A low non-significant correlation was obtained between the scores on the PWE scale and the responses to the Crown and Marlow Social Desirability scale.

The PWE scale correlated positively and significantly with the Mosher scales for Sex Guilt and Morality Conscience Guilt but was unrelated to the Hostile Guilt scale. This finding was consistent with the Protestant Ethic condemnation of moral laxity in worldly affairs and tolerance for aggressive righteousness. These results provided some evidence of the scales' construct validity.

Li-Ping Tang (1992) conducted a study on 115 first year medical students in Taiwan to investigate the factor structure of the Mirels and Garrett (1971) PWE scale. The responses were subjected to principal components factor analysis. A scree test indicated that four factors provided the best structure. These factors were hard work, internal motive, asceticism and attitude toward leisure. Li-Ping Tang agreed with other authors such as Furnham (1990b) that there is enough reason to believe that the PWE is still quite active. This finding by Li-Ping Tang (1992) gives some indication that the PWE also functions in non-Western, non-Christian or -Protestant societies. His results, however place

the factor structure of the Mirels and Garrett (1971) PWE scale in some doubt – at least when the scale is used outside of the USA.

Work Ethic scale (Buchholz, 1977)

Buchholz (1977) attempted to develop a conceptual framework that allows beliefs about work to be measured through a multidimensional approach where relative strengths of different beliefs can be measured. Buchholz built his framework on five belief systems viz. The Work Ethic, the Organizational Belief System, Marxist-related beliefs, the Humanistic Belief System and the Leisure Ethic.

The five main belief systems about the nature of work can be summarized as follow:

1. The Work Ethic: Work is an end in itself and is a duty bestowed on man by God. Success is linked to man's effort and the accumulation of material wealth can be seen as an indication of how much effort one has exerted, although wealth should not be spent unwisely.
2. Organizational belief system: Work only takes on meaning in its influence on the group and the organizations as it contributes to one's status and rise in the organizational hierarchy. Work is seen more as a means of accomplishing other goals than as an end in itself. Success is more dependent on one's ability to conform and adapt to group norms than on individual productivity.
3. Marxist-related beliefs: Work is seen as the mean to fulfil one's basic physical needs. Through work man maintains relations with fellow human beings but his work mainly benefits the ownership classes of society. Work is also seen as basic to human fulfilment but as presently organized does not make this possible. This belief system believes that workers are alienated from their productive activity and are easily exploited.
4. Humanistic belief system: Work is seen as the means to achieve self-fulfilment and self-development. Human processes are more important

than the output of the work process. Emphasis is placed on job satisfaction and the meaningfulness of work, not on work as an activity.

5. Leisure ethic: According to this belief system work has no meaning in itself but finds meaning in leisure. Work is seen as a necessity to sustain life and provides the means to buy goods. Human fulfilment is found in leisure activities where the person has the freedom to spend his time according to his interests, thus giving him the opportunity to be creative.

The questionnaire was developed from an inventory of belief statements (in the categories as outlined) that reflected the various elements of each belief system. The original inventory contained 159 statements. In order to reduce the number of items so that they could be factor analyzed, an informal card sorting procedure was followed. Ten doctoral students were asked to sort the statements in as many categories as they saw fit. From that analysis 20 statements reflecting each belief system were selected. A five point Likert scale (ranging from strong disagreement to strong agreement) was used as response system.

Three hundred and forty respondents from various companies in the Pittsburgh area completed the questionnaire. A factor analysis was performed to determine the factor structure of the scale. Forty-five statements were selected to comprise five factors that corresponded with the five belief systems. The only items that were discarded were items that were intended to be leisure items but turned out to be negative statements about work. The remaining 45 items were again completed by 366 top manages from a wide variety of organizations. Factor analysis was again performed to determine the factor structure. Items that loaded .35 and above were included in the final inventory, resulting in 37 items to comprise the five scales or factors that corresponded with the five belief systems, thus supporting the original conceptual framework. Some evidence is provided that age was related to the scores on the subscales in the questionnaire. No evidence is provided regarding the internal consistency of the subscales.

Work involvement scale (Kanungo, 1982)

According to Kanungo (1982) earlier studies failed to distinguish between a job and a general work context. He defined work involvement as a normative belief about the value of work in one's life and saw it as a function of one's past cultural socialization. Kanungo (1982, p.342) further argued that work involvement should be distinguished from the Protestant Ethic. He stated that although the belief in the centrality of work might have been the result of Protestant Ethic socialization, the two are not identical. Kanungo noted the possibility that work involvement could also develop from other types of socialization.

Kanungo (1982) used three different measurement formats in the development of his job and work involvement scale namely a questionnaire, semantic differential and a graphic technique. Questionnaire items that reflected a cognitive state of psychological identification were judged by 10 graduate students as to their suitability for this purpose. There was complete agreement on nine items, however, after item analysis, three items were dropped. Six graduate students identified eleven bipolar items (using available literature and dictionaries for synonyms and antonyms) on which there were total agreement. These items, with a 7-point response format, were used to construct a Work Involvement Semantic Differential scale. Three items in the work involvement scale were dropped on the basis of item-total correlations. Two graphic items representing psychological identification were selected for the graphic scale. The final questionnaire was administered to French and English speaking employees who were enrolled for extension courses at three different universities. Seven hundred and three questionnaires were returned. A parallel study was performed at two of the universities to establish test-retest reliabilities of the measures. The questionnaires were administered three weeks apart.

The Alpha coefficients for the three measures of work involvement were .83 (semantic differential), .75 (questionnaire) and .68 (graphic items). The test-

retest scores were .78, .67 and .67 respectively (in the same order). Factor analysis revealed two separate factors of job and work involvement.

Evidence of the reliability of the scale was given by the intercorrelations among the six involvement scales (three scales from work and job involvement each). All the correlations were statistically significant suggesting convergent validity.

In order to assess the discriminant validity of the scale, Kanungo (1982) compared the monotrait-heteromethod values (agreement between different ways of measuring the same trait) with the heterotrait-heteromethod values (the first should exceed the latter). The results indicated that the monotrait-heteromethod values were higher than the heterotrait-heteromethod values. Another criteria for discriminant validity is when there is agreement between different traits measured the same way. The semantic differential format did not meet this criteria. Kanungo (1982) found that the validity of the Work Involvement Semantic Differential Scale (WISD) was questionable because the correlations between the WISD, Work Involvement Questionnaire and the Work Involvement Graphic measure did not exceed the correlations between the WISD and the Job Involvement Semantic Differential Scale.

In support for the discriminant validity of the work involvement scale, correlations involving job satisfaction were statistically non-significant in three out of four cases evaluated by Misra, Kanungo, von Rosenthiel & Stuhler (1985). On the contrary, Brooke et al. (1988) using the sample scales found a significant positive correlation between job satisfaction and work involvement.

Morrow (1993) reported that Kanungo's measure did not receive sufficient support in the empirical literature. She could also not evaluate Kanungo's (1982) contention that work involvement is distinct from the PWE due to the lack of empirical evidence. However, Morrow (1993) concluded that his measure seemed to have adequate reliability and that the measure demonstrated excellent isomorphy with its conceptual definition. She recommended that the measure be used more frequently.

Multidimensional scaling approach (Billings and Cornelius, 1980)

Billings and Cornelius (1980) argued that a multidimensional model of work values would be a more useful approach as it would allow each work outcome to be described by a set of values consisting of multiple dimensions. They suggested that a useful technique for studying the underlying dimensions of work values is multidimensional scaling (MDS). According to Billings and Cornelius (1980) the underlying conceptual model of the MDS techniques is very useful. Previous studies of work outcomes often resulted in clusters of outcomes which are then placed in the extrinsic/intrinsic categories. A better way of describing work values may be by their underlying continuous dimensions, with each outcome having a specific value on each dimension.

Two separate questionnaires were developed to investigate the convergence between somewhat different methods i.e. a similarity judgement questionnaire and a likelihood judgement questionnaire. Both questionnaires contained all the possible paired comparisons of work outcomes used in the Dyer and Parker (1975) survey. The similarity judgement questionnaire contained 221 paired comparisons with items such as "To what extent is the work outcome high salary similar to the work outcome prestige?" The response scale ranged from very similar to very dissimilar. The likelihood judgement questionnaire consisted of items such as "Imagine a work situation that provides high salary, how likely would the work situation also provide prestige?" The response scale ranged from extremely likely to extremely unlikely. Both the similarity judgement scale and the likelihood judgement scale were completed by 91 randomly assigned respondents. Respondents were undergraduate students enrolled in introductory psychology courses at the Ohio State University.

Each outcome was rated on eight unidimensional scales that were hypothesized as possible underlying dimensions. The dimensions included were extent to which outcome is inherent in work itself, extent outcome is internally mediated, level of underlying psychological need being met, degree of concreteness of the outcome, extent the outcome is valued as a means to an end, extent to which the individual can control the outcome through his

behaviour, the value the individual placed on the outcome and the value placed on it by society.

For the exact procedures followed by the authors it is advisable to read their original article. In order to determine the dimensionality of the scales, the paired comparisons from the similarity judgement questionnaire were entered into the ALSCAL version 4D computer programme with the options of interval measurement level, individual differences model, negative weights permitted and matrix conditional data specified. The same procedures were followed for the likelihood judgement questionnaire.

The determination of underlying dimensionality was made on the basis of visually inspecting the plots of the stress values for various dimensional solutions, the interpretability of various solutions and the degree of convergence of results from the two separate analyses. After correlating the underlying dimensions in the various similarity spaces with the underlying dimensions in the corresponding likelihood space, a three dimensional ALSCAL solution seemed to present the correct underlying dimensions of the data. The dimensions could be interpreted as societal values, underlying needs and the extent inherent in work.

Billings and Cornelius (1981) concluded that their study supported the hypothesis that an interpretable, multidimensional structure underlies the examined work outcomes and that the extrinsic/intrinsic dichotomy distinction is not useful. They further suggested that the study be repeated on other samples and that the length of the questionnaires leading to low motivation for some subjects seemed to pose some limitation on the validity of the results. Furthermore, the limited sample makes generalizability of the results unwarranted.

That some doubt should still exist with regard to the contents and measurement of the (Protestant) Work Ethic is shown by the different frames of references used by authors of measuring instruments and the number of questionnaires developed to measure the construct. Apart from the

instruments mentioned up to now, Goldstein and Eichhorn (1961) developed an instrument consisting of four items to which subjects had to respond on a disagree-agree basis. No reliability or validity information is available for the scale and it has also not as far as could be established been used in other studies. Hammond and Williams (1976) developed a six-item scale but did not provide any information on their scale's internal consistency. Ray (1982) developed a scale to measure what he called the Eclectic Protestant Ethic. The scale consisted of 18 items (9 negatively worded) and had high internal consistency (Cronbach Alpha = .82). Ho (1984) developed a unidimensional scale (consisting of seven items) with adequate internal consistency (Cronbach Alpha = .76). No evidence for concurrent and convergent validity of the scales existed. Furnham (1990b) subjected the items of seven of the scales to factor analysis. From his analysis five clearly interpretable factors emerged although no factor contained more than 7.5% of the total variance. Furnham (1982) concluded that the PWE was alive but not well – a great deal of further work would be needed to clarify the construct in the present societal and organizational context.

Work values scale (Elizur, 1984)

Elizur (1984) defined a work value as the importance individuals give to a certain outcome obtained in the context of work. He distinguished between two basic facets of work values i.e. modality of the work outcome (whether it is instrumental, cognitive or affective) and performance contingency (whether the outcome is contingent upon performance or upon membership in the organization) (Sagie, Elizur & Koslowsky, 1996).

Elizur (1984) developed a 24-item work values questionnaire through the process of facet analysis. Facet analysis attempts to test the hypothesis about the relationship between the conceptual framework and the structure of the empirical observations. According to Elizur (1984, p.380) "facet analysis is based on the presupposition that a priori definition of the universe of observations is an inseparable part of scientific activity, and it adds to the accumulation of testable knowledge". In terms of a multivariate concept such

as work values, facet analysis is a reliable way of specifying which items belong to the domain of work values and which items do not.

In Facet Analysis a geometric structure for a certain domain is postulated in a Cartesian space (Wheeler, 1994). Elizur (1984) suggested a polar geometric structure to indicate the spatial distribution of the work value items.

The two samples used in the development of the instrument consisted of 489 and 546 respondents respectively from the urban adult Jewish population in Israel.

Smallest Space analysis was used to analyze the relations between the items and for testing the hypothesis concerning the structure of the domain.

Two samples of work value items were examined. The first questionnaire completed by the respondents was based on a questionnaire developed by Jurgensen (1978). Classification of the items according to the facets led to the categorization of pay, hours of work, security and working conditions as instrumental; co-workers and supervisor as affective while advancement, type of work, status and company were seen as cognitive elements. Pay, status and advancement were categorized as rewards and the remaining items were classified as resources.

A second questionnaire was compiled to represent a wider sample of affective, cognitive and reward items. The number of response categories was also increased to allow for a wider range of responses. One of the items, "type of work" was changed to "job interest". All the items from the first questionnaire were included, some with minor changes. Additional cognitive items were added, for instance, achievement, independence, responsibility and meaningful work. The additional affective items were recognition for doing a good job and esteem.

Elizur (1984) pointed out that due to the fact that no statistical techniques were available to test for the goodness of fit between the definitional framework and

the patterns obtained, it was necessary to rely on visual inspection and repetitions. After inspection of the map, Elizur (1984) concluded that there was support for the basic hypothesis of his study. The modality facet was found to be polarizing and the performance contingency facet ordered the conceptual space from center to periphery. Outcomes perceived as given in exchange for job performance (job rewards) were nearer to the origin in the central region of the map whereas resources available in the work environment and not directly related to job performance were located in the peripheral region of the map. The two facets together corresponded to a radial partitioning of the space.

The two dimensional facet model for work values postulated by Elizur (1984) were successfully replicated on a South African sample by Wheeler (1994). His sample consisted of 290 Afrikaans speaking male managers working in a commercial bank. The aim of the study was to draw a profile for the managers and to test the work values facet model for South African samples. From the visual inspection, it was clear that the partitioning of the Cartesian space in the different facets revealed a radex structure, thus providing support for Elizur's model.

In another study on 73 graduate computer science students from British Columbia done by Tillquist (1996), a three factor solution seemed to be optimal, using factor analysis. The three factor solution suggested that individuals perceive the object of value preference in varying degrees of externality to themselves. Some of the reasons that can be offered for the different results are the low item-respondent ratio of the Tillquist (1996) study and the fact that students might not yet have the same degree of established work values as employees working as managers.

2.1.4.4 Summary

In the light of the above discussion it is very difficult to come to a conclusion about the "state of the art" with regard to work ethic and work values. First of all, although academics acknowledge the fact that the PWE is

multidimensional in nature, numerous unidimensional measures have been developed in the sense that they yield single scores that are supposed to reflect a person's PWE beliefs.

In an evaluation of seven existing PWE scales Furnham (1990b) found that they were measuring different facets although some communality existed. The matter is further complicated by the fact that many studies use different measures. The replication of a study is very important in order to provide evidence of the robustness of the scale/measure.

Researchers have also not adequately taken the changing nature of the PWE into consideration. It is perhaps time to develop new work ethic scales reflecting these changes.

Surprisingly few studies have investigated the factor structure of work values and those that have failed to provide evidence of the measuring instrument's reliability. This is very important seen against the background of the growing amount of evidence of change in the meaning people attach to their work.

Looking at the combined results, it seems as if there is still a great need for a unifying theory of work values and for the development and refining of multidimensional scales.

2.2 The interrelationships among the work commitment facets

There are two points of importance as far as the interrelationships among the work commitment facets are concerned. The first issue is related to concept redundancy, in other words the distinctness of the facets, and the second is concerned with the way in which these facets interrelate with each other.

2.2.1 Concept redundancy

Morrow (1983), in her review of the existing work commitment measures, suggested that a certain degree of concept redundancy existed among the

work commitment constructs. Morrow argued that high, positive intercorrelations among the relevant measures would indicate the existence of redundancy. According to Morrow (1983, p. 496) concept redundancy would be evidenced by high, positive intercorrelations among the relevant measures. These correlations should be quite high, between .60 and .80, because of the common variance attributable to the use of paper and pencil questionnaires to measure all the facets. Independence may exist even if correlations among facets are as high as .30 due to shared method error and the probability of some mutual antecedents.

Concept redundancy exists whenever concepts are not defined precisely enough to be mutually exclusive or when the link between the conceptual definition and the measurement procedure is less than perfect (Morrow, 1993, p.109). This link is called the epistemic correlation (Northrop, 1959). For instance, some of the work commitment measures contain items which reflect the meaning of one of the other facets. One of the items of Lodahl and Kejner's (1965) job involvement scale "The most important things happening to me involve my work", for instance overlaps with the concept of work as a central life interest.

Several studies investigating the notion that concept redundancy existed have been done since Morrow (1983) called for a moratorium on the development of new work commitment measures.

Morrow, Eastman and McElroy (1991) investigated by means of content analysis the possibility of redundancy among and the validity of five work commitment constructs i.e. PWE, career salience, job involvement, work as a central life interest and organizational commitment. Morrow et al. (1991) believed that one contributor to concept redundancy is a phenomenon called rater naivete. Rater naivete is concerned with the issue whether respondents can discriminate among what researchers define as distinct measures for what they (the researchers) consider to be of different concepts.

They followed a procedure where raters were asked to classify items in each of the five commitment scales according to the construct it represents. The five scales included in the study were Career salience (Greenhaus, 1971), PWE (Mirels and Garrett, 1976), job involvement (Lodahl and Kejner, 1965), work as a central life interest (Dubin, 1956) and organizational commitment (Mowday, Steers and Porter, 1979). It was postulated that an indication of redundancy would be the extent in which items were misclassified.

The results indicated that some measure of concept redundancy existed among three of the constructs namely among job involvement, career salience and work as a central life interest. Items included in the PWE, job involvement and work as a central life interest measures also tended to be classified together and in some cases PWE seemed to be the basis used to classify some of the other items. However, the degree of redundancy concerning the PWE was not high. The strongest evidence of concept redundancy was found among the items in the job involvement, work as a central life interest and career salience scales. Over 20% of the items in each of these scales were attributed to the other concepts.

Morrow et al. (1991) concluded that organizational commitment and the PWE scales demonstrated the least redundancy. They suggested that the nomological network of the other three constructs (job involvement, career salience and work as a central life interest) be further investigated.

Blau, Paul and St John (1993) followed up on the Morrow and McElroy (1986) study and tested for concept redundancy across four facets i.e. career, job, value and organization. They followed an approach suggested by Morrow (1983) that attempts should be made to reduce the redundancy within each work commitment scale and secondly reducing the redundancy between the work commitment facets.

In the first study the participants consisted of 328 repeat-respondent part-time MBA students from the Philadelphia area. The participants in the second study were 339 nurses.

The work commitment measure included the following scales:

Career facet:	Blau's (1985) 7-item career commitment scale
	Gould's (1979) 8-item career involvement scale
	Greenhaus (1971, 1973) 9-item general attitude towards work scale
	Sekaran's (1982) 7-item career salience scale
Job facet:	Kanungo's (1982) 10-item job involvement scale
Value facet:	Kanungo's (1982) 6-item work involvement scale
	Blood's (1969) 4-item pro-PWE scale

Organizational facet:

Meyer and Allen's (1984) 8-item affective commitment scale.

Exploratory Factor Analysis was performed to test for redundancy. Principal Component Analysis indicated that a five factor structure seemed to be the most appropriate solution. Only items loading .30 or higher and not cross loading on other factors were included in the factor structure decided upon. The factor loadings were as follows:

Factor 1	7 items from Blau; 2 item from Gould, 2 items from Sekaran
Factor 2	4 PWE items - Blood; 3 items – Kanungo's work involvement scale
Factor 3	6 Items - Meyer and Allen
Factor 4	7 Items - Kanungo's job involvement scale
Factor 5	4 Occupational facet items ; 1 value facet item and

1 job facet item

The factors could be interpreted as occupational commitment, value of work, organizational commitment, job involvement and negative orientation toward work.

In line with Morrow's (1983) suggestion, the newly constructed scale was then applied in the second study. Minor adjustments were made to the career commitment scale, using only the occupational referent. Confirmatory Factor Analysis was applied to the 31 work commitment items and an acceptable fit of the data to the four a priori facets were found (Goodness of fit index = .92). All the factor loadings were significant. Blau et al. (1993) concluded that their results indicated that occupational commitment, job involvement, value of work and organizational commitment are distinct work commitment facets.

Blau et al. (1993) further suggested that researchers and behavioural scientists use the same referent within a particular work commitment scale. To illustrate this point, several referents were used in the career commitment domain such as career, job, work, field and occupation. Factor analysis in Blau's et al. (1993) study showed that scales that were designed to measure the career facet exhibited item inconsistencies and construct contamination. A much stronger occupational theme emerged from the measures in the second phase of the Blau et al. (1993) study.

Literature reveals a wealth of other studies supporting the distinctiveness of the work commitment facets, although included in different combinations in different studies (Blau, 1985, 1988, 1993, 1994; Brooke, Russels & Price, 1988; Mathieu and Farr, 1991; Morrow and Goetz, 1988; Morrow and Wirth, 1989; Paulley, Alliger and Stone- Ramero, 1993).

Morrow (1993) noted that although her concern about concept redundancy was not unfounded it was not as pervasive as she implied. Redundancy

seemed to be more a problem of instrumentation rather than of conceptual overlap. Morrow's view is supported by the findings summarized in Table 1.

Table 1:

Results of Work commitment redundancy studies

Constructs	Relationship	Study
PWE, CS	Independent	Greenhaus (1971)
PWE, OC	Independent	Porter et al. (1974)
PWE, JI	Independent	Taveggia & Ziemba (1978)
JI, Central life interest	Moderate	Taveggia & Ziemba (1978)
JI, Professional commitment	relationship	Aranya et al. (1981)
JI, WI	High correlation	Kanungo (1982)
CS, JI	Independent	Blau (1985)
CS, JI	Independent	Morrow & McElroy (1986)
CS, OC	Overlap	Morrow & McElroy (1986)
JI, PWE	Independent	Morrow & McElroy (1986)
PWE, OC	Independent	Morrow and Goetz (1988)
JI, OC, CS	Independent	Shore, Thornton and
	Independent	MacFarlane-Shore (1990)
JI, OC		Koslowski et al. (1990)
JI, CC, OC, PWE	Overlap	Blau et al. (1993)
	Independent	

Job involvement = JI
Organizational commitment = OC
Career salience = CS
Career Commitment = CC
Protestant Work Ethic = PWE
Work involvement = WI

One can conclude that individuals do differentiate between their job, organization, occupation and work in general.

2.2.2 Interrelationships among the work commitment facets

Reichers (1986) stated that the systematic examination of multiple forms of work commitment is still in its infancy. According to Randall and Cote (1991, p.194) the theoretical linkages among the major forms of work commitment are not readily apparent and are not fully understood. Randall and Cote (1991) noted that if the interrelationships among the work commitment construct were studied, a bivariate approach was usually followed.

The problem arising from bivariate approaches is that the possible influence from other work commitment constructs cannot be determined, thus rendering the possibility that the reported bivariate correlations may be method artifacts.

Another major limitation in the studies investigating the interrelationships among the work commitment facets is that two or three of the work commitment facets were included in the same study, without examining their interrelationships (Emmert and Taher, 1992; Thompson, Kopelman and Schriesheim, 1992; Krausz, Brandwein and Fox, 1995). A multitude of studies investigated the relationships between one or more work commitment measures and other variables such as job characteristics, personality variables and work outcomes, but very few studies investigated the interrelationships among the main work commitment facets together in one study.

Randall and Cote (1991) suggested a multivariate framework and conducted a study where they specified causal linkages among five forms of work commitment i.e. organizational commitment, career salience, work group attachment, job involvement and the PWE. Their sample consisted of 455 staff members at a large university in the Northwestern United States. Randall and Cote (1991) conceptualized the interrelationships among the five forms of commitment as follows: The five facets are firstly depicted as related but separate forms of commitment. Job involvement is seen as the key moderating variable, influenced by the PWE and work group attachment. Job involvement is also postulated to influence organizational commitment and career salience.

Randall and Cote (1991) suggested that the five foci of work commitment which they identified could influence each other in the following way.

Work group attachment

Work group attachment refers to the individual's sense of belongingness and cohesiveness with fellow workers and a sense of membership to the organization. The greater the social involvement, the greater the attachment to the organization.

The PWE

It is suggested that the PWE plays a key role influencing an employee's affective responses in the work environment.

Job involvement

A direct relationship between work group attachment and job involvement is suggested because it has been postulated that the social relations at work shape a person's job involvement. Job involvement has also been linked with PWE. A person with a high work ethic will be most likely to be job involved (Runyon, 1973; Ruh and White, 1974). Blau (1985b) found that the degree to which a person is job involved is positively influencing his career commitment.

Career commitment

The findings regarding the relationship between career commitment and organizational commitment are rather inconsistent. It is viewed as a relationship of conflict by some (Sheldon, 1971), yet others feel that these two forms of commitment can be compatible. Due to the inconsistent findings in this regard, Randall and Cote (1991) did not specify a linkage between career and organizational commitment.

Organizational commitment

The strongest evidence of a consistent positive correlation in the literature exists between organizational commitment and job involvement. For instance, Blau and Boal (1987) proposed a conceptual model describing how the interaction between job involvement and organizational commitment can be

used in predicting turnover and absenteeism. Blau and Boal (1987) proposed that job involvement and organizational commitment multiplicatively interact to predict turnover intentions. They argued that job involvement and organizational commitment should serve as interactive orientations to one's rationale to stay or leave an organization. Studies by Martin and Hafer (1995) and Nouri (1994) offered support for their model. Wiener and Verdi (1980) also found that job involvement and organizational commitment were significantly related.

Randall and Cote (1991) therefore conducted a Confirmatory Factor Analysis to remove random error and to estimate the true correlations between the underlying constructs. In order to examine the hypothesized relationships an analysis of covariance structures was performed as a subroutine of the EQS programme (Bentler, 1980).

Results indicated that four of the five specified relationships were significant with the coefficient of determination varying between .03 and .51. The strongest relationship was found for the effects of job involvement on organizational commitment (.33) and career salience (.27). Work group attachment had no significant effect on organizational commitment, only through job involvement. The effect of PWE on work group attachment, career salience and organizational commitment was also examined. The PWE did not have any effect on work group attachment and did not significantly increase the explained variance in career salience. The inclusion of the PWE did however increase the explained variance for organizational commitment.

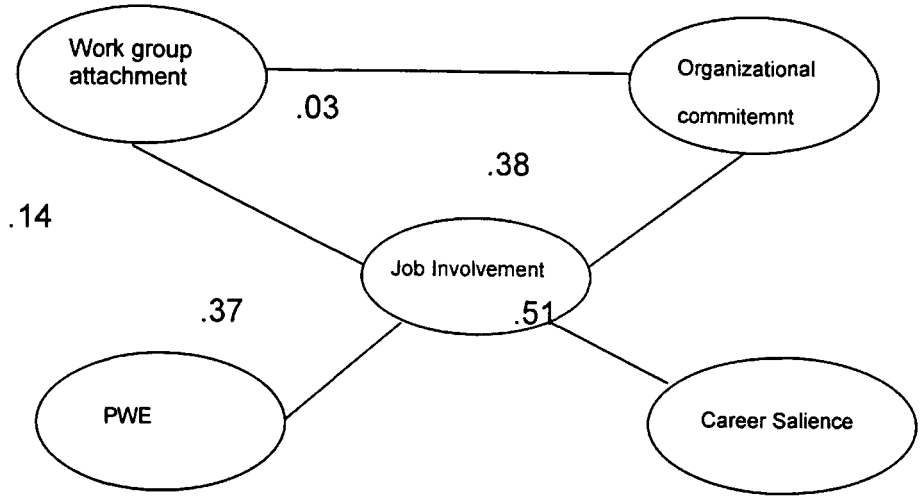


Figure 2: A Model of relationships among work commitment constructs

Overall, their results stressed the central role of job involvement among the work commitment facets. Job involvement appeared to be strongly influenced by career salience and organizational commitment. However, the model did not fit the data very well. Randall and Cote (1991) suggested that the reasons one could offer for the poor fit between the model and the data are random measurement errors, the possibility that the measures might be flawed and that the relationships specified in the model might be different. They recommended that further research using multivariate approaches should be conducted in order to increase our understanding of how the work commitment facets interrelate with each other.

Due to the lack of causal models on work commitment facets, one will have to rely on previous findings and correlations to give some indication of possible relationships. Some other results are summarized in Table 2.

Table 2:

Correlations among work commitment facets

Facets	Correlations	$100r^2$	Study
PWE, JI	.41	16.81	Morrow & McElroy (1986)
PWE, OC	.42	17.64	Morrow & McElroy (1986)
PWE, OC	.37	13.69	Morrow & McElroy (1987)
PWE, OC	.28	7.84	Morrow & Goetz (1988)
PWE, OC	.13	1.69	Koslowski et al. (1990)
PWE, OC	.28	7.84	Morrow & Goetz (1988)
PWE,OC	.43	18.49	Brooke et al. (1988)
CC, JI	.62	38.44	Morrow & McElroy (1986)
	.21	4.41	Blau (1985b)
	.28	7.84	Blau (1988)
	.27	7.29	Blau (1988)
	.32	10.24	Blau (1989)
	.55	30.25	McGinnis & Morrow (1990)
CS, JI	.25	6.25	Sekaran (1982)
	.31	9.61	Sekaran (1982)
	.62	38.44	Morrow & McElroy (1986)
CC, OC	.40	16	Morrow & McElroy (1986)
	.18	3.24	Blau (1985)
	.47	22.09	McGinnis & Morrow (1990)
	.28	7.84	Blau (1989)
OC, JI	.46	21.16	Gould & Werbel (1983)
	.22	4.84	Parasuraman & Alutto (1984)
	.45	20.25	Morrow & McElroy (1986)
	.53	28.09	Morrow & McElroy (1987)
	.41	16.81	Morrow & Goetz (1988)
	.32	10.24	Morrow & Wirth (1989)

Table continues

OC, Ji	.61 ns	37.21	Mathieu & Kohler (1990) Barling, Wade & Fullager (1990)
OC, CC	.31 .32 .28	9.61 10.24 7.84	Blau (1988) Blau (1988) Steffy & Jones (1988)
OC, Work values	positive correlation		Putti, Aryee & Liang (1989)

A scrutiny of the Table 2 indicates somewhat inconsistent results regarding the correlations among the work commitment measures. Possible reasons that can be offered for this situation are mono-method bias (the majority of studies used questionnaires which will amount to a certain degree of correlation), and the use of different instruments measuring the same construct. It is possible that in some cases the inconsistent relations might be the result of instrumentation rather than definitional problems. However, correlations obtained through two meta analyses (Brown, 1996; Mathieu and Zajac, 1990) give a better indication of the true correlations among some of the work commitment facets.

Table 3:

Correlations obtained from two meta analyses

Facets	Correlation	Number of studies	Study
JI, WI	.528	6	Brown (1996)
JI, PWE	.449	13	
JI, CS	.604	10	
JI,OC	.496	71	
OC, JI	.439	20	Mathieu & Zajac
OC, CC	.438	22	(1990)
OC, PWE	.289	7	

2.2.3 Summary

What is becoming clear is the relative little advance made over the last two decades in the understanding of the interrelationships among work commitment facets. Very little evidence could be found with regard to the causal relationships among these facets. One possible cause is the lack of a well-developed and tested conceptual framework underlying the work commitment construct. One can only refer back to the discussion on each facet to illustrate this point. It would also be very difficult, if not impossible, to successfully investigate any causal directions among the work commitment facets when there is still evidence of definitional and measurement problems within the different facets. It is hoped that the current study will especially bring some clarity in this regard.

2.3 Role strain

In paragraph 1.2 it was indicated that individuals react differently to changes in the work place. Employees may experience higher levels of stress and role ambiguity while others may be less committed to their jobs and have a higher propensity to quit. It was therefore decided to investigate the relationships among the work commitment facets, role ambiguity and role conflict.

The approach followed in this section is somewhat different from the previous sections. A brief discussion of role strain (role conflict and role ambiguity) and intention to quit as measured in the current study will be given, followed by a summary of some of the relationships found between these variables in previous studies.

Stress in the work environment has received a lot of attention over the years (McGee, Ferguson and Seers, 1989). A major source of such stress is role stress and more particularly role conflict and role ambiguity. At the end of the 20th century people have more roles to fulfil and more complicated tasks to carry out with more uncertainty and less clear-cut instructions. Several early studies indicated that role ambiguity directly or indirectly leads to the reduction in job involvement and productivity (House and Rizzo, 1972; Miles, 1976; Beehr, Walsh and Taber, 1976). Higher levels of work role conflict and work role ambiguity have also been associated with intentions to leave a job (Jenkins, De Frank and Speers, 1984; Rizzo, House and Lirztman, 1970).

Most of the research regarding role stress focussed on individual and group level factors as causal variables and treating role stress as a predictor variable, whereas other studies were concerned with diverse topics such as job and marital satisfaction, supervisor-subordinate relationship and job attribute preferences (Wiersma, 1990). Few studies have investigated role stress as a dependent variable, the majority of studies examined role stress as a predictor of variables such as psychological stress, dissatisfaction and burnout (Bacharach, Bamberger and Mitchell, 1990).

According to Van der Velde and Class (1995), few studies extended the theoretical framework for studying role stress to include constructs such as organizational behaviour as was suggested should be done by Van Sell, Brief & Schuler, 1981). There is certainly no shortage of studies which investigated the relationship between role stress and certain job outcomes such as job satisfaction, burnout, mental health and intention to leave. However, the critique voiced by Van der Velde and Class (1995) is equally valid regarding

the relationship between role stress and facets of work commitment. Few studies looked at the relationships and possible causal relations among scores on the various work commitment measures and role strain/stress in a single study.

To answer the third research question i.e. "What are the relationships among the work commitment facets, role stress and intention to quit?" an almost inductive approach will have to be followed, especially as far as the work commitment facets are concerned.

2.3.1 Role Conflict

Role conflict is defined by Rizzo et al. (1970, p.155) as the "dimensions of congruency-incongruency or compatibility-incompatibility in the requirements of the role, where congruency or compatibility is judged relative to a set of standards or conditions which impinge upon role performance". Rizzo et al. (1970) identified four types of role conflict i.e. intrarole, intrasender, interrole and intersender conflict.

The four types can be divided into two groups. In intrarole and intrasender conflict, the individual is the perceiver of the incongruency, and in intersender and interrole conflict another person or persons in the organization is or are the perceivers of the incongruency (Schwab, Iwanicki and Pierson, 1983).

Intrarole conflict occurs when a person has to violate personal beliefs or principles in order to do the job. Intrasender conflict occurs when the individual is asked to do something he believes is beyond his capabilities and circumstances (e.g. time and resources). Interrole conflict is experienced when a person has to fulfil several roles within an organization, which require different and incompatible actions. Intersender conflict arises when the individual is trapped by conflicting expectations and demands from the organization or different divisions in the organization.

Work roles may be in conflict with the employee's values, needs and abilities. Multiple roles may be in conflict with one another and a single role might be defined by more than one sender, resulting in internal conflict.

2.3.2 Role ambiguity

Role ambiguity is defined by Rizzo et al. (1970, p. 157) as the "predictability of the outcomes or responses to one's behaviour, and the existence of clarity of behavioural requirements, often in terms of input from the environment, which would serve to guide behaviour and provide knowledge that behaviour is appropriate".

Defined differently, role ambiguity is "a lack of clarity regarding the expectations for one's role, the methods for fulfilling those expectations, and the consequences for ineffective performance" (Olk and Friedlander, 1992, p.391).

Role ambiguity generally arises from discrepancy between job-related information that is made available to the worker and the ideal information required by the employee to adequately perform his role (Kahn, Wolfe, Quinn and Snoek, 1964).

2.3.3 Role ambiguity and conflict scale (Rizzo et al., 1970)

Rizzo et al. (1970) developed the most well known and widely used scale measuring role conflict and role ambiguity. An extensive number of studies have used the Rizzo et al. (1970) scale (Nhundu, 1992; Rabinowitz and Stumpf, 1987; Schuler, Aldag and Brief, 1975; Singleton, 1986; Tracy and Johnson, 1983). A review of these studies resulted in the conclusion that the psychometric properties and construct validity of the scale were acceptable (House, Schuler and Levanoni, 1983; Schuler, Aldag and Brief, 1977).

Rizzo et al. (1970) developed a pool of 30 items to measure role ambiguity and the various types of role conflict. Respondents were asked to rate each item on a scale of one to seven where one indicated that the statement was definitely not true of one's job and seven indicated that the statement was definitely true. The item-responses were factor analysed by using an image covariance method. An item was eliminated if it did not load .30 or higher on a factor, if it cross-loaded on more than one item or if the item did not contribute to the reliability of the instrument. A total of 16 items were eliminated using these criteria. The remaining 14 items revealed a two factor structure. The first factor could be interpreted as role conflict and the second factor as role ambiguity. The factor structure did not reflect the four types of role conflict as identified by Rizzo et al. (1970).

The construct validity of the Rizzo et al. (1970) scale was investigated through an analysis of the responses of 448 Massachusetts's teachers performed by Schwab, Iwanicki and Pierson (1983). The results of the factor analysis indicated a three factor solution where the role conflict scale broke down in two factors i.e. intrarole/intrasender conflict, an interrole and intersender conflict factor and a third factor which was quite similar to the Rizzo et al. (1970) role ambiguity scale.

The Cronbach Alpha coefficients for the three scales were .78, .79 and .86 respectively. However, the two role conflict scales correlated moderately with each other and when the two scales were combined a much higher Alpha coefficient of .85 was obtained.

Tracy and Johnson (1981) noted that a possibility existed that the independence of the two scales might be an artifact of the differential wording of the items comprising the scales. In their re-examination, they found that the two factors corresponded to the stress-worded items and the comfort-worded items respectively. Put differently, the respondents reacted stronger to the wording difference in the items than to the difference between role conflict and ambiguity. Tracy and Johnson (1981) further argued that subjects' responses

differ according to their tendency to agree with positively and negatively worded items.

McCandless (1979) noted that most of the role conflict items described states that most respondents would reasonably attribute to others. Accordingly, the role ambiguity items described states that could be reasonably attributed to one self. He thus hypothesized that respondents will differ according to their tendency to agree with externally other-oriented items. Because of the hypothesized independent tendencies, subjects might have response biases associated with self-oriented or other-oriented items that could account for the factorial independence of the scales.

In order to investigate whether the factorial independence of the role ambiguity and role conflict scale is indeed the result of differential wording, House, Schuler and Levanoni (1983) developed new role conflict and ambiguity scales taking into account previously expressed concerns.

Forty-nine new items were developed reflecting stress and comfort and self- and other-worded items. These items together with the original items were judged by six members of the Organizational Behaviour Faculty and graduate students from the University of Toronto. Items were retained when five of the six judges were in agreement on whether the items reflected role conflict or role ambiguity. A total of 43 items were retained.

The questionnaire was completed by 272 employees of a large public company. A four-factor solution was derived explaining 81,6 % of the total variance. The Cronbach Alpha coefficients for the four factors were .90, .84, .60 and .60 respectively. Factor one could be interpreted as a role ambiguity factor and factor two as a role conflict factor. Comfort-worded items with an equal number of conflict, ambiguity, self -and other-worded items dominated the third factor. Factor 4 basically consisted of role conflict items dominated by self-oriented and stress-worded items. The new role ambiguity factor correlated .88 with the original ambiguity scale and the role conflict scale

correlated .94 with the original role conflict scale. The third and fourth factors had no significant correlations with the two new or the original scales.

One can therefore conclude that the original role conflict and ambiguity scale developed by Rizzo et al. (1970) remains a relatively reliable measure measuring a clear construct and with acceptable psychometric properties. It was therefore decided to use the House et al. (1983) scale based on the Rizzo et al. (1970) instrument in the current study.

2.4 Intention to leave

Intention to quit can be defined as an individual's desire to leave an organization. Defined differently, turnover intentions result from a psychological state of alienation from the job or organization or both. From the employee's perspective, there are three main reasons for leaving a job namely a better offer elsewhere, a way of coping with undesirable job conditions such as role conflict and role ambiguity and a poor work-family fit. From the organization's point of view, turnover is in most cases undesirable, resulting in the loss of valuable manpower and extra costs to recruit and train a new person for the job.

Reviews of earlier literature concentrated on the relationships between turnover and various variables such as organizational commitment and job dissatisfaction (Mobley, 1977; Porter and Steers, 1973; Newman, 1974). Porter and Steers (1973) argued that more emphasis should be placed on the psychology of the withdrawal process. In this way, intention to leave can be perceived as the next logical step after experiencing dissatisfaction. Mobley (1977) developed a model in which he explained the turnover process – see Figure 3.

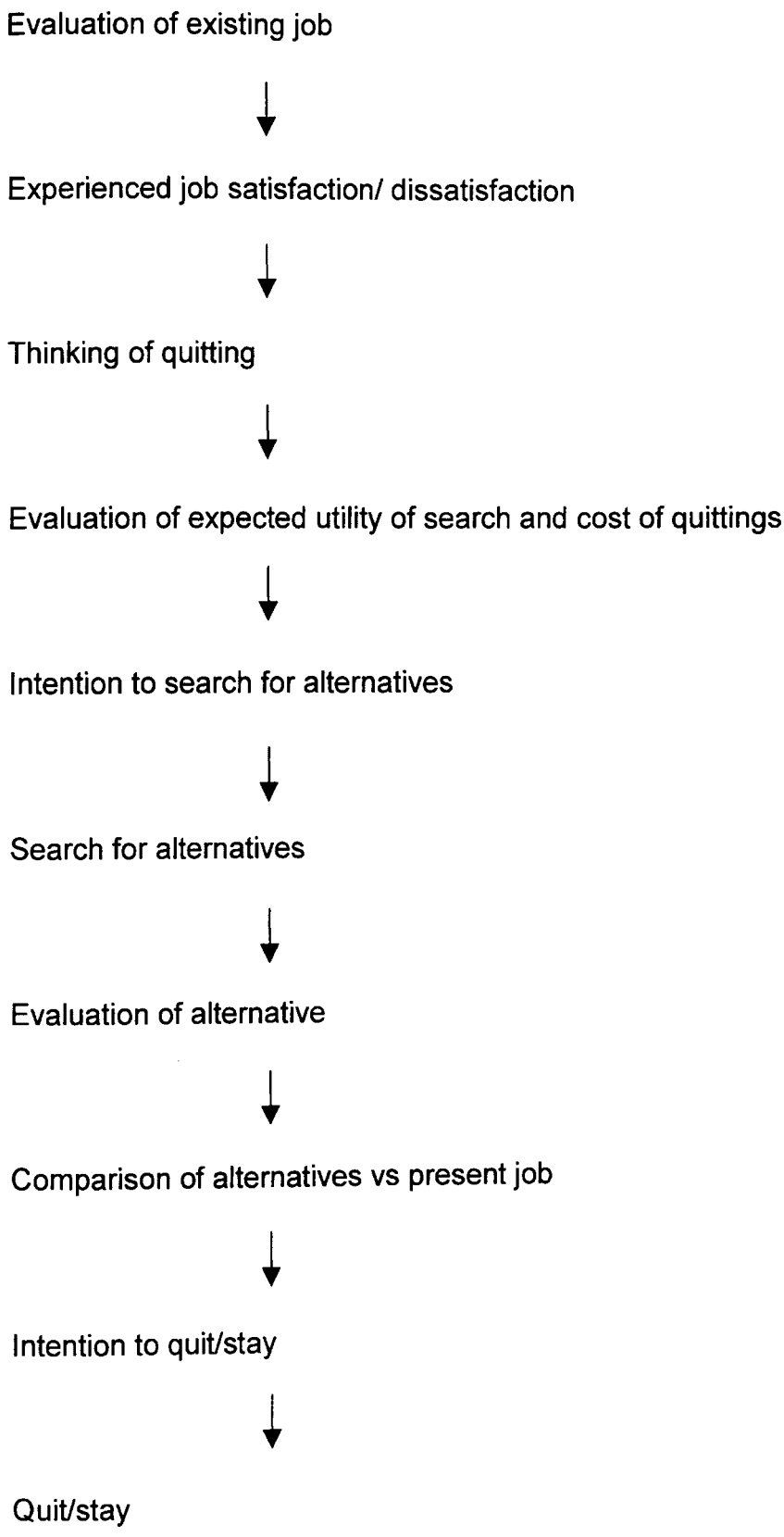


Figure 3:The employee turnover process (Mobley, 1977)

Conditional rather than direct causality is implicit in the model. Only intention to quit is directly linked with turnover. Feedback loops are also incorporated into the model. The person can evaluate his/her position against the information obtained at several points in the model. For instance, if the costs of quitting are high (e.g. the person will loose service benefits and pension if he leaves the organization), or the expected search utility is low, the person may re-evaluate his present job. The person will proceed to the next step if the costs are not perceived as too high. According to this model, only intention to leave is directly linked with the actual quitting. This is in line with Fishbein and Ajzen's (1975) view that behavioural intentions constitute the most immediate determinant of actual behaviour. It is for this reason and the fact that actual turnover can only be measured after it happened (when it is too late to do anything about it), that the current study is interested in intention to quit rather than turnover itself.

As is the case with role conflict and role ambiguity, no studies could be found investigating the effect of and relationships between intention to leave and the main work commitment facets in one study. In order to give us some indication of how these constructs and facets are related, some of the previously found correlations including work commitment facets, role strain and intention to quit are summarized in Table 4.

Table 4:

Correlations among work commitment facets, role conflict, role ambiguity and intention to quit.

Job involvement = JI; Organizational commitment = OC; Career commitment = CC; Protestant Work Ethic = PWE; Role ambiguity = RA; Role conflict = RC; Intention to quit = ITQ

Facets	Correlation	Study
JI, RA	Negatively related	Beehr, Walsh & Taber (1976)
JI,RA	Significantly related to alcohol abuse	Frone, Russell & Cooper (1995)
JI, RA	-.29	Igbaria & Siegel, 1992)
JI, Role strain	-.22	Parasuraman & Alutto (1984)
	-.20	Baba (1990)
JI, ITQ	indirect relationship	Igbaria and Siegel (1990)
	negatively related	Blau and Boal (1989)
	-.21	Blau (1988)
	-.24	Blau (1989)
JI, intention to stay	.31	Morrow & McElroy (1987)
OC, ITQ	-.52	Igbaria and Siegel (1990)
	-.52	Mathieu and Zajac (1990)

Table continues

	-.36	Blau (1989)
	-.70	McGinnis and Morrow (1990)
OC, role stress	-.31	Brooke, Russel & Price (1988)
	-.39	Igbaria & Siegel (1990)
OC,RA	-.57	Glisson & Durick (1988)
OC,RA	-.41	Meyer & Allen (1988)
	-.30	Colarelli & Bishop (1990)
OC,RC	ns	Martin & O'Laughlin (1984)
	-.43	Glisson & Durick (1988)
	-.27	Colarelli & Bishop (1990)
	-.23	Igbaria & Siegel (1992)
RC, ITQ	negatively related	Singleton (1986)
	positively related	Baroudi (1985)
		Bedeian & Armenakis (1981)
		Chan (1989)
	.23	Igbaria & Siegel (1990)

Table continues

RA, ITQ	positive related .22	Singleton (1986) Igbaria & Siegel (1990)
CC, RC	ns	Colarelli and Bishop (1990)
CC, RA	-.38	Blau (1985b)
CC, intention to stay	.31	Morrow and McElroy (1987)
PWE, Intention to stay	.23	Morrow & McElroy (1987)
RC, WI	.23	Tenbrunsel, Brett, Stroh & Reilly (1995)

As was the case with the correlations among the work commitment facets, the results are inconsistent. Two meta analyses by S.P.Brown (1996) and Mathieu and Zajac (1990) attempt to give a clearer picture of the true correlations among two of the work commitment facets i.e. job involvement and organizational commitment, role stress and intention to quit.

Table 5:

Correlations among JI, OC, RA, RC and ITQ from two meta analyses

Facet/construct	Correlation	Number of studies	Study
JI, RA	-.16	32	Brown (1996)
JI, RC	-.167	27	
JI, ITQ	-.310	23	
OC, RA	-.218	21	Mathieu & Zajac (1990)
OC, RC	-.271	24	
OC, ITQ	-464	36	

2.5 Conclusion

It seems as if a lot of progress has been made since Morrow (1983) called for a moratorium on the development of new work commitment measures. Although many of the measuring instruments still struggle with construct validity, items overlapping with other work commitment facets and other methodological problems, it seems justifiable to use the existing work commitment facets as independent measures. However, a lot of work still needs to be done. For instance the PWE measurements of the concept should be adjusted to reflect the work ethic of today. With career commitment on the other hand one should seriously consider what comprises a career in modern times and for different kinds and levels of people.

As far as the correlations among the work commitment facets are concerned, progress has been made in the form of a few meta analyses and those done by Mathieu and Zajac (1990) and S.P. Brown (1996) need to be mentioned. Based on the results of the meta analyses (which is a much better indication of the true correlations since the results of a large number of studies were

included) and in the light of the lack of causal models, certain relationships can be hypothesized.

These relationships can be divided into three broad categories i.e. antecedents, correlates and outcomes. The PWE is postulated as an antecedent of job involvement and organizational commitment. According to the individual perspective, job involvement is the result of socialization processes that regard the importance of work as necessary and virtuous. Such beliefs are likely to predispose people to be more involved in their jobs and to be committed to their organizations.

Job involvement is postulated to be an antecedent of organizational commitment. Brown (1996) stated that the relationship between organizational commitment and job involvement are likely to be reciprocal. For instance, the relationship between job satisfaction and organizational commitment is much stronger than between job involvement and job satisfaction. Organizational commitment was also more strongly related to turnover intentions than job involvement.

Both career commitment and work involvement were in some previous studies related to job involvement. It is, however, not clear from the literature whether commitment to a job leads to greater commitment to work in general. Mathieu and Zajac (1990) also considered career commitment to be a correlate of organizational commitment although it is not clear how these forms of commitment develop.

As far as the role conflict, role ambiguity and intention to quit variables are concerned, role conflict and role ambiguity are considered as antecedents to both job involvement and organizational commitment, and intention to quit is seen as an outcome variable. To the extent that an employee experiences dissatisfaction in his work due to conflicting demands from different role partners (role conflict) or uncertainty regarding role requirements, the job's potential for satisfying salient psychological needs is reduced. It is therefore postulated that role conflict and role ambiguity would effect job involvement

negatively (Fisher and Gitelson, 1983). Brown (1996) found that role conflict and role ambiguity had smaller negative effects on job involvement than on organizational commitment.

Intention to quit is seen as an outcome variable of job involvement. The assumption is made that a cognitive state of identification with the job based on perceptions of its potential for satisfying salient psychological needs, proceeds and triggers motivational processes that will influence motivation, commitment, absenteeism and turnover. Brown (1996) found that there was a stronger relation between job involvement and intention to quit than with turnover. Not much research has been done relating role states to commitment. The most common assumption has been that role states result from perceptions of the work environment and then influence affective responses. The results indicated that people with higher levels of stress tend to be less committed to their organizations.

It is clear that causal models explaining the relationships among the work commitment facets, role stress and intention to quit are desperately needed. The few possible links suggested above are by far not exhaustive. A clear picture cannot be obtained when the different variables are studied in fragments. It is hoped that the contribution of the current study in this regard is the fact that for the first time all of these variables are included in one study, and that for the first time the causal effect of these variables on each other will be investigated.

Chapter 3: Rationale for methodological approach

In this chapter an attempt will be made to provide a rationale for the methodological approach followed in Chapter 4.

3.1 Theoretical framework

Planning a research design is like going on a hiking trip. Before leaving on such a trip, you need to make a list of everything one might need, for instance, food, water, dry clothes, matches, a compass and a map to make sure you reach your final destination. To carry out successful research is the same. It requires careful planning, a thorough conceptualization of the entire process and a detailed plan for very step. Without a careful thought-out design, things can and almost always go wrong. Just as when one does not follow the planned trail, you find that you have missed several landmarks and scenery, one might still complete the research but will discover a trail of gaps you did not make provision for and which considerably diminishes the value of the research. How does one avoid these pitfalls? The answer can be found in conducting good scientific research which is characterized by the presence of good integrating theory; public and open procedures; precise definitions; a systematic and cumulative approach; replicable findings; objective data-collecting and sampling; a clear statement of the research problem and there should be a purpose of explanation, understanding and prediction of the phenomenon/phenomena studied (Kerlinger, 1986).

In planning a research design, one has to decide what kind of approach to follow. One can work deductively or theory testing, where one has an idea what results are going to be found and the research design is developed to confirm or disconfirm the hypothesis. The other approach which can be followed is that of inductive reasoning, also known as the scientific method or theory building. With inductive theorizing, one does not know what you are going to find. The facts are arranged into patterns that will move toward theory. The theory is then more grounded in the sense that it was generated from the data and not from speculations (Guy, Edgley, Arafat and Allen, 1987).

After one has chosen an approach (or a combination of approaches), one has to decide on the specific methodology you are going to use. Here we firstly distinguish between qualitative and quantitative research. Qualitative research "depends mainly on direct observation and descriptive analysis of social interaction and outcomes in specific social settings, sometimes relying on the intuitive skills of the researcher" (Guy et al., 1987). Quantitative research depends mainly on "statistical measures to evaluate differences in variance and means in a variable presumed to have been measured" (Guy et al., 1987). It is important to remember that is not a case of following an either/or methodology, the two approaches can be combined and this is also known as triangulation (the use of several frames of references or perspectives in the analysis of the same set of data (Leedy, 1993, p.143)).

This, in a nutshell, provides the background to decisions which had to be taken in the present study.

To try and find answers to the first two research questions, a deductive approach will be followed and a combined approach (both inductive and deductive approach) will be followed in answering for the third research question.

In terms of the operational aspects, several decisions had to be made. Here the characteristics of good scientific research served as guidelines.

A very brief overview of the literature regarding the first two research questions will be given with emphasis on the operational and methodological shortcomings in previous studies on work commitment.

In terms of the first and second research question i.e. "What are the underlying dimensions of each of the four work commitment facets?" and "What are the underlying dimensions of the work commitment construct?" various researchers have postulated that the main facets of work commitment are job involvement, organizational commitment, work values and career commitment (Morrow, 1983, 1993; Blau, Paul and St John, 1993; Randall and Cote, 1991).

Some studies (Morrow, 1983) included union commitment but since not all employees are members of unions, it is not considered as a main facet of work commitment and is therefore not included in the current study.

Literature reveals a wealth of other studies supporting the distinctiveness of the work commitment facets, although the facets were studied in different combinations in the different studies (Blau, 1985, 1988, 1993, 1994; Brooke, Russels & Price, 1988; Mathieu and Farr,1991; Morrow and Goetz, 1988; Morrow and Wirth, 1989; Paulley, Alliger and Stone- Ramero, 1993).

However, as has been described in chapter two, research on each of these facets suffer from certain measurement and methodological problems such as construct validity, concept redundancy, definitional problems and poor measuring instruments. It is problems like these that make it very difficult to determine the underlying dimension of each facet and of work commitment as a whole, since it is difficult to determine whether the facets are really independent from each other or to which extent they share common variance.

The most important reasons for the theoretical and measurement problems in the different facets can be briefly be summarized as follows:

3.2 Limitations and shortcomings in previous research

3.2.1 Lack of integrating theory

The basic and ultimate aim of science is theory. Theory is a set of interrelated constructs or concepts, definitions and propositions that present a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomena (Kerlinger, 1986, p.9). Good scientific research is "systematic, controlled, empirical and critical investigation of natural phenomena guided by theory and hypotheses about the presumed relationships among such phenomena (Kerlinger, 1986, p.10).

A review of the literature with regard to the work commitment facets reveals a lack of integrated theory and consensus of what each facet consists of (Morrow, 1983; Reichers, 1985; Oliver, 1990) although some progress has been made (Morrow, 1993). In many cases, such as job involvement and career commitment, a proliferation of terms exists. In other cases such as career commitment, many studies did not even include a definition of what a career is. It seems that in many cases, the definitions lacked conceptual clarity which can then also be seen in the operationalization of the concept. A good example in this regard is Lodahl and Kejner's (1965) definition of job involvement where they included two definitions i.e. psychological identification with one's job and a performance self-esteem contingency without indicating which definition they preferred or used in developing their scales to measure the particular facet. The lack of theory is especially noticeable as far as the interrelationships among the work commitment facets are concerned. Very few studies investigated the interrelationships and possible causal relations among the work commitment facets in one study. At the moment hypotheses of how these facets are interrelated can only be based on the correlations found among various combinations of facets together.

3.2.2 Methodological problems

The lack of consistent results concerning the correlations among the work commitment facets as well as among the work commitment facets, role conflict, role ambiguity and intention to quit can be attributed to various reasons. First of all, the choice of sample plays an important role. In some cases such as studies on career commitment, most of the samples consisted of nurses, which place a limitation on the generalizability of the results. It has been found that different occupational groups differ in terms of their career commitment, work ethics and other forms of commitment. It is therefore important to replicate studies on other samples as well in order to test the construct validity of the instruments used. Secondly, the sample sizes in many studies were far too small. For many sophisticated statistical techniques such as structural equations and multivariate analysis techniques in general, an item-respondent ratio of 5-10 is essential. Factor loadings tend to be unstable

in sample smaller than 200 and tend to stabilize in sample sizes between 200-300 (Thorndike, 1982).

Thirdly, the specific statistical analyses used in many studies are questionable. Procedures such as Orthogonal rotation of the axes in factor analytical procedures are based on the assumption that the variables are independent from each other or not related, where in the social sciences, very few variables are completely independent from each other. Procedures such as Principal Components Analysis are based on the assumption that the data is linearly related, thus rendering fewer factors. It may be that results under those circumstanzes were due to statistical artifacts.

Another problem encountered in many of the studies is the strength of the correlations. In many cases the correlations are indicated as significant although it is still rather low. For instance when a correlation of .40 is given it might seem high, but in fact when the percentage common variance (100 $r^{2)}$ is calculated, a value of only 16% is obtained, rendering the correlation not so high after all. Another point which is often ignored where high correlations are obtained is the effect of mono-method bias. It is well known that when only one method of data gathering e.g. questionnaires is used a certain degree of correlation between variables will be obtained. Again there is the question of what the true correlations among the variables would be. Meta analysis is a potentially powerful technique in this regard to determine the true relationships among variables over a large number of studies. Few meta analyses in the work commitment literature could be found and further research in this regard is needed.

3.2.3 Development of measuring instruments

Morrow (1993) in her review of the work commitment facets stated that the problem of redundancy as identified in her earlier review (1983) is more an instrumentation than a conceptual problem. For instance, the Lodahl and Kejner (1965) measure of job involvement was not deductively formulated in order to operationalize either or both of their proposed definitions. They arrived at their definitions of the facet inductively through factor analytical

procedures (Morrow, 1983). Another problem causing measurement problems is the referent used in the instrument. Do we talk about career commitment or occupational commitment; do we distinguish between work and job involvement? If these referents are not clearly defined and used consistently response overlap may take place, which will contaminate the results because it is not clear what the instrument measures. Meyer, Allen and Smith (1993) adjusted their three-component organizational commitment scale to measure occupational commitment. They basically just substituted the organizational referent for an occupational referent. Whether such a procedure will lead to clearer definition of the contents of the career construct is questionable.

Although a lot of limitations of previous studies have been mentioned, one has to acknowledge the positive side too. In order to build any theory, one inevitably has to work inductively at some point. From Chapter two it is clear that a wealth of research has been done and without that previous research the present study would not have been possible. What remains to be done now, is to continue with the theory building process, build on previous research, try and eliminate previous shortcomings and thus conduct good scientific research.

In this regard, the limitations of previous studies mentioned above serve a twofold purpose. Firstly it gives some idea of the main reasons why there are inconsistent results in the work commitment domain and secondly what one will have to do to improve the existing theory and make some valuable contributions to the field. Again the characteristics of good scientific research served as guidelines for planning the present study.

3.2.3 Current approach

In order to answer the first research question (and cancel out some of the above mentioned problems) it was decided to investigate each facet separately. In an earlier study (Boshoff, Hoole, Bennett and Jillings, 1997), several instruments in each work commitment facet (selected on the basis of the frequency of their use and their psychometric qualities, and thus building

on previous research) were completed by a large South African sample that consisted of 1019 respondents from approximately 50 different organizations (some of the limitations of previous research were that sample sizes were too small for the statistical techniques used and for factor loadings to stabilize and that samples came from only a few organizations and occupational groups). The diversity of the sample attempted to eliminate the problem of generalizability due to too small sample sizes and samples of convenience. Exploratory and Confirmatory Factor Analysis were performed to determine the underlying factor structure of each facet until a pure factor structure was obtained. The results of the Boshoff, Hoole, Bennett and Jillings (1997) study form the basis of the current study. For the current study, the newly obtained scales (consisting of combined items from various scales in each facet) were completed by 1484 respondents from three organizational subgroups. The procedures will be discussed in more detail in chapter four. The purpose then is to determine the underlying dimensions of the facets separately, to determine the structure of the work commitment facet and to see whether a similar factor structure will be obtained as in the Northern American countries where most of these instruments were developed. This is especially important in terms of the portability of instruments developed in one country to another.

One can then conclude that a deductive approach will be followed to answer the first two research questions in the sense that it will be tested whether work commitment does indeed consist of the four main identified facets i.e. job involvement, organizational commitment, work values and career commitment, and whether these facets can be treated as separate constructs.

In terms of the third research question, it has been pointed out in chapter two that one of the biggest problems up to now was that very few studies included measurement of all the work commitment facets together in one study. Most studies adopted a bivariate approach, giving no information on possible causal relations. Role conflict, role ambiguity and intention to quit were mostly studied together with just one or two of the work commitment facets. It is almost impossible to determine the nature of interaction among the work

commitment facets, role conflict, role ambiguity and intention to quit if all the variables are not included in the same study (no evidence could be found of any studies including all of the relevant variables), because one will not know what the effect of other variables would be. Since no well-developed theory is available which explains the interrelationships among the work commitment facets, and among these facets and the role strain and intention to quit variables, it was decided to calculate the intercorrelations among all the involved variables to give some indication of how these variables are related and how a possible model concerning the possible causal relations among the variables could be built.

3.2.4 Rationale for use of specific statistical techniques

It is appropriate to give a short description of each technique and the reason why it was chosen. A model building approach was followed and carried out in three ways namely Exploratory Factor Analysis, Confirmatory Factor Analysis and Structural Equation Modeling.

Exploratory Factor Analysis

Exploratory Factor Analysis is used when one has obtained measures on a number of variables, and wants to identify the number and nature of the underlying factors. Exploratory Factor Analysis is therefore used to determine the underlying factor structure of a set of data or a construct (Hatcher, 1994). Both the first and second research questions are concerned with determining the underlying factor structure of the work commitment constructs and its facets.

Confirmatory Factor Analysis

Confirmatory Factor Analysis is used to determine the fit between the data and the measurement model or factor structure obtained through Exploratory Factor Analysis. Once the underlying structure of a set of data has been obtained, Confirmatory Factor Analysis is used to determine how well the obtained structure fits the data.

Structural Equation Modeling

Structural equation modeling is a very useful technique for specifying, estimating and testing hypothesized interrelations among a set of substantively meaningful variables (Bentler and Wu, 1995). Structural equation models try to explain relationships among complex phenomena where a large number of variables are involved (Hoole, 1996). In the current data set little is known about the relationships and possible causal directions among the studied variables. Structural equation modeling would therefore be the appropriate technique to find an answer to the third research question.

Chapter 4: Methodology

4.1 Research design

The research design can be described as an empirical and quantitative correlational/factor analytical study with an exploratory component. The measurements used in the current study are widely used in the work commitment field.

The current study is the second phase of an international study of work. During the first phase, various instruments were selected (on the basis of frequent use in the literature) which were felt best reflected each work commitment facet. The questionnaires used in the first phase were:

Organizational Commitment
24-item scale (Allen and Meyer, 1990)

Job Involvement
Lodahl and Kejner's (1965) 20-item scale
Kanungo's (1982) 10-item scale

Career/Occupational Commitment
Blau, Paul and St John (1993) - 11 items
Carson and Bedeian (1994) - 12 items

Value facet
Elizur (1984) - 42 items
Blood (1969) - 8-item scale
Kanungo's (1982) work involvement scale - 6 items

The combined questionnaire was completed by 1019 South African respondents from approximately 50 organizations. Each facet was subjected to Exploratory and Confirmatory Factor Analysis using the BMDP (1993) and SAS (1994) statistical analysis programmes in order to determine the

underlying dimensions of each facet until a pure factor structure was obtained. The total scale (all the items of the different scales combined) was subjected to the same procedure (in order to determine the underlying dimensions of the work commitment facet). This first phase was seen as a preparatory step in the bigger project, since very few of these scales were standardized for South African conditions and little evidence could be found on studies investigating the work commitment construct within South African samples.

The process in the first phase of the research programme resulted in a new scale for each facet consisting of combined items from the corresponding scales for each facet (more than one instrument was used for each facet). The remaining items were then included in the questionnaire used in the current study to measure the different work commitment facets. The rationale for this decision is that all the weak items in the different scales were eliminated, and that a factor structure based on a highly a diverse South African sample was obtained.

The compositions of the new scales are as follows:

Job Involvement

22 items (Kanungo, 1982 & Lodahl and Kejner, 1965)

Organizational commitment

20 items (Allen and Meyer, 1990)

Career Commitment

22 items (Blau, Paul and St John, 1993; Carson and Bedeian, 1994)

Work values

24 items (Elizur, 1984)

5 items (Kanungo, 1982

2 items (Blood, 1969)

The other scales included in the current study are:

Role strain

25 items (House, Schuler and Levanoni, 1983)

Intention to quit

3 items (Cohen, 1993)

Biographic Questionnaire

15 items (Hoole, 1997)

4.2 Participants

The participants were members (employees) of two, in South African terms, large organizations - a financial services company and a university. The university has campuses in the Northern parts of South Africa. The financial services organisation has regional offices and branches throughout South Africa.

The sampling frame used for the selection of members of the subsample from the financial services company consisted of all the incumbents of positions classified into job grades four to ten. The organisation grades all jobs according to a formal job evaluation system and identifies 15 job grades. Job grade one is the lowest level of work in the organisation with job grade 15 seen containing the position of the Chief Executive of the organisation. Incumbents of jobs at job grades lower than four were not considered for inclusion in the sample as it was considered likely that employees at these levels would have difficulty understanding and completing the questionnaire. Individuals in positions classified as above job grade 10 were considered to be at the levels of upper middle management, senior and top management. It was felt that social desirability could play a role in determining the answers of employees at these levels. A random sample was drawn of employees at the job grade four to ten levels. The sample consisted of 700 employees at the Head Office of the organisation and 200 employees from each of the two largest regional offices. All these individuals received questionnaires. Of

these numbers 411 questionnaires were received back from Head Office staff members and 174 and 116 from the two regions respectively. The return percentage therefore amounted to 58.71% for Head Office employees and 87% and 53% for the two regions respectively. For the organization as a whole the return percentage therefore amounted to 63.63%.

In the case of the university, random samples were drawn from the alphabetical university address lists of employees obtained from the Personnel Division of the organisation. Separate samples were drawn from lists of names of, respectively, Heads of Department, teaching, research and professional staff (e.g. members of the staff of the library system) and the administrative staff of the university. Out of 1200 members of the administrative staff 600 received questionnaires. Every second name on the alphabetical list was left out. Questionnaires were also sent to 120 Heads of Departments out of a total of 160 and 500 other academic staff out of a total of a 1000. Every fourth name was left out in the case of Heads of Department. In the case of other academic staff, every second name was left out. From administrative staff 367 questionnaires were returned, a response rate of 61.17%. The corresponding figures for Heads of Department were 63% and 51.5% and for the other academic staff 396 and 79.2%. The number of questionnaires returned and return rate for the total university staff were therefore 826 and 67.67%. Using address lists in this way to draw samples can be seen as a process of random sampling (Moser and Kalton, 1972).

Information about the age of the sample and subsamples is given in Table 6.

TABLE 6:
DEMOGRAPHIC CHARACTERISTICS OF SAMPLE

Grouping	N	Mage	SDage
Total sample	1527	37.44	11.13
Financial institution	701	31.37	8.84
Academic	459	43.49	10.17
University Administrative	367	41.47	10.24

Table continues

University (Total)	826	41.91	10.21
Males (Total)	533	40.46	11.59
Females (Total)	977	35.76	10.56

4.3 PROCEDURE

Data was gathered by means of a questionnaire developed and compiled as described earlier. The questionnaire was completed anonymously by all participants except when the participant voluntarily identified him/herself by requesting feedback on his/her responses in comparison to those of the other members of the sample.

Data was obtained by means of initially negotiation with members of senior or top management of the two organisations from which members were included in the study. Once permission had been obtained data gathering was initiated.

In the financial services organisation a covering letter which was a copy of the researcher's letter to the organization's General Manager was sent to all individuals whose names had been included in the original samples drawn randomly. A copy of the letter is included as Appendix A. In this organisation the questionnaires were distributed by the secretary of the senior manager in the Personnel Division of the organisation. This individual had assistants who handed the questionnaires over to members of the original sample. The assistants collected the questionnaires, placed in sealed envelopes, five days later.

In the university questionnaires were distributed by means of the internal postal system of the organisation to all individuals included in the original random sample. A covering letter shown as Appendix B, was included with the questionnaire. A return envelope pre-addressed to the promoter of the study was included with the questionnaire. An e-mail message was sent to all members of the randomly chosen sample after one week to request compliance with the request to complete the questionnaire.

Data was analysed by means of a mainframe computer at the University of Pretoria utilising the SAS and BMDP sets of programmes. A copy of the questionnaire is provided in Appendix C. A participant's responses were left out of a specific analysis if in the total questionnaire more than three items and in any individual scale more than one item had been left unanswered.

4.4 Measuring instruments

Information on the measuring instruments will be presented according to each work commitment facet. Some overlap with information in earlier chapters will be evident but it is felt that an integrated presentation of the instruments and their development in this chapter will be worthwhile.

4.4.1 The job facet

Job and Work Involvement scales

The job and work involvement scales used in the current study were developed simultaneously by Kanungo (1982) and will therefore be described together in this section.

Sample characteristics

The total sample consisted of 703 employees (184 French speaking, 519 English speaking, 57% male and 43% female, 40% was married and 60% was single.

The Mean age for total sample was 28 years, SD = 6.66, 37% of the sample was French Canadian subjects, and 41% English Canadian subjects.

Development of Job and Work involvement scales

Kanungo (1982) used three different measurement formats in the development of his job and work involvement scales namely a questionnaire, semantic differential and a graphic technique. Questionnaire items that were supposed

to reflect a cognitive state of psychological identification with one's job were judged for face and construct validity by 10 graduate students. There was complete agreement on twelve items to be included in the job involvement questionnaire and on 9 items for inclusion in the work involvement questionnaire. For the JIQ and the WIQ items, 6-point agree-disagree response formats were developed. The tentative instrument was then applied to the respondents as described earlier. After item analysis had been conducted, two items were dropped from the JIQ and three items from the WIQ because of their low interitem and item-total correlations. For the semantic differential instrument, six graduate students identified eleven bipolar items (using available literature and dictionaries for synonyms and antonyms that clearly reflect the notion of psychological identification) on which there were total agreement. These items with a seven-point response format were used to construct the Job involvement semantic differential (JISD) and the work involvement semantic differential scale (WISD). Three items were dropped from each scale on the basis of interitem and item-item correlations. Three graphic items representing the notion of psychological identification were selected for use in the job involvement graphic (JIG) and the work involvement graphic (WIG) scales. Two of the graphic items were finally selected for the graphic scales. Both JIG and WIG items used a 7-point response format. The final questionnaire was administered to 900 French and English speaking employees who were enrolled for extension courses at three different universities.

Information in the internal and test-retest reliability coefficients obtained by Kanungo are shown in Table 7 and 8.

Table 7:

Reliability coefficients for the three job involvement scales

Scale	Internal consistency	Test-retest
JISD	.81	.74
JIQ	.87	.85
JIG	.70	.82

Table 8:

Reliability coefficients for the three work involvement scales

Scale	Internal consistency	Test-retest
WISD	.83	.78
WIQ	.75	.67
WIG	.68	.67

The eight items included in the JISD and WISD respectively had median item-total correlations of .75 (range = .64-.82) and .74 (range = .71-. 82). The median item-total correlation for the 10 items included in the JIQ was .68 (range = .59-.74). For the six items in the WIQ the median item-total correlation was .67 (range = .54-.74). The intercorrelations for items in the JIG and WIG scales were .70 and .68 respectively.

The means scores and standard deviation of the six scales i.e. JISD, JIQ, JIG, WISD, WIQ and WIG are reported in Table 9:

Table 9:

Mean scores, SD for JISD, JIG, WISD, WIQ, WIG

Scale	Mean	Standard deviation
JISD	23.94	10.07
JIQ	31.31	10.61
JIG	8.39	3.01
WISD	20.30	8.28
WIQ	20.70	5.97
WIG	9.04	2.69

In the case of JISD and WISD lower scores represented higher involvement but for all the other scales higher scores represented higher involvement.

Dimensionality of the scales

The scores on the job and work involvement items were factor analyzed (separately for each of the three methods). The Principal Components Analysis followed by a Varimax rotation was used to arrive at a factor solution. In each case two separate factors were obtained. Following separate analysis, item scores from all six scales put together were again factor analyzed. A two factor solution clearly revealed differential factor loadings on job and work involvement items. The factor loadings of the relevant items are shown in Table 10:

Table 10:

Factor loadings of job and work involvement items

	Factor 1	Factor 2
JI	.70 to.40	.41 to.03
WI	.25 to.00	.79 to.34

The results suggest distinctiveness of the two constructs.

Convergent and discriminant validity of the involvement scales

The intercorrelations among the six involvement scales are given in Table 11:

Table 11:

Intercorrelations among the six involvement scales

	JISD	WISD	JIQ	WIQ	JIG	WIG
JISD						
WISD	**.28**					
JIQ	*-.33*	-.08				
WIQ	.01	*-.12*	**.29**			
JIG	*-.44*	-.09	*.80*	.21		
WIG	.02	*-.24*	.33	*.69*	**.36**	

Correlations showed in italics represent or monotrait-heteromethod values; correlations showed in bold represents heterotrait-mono-method values. The remaining correlations represent heterotrait-heteromethod values.

All the correlations were statistically significant ($p<.01$) suggesting convergent validity of the scales. However, the convergent validities of the questionnaire and graphic scales measuring job involvement were quite high ($r=.80$) and for work involvement (.69). The semantic differential scales showed a moderate to weak relationship to other scales measuring job and work involvement.

Assessment of discriminant validities requires that monotrait-heteromethod values (agreement between different ways of measuring the same trait) should exceed the heterotrait-heteromethod values (agreement between different traits measures in different ways). A more stringent criterion for discriminant validity is that the monotrait-heteromethod values should exceed heterotriat-monomethod values. This would indicate whether common trait variance is greater than common method variance. The semantic differential scales did not meet this criteria, especially the WISD.

The validity of the WISD scale is questionable because the correlations between the WISD, WIQ and WIG involvement measures (rs = -.12 and -.24)

did not exceed the correlations between the WISD and the JISD (r = .28). However, Kanungo (1982) reported that the validity criteria was met because correlations between the JISD and the JIQ and JIG scales (rs = -.33 and -.44 respectively) were higher than the correlation between the JISD and the WISD (r = .28).

Criterion-related concurrent validity of the scales was tested by examining the correlations between the job and work involvement measures and job satisfaction. It was postulated that job involvement is closer related to job satisfaction than work involvement, because involvement in one's present job stems mainly from the perception of need-satisfying potential of the job where involvement with work in general is more a matter of past socialization. Support for Kanungo's (1980) hypothesis is seen Table 12.

Table 12:

Correlation of involvement scales with job satisfaction measures

Scale	Job satisfaction scale	Overall job satisfaction scale
JISD	-.27*	-.56*
WISD	-.01	-.08
T(df = 700)	5.96*	12.79*
JIQ	.57*	.43*
WIQ	.12*	.04
T(df = 700)	12.18*	9.64*
JIG	.65*	.55*
WIG	.24*	.06
t(700)	12.61*	13.94*

* = p<.01

From Table 12 it is clear that job satisfaction had a stronger relationship with job involvement than with work involvement, suggesting further evidence for the distinctiveness between job and work involvement.

Further support for Kanungo's (1982) job involvement measure:

Kanungo (1982) reported that after further analysis of this data the results indicated that of his job involvement scale had acceptable convergent and discriminant validity and that job involvement proved to be a unidimensional construct. This was supported by various studies (Blau, 1985, 1987; Brooke, Russel & Price, 1988; Kaplan, 1990; Blau, Paul & John, 1993). The reported internal reliabilities for the Kanungo scale are uniformly high, generally between .83 and .87 (Kaplan, 1990, p.157). Kaplan (1990) further reported that Kanungo's (1982) job involvement scale's factor structure seemed to be stable across samples and even cultures. Similar factor structures were obtained using French and English Canadian employees (Kanungo, 1982), American nurses and several categories of university employees (Blau, 1985) and English and Afrikaans speaking South African professionals (Boshoff, Bennett & Kellerman, 1994; Boshoff and Hoole, 1997; Kamfer and Venter, 1997; Kaplan, 1990). In her review of work commitment measures (Morrow, 1993) reported that over 11 studies, with one exception, Cronbach α estimates have met or exceeded .70. The test-retest estimates of .63 (Blau, 1985) over seven months somewhat lower but consistent with the idea that job involvement is subject to job situation changes.

Some additional evidence of the discriminant validity of Kanungo's job involvement scale can been seen in Table 13 of studies in which the scores on this scale were correlated with scores on other scales:

Table 13:

Additional evidence of the discriminant validity of Kanungo's job involvement scale

Measures	Correlation	Study
JI, OC	.28, .18	Blau (1985)
JI, PWE	-.33,ns, .29	Kanungo (1982)
	-.32, .36, .64	Misra et al. (1985)

Table continues

JI, CC	.27 .32	Blau (1988) Blau (1989)
JI, Job satisfaction	.57, .43 .28, .22 .11 - .46	Kanungo (1982) Misra et al. (1985) McGinnis and Morrow (1990)

Several authors concluded that studies of Kanungo's (1982) scale have therefore shown it to be superior to previous measures of job involvement (Blau, 1985; Paterson and O'Driscoll, 1990; Boshoff and Bennett, 1991; Morrow, 1993; Paulley, Alliger & Stone-Ramero, 1994). The measure attempts to overcome problems in the Lodahl and Kejner (1965) scale and the measure avoids ambiguous terminology.

Lodahl and Kejner (1965) Job Involvement scale

Lodahl and Kejner (1965) used the scale discrimination technique of Edwards and Kilpatrick (1948) in the development of their measure. One hundred and ten statements were gathered from interview protocols, existing questionnaires and self-written items. Elimination of duplicate items resulted in the total of 87 items. The 87 items were submitted to judges (11 psychologists, 3 sociologists and 8 second year graduate students in a course of Human Relations to determine the degree of job involvement each item represented). Forty seven items were discarded. The remaining 40 items were cast into a four-item Likert type format where 1=strongly agree and 4 = strongly disagree. These 40 items were completed by 137 nursing personnel and 70 engineers. Analysis of the data obtained yielded the results shown in Table 14.

Table 14:

Characteristics of the Lodahl and Kejner (1965) sample

Norming group	M	SD	Splithalf r	Corrected splithalf r
Nurses (N=137)	43.37	6.52	.56	.72
Engineers (N=70)	42.62	7.83	.67	.80

A total job involvement score was calculated for each respondent. The total score and the responses to each of the 40 items were intercorrelated and factor analyzed. A general factor accounting for 22% of the obtained communality emerged in the unrotated solution. The total job involvement score had a loading of .96 on this general factor, accounting for 91% of its variance. Although 11 factors had eigenvalues of higher than 1.00, only seven had loadings greater than .30 on more than two variables. Lodahl and Kejner thus extracted seven factors (using Varimax rotation) each factor containing at least three items each loading .3 or higher. The seven factors accounted for 77% of the communality. The last two factors had zero loadings for the total job involvement score and were subsequently not interpreted.

The five factors could be interpreted as an indifferent response, job involvement, duty toward work, negative involvement and pride in the organization.

The items were further reduced to 20 items based on the item-total correlations, the communality of an item and the factorial clarity of the item. The items were then administered to a sample of engineers (N=70). For comparison purposes, the responses to the final 20 items were rescored for the nurses. The total and item scores were then intercorrelated and factor analyzed. Lodahl and Kejner (1965) found in both samples that the most variance in the total job involvement score appeared on the first axis (.99 for the nurses and .96 for the engineers respectively), indicating a general job

involvement factor. However, for the nurses only six items had their highest loadings on this general factor and for the engineers eleven items. More factors were extracted and a three factor solution was found for the nurses and a four factor solution for the engineers. The first two factors were very similar (although the second and third factor for the engineer sample had opposite signs). The first factor was interpreted as high job involvement, the second factor as an indifferent response to work, and the third factor as the "rejection of extra duties and of the general notion of work as a measure of self" (Lodahl and Kejner, 1965, p. 30). The fourth factor for the engineers seemed to deal with boredom and the unimportance of work.

Reliability and validity

Split-half reliability was calculated by means of product-moment correlation coefficients (see Table 14). A third group consisting of 2nd year graduate business administration students were asked to respond to the items with regard to the job of students. Analysis of Variance performed on the data indicated that the three groups differed significantly. The students, for instance, had lower job involvement which is quite understandable as they were in their final semester in a graduate professional school.

The correlations with other variables also provide evidence for the validity of the scale. For the 137 nursing personnel, total job involvement scores were correlated with years of college education, years of experience, part-time or full-time employment, job status, age and marital status. The only significant relationship found was between age and job involvement (.26 $p<.01$).

Ghiselli's Self Description Inventory (1954) was administered to the student sample described and scored on Ghiselli's empirically constructed scales for intelligence, supervisory qualities, initiative, self-assurance, occupational level and decision-making process. Using the 20-item job involvement score, the only significant correlation was found between job involvement and supervisory qualities (.31 $p<.05$).

Lodahl and Kejner (1965) provided further evidence for the validity of their scale by intercorrelating fifty variables in the engineering sample (which dealt with the technological nature of their work and with job satisfaction as measured by Smith's Job Description Index (Kendall, Smith, Hulin and Lock, 1963). The 20-item job involvement score was correlated with the number of people contacted per day in the job (.30) and the interdependence of the job (.34) which are both associated with job involvement at the .01 level. Four satisfaction variables were associated with high job involvement namely satisfaction with work itself (.29), promotion (.38), supervision (.38) and people (.37). Job involvement was also associated with the perceived technical proficiency of the supervisor (.29) and with the perceived chances of getting two or more future promotions (.34).

Further evidence for the discriminant validity of the Lodahl and Kejner (1965) scale is provided in Table 15.

Table 15:

Further evidence of discriminant validity for the Lodahl and Kejner scale

Measures	Correlation (r)	($r^{2)}$	Study
JI, OC	.22	4.84	Parasuraman & Alutto, 1984
			Morrow and Wirth, 1989
	.32	10.24	Morrow & McElroy, 1987
	.53	28.09	
			Morrow & McElroy, 1987
JI, PWE	.38	14.44	Brockner et al., 1988
	ns		Sekaran, 1989
	.24	5.76	Morrow & McElroy, 1986
	.41	16.81	
			Gould & Werbel, 1983
JI, Education	ns		Mathieu and Farr, 1991
	.18	3.24	
			Gould and Werbel. 1988
JI, gender	ns		Morrow & McElroy, 1987
	- 11	1.21	

Although the Lodahl and Kejner (1965) job involvement measure has been subjected to considerable criticism (see discussion in chapter two), the wealth of research using their operationalization cannot be discarded. Kanungo's measure is generally seen as the more superior of the two scales, especially psychometrically. However, there is still no final answer on the dimensionality of job involvement and it is also questionable whether Kanungo's scale measures the whole concept of job involvement. It was therefore decided to include both Lodahl and Kejner (1965) and Kanungo (1982) scales (based on their track records) to determine whether a better measurement of job involvement could be obtained.

During the first phase the 30 items of the two scales were subjected to Exploratory and Confirmatory Factor Analysis until a clear factor structure was

obtained. A total of 22 items were retained. A two factor structure seemed to provide the best solution (Boshoff et al., 1997). It was therefore decided to include the remaining 22 items in the current study.

4.4.2 The value facet

The value facet of the work commitment construct can be divided into two dimensions namely work ethic and work values. Two scales were included to measure the work dimension viz. Blood's (1969) 8-item scale and Kanungo's (1982) 6-item scale. Elizur's (1984) Work value scale is included to measure the work value dimension.

Kanungo's (1982) Work involvement scale

The development of Kanungo's (1982) work involvement scale is described above, as part of a larger project by Kanungo where he also developed a new job involvement measure. In order to justify the use of the work involvement scale in the current study, further evidence of the psychometric qualities will be given.

The reliability of Kanungo's (1982) work involvement scale has been assessed by Morrow (1993) using respondents from three nationalities in two studies. Kanungo (1982) reported that the measure exhibited a Cronbach Alpha of .75 and a test-retest reliability correlation .67. Misra et al. (1985) used the Kanungo work involvement measure in a sample of German and Indian subjects. The Cronbach Alphas were .84 and .73 respectively. Factor analysis of job and work involvement within each sample and with the two samples combined found the two measures to be independent. Brooke et al. (1988) also found support for Kanungo's (1982) findings regarding the distinctness of the two factors.

Table 16:

Further evidence for the discriminant validity of Kanungo's work involvement instrument

Variables	Correlation	Study
WI, JI	ns, .33, .36	Kanungo, 1982
	-.25, .34, .64	Misra et al., 1985
	ns, .15, .43	Stafford, Jackson & Banks, 1980
	pos	Brooke et al., 1988
WI, Job satisfaction	.12, ns	Misra et al., 1985
	.15, ns	Stafford, Jackson & Banks, 1980
	ns, ns	
	pos	Brooke et al., 1988

Misra et al. (1985) suggested that the differences in results may be an indication that different work involvement measures must be developed for different countries. This means that indiscriminate use of a specific scale in countries other than its origin should be viewed with concern.

Morrow (1993) reported that Kanungo's work involvement measure did not receive sufficient support in the empirical literature. She could also not evaluate Kanungo's (1982) contention that work involvement is distinct from the PWE due to the lack of empirical evidence. However, Morrow (1993) concluded that the work involvement measure seemed to have adequate reliability and that the measure demonstrated excellent isomorphy with its conceptual definition. She recommended that the measure be used more frequently and it was for this and other reasons included in the current study.

Blood's Work Value scale (1969)

Blood (1969) as one of the pioneers in measuring the PWE, developed one of the best-known earlier PWE scales. His respondents consisted of 420 airmen and non-commissioned officers from the United States Air Force. Of the 420 respondents, 114 were airmen who were enrolled as full-time students in

courses in aircraft maintenance. The other 306 respondents were serving in permanent positions on a variety of low skill level tasks principally as technicians or as maintenance, transportation or supply workers. The Protestant Ethic scale had four items that were intended to reflect the Protestant Ethic and four items, which were to measure disagreement with the Protestant Ethic. Respondents had to respond to each item on a scale from one to six, where 1=disagree completely and 6=agree completely.

A Principal Components Analysis of the eight items with Varimax rotation demonstrated that the two subsets of items were appropriately interrelated. The four items that loaded on the first scale were called the pro-Protestant Ethic score and the four items that loaded on the second scale were called the non-Protestant Ethic score. Aldag and Brief (1975) reported that although the second scale is basically the reverse wording of the first scale, results indicated that the scales warranted separate use. Martelli (1988) and Waters and Zakrajsek (1991) also supported this view. The two work values dimensions were correlated .113 among the 114 students subjects and -.023 among the 306 permanent party members in the sample. Correlations were computed between the Protestant Work Ethic scores on a satisfaction measure. The results are shown in Table 17.

Table 17:

Correlations between JDI satisfaction variables and Protestant Ethic dimensions developed by Blood (1969)

Satisfaction variables	Students (N = 114)		Military personnel (N=306)	
JDI variables	Pro	Anti	Pro	Anti
Sum	.18*	-.24**	.16**	-.12*
Work	.09	-.16*	.17**	-.12*
Supervisor	.06	-.15	.09*	-.01
People	.18*	-.15	.10*	-.13*
Pay	-.02	-.31**	.14*	-.05
Promotion	.28**	.02	.05	-.06
Job in general	.22*	-.17*	.10*	-.13*
Life in general	.08	-.09	.17**	-.06

* p <.05 ** p<.01

Although the relationships are not strong, the direction is obvious. In general, the pro PWE scores are related to satisfaction and the non-PWE scores are inversely related to satisfaction. The results imply that a person who scores high on the PWE will be more satisfied in his/her job and with life in general and visa versa.

In her review of the work commitment literature, Morrow (1993) noted that Blood's (1969) scale was very little used during the last few years and that some measurement problems were reported. However, Blood's (1969) PWE scale is included in the current study because it is one of the few scales which was designed to measure the pure Protestant Work Ethic as it has been defined originally and it is felt that Blood's scale can still contribute to the overall measuring of the value facet.

Work values scale (Elizur, 1984)

Elizur (1984) defined a work value as the importance individuals give to a certain outcome obtained in the context of work. He distinguished between two basic facets of work values i.e. modality of the work outcome (whether it is

instrumental, cognitive or affective) and performance contingency (whether the outcome is contingent upon performance or upon membership in the organization (Sagie, Elizur & Koslowsky, 1996)).

Elizur (1984) developed a 24-item work values questionnaire through the process of facet analysis. Facet analysis attempts to test the hypothesis about the relationship between the conceptual framework and the structure of the empirical observations. According to Elizur (1984, p.380) "facet analysis is based on the presupposition that a priori definition of the universe of observations is an inseparable part of scientific activity, and it adds to the accumulation of testable knowledge". In terms of a multivariate concept such as work values, facet analysis is seen as a reliable way of specifying which items belong to the domain of work values and which items do not.

In facet analysis a geometric structure for a certain domain is postulated in a Cartesian space (Wheeler, 1994). Elizur (1984) suggested a polar geometric structure to indicate the spatial distribution of the work value items.

Development of the Elizur (1984) measure

The two samples used in the development of the instrument consisted of 489 (taken in 1979) and 546 (taken in 1980) respondents respectively from the urban adult Jewish population. The number of subjects in each of the urban areas was proportional to its share of the total urban population. Subjects were randomly selected from the most recent voters' register. In the 1979 sample 52% were female and in the 1980 sample 55% were female. The M ages for the 1979 and 1980 sample were 35 and 38 respectively. Educationwise, 23% and 25% of the two samples respectively completed higher education or academic training and 27% and 28% of the two samples reported high school education.

Smallest Space analysis was used to analyze the relations between the items and for testing the hypothesis concerning the structure of the domain. Smallest Space Analysis (SSA) is one of the variety of non-metric

multidimensional scaling (MSD) analysis techniques for structural analysis of similarity data.

For a given matrix of pairwise similarity coefficients between items, the SSA-I computer programme maps items into a space of prespecified dimensionality. A point represents each item. The distances among the points are inversely related to the observed relationships among the items as defined by the similarity coefficients. When the similarity between two items is high, the distance between the points representing them is relatively small. Conversely, when the similarity between two items is low, the distance between their geometric points should be relatively large (Taken from Elizur, 1984, p.382).

Two samples of work values were examined. The first questionnaire completed by the respondents was based on a questionnaire developed by Jurgensen (1978). Classification of the items according to the facets obtained led to the categorization of pay, hours of work, security and working conditions as instrumental, co-workers and supervisor as affective while advancement, type of work, status and company were seen as cognitive elements. Pay, status and advancement were categorized as rewards and the remaining items were classified as resources.

A second questionnaire was compiled to represent a wider sample of affective, cognitive and reward items. The number of response categories was also increased to allow for a wider range of responses. One of the items, "type of work" was changed to "job interest". All the items from the first questionnaire were included, some with minor changes. Additional cognitive items were added, for instance, achievement, independence, responsibility and meaningful work. The additional affective items were recognition for doing a good job and esteem.

Elizur (1984) pointed out that due to the fact that no statistical techniques were available to test for the goodness of fit between the definitional framework and the patterns obtained, it was necessary to rely on visual inspection and repetitions. After inspection of the spatial map, Elizur (1984) concluded that

there was support for the basic hypothesis of his study. The modality facet was found to be polarizing and the performance contingency facet ordered the conceptual space from center to periphery. Outcomes perceived as given in exchange for job performance (job rewards) were nearer to the origin in the central region of the map whereas resources available in the work environment and not directly related to job performance were located in the peripheral region of the map. The two facets together corresponded to a radial partitioning of the space.

The two dimensional facet model for work values postulated by Elizur (1984) were successfully replicated on a South African sample by Wheeler (1994). His sample consisted of 290 Afrikaans speaking male managers working in a commercial bank. The aim of the study was to draw a profile for the managers and to test the work values facet model for South African samples. From the visual inspection, it was clear that the partitioning of the Cartesian space in the different facets revealed a radex structure, thus providing support for Elizur's model.

In another study on 73 graduate computer science students from British Columbia done by Tillquist (1996), a three factor solution seemed to provide an optimal solution using Exploratory Factor Analysis. The three factor solution suggested that individuals perceive the object of value preference in varying degrees of externality to themselves. The three factors that related to the subject's orientation to the world were interpreted as individual, organizational and societal. Some of the reasons that can be offered for the different results are the low item-respondent ratio of the Tillquist (1996) study and the fact that students might not yet have the same degree of established work values as employees working as managers.

Elizur's (1984) measure was not included in Morrow's (1993) review of work values. For the purpose of the current study it was felt that the investigation of the value facet of work commitment will not be complete if the aspects people value in their work are not included. Elizur's measure seems to provide

consistent results over different samples (and was successfully applied to a South African sample) and is therefore included into the current study.

The three measurement instruments selected to represent the value facet of work commitment for this study were separately subjected to Exploratory and Confirmatory Factor Analysis during phase one of the research programme (Boshoff et al., 1997) until a pure factor structure was obtained. After error variance was reduced and all items not loading .30 or higher and cross loading on more than one factor, 24 items from Elizur's (1984) scale, 5 items from Kanungo (1982) and 2 items from Blood (1969) were retained. Elizur's scale formed a separate factor but the work involvement and PWE scale loaded on one factor (Boshoff, Hoole, Bennett and Jillings, 1997). These remaining items are included in the questionnaire compiled for the current study.

4.4.3 The Career facet

Items included in the work commitment questionnaire were taken out of two questionnaires i.e. a combined questionnaire developed by Blau, Paul and St John (1993), and Carson and Bedeian (1994).

Career commitment measure (Blau et.al., 1993)

Blau et al. (1993) followed up on the Morrow and McElroy (1986) study and tested for concept redundancy across four facets of work commitment i.e. career, job, value and organization. They followed an approach suggested by Morrow (1983) that attempts should be made to reduce the redundancy within each work commitment facet scale secondly reducing the redundancy between the work commitment facets.

In the first study carried out by Blau et al. (1993) the participants consisted of 407 part-time MBA students from the Philadelphia area which completed the questionnaire at time one. An occupational breakdown showed that 29% were in the technical area of work, 10% in the health area and 5% in the educational area and 14% in other areas. A total of 383 part-time MBA students

completed the questionnaire at time two. No significant differences could be found among the groups.

The work commitment measure used included the following scales:

Career facet: Blau's (1985) 7-item career commitment scale
Gould's (1979) 8-item career involvement scale
Greenhaus (1971, 1973) 9-item general attitude toward work scale
Sekaran's (1982) 7-item career salience scale

Job facet: Kanungo's (1982) 10-item job involvement scale

Value facet: Kanungo's (1982) 6-item work involvement scale

Blood's (1969) 4-item pro-PWE scale

Organizational facet:
Meyer and Allen's (1984) 8-item affective commitment scale.

Exploratory Factor Analysis was performed to test for redundancy. Principal component analysis indicated that a five-factor structure seemed to be the most appropriate solution. Only items loading .30 or higher and not cross loading on other factors were included in the factor structure decided upon. The factor loadings were as follows:

Career facet: Blau's (1985) 7-item career commitment scale
Gould's (1979) 8-item career involvement scale

Greenhaus (1971, 1973) 9-item general attitude toward work scale
Sekaran's (1982) 7-item career salience scale

Job facet: Kanungo's (1982) 10-item job involvement scale

Value facet: Kanungo's (1982) 6-item work involvement scale

Blood's (1969) 4-item pro-PWE scale

Organizational facet:

Meyer and Allen's (1984) 8-item affective commitment scale.

Exploratory Factor Analysis was performed to test for redundancy. Principal component analysis indicated that a five-factor structure seemed to be the most appropriate solution. Only items loading .30 or higher and not cross loading on other factors were included in the factor structure decided upon. The factor loadings were as follows:

Factor 1	7 items from Blau; 2 items from Gould, 2 items from Sekaran,
Factor 2	4 PWE items - Blood; 3 items – Kanungo's work involvement scale;
Factor 3	6 Items - Meyer and Allen
Factor 4	7 Items - Kanungo's job involvement scale
Factor 5	4 Occupational facet items ; 1 value facet item and 1 job facet item

The factors could be interpreted as occupational commitment, value of work, organizational commitment, job involvement and negative orientation toward work.

In line with Morrow's (1983) suggestion, the newly constructed scale was applied in a the second study. Minor adjustments were made to the career commitment scale, using only the occupational referent. Confirmatory Factor Analysis was applied to the 31 work commitment items and an acceptable fit of the data to the four a priori facets were found (Goodness of fit index = .92). All the factor loadings were significant. Blau et al. (1993) concluded that their

results indicated that occupational commitment, job involvement, value of work and organizational commitment are distinct work commitment facets.

Table 18:

Means, Standard deviations, Coefficients Alpha and Test-retest reliabilities and correlations among four work commitment facets

Variable	Time 1			Time2			Correlations			
	M	SD	α [a]	M	SD	α	1	2	3	4
CC	40.3	8.2	.76	41.1	8.4	.73	**.90**[b]	.39[c]	.45	.37
WV	25.1	6.7	.75	25.7	6.3	.74	.36	**.92**	.29	.41
OC	24.2	6.1	.80	24.6	6.9	.81	.43	.31	**.94**	.27
JI	26.9	6.5	.79	26.2	6.4	.78	.39	.42	.33	**.91**

A = Cronbach Alpha, B = test-retest reliability in diagonal

C = if r> .10, p<.05; if r> .14, p<.01 Correlations below the diagonal are for time 1 and above the diagonal for time 2.

Blau et al. (1993) further suggested that researchers and behavioural scientists use the same referent within a particular work commitment scale. Factor analysis in Blau's et al. (1993) study showed that scales that were designed to measure the career facet exhibited item inconsistencies and construct contamination. A much stronger occupational theme emerged from the measures in the second phase of the Blau et al. (1993) study.

This measure is seen as an instrument with a lot of potential for future research purposes. An attempt was made to eliminate concept redundancy among items from various career commitment scales, resulting in a much purer measure and it was therefore included in the current study. The 11 occupational commitment items remaining from the second study conducted by Blau et al. (1993) were included in the first phase of the current study.

Carson and Bedeian's (1994) Career Commitment scale

The second scale used to measure the career facet is Carson and Bedeian's (1994) career commitment scale. Information on the sample used in the initial phase is shown in Table 19.

Table 19:

Sample characteristics used in the Carson and Bedian (1994) study

Study	N	By setting	By occupation
Pilot study A	304	Loan office Chemical plant Law firm MBA students (2 universities) Undergraduate students (3 universities)	Clerical (24%) Professional (15.8%) Managers/ supervisors (15.1%) Service (12.9%) Sales (12.7%) Other(19.5%)

Table continues

Pilot study B	263	Public sector human resources department Public High school Financial Institution Fast-food restaurant MBA students (2 universities) Undergraduate students (3 universities)	Managers/ supervisors (26.2%) Clerical (24.3%) Professional (22.1%) Service (10.6%) Other (16.8%)
Field study	476	Small teaching university in the Mid South (n=141) Large research university in the Southeast Food service workers (n=21 Engineering services (n=14) D.V.M. (n=94) Nursing home (n=22) Packaging plant (n=6) Public school computer service	E.g. teaching faculty, counsellor, admission officer Dietician, supervisor Computer analyst Lecturing faculty clinician Practical nurse nursing assistant Truck loader,truck driver

Table continues

		(n=8) State library association (n=137) Personnel association (n=33)	Data-entry operator Reference librarian Circulation librarian Personnel manager, human resource specialist

Measurement instruments used in the Carson and Bedeian study (1994)

- Seven-item career commitment scale (Blau, 1985; α = .87)
- Newly developed Career commitment scale (Carson and Bedeian, 1994; α = .81)
- Affective organizational commitment (8-item scale developed by Meyer and Allen, 1984; α = .89).
- Job involvement (10-item measure of Kanungo, 1982; α = .87)
- Withdrawal cognition (3-item measure developed by Michaels and Spector, 1982; α = .79)

Development of instrument

The development of their own measure took place in three phases. As a first step 87 items were generated to represent the full range of the career commitment domain. All items indicating some degree of overlap and concept redundancy with other work commitment constructs were eliminated. Four judges reviewed all the items and a total of 36 items were retained. Two pilot studies (A and B) were conducted to investigate the factor structure and the reliabilities of the intended measure. A third study was performed to test the discriminant, convergent and construct validity of the measure.

In the first phase (pilot study A), six factors were extracted using principal-axes factor analysis, of which factor four (three items with negative loadings) and factor six, which contained only one item, were dropped. The first factor could be interpreted as career identity (5 items), the second factor as career resilience (5 items), the third factor consisted of 2 items resembling career planning and 2 items resembling career resilience, and the fifth factor as career planning (4 items). Alpha coefficients for the four remaining factor scales were all above .78. A total of 20 items were retained from the first phase.

In the second phase (pilot study B) the psychometric properties of the remaining 20 items were examined. Principal-axes factor analysis with oblique rotation was carried out and all items not loading > .40 were eliminated. Four factors (with eigenvalues higher than 1.00) were obtained but factor four was dropped because of its low reliability (alpha coefficient = .69). The other three factors could be interpreted as career identity (6 items), career resilience (4 items) and career planning (5 items). The Cronbach Alpha coefficients for the three factors were all above .81 and 12 items remained in total.

In the field test, a three-factor solution was chosen and all the items except one loaded above .50. A correlation of .63 (corrected value = .75) between Blau's (1985) measure and the new career commitment measure provided evidence for convergent validity.

To determine the discriminant validity of the CCM, a principal-axes factor analysis with oblique rotation was performed on the total set of individual items comprising the Blau measure (7 items), CCM (12 items) and the 3 items from the withdrawal measure. On the first factor all three withdrawal items loaded with Blau's seven career commitment items. The other three factors could be interpreted as career identity, career planning and career resilience. The results are shown in Table 20.

Table 20:

Results of the factor pattern obtained in the CCM scale

Factor1	Blau, Career withdrawal items	10 items
Factor2	Career Resilience	4 items
Factor3	Career planning	4 items
Factor4	Career identity	4 items

Further results showed that the new career commitment measure was "clean" from overlapping problems with withdrawal cognitions.

The career commitment measure was also able to detect differences in career commitment levels associated with varying degrees of professionalism across occupational groups. To assess the distinctiveness of the contents of the career commitment measure, factor analysis was performed on the responses to the career commitment measure and responses to a measure of affective commitment and a measure of job involvement. A principal-axis analysis with oblique rotation was conducted. All items loaded cleanly on the factor they were intended to measure. Affective organizational commitment loaded on the first factor, career resilience on the second factor, career planning on the third factor, job involvement the fourth and career identity loaded on the fifth factor. The results taken together indicated a valid and reliable measure of career commitment which seems promising for use in future research.
Evidence of construct validity is provided in Table 21:

Table 21:

Evidence of construct validity of the CCM Scale

Correlates	**CCM**	**Affective OC**	**t (df = 473)**
Educational level	.18	-.05	4.95 [e]
Chronological age	.15	.26	-2.38 [c]
Tenure in career field			
Tenure in organization	.20	.23	-0.67

Table continues

Career withdrawal cognitions	.03	.25	-4.97 [e]
Job withdrawal cognitions	-.54	-.43	-2.77 [d]
	-.44	-.60	4.21 [e]

c – significance of difference in correlation values was p<.05

d - significance of difference in correlation values was p<.01

e - significance of difference in correlation values was p<.001

The newly developed career commitment scale seemed to illustrate good psychometric properties. Because both positive and negative worded items were included in the questionnaire, the likelihood of mono-method bias is reduced. A further strength of this scale is the diversity of the sample used.

Both the Blau et al. (1993) and Carson and Bedeian (1994) scales possess adequate psychometric qualities and were standardized on diverse samples. The items seem to cover a wide spectrum of the career commitment facet and also tap the multidimensional nature of the construct. It was decided that these two measures were the most adequate measures available to measure the career commitment facet.

During the first phase, both the career commitment scales were subjected to Exploratory and Confirmatory Factor Analysis until a clear factor structure was obtained. A three factor solution seemed to have provided the best fit and a total of 22 items were retained which was included in the current study to measure the career commitment facet.

4.4.4 The organizational facet

Meyer and Allen's (1991) Three-dimensional Affective, Continuance and Normative Organizational Commitment Scale

Sample characteristics

The sample consisted of 256 full-time non-unionized employees from three organizations: two manufacturing firms and a university. Female comprised 57 % of the sample. Forty two percent were under 30 years of age, 39% between 30 and 40 years and the remaining 19% were above 40 years of age.

Development of the Affective commitments scale (ACS), Continuance commitment scale (CCS) and Normative commitment scale (NCS)

Meyer and Allen (1984) developed an eight-item ACS using a 7-point Likert-type scale, including items such as "This organization has a great deal of personal meaning for me". They also developed an eight-item CCS with items such as "It would be very hard for me to leave my organization right now, even if I wanted to", in order to assess the extent to which employees feel committed to their organizations by virtue of the costs that they feel are associated with leaving. The reliability coefficients for the ACS and CCS were .87 and .77 respectively. Further results showed that the ACS correlated .78 with the Organizational Commitment Questionnaire (OCQ). The CCS was not significantly correlated with the OCQ.

Allen and Meyer (1990) extended their two-component model by adding a third scale measuring normative commitment. The items of the CCS and ACS were included in the pool of items used for the development of the three dimensional Organizational Commitment Scale.

Development of the scale

The authors generated in total 51 items some of which items were modified from previous studies and using self-written items. Elimination of items was

based on the criteria of item-total correlations, item endorsement proportion (where endorsement proportion were > .75) and direction of keying and content redundancy. The number of items selected for each scale was set equal to that for the scale with the minimum number of items surviving the set criteria stated above. As a result each scale contained eight items. The internal reliabilities for the affective, continuance and normative scales as determined by Alpha coefficients were .87, .75 and .79 respectively. The 24 items were subjected to factor analysis (Principal Factor method). Three factors were extracted and rotated to a Varimax criterion. All the items loaded highest on the factor representing the appropriate construct. The interrelationships among the commitment scales are shown in Table 22.

Table 22:

Means, SD and intercorrelations of commitment measures

Scale	M	SD	ACS	CCS	NCS	OCQ
ACS	4.63	1.33				
CCS	4.51	1.16	.06			
NCS	3.77	1.13	.51*	.14		
OCQ	5.32	1.07	.83*	-.02	.51*	

ACS – Affective commitment scale
CCS – Continuance commitment scale
NCS – Normative commitment scale
OCQ – Organizational commitment scale
* = p<.0001

The results indicate that each scale can be seen as reliably.

Meyer and Allen (1991) also found that the Mowday et al. (1979) Organizational Commitment Questionnaire scores correlated significantly (.83 p<.001) with the affective commitment scale indicating 68.9% overlap in variance. They suggested that although the desire to remain with an organization is not synonymous with the feeling or obligation to do so, there is

the tendency for these feelings to co-occur. Support for the distinctiveness of the three forms of commitment is given by various studies (Dunham, Grube and Casteneda, 1994; Hackett et al., 1994; McGee and Ford, 1987; Reilly and Orsak, 1991).

Allen and Meyer (1996) evaluated the construct validity of their affective, continuance and normative scales by reviewing over 40 samples representing more than 16000 employees using their affective, continuance and normative scales in order to investigate evidence for construct validity (internal consistency, test-retest reliabilities and factor analytical evidence).

Allen and Meyer (1996) found that the median reliabilities across the ACS, CCS and NCS scales were .85, .79, and .73 respectively. The authors further found that the test-retest reliabilities that were available were in acceptable range – see Table 23.

Table 23:

Test-retest Reliabilities of the ACS, CCS and NCS

Measure	Rt_1t_2	Rt_1t_3	Rt_2t_3	Timing of measure	Reference
ACS	.94			7 weeks apart	Blau et al. (1993)
ACS	.68	.62	.78	1,6,11 months post entry	Meyer et al. (1991)
CCS	.71	.63	.72		
ACS	.66	.61	.73	1,6,12 months post entry	Meyer et al. (1993)
CCS	.56	.58	.67		
NCS	.61	.62	.73		
ACS	.48	.38	.77	1day, 3 and 6 months post entry	Vandenberg and Self (1993)
CCS	.44	.44	.63		

To conclude, Allen and Meyer (1996) provided a wealth of evidence (which cannot all be described here) in support of the continuous use of the three-dimensional commitment measure. It was felt that sufficient evidence exists to

justify the inclusion of Allen and Meyer's (1990) organizational commitment scale. During the first phase, a three-factor solution seemed to provide the best fit and a total of 20 items remained after Exploratory and Confirmatory analysis were conducted which are included in the current study.

4.4.5 Role Conflict and Role ambiguity

The next two scales were not included in the first phase of the current study.

Characteristics of the sample on which it was developed by House et al.(1983) were:

The sample consisted of 272 employees of a large public utility of which 218 male and 54 were female employees. The average level of education was a high school diploma plus two years of college. Thirty two respondents had tenure of more than 25 years in their organization.

Development of Role strain scales

Forty-nine new items were written for the measuring of role conflict and role ambiguity reflecting stress and comfort and self- and other-worded items. These items together with the original items used by Rizzo et al. (1970) were judged by six members of the Organizational Behaviour Faculty and graduate students from the University of Toronto. (The items used by Rizzo et al. (1970) were included in order to determine whether the independence of their scales were due to the differential wording of the items). Items were retained when five of the six judges were in agreement on whether the items reflected role conflict or role ambiguity. A total of 43 items were retained.

The number of factors were determined by three criteria i.e. the interpretability of the factors, eigenvalues of at least one and variance explained. A four-factor solution was chosen explaining 81,6 % of the total variance. The Cronbach alpha coefficients for the four factors were .90, .84, .60 and .60 respectively. Factor one could be interpreted as a role ambiguity factor and

factor two as a role conflict factor. Comfort-worded items with an equal number of conflict, ambiguity, self -and other-worded items dominated the third factor. Factor 4 basically consisted of role conflict items dominated by self-oriented and stress-worded items. The new role ambiguity factor correlated .88 with the original ambiguity scale and the role conflict scale correlated .94 with the original role conflict scale. The third and fourth factors had no significant correlations with the two new or the original scales.

One can therefore conclude that the original role conflict and ambiguity scale developed by Rizzo et al. (1970) remains a relatively reliable measure measuring a clear construct and with acceptable psychometric properties. In the light of the general support for the Rizzo et al. (1970) scale (refer to chapter 2) it was decided to use the House et al. (1983) scale based on the Rizzo et al. (1970) in the current study.

4.4.6 Intention to quit

The intention to quit or leave the organization scale was developed by Cohen (1993) based on the Mobley et al.'s (1979) definition. The respondents were asked to indicate their agreement with three items on a five-point Likert scale. The items were:

- I think a lot about leaving the organization
- I am actively searching for an alternative to the organization
- When I can, I will leave the organization.

These items were chosen to measure intention to quit because they measure a much broader concept of withdrawal cognition and a three-item scale is much more reliable than only one item.

4.5 Psychometric qualities of the role strain questionnaire

The psychometric qualities of the instruments measuring facets of work commitment when applied to a South African sample were described earlier in this section. To determine whether the Role Strain questionnaire developed by House et al (1983) had acceptable psychometric qualities when applied to a South African sample Exploratory Factor Analysis and Confirmatory Factor Analysis were carried out on the responses of the total sample (N=1484) to the items in the questionnaire. Five eigenvalues > 1 were obtained. These eigenvalues were respectively 8.388l, 2,357, 1.503, 1.158 and 1.028. It was decided to extract two as well as three factors during the first round of analysis. Clear "breaks" seemed to exist between the second and third eigenvalues and the third and fourth eigenvalues. The existence of two factors would be in accordance with the findings of the authors of the instrument. When a two factor solution was specified all the items loaded ≥ .25 on at least one of the factors. Items V151 and V156, however, loaded ≥ .25 on both factors. In the three factor solution item V169 did not load ≥ .25 on any of the factors. Items V147, V148 and V151 loaded ≥ .25 on more than one of the three factors extracted. These results led to the decision to leave item V151 out of further analyses. A second round of Exploratory Factor Analysis was therefore carried out with two and three factor solutions again specified. This resulted in a two factor solution in which 16 items loaded between .318 and .795 on factor one without cross loading on factor two. The remaining items included in the analysis loaded between .454 and .718 on the second factor without cross loadings on factor one. Factor one had a Cronbach Alpha coefficient of .892. This corresponding value for factor two was .849. The two factors correlated quite highly (r=.494). The two factors respectively explained 30.62% and 7.38% of the total variance and 80.58% and 19.42% of the common variance. The factor pattern is shown in Table 24.

A Confirmatory Factor Analysis was carried out to test the two factor model against the data. The indices obtained from this analysis are shown in Table

25. The results of the indices obtained from Confirmatory Factor Analysis for the three factor solution is presented in Table 26.

TABLE 24:

FACTOR LOADING PATTERN IN TWO FACTOR SOLUTION ON ROLE STRAIN RESPONSES (TOTAL SAMPLE N=1484)

Item	Factor 1	Factor 2
V146	.795	
V144	.737	
V145	.723	
V152	.709	
V147	.652	
V148	.590	
V157	.571	
V160	.548	
V143	.513	
V150	.506	
V156	.323	
V159	.420	
V142	.493	
V158	.421	
V169	.318	
V149	.466	
V167		.718
V168		.697
V166		.689
V164		.672
V165		.615
V162		.571
V163		.565
V161		.454

The indices obtained from this Confirmatory Factor Analysis do not seem to represent as good a fit as provided by the two factor solution. The two factor pattern was therefore accepted for use in further analyses.

Table 25:

RESULTS OF CONFIRMATORY FACTOR ANALYSIS ON TWO FACTOR MODEL (TOTAL SAMPLE N=1484)

Indices	Value
Fit criterion	.5680
Goodness of Fit Index (GFI)	.9064
GFI Adjusted for Degrees of Freedom (AGFI)	.8529
Root Mean Square Residual (RMR)	.2248
Parsimonious GFI (PGFI)	.7050
Chi-square (df)	842.4130 (35)
Null Model Chi2 (df)	7012.6777 (45)
Bentler's Comparative Fit Index (BCFI)	.8841
Akaike's Information Criterion	772.4130
Bozdogan's (CAIC)	551.8256
McDonald's Centrality (MC)	.7618
Bentler & Bonett's Non-normed Index (BBNNI)	.8510
Bentler & Bonett's Normed Fit Index (BBNFI)	.8799
James, Mulaik, & Brett's Parsimonious Normed Fit Index (NFI)	.6843
Bollen's Normed Index (BNI)	.8456
Bollen's Non-normed Index (BNNI)	.8843
Relative Non-Centrality Index (RNI)	.8842

Further analyses were also done on the three factor solution obtained. The 24 remaining items were subjected to Exploratory Factor Analysis using the same approaches as before. This yielded a factor pattern in which 23 of the items loaded ≥ .25 or higher on at least one factor. Item V147, however, crossloaded on factors 1 and 3 while item V169 did not load ≥ .25 on any of the three items. A further Exploratory Factor Analysis was therefore carried out. From these analysis items V147 and V169 were left out. This yielded a factor structure in which item V156 did not load ≥ .25 on any of the three factors and items V148 and V160 crossloaded ≥ .25 on factors one and two.

Leaving these three items out yielded a factor pattern in which eight of the items loaded ≥ .25 on factor one, seven on factor two and four on factor three. As no crossloadings were evident this was accepted as the three factor structure on which Confirmatory Factor Analysis could be carried out. The three factors respectively had Cronbach Alpha coefficients of .849, .861 and .795 but correlated quite highly with each other. Factor one correlated .492 and .479 respectively with factors 2 and 3. Factor 2 correlated .562 with factor 3. The three factors respectively explained 32.92%, 8.82% and 5.32% of the total variance and 70.77%, 17,80% and 11.43% of the common. The factor pattern obtained from the three factor solution is shown in Table 26. Confirmatory Factor Analysis was carried out on the three factor structure. This yielded the indices shown in Table 27.

TABLE 26:

FACTOR PATTERN OF ROLE STRAIN ITEMS IN THREE FACTOR SOLUTION (TOTAL SAMPLE, N = 1484)

Item	Factor 1	Factor 2	Factor 3
V167	.723		
V166	.702		
V168	.697		
V164	.678		
V165	.628		
V162	.577		
V163	.555		
V161	.455		
V144		.846	
V146		.836	
V145		.752	
V152		.649	
V157		.581	
V143		.389	
V142		.457	
V150			.760
V159			.732
V158			.693
V149			.602

TABLE 27:

RESULTS OF CONFIRMATORY FACTOR ANALYSIS ON THREE FACTOR STRUCTURE OF ROLE STRAIN ITEMS (TOTAL SAMPLE, N=1484)

Index	Value
Fit criterion	.6575
GFI	.8660
AGFI	.7766
RMR	.2608
PGFI	.6495
Chi-square (df - 0, p > Chi - .0001)	975.0528 (27)
Null model Chi-square (df = 3)	6042.8660 (36)
BCFI	.8422
AIC	921.0528
CAIC	750.8854
McDonald's Centrality	.7266
BBNNI	.7896
BBNFI	.8386
PNFI	.6290
BNI	.I7849
BNNI	.8424
RNI	.8247

The indices shown in Table 27 are interpreted as representing a satisfactory but not as good as one would prefer.

The results obtained from similar analyses on the responses of members of the subsamples are shown in summary form in Table 28.

TABLE 28:

FACTOR STRUCTURES OBTAINED FROM EXPLORATORY FACTOR ANALYSIS OF RESPONSES OF SUBSAMPLES FOR ROLE STRAIN ITEMS

Subsample	No of factors	Items eliminated	% Variance explained (a) Total (b) Common	Alpha
Financial Institution	2	V151, V153, V154, V155, V158, V159	(a) 26.61; (b) 76.01; 23.99	.8656 .810
	3	V148, V153, V154, V155, V169	27.48; 7.95; 4.764 68.40; 88.20; 11.80	.850; .825
Academic (N=444)	3	V142, V147, V148, V160	38.04; 8.02; 4.48;	.895; .872; .801
	2	NONE	75/.27; 15.87; 8.86	.916; .872
University Administrative Staff (N=367)	3	V147, V148, V151, V156, V160, V169	35.35; 8.84; 5.30 71.58; 17.90; 10.52	.870; .876; .784
	2	V151; V156	32.22; 8.34 79.44; 20.56	.890; .870
All University Staff (N=809)	3	V147, V148, V151, V160, V169	36.56; 7.94; 4.74 74.25; 26.11; 9.54	.871; .882; .802
	2	V151	33.98; 7.49 81.94; 18.06	.903; ,871

Confirmatory Factor Analyses were carried out on the final two and three factor structures for each of the subsamples. The results are shown in Table 29.

TABLE 29:

RESULTS OF CONFIRMATORY FACTOR ANALYSES ON TWO AND THREE FACTOR STRUCTURES ON RESPONSES OF SUBSAMPLES TO ROLE STRAIN ITEMS

Indices	Subsample							
	Financial							
			Academic		Administrative		All university staff	
	No of Factors		Number of factors		Number of factors		Number of factors	
	Two	Three	Three	Two	Three	Two	Two	Three
Fit criterion	.6773	.9763	1.1366	.5411	.8427	1.1294	.6659	1.0673
GFI	.8880	.8625	.8211	.9031	.8428	.8097	.8959	.8370
AGFI	.8133	.8076	.7189	.8386	.7380	.6828	.8364	.7555
RMSR	.2048	.2279	.3009	.2439	.2877	.2983	.2562	.2926
PGFI	.6660	.7188	.6386	.6774	.6321	.6073	.6968	.6696
Chi ^{2}	456.5091	658.0322	503.5073	196.958	306.7510	411.12	538.08	862.2649
(df)	(27)	(65)	(35)	(27)	(27)	(27)	(35)	(44)
Null model Chi^2	2330.92	3389.82	2428.73	2112.56	1592.70	1933.61	4529.91	4640.79
(df)	(36)	(78)	(45)	(36)	(36)	(36)	(45)	(55)
BCFI	.8128	.8209	.8035	.9182	.8203	.7976	.8878	.8215
AIC	402.5091	528.0322	433.5073	142.9583	252.7510	357.12	468.08	774.3649
CAIC	251.6118	169.5759	255.1534	10.6611	120.4538	224.82	268.73	523.7497
MC	.7275	.6445	.5900	.7923	.6817	.5909	.7328	.6030
BBNNI	.7505	.7851	.7473	.8909	.7604	.7301	.8558	.7769
BBNFI	.8042	.8059	.7927	.9068	.8074	.7874	.8812	.8142
PNFI	.6031	.6716	.6165	.6801	.6056	.5905	.6854	.6513
BNI	.7389	.7671	.7335	.8757	.7432	.7165	.8473	.7677
BNNI	.8136	.8216	.8043	.9185	.8212	.7985	.8881	.8220
RNI	.8234	.8179	.8037	.9186	.8202	.7976	.8888	.8216

Chapter 5: Results

5.1 First research question

The statistical analysis of the data was aimed at finding answers to the three research questions identified in Chapter one.

5.1.1 The job facet

An attempt was firstly made to find an answer(s) to the first research question. Operationally this meant that it was necessary to determine the dimensions of the contents measured by each of the instruments which had been applied to measure the different facets of the work commitment construct.

Job involvement was, as indicated in Chapter 4, measured by means of 22 items taken from questionnaires developed by Lodahl and Kejner(1965) and Kanungo (1982). These questions were randomly distributed in the questionnaire among items of other measuring instruments in which the same response format i.e. a six point Likert type scale was used.

The responses of the total sample included in the present study (N=1484) were firstly analysed by means of Exploratory Factor Analysis. Principal Factor Analysis was used as this is the procedure recommended when an attempt is made to determine the number and contents of factors measured by an instrument (Hatcher, 1994). An oblique rotation of the axes was utilised as it was thought unlikely that the dimensions measured would be independent from each other. An orthotogonal rotation method would, under these circumstances, probably provide a distorted picture of the factor structure underlying the measurements. In the first round of the Exploratory Factor Analysis of the responses to the 22 items a preliminary scree test was carried out by means of the Proc Factor programme with Promax rotation included in the Statistical Analysis System. This indicated that three eigenvalues >1.00 existed i.e. 7.52, 2.05 and 1.17. A clear "break" was therefore present between the first and second largest eigenvalues as well as between the second and third largest

eigenvalues. In terms of the available theory it seemed as if either one or two factors could be expected to exist. This seemed to be especially true in terms of the different definitions of job involvement as set out in Chapter 2.

A two factor as well as a one factor solution was therefore specified and executed by means of the MBDP 4 M programme with Quartimin rotation.

In the two factor solution 11 items had a loading of .25 or higher on factor one and a loading of lower than .25 on factor 2. Three items had loadings of .25 or higher on factor 1 as well as on factor 2. Eight items loaded .25 or higher on only factor 2. The 14 items loading on only factor one had a Cronbach Alpha coefficient of .89 and the eight items clearly belonging to factor 2 had a Cronbach Alpha of .77. If the 19 items without crossloadings were taken to represent a single scale a Cronbach Alpha Coefficient of .88 was obtained. This indicated that the items scores were probably quite highly related to each other and possibly formed part of the same facet.

In the one factor solution all the items except item V48 loaded >.25 on the one factor extracted. In the next round of analysis the item was left out of the analysis in which one factor was extracted. Similarly the three items which crossloaded in the two factor solution was left out of further Principal Factor Analyses in which one and two actors were respectively extracted.

This time therefore the items which did not load .25 or higher on a factor or crossloaded, i.e. had loadings of .25 or higher on more than one factor, were left out of the analysis. A one factor solution with one item (V48) left out and a two factor solution with three items (V13, V32, V51) left out were therefore specified. This resulted in a one factor solution in which the remaining 21 items loaded ≥.25 on the single factor. New loadings on the sample factor varied between .367 and .750. Of the 21 items 17 had loadings higher than .40 on the single factor and 15 loadings above .50. The Cronbach Alpha coefficient was .902. The one-factor solution explained 32.32% of the total variance. In the case of the two factor solution it was found that all the remaining items loaded .25 or

higher on one of the two factors without having a loading of ≥.25 on the other factor. The Alpha coefficients of the two factors were respectively .886 and .772. The two factors explained 31.26% and 7.44% respectively of the total variance and 80.79% and 19.21% of the common variance. Eleven items loaded >.25 on factor one (all higher than .40 and 9 higher than .50) and 8 on factor two (four higher than .50 and seven higher than .70).

The factor pattern for the one factor solution is shown in Table 30 . In this and subsequent tables factor loadings of <.25 are suppressed.

Table 30:

Factor pattern for one factor solution of responses to job involvement items (Total sample)

Item	Loading
V34	.750
V38	.718
V24	.713
V29	.713
V19	.669
V28	.669
V30	.609
V32	.607
V5	.588
V35	.575
V42	.558
V13	.537
V53	.531
V51	.520
V10	.512
V44	.457
V37	.434
V26	.395
V43	.374
V50	.372
V31	.367

From Table 30 it can be seen that only one item was "lost" in the analysis and that all the items loaded .25 or higher on the single factor extracted. The factor pattern when two factors were extracted is shown in Table 31.

Table 31:

Factor pattern obtained in two factor solution of responses to job involvement items (Total sample)

Item	Factor 1	Factor 2
V28	.817	
V29	.764	
V38	.760	
V19	.725	
V24	.709	
V34	.702	
V30	.609	
V5	.561	
V35	.513	
V26		.619
V50		.643
V44		.624
V53		.550
V48		.481
V37		.433
V31		.399
V43		.405
V42	.461	
V10	.451	

A Confirmatory Factor Analysis was executed on the one factor solution. This yielded the values shown in Table 32.

Table 32:

Results of Confirmatory Factor Analysis on unidimensional structure for job involvement items (Total sample)

Fit criterion (FC)	0.1487
Goodness of Fit Index (GFI)	0.9523
GFI Adjusted for Degrees of Freedom (AGFI)	0.8888
Root Mean Square Residual (RMR)	0.0456
Parsimonious GFI (Mulaik, 1989)	0.5714
Chi-square = df	219.2459 (9)
Null Model C = df	3708.8641 (15)
Bentler's Comparative Fit Index (BCFI)	0.9431
Akaike's Information Criterion (AIC)	201.2459
Bozdogan's (1987) CAIC	144.5234
McDonald's (1989) Centrality (MC)	0.9316
Bentler & Bonett's (1980) Non-normed Index (BBNNI)	0.9051
Bentler & Bonett's (1980) NFI (BBNFI)	0.9409
Bollen (1986) Normed Index Rho1 (BNI)	0.9015
Bollen (1988) Non-normed Index Delta2 (BNNI)	0.9432
Relative Non-Centrality Index (RNI)	0.9431

The indices shown in Table 32 can be regarded as reflecting a good fit between the factor structure and the data. A Confirmatory Factor Analysis was also carried out on the two factor structure. This yielded the indices shown in Table 33.

Table 33:

Results from Confirmatory Factor Analyses on two factor structure for job involvement items (Total sample)

Fit criterion (FC)	0.3494
Goodness of Fit Index (GFI)	0.9269
GFI Adjusted for Degrees of Freedom (AGFI)	0.8684
Root Mean Square Residual (RMR)	0.1927
Parsimonious GFI (Mulaik, 1989) (PGFI)	0.662
Chi-square = df =	518.1025 (20)
Null Model C = df =	4248.8318 (28)
Bentler's Comparative Fit Index (BCFI)	0.8820
Akaike's Information Criterion (AIC)	478.1025
Bozdogan's (1987) CAIC	352.0526
McDonald's (1989) Centrality (MC)	0.8455
Bentler & Bonett's (1980) Non-normed Index (BBNNI)	0.8348
Bentler & Bonett's (1980) NFI (BBNFI)	0.8781
Bollen (1986) Normed Index Rho1 (BNI)	0.8293
Bollen (1988) Non-normed Index Delta2 (BNNI)	0.8822
Relative Non-Centrality Index (RNI)	0.8820

The fit indices in Table 33 indicated a reasonable fit between the model and the data although the one factor solution seemed to provide a better fit and was therefore preferred.

After analysing the responses from the total sample the same procedures were followed in the analyses of the responses of the members of the different subsamples. The results are summarized in Table 34.

Table 34:

Factor structures obtained from Exploratory Factor Analysis of responses of subsamples to job involvement items

Subsample	No of factors	Items eliminated	% Variance explained a)Total b)Common	Alpha
Financial Institution	2	V3, V32, V51	a)26.61%, 6.77% b) 79.73; 20.27;	.852 .735
	1	V48	27.62	.8790
Academic	2	V13, V32, V51	a)35.99; 7.03 b)83.65; 16.35	.916; .770
	1	None	35.13	.913
University Administrative Staff	2	V13, V32, V51	a)32.03; 8.54 b)78.95; 21.05	.875; .797
	1	None	31.67	.903
All University Staff	2	V13, V32, V51	a)34.48; 8.16 b) 80.87; 19.13	.907; .790
	1	None	31.67	.903

The results presented in Table 34 seem to indicate considerable consistency in the factor patterns which were obtained. The same items tended to be eliminated in the two factor solution. The one factor solution tended to contain all the items except that item V48 was eliminated in terms of the responses of the employees of the financial institution. (This item was also eliminated in the one factor solution in the case of the total sample).

Confirmatory Factor Analyses were carried out on the two factor as well as the one factor solution on the responses of the participants in all the subsamples. The results are in abbreviated form shown in Table 35.

Table 35:

Results of Confirmatory Factor Analysis on factor structures obtained on job involvement item responses by subsamples

Indices	Subsample							
	Financial		University				All University	
			Academic		Administrative			
	Factors		Factors		Factors		Factors	
	One	Two	One	Two	One	Two	One	Two
FC	.0294	.2766	.1975	.4597	.9836	.3168	.2639	.3649
GFI	.9880	.9418	.9450	.9169	.9650	.9397	.9262	.9335
AGFI	.9639	.8953	.8900	.8616	.8949	.8966	.8524	.8891
RMSR	.0239	.1706	.0444	.2184	.0341	.1762	.0549	.2038
PGFI	.4940	.6727	.6300	.6877	.4825	.7035	.6175	.7001
BCFI	.9874	.8964	.9498	.9090	.9697	.9362	.9275	.9210
AIC	9.83	143.06	59.47	149.64	20.43	61.33	185.24	240.82
CAIC	-17.74	32.767	-11.86	12.06	-4.07	-70.97	105.50	87.03
MC	.9891	.8862	.9206	.8196	.9658	.8860	.8841	.8475
BBNNI	.9748	.8550	.9346	.8787	.9395	.9149	.8825	.8946
BBNFI	.9833	.8857	.9410	.8970	.9642	.9188	.9168	.9139
PNFI	.4916	.6327	.6274	.6728	.4821	.6891	.6112	.6855
BNI	.9665	.8400	.9116	.8627	.9284	.8917	.8753	.8852
BNNI	.9874	.8969	.9116	.9095	.9699	.9366	.9219	.9212
RNI	.9874	.8964	.9498	.9090	.9697	.9361	.9217	.9210

From Table 35 it is clear that a good fit between the model and the data was obtained for all the subsamples. It seems as if the one factor structure provided the best fit (in some subsamples one marginally).

5.1.2 Organizational commitment

With regard to the underlying dimensions of Organizational Commitment as manifested in the responses of the members of the present sample and subsamples the same procedures as in the case of job involvement were followed.

The responses of the total sample (N=1484) were subjected to Exploratory Factor Analysis with a Direct Quartimin solution specified. According to the authors of the original questionnaire the instrument was designed to measure three dimensions i.e. continuance, normative and affective commitment. In the Principal Factor Analysis carried out on the responses of the total sample (N=1484) four eigenvalues (5.669, 2.913, 1.756 and 1.070) existed. It seems as if a clear break existed between the third and fourth eigenvalues but it was decided to extract three and four factors in the first round of analyses. In the four factor solution it was found that all the items loaded > .25 on at least one of the identified factors and without any cross loadings > .25 being evident. The loadings on factor one varied between .330 and .893 with six items loading ≥.50 on this factor. Eight items loaded ≥ .25 on this factor. Five items loaded on factor 2. All these loadings exceeded .50. The four items which loaded on factor three had loadings varying between .365 and .891. Three items loaded on factor 4 with loadings varying between .430 and .795. Only one negative correlation existed. The four factors had Cronbach Alphas of respectively .862, .782, .723, and .749. Of the total variance 25.73% was explained by factor one and 12.24%, 6.27%, 3.29% respectively by the other three factors. The first factor explained 54.13% of the common variance and the other factors 25.77%, 13,18% and 6.92% respectively.

In the case of the three factor solution one item (V63) loaded ≥.25 on more than one factor in the first round of Exploratory Factor Analysis and was excluded from further analysis. In a subsequent Principal Factor Analysis with this item excluded a three factor solution was again specified. The factor pattern obtained contained eight items loading between .324 and .862 on the first factor. Seven items loaded above .50 on this factor. Five items loaded ≥.25 on factor two. These loadings varied between .539 and .709. Factor three had six items with loadings of >. 25. These loadings varied between .419 and .811. Cronbach Alpha coefficients were .862, .782 and .767 for factors one, two and three respectively. The three factors explained, respectively 25.04%, 12.69% and 6.22% of the total variance and 56.98%, 28.89%, 14.13% of the common variance. The results of the Exploratory Factor Analysis of the responses of the

total sample to the organizational commitment items for the three and four factor solution are presented in Table 36.

TABLE 36:

Factor pattern in three and four factor solution on organizaitonal commitment items (Total sample)

Three Factors				Four factors				
Item no.	Factor 1	Factor 2	Factor 3	Item no	Factor 1	Factor 2	Factor 3	Factor 4
V59	.862			V59	.893			
V61	.810			V58	.849			
V58	.809			V61	.800			
V60	.721			V60	.651			
V56	.606			V56	.544			
V57	.582			V57	.509			
V55	.534			V55	.432			
V73		.709		V74	.330			
V72		.673		V73		.709		
V70		.673		V70		.690		
V69		.550		V72		.689		
V71		.539		V69		.545		
V67			.811	V71		.534		
V66			.801	V67			.891	
V68			.531	V66			.735	
V65			.437	V68			.439	
V62			.428	V62			.365	
V64			.419	V64				.795
V74	.324			V65				.712
								.430

An attempt was made to interpret the factors obtained from the three and four factor solutions. In the three factor solution the first factor consisted of items V59, V61, V58, V60, V56, V57, V55, V74 and was interpreted as affective commitment although item V74 was classified by the authors of the instrument as representing normative commitment. The second factor, consisting of V73,

V72, V70, V71 and V69 was interpreted as normative commitment. Factor 3, consisting of items V67, V66, V68, V65, V62, V64, was interpreted as representing continuance commitment. The four factor solution was not readily interpretable. In order to test the fit between the models and the data for the three and four factor solution, Confirmatory Factor Analyses were carried out. The results are shown in Table 37.

Table 37:

Results of Confirmatory Factor Analyses on three and four factor model of organizational commitment (Total sample)

	Factors	
Indices	**Three**	**Four**
Fit criterion	.9263	.9168
GFI	.8772	.8670
AGFI	.8362	.8138
RMR	.1466	.1950
PGFI	.7519	.7225
Chi-square (df)	337.1773 (90)	1359.5456 (65)
Null model Chi-square (df)	1861.5495 (105)	7571,6232 (78)
BCFI	.8593	.8272
AIC	157.1773	1229.5456
CAIC	-283.8134	819.8834
MC	.7128	.6465
BBNNI	.8358	.7927
BBNFI	.8189	.8204
PNFI	.7019	.6837
BNI	.7887	.7845
BNNI	.8605	.8275
RNI		

The same procedures with regard to Exploratory Factor Analysis as used in the case of the responses of the total sample were used on the responses of the four subsamples. The results are summarized in Table 38.

Table 38:

Factor structures obtained from Exploratory Factor Analyses of responses of subsamples to organizational commitment

Subsample	No of factors	Items eliminated	% Variance explained (a) Total (b) Common	Alpha
Financial Institution	2	V55, V62, V70	(a) 25.45; 10.57 (b) 70.67; 29.33	.846; .757
	3	V55	(a) 25.60; 10.24; 7.29 (b) 59.36; 23.63; 16.91	
Academic	2	V63. V69, V73	(a) 26.09; 17.48 (b) 59.87; 40.13	.861; .827 .873; .827; .774
	3	V63	(a) 23.80; 15.05; 8.04 (b) 50.76; 32.08; 17.16	873; .827; .774
University Administrative	2	V55, V60, V62, V63	(a) 22.79; 14.23 (b) 61.57; 38.43	.813; .798
	3	V55, V56, V60, V62, V63	(a) 23.63; 15.07; 7.35 (b) 51.32; 32.71; 15.97	.789; .812; .734
All University	2	V63. V70	(a) 24.38; 10.36 (b) 62.84; 37.16	.860; .786
	3	V63	(a) 25.14; 13.96; 7.09 (b) 54.43; 30.22; 15.35	.868; ,799; .798

Confirmatory Factor Analysis were carried out on the responses of the subsamples. The results are shown in Table 39.

Table 39:

Results of Confirmatory Factor Analyses on factor models based on responses of subsamples to organizational commitment items

Indices	Subsample							
	Financial		University				All University	
			Academic Administrative					
	No of Factors		No of Factors		No of Factors		No of Factors	
	Two	Three	Two	Three	Two	Three	Two	Three
FC	.5088	1.2691	.4370	.3382	.2166	.4351	.3806	.4411
GFI	.8928	.8089	.8975	.9232	.9269	.8711	.9133	.9065
AGFI	.8070	.6814	.7949	.8684	.8173	.7293	.8440	.8442
RMR	.1782	.2399	.2422	.1312	.1545	.1894	.1261	.1600
PGFI	.6370	.6066	.5983	.6924	.5561	.5807	.6524	.6799
Chi^2	342.9313	855.3820	193.6591	149.8054	78.8409	158.3748	307.5283	356.3727
(df)	(20)	(27)	(14)	(21)	(6)	(10)	(20)	(27)
Null model Chi^2	1847.5415	2424.475	1854.421	1341.008	592.0368	608.6395	2721.4946	3166.965
(df)	(28)	(36)	(21)	(28)	(10)	(15)	(28)	(36)
BCFI	.8225	.6532	.9020	.9019	.8749	.7501	.8933	.8948
AIC	302.9313	801.3820	165.6091	107.8054	66.8409	138.3748	267.5283	302.3727
CAIC	192.6370	652.4847	94.2675	.7930	37.4416	89.3758	153.6123	148.5861
MC	.7873	.5414	.8169	.8650	.9050	.8161	.8372	.8158
BBNNI	.7515	.5376	.8531	.8692	.7914	.6251	.8506	.8597
BBNFI	.8144	.6472	.8956	.8883	.8668	.7398	.8870	.8875
PNFI	.5817	.4854	.5971	.6662	.5201	.4932	.6336	.6656
BNI	.7401	.5296	.8434	.8511	.7781	.6097	.8418	.8500
BNNI	.8233	.6545	.9024	.9024	.8757	.7521	.8936	.8951
RNI	.8225	.6532	.9020	.9019	.8749	.8933	.8948	.8629

5.1.3 The ethic and value facet

To determine the dimensions of the items measuring the value facet (PWE and work involvement) as composed for the present study the same approach and procedures i.e. Exploratory Factor Analysis by means of the BMDP 4M

programme with Direct Quartimin solution specified, followed by Confirmatory Factor Analysis were used. The responses of the total sample to the seven items in this part of the questionnaire were firstly analysed. Exploratory Factor Analysis revealed that the two highest eigenvalues were respectively 3.152 and .929. It was therefore decided to extract only one factor. This resulted in a solution in which all seven items loaded >.25 on the one factor. The loadings varied between .408 and .739. The Cronbach Alpha coefficient was .793. The one factor explained 36.38% of the variance in the data space.

The factor pattern obtained is shown in Table 40.

Table 40:

Factor pattern obtained from Exploratory Factor Analysis on PWE and work involvement items (Total sample)

Item	Loading
V18	.739
V9	.674
V21	.643
V7	.632
V15	.572
V23	.490
V11	.408

Confirmatory Factor Analysis was carried out on the unidimensional factor pattern obtained. The results of this are shown in Table 41.

Table 41:

Indices obtained from Confirmatory Factor Analysis on unidimensional solution of work ethic and work involvement responses (Total sample)

Index	Value
Fit criterion	.0000
GFI	1.0000
AGFI	Not calculated

Table continues

RMR	.0000
PGFI	.0000
Chi-square (df)	.0000
Null model Chi-square (df = 3)	1172.8099
RMSEA estimate	.0000
BCFI	1.000
AIC	0.0000
CAIC	0.0000
McDonald's Centrality	1.0000
BBNNI	Not calculated
BBNFI	1.000
PNFI	0.0000
BNI	Not calculated
BNNI	1.000

The values shown in Table 41 indicate, within the limitations of the data (especially the small number of items on which the analysis was based), that the one factor solution fitted the data well. The same approach was used with regard to the analyses of the responses of the members of the subsamples to the seven items from the work involvement and Protestant Work Ethic scales. The results are summarized in Table 42.

Table 42:

Results of Exploratory Factor Analyses on responses of subsample members to work involvement and Protestant Ethic items

Subsample	No of factors	Items eliminated	Total % of Variance explained	Alpha
Financial Services	One	None	33.03	.793
Academic	One	None	39.79	.818
University Administrative	One	None	40.05	.817
Total University	One	None	39.76	.817

From Table 42 it can be seen that satisfactory Alpha coefficients were obtained for the responses of all the subsamples. All the items were retained for all the subsamples. The factor loadings of the different items for the Financial Services subsample varied between .354 and .732 and for the total university sample between .462 and .744. Corresponding figures for the Academic staff subsample were .461 and .752 and for the university administrative staff .459 to .742.

Confirmatory Factor Analyses were also carried out on the unidimensional factor structures obtained for the various subsamples. The results are shown in abbreviated form in Table 43.

Table 43:

Results of Confirmatory Factor Analyses on factor structures of PWE and work involvement scales for subsamples

Index		Value per subsample		
	Financial	Academic	University Administrative	All University
Fit Criterion	.0608	.1598	.1101	.1241
GFI	.9823	.9577	.9707	.9665
AGFI	.9646	.9155	.9414	.9330
RMR	.0342	.0502	.0397	.0444
PGFI	.6549	.6385	.6471	.6443
BCFI	.9710	.9357	.9636	.9461
AIC	12.9995	42.8071	12.0688	72.2841
CAIC	-64.2065	-28.5345	-56.5297	-7.4571
MC	.9802	.9380	.9649	.9481
BBNNI	.9565	.9035	.9454	.9191
BBNFI	.9570	.9217	.9456	.9381
PNFI	.6380	.6145	.6304	.6254
BNI	.9355	.8826	.9184	.9072
BNNI	.9712	.9362	.9639	.9463
RNI	.9711	.9357	.9636	.9461

From Table 43 it can be seen that good fits existed between the factor model and the data in all the subsamples.

5.1.4 The career facet

The responses to the career commitment questionnaire (a combined questionnaire developed by Carson and Bedeian (1994) and Blau et al. (1993) and modified by Boshoff, Hoole, Bennett and Jillings (1997) for use on South African samples were analysed using the same procedures as before as the items in the measuring instruments. Principal Factor Analysis with a Direct Quartimin rotation was therefore carried out by means of the BMDP 4M programme. Factor loadings of <.25 were again regarded as non-significant. To

determine the fit between the factor model obtained and the data Confirmatory Factor Analyses were carried out as before.

The Exploratory Factor Analysis procedure was firstly carried out on the responses of the whole sample. Twenty two items were included in the analysis. Three eigenvalues >1 were obtained. At 8.950 the first eigenvalue was considerably higher than the second (1.788) and the third (1.331). The fourth eigenvalue was <1 at .966. In terms of the factor structure found by Carson & Bedeian it was decided to extract two factors as well as three factors in separate solutions. In the three factor solution it was found that items V17, V22, V40 and V39 had loadings ≥ .25 on more than one factor, (in this analysis on factors one and three). The other items all loaded ←.25 on one of the three factors. In the two factor solution items V36 and V33 loaded ←.25 on both factors. It was therefore decided to, in the case of the three factor structure, leave out items V17, V22, V40 and V39 and in the case of the two factor structure to leave out items V33 and V36. Responses to the other items by members of the total sample were subsequently subjected to Principal Factor Analysis as before. The three eigenvalues > one from this analysis were 8.255, 1.766 and 1.138. The fourth eigenvalue was .904. Extraction of three factors resulted in a factor pattern in which 13 items loaded ≥25 on factor one. Four items loaded ≥25 on factor two and three items similarly on factor three. The items loading on factor one had a Cronbach Alpha coefficient of .912. Corresponding figures for factors two and three were .810 and .766. The factor pattern obtained from the three factor solution is shown in Table 44.

Table 44:

Factor pattern obtained from three factor solution on responses to career commitment items (Total sample)

Item	Factor one	Factor two	Factor three
V25	.899		
V4	.861		
V12	.798		
V27	.781		
V17	.734		
V8	.701		
V22	.684		
V40	.607		
V14	.569		
V6	.549		
V16	.441		
V20	.322		
V39	.382		
V46		.801	
V47		.707	
V45		.704	
V41		.636	
V52			.924
V49			.590
V54			.515

The three factors respectively explained 38.81%, 6.45% and 3.63% of total variance. The first factor explained 79.38% of the common variance. Corresponding figures for the second and third factors were 13,20% and 7.42%. The small proportions of the variance explained by the second and third factor seemed to make it unlikely that a three factor solution would represent an attractive alternative.

A two factor solution on the responses of the total sample to the 20 items left after the first round of Exploratory Factor Analysis was therefore requested. This yielded three eigenvalues > one i.e. 8.255, 1.766 and 1.138. Extraction of two factors yielded two factors on which 16 items loaded ≥.25 on the first factor and

four items on factor 2. No crossloadings were evident. The first factor had a Cronbach Alpha Coefficient of .919. The corresponding figure for the second figure was .81. The first factor explained 38.6% of the total variance and the second 6.46%. Of the common variance 85.66% was explained by factor one and 14.34% by the second factor. The final factor pattern obtained from the two factor solution is shown in Table 45.

Table 45:

Factor pattern in two factor solution on responses to career commitment facet (Total sample)

Item	Factor 1	Factor 2
V4	.860	
V6	.601	
V8	.712	
V12	.768	
V14	.624	
V16	.570	
V17	.737	
V20	.361	
V22	.694	
V25	.896	
V27	.818	
V39	.422	
V40	.604	
V49	.478	
V52	.486	
V54	.464	
V41		.632
V45		.697
V46		.791
V47		.708

To determine the quality of the fit obtained in the two and three factor solutions Confirmatory Factor Analyses were again carried out. The results of these analyses are shown in Tables 46 and 47.

Table 46:

Results of Confirmatory Factor Analysis on three factor solution for career commitment items (Total sample)

Index	Value
Fit criterion	.9402
GFI	.8644
AGFI	.8041
RMR	.2782
PGFI	.7072
Chi-square (df - 54, p > Chi.^{2} = .0001)	1394.2537
Null model Chi-square (df = 66)	9120.7195
RMSEA estimate (90% C1-.1235; .1353)	.1294
BCFI	.8520
Normal Theory reweighted LS Chi-square	1396.3041
AIC	1286.2537
CAIC	945.9189
Schwarz's Bayesian Criterion	999.9189
MC	.6366
BBNNI	.8191
BBNFI	.8471
PNFI	.6931
Z-test (Wilson & Hilferty)	30.5493
BNI	.8132
BNNI	.8522
Hoelter's Critical N	78
RNI	.8520

The fit indices obtained for the three factor solution can be regarded as reasonable but not as high as one would prefer. The results of the Confirmatory Factor Analysis carried out on the two factor model is shown in Table 47.

Table 47:

Indices obtained from Confirmatory Factor Analysis on two factor solution for career commitment items (Total sample)

Indices	Value
Fit criterion	.3571
GFI	.9282
AGFI	.8708
RMR	.2393
PGFI	.6630
Chi-square (df - 14)	529.5166 (20)
Null model Chi-square (df = 21, p=.0001)	6425.9037 (28)
BCFI	.9204
AIC	489.5166
CAIC	363.4667
MC	.8423
BBNNI	.8885
BBNFI	.9176
PNFI	.6544
BNI	.8846
BNNI	.9205
RNI	.9204

The fit indices obtained from Confirmatory Factor Analysis seem to be better for the two factor solution than those obtained from the three factor solution. However, in the light of the relatively high first eigenvalue obtained from the Exploratory Factor Analysis it was decided to investigate the qualities of a unidimensional structure.

An Exploratory Factor Analysis was therefore carried on the responses of the total sample (N=1484) to the 22 original items with a one factor extraction specified. This analysis yielded the unidimensional factor pattern shown in Table 48. From Table 48 it can be seen that all the items in the career commitment facet loaded ≥.25 on the one factor.

Table 48:

Factor loadings in unidimensional structure for career commitment items (Total sample)

Item	Loading
V4	.765
V6	.565
V8	.709
V12	.706
V14	.637
V16	.548
V17	.715
V20	.383
V22	.697
V25	.829
V27	.806
V33	.555
V36	.609
V39	.546
V40	.705
V41	.415
V45	.482
V46	.516
V47	.432
V49	.525
V52	.566
V54	.563

The unidimensional factor pattern shown in Table 48 was subjected to Confirmatory Factor Analysis. The indices obtained are shown in Table 49.

Table 49:

Results of Confirmatory Factor Analysis on unidimensional factor structure for career commitment items (Total sample)

Indices	Value
Fit criterion	.2514
GFI	.9204
AGFI	.8144
RMR	.0535
PGFI	.5523
Chi-square (df)	372.7974 (9)
Null model Chi-square (df)	5680.8425 (15)
BCFI	.9358
AIC	354.7974
CAIC	298.0749
MC	.8846
BBNNI	.8930
BBNFI	.9344
PNFI	.5606
BNI	.8906
BNNI	.9359
RNI	.9358

From Table 49 it can be seen that the fit indices are better than is the case in the two and the three factor solution. It was therefore decided to use the one factor structure in further analyses.

The factor structures underlying the responses of the members of different subsamples where investigated in the same way as those of the total sample. The results of the Exploratory Factor Analyses are summarized in Table 50.

Table 50:

Results obtained from Exploratory Factor Analyses on responses to career commitment items by subsamples

Subsample	No of factors	Items eliminated	% Variance explained a)Total b)Common	Alpha
Financial Institution	1	None	31.95	.906
	2	None	a)32.32; 5.55 b)85.31; 14.69	.900; .764
	3	V20, V22, V39, V40	a)34.45; 6.13; 4.06 b)77.19; 13.71; 9.10	.882; .732; .694
Academic	1	None	36.39	.923
	2	V36. V39, V40	a)37.14; 7.82 b)82.41; 17.59	.907; .818
	3	V14, V17, V20, V22	a)36.85; 8.65; 4.84 b)73.16; 17.16; 9.68	.8870; .8460; .8025
University Administrative Staff	1	Non	40.54	.934
	2	V33, V36, V20	a)42.92; 7.41 b)85.29; 14.71	.932; .824
	3	V14, V17, V20, V22, V36, V39, V40,Vv46	a)41.75; 7.90; 4.81 b)76.67; 91.17; 8.83	.900; .7470; .7800
All University Staff	1	None	39.25	.932
	2	V33. V36	a)40.0; 7.05 b)85.00; 15.00	.922; .839
	3	V14, V17, V20, V22, V33, V36. V39, V40	a)41.20; 9.93; 5.24	.886; .839; .79

In order to determine the fit between the data and the factor patterns Confirmatory Factor Analyses were carried out. The results obtained are shown in Tables 51, 52, 53 and 54.

Table 51:

Results from Confirmatory Factor Analyses on factor patterns from responses of financial institution subsample

	Number of factors		
Indices	**One**	**Two**	**Three**
Fit criterion	.1883	.3949	.6756
GFI	.9422	.9285	.8773
AGFI	.8651	.8808	.8072
RMR	.0531	.2070	.2322
PGFI	.5653	.6964	.6824
Chi-square (df)	126.9285(9)	266.1434 (27)	455.3795 (35)
Null model Chi-square (df)	22007.5788 (15)	2636.7144 (36)	2483.9128 (45)
BCFI	.9408	.9080	.8276
AIC	108.9285	212.1434	385.3795
CAIC	59.2961	63.2461	192.3645
MC	.9164	.8377	.7324
BBNNI	.9014	.8774	.7784
BBNFI	.9368	.8991	.8167
PNFI	.5621	.6743	.6352
BNI	.8946	.8654	.7643
BNNI	.9410	.9084	.8283
RNI	.8954	.8959	.8276

From Table 51 it seems as if for this group a one factor structure is the best solution.

Table 52:

Results from Confirmatory Factor Analyses on factor patterns from responses of academic subsample

	Number of factors		
Indices	**One**	**Two**	**Three**
Fit criterion	.1940	.4044	1.0746
GFI	.9458	.8904	.8476
AGFI	.8916	.7443	.7799
RMR	.0422	.2473	.2692
PGFI	.6305	.5342	.6935
Chi-square (df)	85.9605 (14)	179.1409 (9)	476.0342(54)
Null model Chi-square (df)	1814.7062 (21)	1505.1409 (9)	2704.539(66)
BCFI	.9599	.8858	.8401
AIC	57.9605	161.1409	368.0342
CAIC	-13.3811	115.2785	92.8597
MC	.9222	.9256	.6217
BBNNI	.9398	.8097	.8045
BBNFI	.9526	.8810	.8240
PNFI	.6351	.5286	.6742
BNI	.9289	.8016	.7849
BNNI	.9600	.8863	.8408
RNI	.9599	.8858	.7898

From Table 52 it seems as if the best fit with the data was obtained for this subsample in the one factor structure.

Table 53:

Results of Confirmatory Factor Analyses on factor patterns from responses of university administrative subsample

	Number of factors		
Indices	**One**	**Two**	**Three**
Fit criterion	.1215	.5411	.8427
GFI	.9555	.9031	.8428
AGFI	.8665	.8386	.7380
RMR	.0384	.2439	.2877
PGFI	.4778	.6774	.6321
Chi-square (df)	44.2401 (5)	196.9583 (27)	306.751 (27)
Null model Chi-square (df)	1225.3789 (10)	2112.5581 (36)	1592.7027 (36)
BCFI	.9677	.9182	.8203
AIC	34.2401	142.9583	252.7510
CAIC	9.7406	10.6611	120.4536
MC	.9477	.7923	.6817
BBNNI	.9354	.8909	.7604
BBNFI	.9639	.9068	.8074
PNFI	.4819	.6801	.6056
BNI	.9278	.8757	.7432
BNNI	.9678	.9185	.8213
RNI	.9677	.9182	.8203

From Table 53 it seems as if the one factor structure provided the best fit with the data for the university administrative staff subsample.

Table 54:

Results of Confirmatory Factor Analysis on factor patterns from responses of subsample (university staff)

	Number of factors		
Indices	**One**	**Two**	**Three**
Fit criterion	.1988	.4081	.7766
GFI	.9446	.9179	.8506
AGFI	.8892	.8522	.7510
RMR	.0424	.2496	.2714
PGFI	.6297	.6556	.6379
Chi-square (df)	160.6530 (14)	329.7768 (20)	627.4702 (27)
Null model Chi-square (df)	3640.1485 (21)	3541.8740 (28)	3360.5626 (36)
BCFI	.9595	.9118	.8194
AIC	132.6530	289.7768	573.4702
CAIC	52.9119	175.8608	419.6836
MC	.9133	.8358	.6900
BBNNI	.9392	.8766	.7592
BBNFI	.9559	.9069	.8133
PNFI	.6372	.6478	.6100
BNI	.9338	.8696	.7510
BNNI	.9596	.9120	.8199
RNI	.9595	.9118	.8194

From Table 54 it seems as if the one factor solution provided the best fit with the data.

5.1.5 Work values

The last element to answer the first research question was concerned with the dimensions of the Elizur Scale divised to measure work values i.e. what individuals want from and in their work situations. Tillquist (1996) factor analysed responses to the items in this scale and found three factors which they termed individual, organizational and societal loci. This finding as well as the

view of Elizur that the scale measured two facets of work values guided the present analysis. In the previous analysis executed by Boshoff, Hoole, Bennett and Jillings (1997) the questionnaire appeared to measure a unidimensional construct, which had to be taken into account during the analysis of the responses of the present data set.

The responses of the total sample (N=1484) were firstly analysed by means of Principal Factor Analysis with Direct Quartimin rotation of the axes. The BMDP 4 M programme was again utilized. In this analysis with all 24 items in the questionnaire included in the analysis four eigenvalues >1 i.e. 10.274, 1.498, 1.177 and 1.099, were obtained. At this stage it seemed, also based on a scree test that a one factor solution would be most likely to be more appropriate. In the light of previous findings cited above it was decided to firstly extract one, two and three factors respectively. Inspection of the factor patterns obtained from these analyses revealed that in the three factor solution items V81, V92, V98, V99, V97, V86 and V101 had loadings ≥.25 on more than one factor. All the other items loaded ≥.25 on one of the three factors. In the two factor solution item V92 loaded ≥.25 on both factors extracted. In the one factor structure all the items loaded ≥.25 on the single factor. This factor explained 40.41% of the total variance and had a Cronbach Alpha coefficient of .940. Under these circumstances it was decided to extract two and three factors respectively leaving out item V92 which crossloaded in both the of two and three factor solutions.

In the factor pattern obtained from a further two factor solution items V81, V86, V97, V99 and V101 loaded > .25 on both factors. The other items all loaded ≥.25 on one of the two factors. In the further three factor solution items V76, V97, V98, V99 and V101 had now loadings ≥.25 on the first two factors. It was decided to leave items V97, V99 and V101 out of the subsequent Principal Factor Analyses with two and three factor extractions specified. In the next three factor solution item V76 did not load > .25 on any of the factors. In the two factor solution items V81, V85, V86 now loaded ≥.25 on both the factors extracted. Item V76 was therefore excluded from the next three factor solution and items

V81, V85 and V86 from the next two factor extraction. In the two factor extraction with these variables (V81, V85 and V86) now also excluded, the remaining items all loaded ≥.25 on one of the two factors. Only two items loaded ≥.25 (.830 and .749) respectively on factor two while 16 items belonged to factor one. In the three factor solution nine items now loaded ≥.25 on factor one, eight similarly on factor two and two items on factor three. Confirmatory Factor Analyses were carried out on the factor structures containing respectively three and two factors. The results are shown in shortened form in Table 55. In the two factor solution the two factors respectively explained 38.51% and 4.95% of the total and 88.61% and 11.39% of the common variance and had Alpha coefficients of .905 and .856. The corresponding figures for the three factor solution are 39.74%, 4.42%, 4.10% of the total variance and 82.17%, 9.153 and 8.47% with the Alpha coefficient being .880, .857 and .856.

Table 55:

Results of Confirmatory Factor Analyses on two and three factor solutions on responses to work values items (Total sample)

	Number of factors	
Indices	**Three factors**	**Two factors**
Fit criterion	1.4220	.5428
GFI	.7708	.8752
AGFI	.6180	.7088
RMR	.3690	.3144
PGFI	.5781	.5251
Chi-square (df)	2108.8154 (27)	805.0087 (9)
Null model Chi-square (df)	7624.8240 (36)	5713.3150 (15)
BCFI	.7275	.8630
AIC	2054.8154	787.0087
CAIC	1884.6480	730.2862
MC	.4959	.7648
BBNNI	.6342	.7672
BBNFI	.7234	.8591
PNFI	.5426	.5155
BNI	.6312	.7652

Table continues

BNNI	.7260	.8605
RNI	.7257	.8603

The fit between the factor models and the data as reflected in Table 55. is unsatisfactory in both cases. It was therefore decided to, so because of the high first eigenvalue obtained, to extract a single factor. Principal Factor Analyses and Quartimin rotation were again utilised. The factor pattern obtained from this analysis is shown in Table 56.

Table 56:

Factor pattern obtained from one factor solution of responses to work values items (Total sample)

Item	Factor Loading
V98	.778
V94	.756
V100	.742
V97	.734
V93	.717
V86	.714
V85	.692
V101	.681
V90	.671
V87	.661
V99	.660
V89	.641
V81	.634
V91	.624
V86	.616
V84	.594
V96	.590
V95	.587
V92	.580
V80	.565
V82	.524
V76	.451
V83	.443

Table continues

V78	.429

From Table 56 it can be seen that all the items loaded > .25 on the one factor extracted. This factor had a Cronbach Alpha of .94. It explained 40.41% of the total variance. Confirmatory Factor Analysis was again carried out on the one factor solution. The results are shown in Table 57.

Table 57:

Indices obtained from one factor solution of responses to items in work values measure (Total sample)

Indices	Value
Fit criterion	.0341
GFI	.9889
AGFI	.9741
RMR	.0100
PGFI	.5933
Chi-square (df)	50.5573 (9)
Null model Chi-square (df)	8152.5011 (15)
BCFI	.9949
AIC	32.5573
CAIC	-24.1652
MC	.9861
BBNNI	.9915
BBNFI	.9938
PNFI	.5963
BNI	.9897
BNNI	.9949
RNI	.9949

The data and the factor model formed, as can be seen from Table 57 a very good fit. This factor model was therefore accepted and used in further analyses.

The responses of the members of the subsamples to the work values measurement were analysed separately. The results of the Principal Factor Analyses are shown in Table 58.

Table 58:

Results of Exploratory Factor Analysis on responses of members of subsamples to work values items

Subsample	No of factors	Items eliminated	% Variance explained a)Total b)Common	Alpha
Financial Institution	1	None	a)44.61	.948
	2	V82, V92, V93, V95	a)45.80; 4.25	.936
			b)91.51; 8.49	.872
	3	Not extracted - eigenvalues too low		
Academic	1	V83	a)35.77	.930
	2	V86, V97, V99, V101 V85, V81, V98, V96, V76, V88	a)33.75; 8.63 b)79.62; 20.38	.871; .718
	3	V86, V97, V99, V101 V85, V81	a)34.37; 6.24; 7.21 b)71.85; 13.04; 15.11	.882; .735 .843
University Administrative Staff	1	None		
	2	V86, V87, V90, V92 V94, V95, V97, V98	a)37.92;l 5.61 b)83.27; 16.73	.900; .740
	3	Not Extracted - eigenvalue too low		
All University Staff	1	None	a)36.98 b)100	.931
	2	V76, V81, V85, V86 V97, V99, V101	a)35.81; 6.44 b)84.76; 15.24	.891; .780
	3	V81, V84, V85, V86 V92, V97, V99, V101	a)36,58; 5.75; 5.80 b)76.00; 11.905; 12.05	.876; .837; .723

The one, two and where applicable three factor solutions were finally subjected to Confirmatory Factor Analyses. The results are summarised in Tables 59, 60, and 61.

Table 59:

Results of Confirmatory Factor Analyses on unidimensional structure of responses of members of subsamples

Indices	Financial	Academic	University Administrative	All University
Fit Criterion	.0605	.0717	.0681	.0462
GFI	.9809	.9755	.9778	.9847
AGFI	.9555	.9429	.9481	.9643
RMR	.0176	.0239	.0226	.0183
PGFI	.5886	.5853	.5867	.5908
Chi^2 (df)	40.7441(9)	31.7726(9)	24.7808(9)	37.3036(9)
Null Model Chi^2 (df)	3166.3806(15)	1521.4745(15)	1460.4139(15)	2949.3036(15)
BCFI	.9899	.9849	.9891	.9904
AIC	22.7441	13.6626	6.7808	19.2922
CAIC	-26.884	-32.0899	.37.3182	-31.9700
MC	.9768	.9747	.9786	.9827
BBNNI	.9832	.9748	.9818	.9839
BBNFI	.9871	.9791	.9830	.9874
PNFI	.5923	.5875	.5898	.5924
BNI	.9786	.9652	.0717	.9789
BNNI	.9899	.9849	.9891	.9904
RNI	.9899	.9849	.9897	.9904

The results in Table 59 indicate that a one factor solution fit the data quite well for all the subsamples.

Table 60:

Results of Confirmatory Factor Analyses on three factor structure of work values for responses of different subsamples

Indices	Financial	Academic	University Administrative	All University
Fit Criterion	-	2.4933	-	1.0558
GFI	-	.7375	-	.8266
AGFI	-	.5625	-	.7275
RMR	-	.3326	-	2673
PGFI	-	.5531	-	.6429
Chi^2 (df)	-	1104.5254(27)	-	853.0490(35)
Null Model Chi^2 (df)	-	2514.163(36)	-	3455.8658 (45)
BCFI	-	.5652	-	.7602
AIC	-	1050.5254	-	783/0490
CAIC	-	912.9382	-	583.6960
MC	-	.2972	-	.6031
BBNNI	-	.4202	-	.6916
BBNFI	-	.5607	-	.7532
PNFI	-	.4205	-	.5858
BNI	-	.4142	-	.6826
BNNI	-	.5667	-	.6509
RNI	-	.5652	-	.7602

The three factor solutions were not done for two of the subsamples (see Table 58).

Table 61:

Results of Confirmatory Factor Analyses on two factor structure of work values for responses of different subsamples

Indices	Financial	Academic	University Administrative	All University
Fit Criterion	.7048	.3563	.5400	.3642
GFI	.8783	.9169	.8950	.9053
AGFI	.7809	.8337	.8109	.7791
RMR	.3063	.1861	.2327	.2335
PGFI	.6213	.6112	.6393	.5432
Chi^2 (df)	475.0313(20)	157.8230(14)	196.5500(20)	294.2494(9)
Null Model Chi^2 (df)	4230.4310(28)	1039.276(21)	1220.1027(28)	2324.3288 (15)
BCFI	.8917	.8588	.8519	.8765
AIC	435.0313	129.8230	156.5500	276.2494
CAIC	324.7370	58.4815	58.5521	224.9872
MC	.7139	.8505	.7852	.8384
BBNNI	.8484	.7881	.7927	.7941
BBNFI	.8877	.8481	.8389	.8734
PNFI	.6341	.5654	.5992	.5240
BNI	.8428	.7722	.7745	.7890
BNNI	.8919	.8597	.8529	.8768
RNI	.9817	.8589	.8519	.8765

From the fit indices shown in Tables 59, 60, and 61 it is clear that the one factor model provided the best fit.

5.2 Second research question

With regard to the second research question which is concerned with the determination of the underlying dimensions of work commitment it was decided to firstly, for the total sample, and subsequently for the subsamples, do Exploratory and Confirmatory Factor Analyses to determine the factor patterns in which the items included in the different facets, as measured in the present study, would fall.

The responses of the members of the total sample to the 95 items measuring the different facets of the work commitment construct were firstly analysed by means of Principal Factor Analysis in the BMDP 4 M programme. An oblique rotation i.e. Direct Quartimin was again used as it was clear from the literature study that some overlap would exist among the different facets. In the first round of this analysis 16 eigenvalues > one were obtained. On inspection of the eigenvalues it seemed as if a break occurred between the fourth and fifth eigenvalues (4.167 vs 2.425) and possibly between the third and fourth eigenvalue (5.778 and 4.167). It was therefore decided to firstly extract three and four factors respectively. The Principal Factor Analyses carried out revealed that in the four factor solution items V13, V32, V33, V36, V51, V56, V57, V58, V59, V60 and V61 either did not load ≥ .25 on a factor or had a loading of ≥ .25 on more than one factor. In the three factor solution numerically more items did not meet the required loading of ≥ .25 on one factor. The items which cross loaded or did not load at the required level in the three factor solution were V13, V24, V32, V33, V34, V36, V51, V57, V60, V62, V65, V66, V67, V68, V69, V74. The items which did not meet the requirements in either of the three or the four factor solution were therefore, V13, V32, V33, V36, V51, V57, V60. These items were left out in subsequent Principal Factor Analyses in which three and four factors were respectively extracted. In these analysis items V55, V56, V58, V59, V61, V74 did not load ≥ .25 or crossloaded in the four factor solution. The same happened with items V62, V66, V67, V68, V69 and V74 in the three factor solution. Item V74 was therefore left out of further analyses in this series. In the next round of Principal Factor Analysis items V55, V58, V59 and V61 did not meet the requirements in the four factor solution while items V24, V34, V62, V65, V66, V67, V68, V69 did not load satisfactorily in the three factor solution. No item not loading satisfactorily on both of the two factors therefore occurred in this round of analysis. Four and three factor solutions were therefore pursued leaving out with items not loading satisfactorily when three and four factor extractions were specified left out. The results of these analyses are summarised in Table 62.

Table 62:

Results of additional rounds of Principal Factor Analyses on responses with three/four factors extracted (Total sample)

Round	Items to be left out	
	Four factor solution	Three factor solution
4	V55, V58, V59,. V61	V24, V34, V62, V65, V66, V67, V68, V69
5	None	V63, V64
6	None	None

The final factor patterns obtained from the three and four factor solution are shown in Tables 63 and 64 respectively.

Table 63:

Factor pattern obtained from four factor solution on work commitment items (Total sample)

Item	Factor 1	Factor 2	Factor 3	Factor 4
V25	.872			
V27	.855			
V4	.799			
V12	.748			
V8	.731			
V26	.666			
V17	.657			
V54	.639			
V40	.618			
V14	.604			
V52	.600			
V22	.597			
V16	.585			
V50	.567			
V6	.563			
V49	.559			
V44	.550			

Table continues

V56	.420			
V41	.403			
V46	.478			
V20	.384			
V45	.389			
V47	.387			
V31	.288			
V37	.366			
V39	.497			
V43	.431			
V48	.287			
V53	.444			
V94		.779		
V98		.778		
V100		.672		
V93		.739		
V97		.729		
V86		.710		
V90		.700		
V85		.684		
V87		.675		
V101		.672		
V89		.653		
V99		.648		
V88		.625		
V81		.623		
V95		.588		
V91		.586		
V96		.581		
V84		.579		
V92		.560		
V80		.541		
V82		.521		
V83		.413		
V75		.434		
V76		.457		
V28			.769	
V29			.706	
V19			.701	
V38			.700	

Table continues

V18			.672	
V9			.648	
V21			.628	
V24			.616	
V34			.606	
V7			.604	
V30			.584	
V5			.503	
V23			.444	
V11			.273	
V10			.414	
V35			.478	
V15			.495	
V42			.463	
V68				.649
V64				.600
V66				.556
V67				.544
V65				.543
V63				.537
V70				.504
V73				.502
V69				.436
V71				.415
V72				.387
V62				.337

In this factor structure the four factors had Cronbach Alpha coefficients of, respectively, .934, .938, .905 and .816. The factors explained, respectively 15.80%, 12.02%, 6.06% and 3.65% of the total variance and 42.10%, 32.03%, 16.17% and 9.70% of the common variance.

The final factor pattern obtained when a three factor solution was specified is shown in Table 64.

Table 64:

Factor pattern of three factor solution for work commitment items (Total sample)

Item	Factor 1	Factor 2	Factor 3
V25	.861		
V27	.845		
V4	.793		
V12	.732		
V8	.723		
V26	.680		
V17	.654		
V40	.641		
V54	.637		
V14	.614		
V22	.611		
V52	.608		
V50	.580		
V16	.578		
V44	.574		
V49	.563		
V6	.549		
V39	.524		
V46	.520		
V53	.477		
V55	.447		
V59	.457		
V45	.435		
V37	.390		
V62	.425		
V56	.428		
V20	.388		
V31	.322		

Table continues

V58	.417		
V43	.451		
V47	.427		
V48	.303		
V41	.439		
V98		.776	
V94		.758	
V100		.748	
V97		.734	
V86		.720	
V93		.719	
V85		.698	
V101		.680	
V90		.679	
V87		.669	
V99		.665	
V89		.640	
V81		.634	
V91		.620	
V88		.610	
V84		.600	
V96		.595	
V95		.579	
V80		.568	
V92		.566	
V82		.519	
V75		.421	
V83		.448	
V76		.451	
V28			.699
V18			.695
V9			.673
V21			.669

Table continues

V29			.662
V38			.656
V19			.644
V7			.605
V30			.556
V15			.509
V23			.484
V5			.463
V42			.443
V35			.431
V10			.367
V70			.342
V73			.318
V11			.317
V72			.301
V71			.254

In this structure factor one had a Cronbach Alpha coefficient of .939. The corresponding figures for factors two and three were .940 and .881 respectively. The three factors explained respectively 17.04, 12,80 and 5.75% of the total variance and 47.87%, 37.95% and 16.18% of the common variance.

The three and four factor structures were subjected to Confirmatory Factor Analyses. The indices obtained are shown in Table 65.

Table 65:

Results of Confirmatory Factor Analyses on three and four factor patterns of work commitment (Total sample)

	Number of factors	
Indices	Four factors	Three factor
FC	1.5012	1.2193
GFI	.8615	.8698
AGFI	.8289	.8326
RMR	.1445	.1370
PGFI	.7708	.7610
CHI SQUARE (DF)	2226.2433 (170)	1808.2660
NULL MODEL CHI^2	20468.7065 (190)	17354.4592
BCFI	.8986	.9019
AIC	1886.2433	1570.2660
CAIC	814.8189	820.2689
MC	.5002	.5660
BBNNI	.8867	.8879
BBNFI	.8912	.8958
PNFI	.7974	.7838
BNI	.8784	.8809
BNNI	.8989	.9020
RNI	8986	.9097

From Tables 64 and Table 65 it seems as if the three factor solution represented a reasonable fit between the factor model and the data. The fit between the data and the four factor solution was marginally better than in the three factor solution.

With regard to the responses of the different subsamples the same line of analysis was followed. The results of the Exploratory Factor analyses executed by means of Principal Factor Analysis with Quartimin rotation of the axes are summarised in Table 66.

Table 66:

Results of Principal Factor Analyses for work commitment on responses of subsamples

Subsample	No of factors	Items eliminated	% Variance explained (a) Total (b) Common	Alpha
Financial Institution	3	V12, V13, V20 V22 V32, V33, V36, V51, V62, V64 V65, V66, V67, V68, V69, V71, V74	(a) 13.79; 16.26; 5.13 (b) 39.21; 46.22; 14.57	.948; .932; .883
	4	V13, V20, V22, V32, V33, V36, V51, V55, V56, V57, V58, V59, V60, V61, V62, V74, V99	(a) 14.01; 14.17; 5.32; 3.21 (b) 38.27; 38.71; 14.22; 8.79	.948; .914; .884; .7936
Academic	3	V13, V24, V31, V32, V33, V34, V36, V40, V51, V53, V57, V60, V62, V65, V66, V67, V68, V69, V71, V73, V74, V80, V83	(a) 17.08; 11.60; 6.57 (b) 48.46; 32.91; 18.63	.932; .9287; .887
	4	V31, V32, V36, V40, V45, V48, V53, V55, V57, V60, V61, V69, V70, V71, V72, V73, V74, V80, V83	(a) 17.73; 11.03; 7.31; 3.72 (b) 44.57; 27.75; 18.31; 9.37	.929; .926; .9271; 8350
University Administrative Staff	3	V13, V32, V33, V36, V38, V39, V40, V51, V55, V60, V62, V64, V65, V66, V67, V68, V69, V74	(a) 18.49; 11.71; 5.59 (b) 50.10; 31.86; 18.14	.937; .937; .906
	4	V13, V22, V31, V32, V33, V36, V38, V39, V40, V45, V51, V55, V56, V57, V60, V61,	(a) 17.51; 12.17; 7.08; 3.25 (b) 43.80; 30.42; 17.66; 8.12	.931; .930; .904; .740

Table continues

		V62, V63, V70, V71, V73, V74, V82, V83		
All University Staff	3	V13, V24, V32, V33, V34, V36, V51, V52, V53, V55, V60, V74	(a) 17.60; 11.82; 6.48 (b) 49.04; 81.97; 18.03	.936; .931; .898
	4	V13, V31, V32. V33. V36, V45, V51, V52, V53, V55, V57, V58, V59, V60, V61, V74	(a) 16.43; 11.27; 6.97; 4.13 (b) 42.36; 29.03; 17.97; 10.64	.931; .931; .919; .824

The various factor patterns were subjected to Confirmatory Factor Analysis. The results are shown in Table 67.

Table 67:

Results of Confirmatory Factor Analyses for work commitment items on responses of subsamples

Indices	Subsample							
	Financial		Academic		Administrative		All University	
	Factors		Factors		Factors		Factors	
	Three	Four	Three	Four	Three	Four	Three	Four
Fit erion	1.024	1.2602	1.6133	2.1956	1.6827	1.4919	1.8043	1.7664
GFI	.9017	.8941	.8260	.8198	.82132	.8773	.8305	.8464
AGFI	.8755	.8718	.7763	.7797	.7702	.8515	.7853	.8122
RMR	.1430	.1430	.1296	.1531	.1631	.1315	.1512	.1327
PGFI	.7956	.8089	.7227	.7378	.7186	.7937	.7328	.7617
Chi^2(df)	690.45 (135)	849.35 (209)	714.68 (119)	972.67 (189)	612.50 (119)	543.07 (209)	1457.88 (135)	1427.25 (189)
Nul odel Chi^2 (df)	8624.01 (153)	9444.17 (231)	4825.40 (136)	6420.14 (210)	4612.57 (136)	5057.31 (231)	9423.98 (153)	10806.4 (210)
BCFI	.9344	.9305	.8730	.8738	.8898	.9308	.8573	.8831
AIC	420.45	431.35	476.68	-368.44	374.50	125.07	187.88	1049.25
CAIC	-324.04	-21.2207	-29.73	0179.44	0208.59	0899.01	418.95	-7.2592
MC	.6627	.6223	.5113	.4137	.5086	.6328	.4415	.4652
BBNNI	.9257	.9232	.8548	.8598	.8740	.9235	.8383	.8702

Table continues

BBNFI	.9199	.91091	.8519	.8485	.8672	.8926	.8453	.8679
PNFI	.8117	.8234	.7454	.7636	.7588	.8076	.7459	.7811
BNI	.9093	.9006	.8307	.8317	.8482	.8813	.8247	.8533
BNNI	.9346	.9307	.8734	.8742	.8902	.9311	.8576	.8834
RNI	.9351	.9305	.8731	.8739	.8899	.9308	.8574	.8832

From Table 67 it can be seen that in some cases a four factor solution provided the best solution and in other cases a three factor solution. Most of the fit indices reached high levels but the residuals are in all cases still quite high (see values of RMR).

To investigate the factorial structure of the work commitment structure further it was decided to repeat the attempts to find the factor structure of the items measuring work commitment with the exclusion of the items included in the work values questionnaire developed by Elizur (1984). It was argued that the work values concept as embodied in Elizur's questionnaire has not been part of the work commitment construct in previous research studies. Job involvement, organizational commitment, work involvement and career/occupational commitment have generally been seen as part of work commitment. It was therefore decided to carry out Exploratory Factor Analysis on the items included in the instruments which had been developed to measure the different facets of work commitment as identified by Morrow (1983) and included in the present study. This was done for the responses of the members of the different subsamples as well as for the total sample.

In the first phase of this process of Exploratory Factor Analysis on the responses of the members of the total sample items V4 to V74 were included in the calculations. Twelve eigenvalues > one were obtained, varying between 1.008 and 17.186. The first four eigenvalues were 17.186, 7.757, 4.034 and 2.266. The fifth eigenvalue amounted to 1.961. In line with the available theory and in the light of the pattern of eigenvalues it was decided to extract four and three factors. It was found that in the four factor solution items V31, V32, V33, V36, V37, V44, V50, V54 and V55 crossloaded i.e. had loadings ≥ .25 on more than one of the four factors. In the three factor solution items V13, V32, V33, V36,

V51, V55, V56, V57, V58, V59, V60 and V61 crossloaded in terms of the same criteria. It was therefore decided to leave items V32, V33, V36 and V55 out of the next round of Principal Factor Analyses. This process was repeated until a "clean" factor pattern as shown in Table 68 and Table 69 were obtained for the three and four factor solutions respectively. The factor patterns obtained from the final four factor solution are shown in Table 68.

Table 68:

Factor pattern in four factor solution on responses to items v4-v74 (Total sample)

	Factor			
Item nr	**Item 1**	**Item 2**	**Item 3**	**Item 4**
V25	.906			
V4	.837			
V27	.829			
V27	.779			
V8	.705			
V17	.673			
V22	.645			
V40	.604			
V26	.592			
V14	.586			
V6	.561			
V16	.533			
V46	.325			
V49	.444			
V52	.466			
V20	.408			
V39	.403			
V43	.388			
V28		.770		
V29		.711		
V19		.707		
V38		.707		
V18		.682		
V9		.649		
V24		.637		

Table continues

V21	.634		
V7	.624		
V34	.614		
V30	.600		
V15	.516		
V5	.509		
V51	.353		
V35	.487		
V11	.288		
V10	.431		
V23	.441		
V42	.456		
V13	.347		
V59		.826	
V58		.812	
V61		.776	
V60		.617	
V57		.502	
V56		.462	
V74		.384	
V66			.677
V67			.658
V68			.657
V64			.635
V65			.585
V63			.535
V73			.415
V62			,356
V69			.353
V72			.302
V71			.301

The factor pattern obtained from the final three factor solution is shown in Table 69.

Table 69:

Factor pattern obtained in final three factor solution on work commitment items excluding Elizur (Total sample)

	Factor		
Item`	1	2	3
V25	.873		
V27	.855		
V4	.800		
V12	.749		
V8	.730		
V26	.666		
V17	.650		
V54	.640		
V40	.618		
V14	.604		
V52	.601		
V22	.595		
V16	.586		
V50	.571		
V49	.562		
V6	.560		
V44	.548		
V41	.410		
V20	.385		
V46	.484		
V45	.397		
V37	.364		
V47	.392		
V48	.286		
V39	.497		
V31	.287		
V43	.432		
V53	.446		
B28		.773	
V29		.714	
V38		.704	
V19		.703	
V18		.678	

Table continues

V9	.650	
V21	.633	
V24	.622	
V7	.610	
V34	.607	
V30	.590	
V5	.506	
V23	.448	
V11	.275	
V10	.421	
V35	.483	
V15	.499	
V42	.460	
V68		.666
V64		.632
V66		.584
V65		.572
V67		.570
V63		.569
V70		.499
V73		.482
V69		.437
V71		.407
V72		.398
V62		.337

The four factors identified in the four factor solution had Cronbach Alpha Coefficients of .921, .912, .849 and .797 respectively. Of the total variance the four factors explained 22.48%, 8.35%, 5.33%, and 3.02%. Correspondingly 57.37%, 21.30%, 13.61%, and 7.72% of the common variance were explained by factors one to four.

The Cronbach Alpha coefficients of the factors in the three factor solution were .933, .909 and .816. The three factors explained 21.97%, 8.61% and 4.76% of the total variance and 61.99%, 24.30% and 13.71% of the common variance.

The four factor and three factor solutions were subsequently subjected to Confirmatory Factor Analysis. The results are shown in Table 70.

Table 70:

Results of Confirmatory Factor Analyses on four and three factor solutions for items V4-V74 (Total sample)

	Number of factors	
Indices	**Three factors**	**Four Factors**
Fit criterion	.6933	2.0922
GFI	.9136	.7895
AGFI	.8836	.7294
RMR	.1862	.2471
PGFI	.7831	.6908
Chi-square (df)	1028.2198(78)	3102.6872 (119)
Null model Chi-square (df)	12744.3949 (91)	15033.7351 (136)
BCFI	.9249	.7997
AIC	872.2198	2864.6872
CAIC	380.6251	2114.6901
MC	.7260	.3659
BBNNI	.9124	.7711
BBNFI	.9193	.7936
PNFI	.7880	.6944
BNI	.9059	.7641
BNNI	.9250	.8000
RNI	.9249	.8022

From Table 70 it seems as if the three factor model definitely represents a better fit with the data than the four factor model. The analyses described for the responses to items V4 to V74 by the members of the total sample were repeated on the responses of the four organizational subsamples. The results of the Exploratory Factor Analyses are summarised in Table 71.

Table 71:

Results of Exploratory Factor Analyses on responses to items v4 to v74 by members of subsamples

Subsample	No of factors	Items eliminated	% Variance explained (a) Total (b) Common	Alpha
Financial Institution (N=675)	3	V11, V20, V22, V31, V32, V33, V37, V44, V53, V54, V55, V56, V57, V58, V59, V60, B62, B70, V71, V72, V73	(a) 20.27; 7.37; 4.65 (b) 62.79; 22.83; 14.38	.904; .895; .794
	4	V20, V22, V31, V32, V36, V37, V46, V48, V53, V54, V55, V60, V62	(a) 20.92; 6.81; 4.02; 2.89 (b) 60.40; 19.66; 11.61; 8.33	.897; .899; .794; .809
Academic	3	V31, V32, V36, V40, V45, V53, V55, V56, V58, V59, V60, V61, V69, V70, V71, V72, V73, V74	(a) 24.53; 10.08; 4.83 (b) 62.91; 25.86; 12.25	.932; .922; .835
	4	V31, V32, V33, V36, V40, V45, V47, V48, V53, V69, V72, V73	(a) 23.58; 9.38; 5.28; 3.36 (b) 56.68; 22.55; 12.69; 8.08	.930; .922; .847; .835
University Administrative Staff	3	V13, V22, V32, V33, V36, V45, V51, V55, V56, V57, V60, V62, V63, V74	(a) 22.63; 9.61; 4.72 (b) 62.25; 25.31; 12.44	.938; .915; .813
	4	V22, V31, V32, V33, V36, V45, V47, V48, V50, V51, V52, V53, V54, V55, V56, V57, V60, V62, V63	(a) 23.47; 9.65; 4.07; 4.15 (b) 56.77; 23.35; 9.84; 10.04	.923; .918; .813; .777
All University Staff	3	V13, V31, V32, V44, C36, V40, V45, V51, V53, V55, V56, V57, V58, V59, V60, V61, V74	(a) 22.64; 10.16; 5,49 (b) 59.13; 26.53; 14.34	.930; .922; .824
	4	V31, V32, V33, V36, V40, V41, V44, V45, V47, V48, V49, V50, V52, V53, V55, V70	(a)23.42; 20.31; 5.78; 3.30 (b)56.02; 22.27; 13.81; 7.90	.925; .918; .852; .805

The factor patterns obtained were subjected to Confirmatory Factor Analyses. The results are shown in Table 72.

Table 72:

Results of Confirmatory Factor Analyses on responses to items V4 to V74 by members of subsamples

Indices	Subsample							
	Financial		University				All University	
			Academic Administrative					
	No of Factors		No of Factors		No of Factors		No of Factors	
	Three	Four	Three	Four	Three	Four	Three	Four
FC	.8110	1.6432	.7996	2.2715	1.1230	1.1635	.7441	1.3997
GFI	.8851	.7894	.8958	.7964	.8696	.8626	.9024	.8439
AGFI	.8392	.7192	.8541	.7382	.8262	.8203	.8654	.7959
RMR	.2153	.2519	.1963	.2323	.1967	.2050	.1822	.2182
PGFI	.7376	.6767	.7465	.6968	.7454	.7476	.7636	.7314
Chi ^{2} f)	546.6033	1107.5146	354.2250	1006.2812	408.7883	423.5280	601.2118	1130.97
(df)	(65)	(90)	(65)	(119)	(90)	(04)	(66)	(104)
Null odel Chi^2	4699.6969	5224.1157	3931.8931	4387.9266	3599.5077	3452.5896	7066.5042	7551.56
(df)	(78)	(105)	(78)	(136)	(105)	(120)	(78)	(120)
BCFI	.8958	.8012	.9250	.8007	.9088	.9041	.9234	.8618
AIC	416.6033	927.5146	224.2280	768.2812	228.7883	215.5284	469.2118	922.968
CAIC	58.1470	431.1905	-107.0006	161,8781	-212.2025	-294.0609	-93.2890	330.605
MC	.7000	.4706	.7220	.3682	.6462	.6455	.7184	.5301
BBNNI	.8750	.7681	.9099	.7722	.8936	.8894	.9095	.8405
BBNFI	.8837	.7880	.9099	.7807	.8864	.8773	.9149	.8502
PNFI	.7364	.6754	.7583	.6831	.7598	.7604	.7742	.7369
BNI	.8604	.7527	.8919	.7493	.8675	.8585	.8995	.8272
BNNI	.8961	.8018	.9252	.8015	.9092	.9046	.9235	.8621
RNI	.8958	.8012	.9250	.8007	.9088	.9041	.9234	.8618

5.3 The third research question

An attempt was also made to answer the third research question regarding the relationships among the different facets of the work commitment construct. This was firstly done by means of calculation of the intercorrelations among the scores of the total sample (N=1484) on the different facets and subfacets as

determined when an attempt was made to answer the first research question. The results are shown in Table 73.

Table 73:

Intercorrelations among facet and subfacet scores of work commitment construct (Total sample)

	V124	V125	V126	V127	V128	V129
V124	1.000					
V125	0.551	1.000				
V126	0.233	0.359	1.000			
V127	0.015	0.174	0.345	1.000		
V128	0.403	0.771	0.728	0.668	1.000	
V129	0.569	0.301	0.330	0.134	0.351	1.000
V130	-0.026	-0.060	-0.117	-0.140	-0.139	-0.062
V131	0.602	0.497	0.070	-0.113	0.255	0.155
V132	0.511	0.385	0.049	-0.108	0.187	0.158
V133	0.643	0.521	0.073	-0.124	0.265	0.172
V134	-0.319	-0.418	-0.138	-0.054	-0.310	-0.161
V135	-0.147	-0.287	-0.005	0.001	-0.162	-0.034
V136	-0.091	-0.047	0.131	0.078	0.058	-0.008
V137	-0.435	-0.585	-0.224	-0.137	-0.472	-0.155

	V130	V131	V132	V133	V134	V135
V130	1.000					
V131	0.070	1.000				
V132	-0.060	0.480	1.000			
V133	0.045	0.976	0.658	1.000		
V134	0.050	-0.394	-0.322	-0.418	1.000	
V135	-0.009	-0.335	-0.125	-0.319	0.520	1.000
V136	-0.122	-0.225	-0.031	-0.201	-0.110	-0.021
V137	-0.037	-0.592	-0.286	-0.578	0.444	0.382

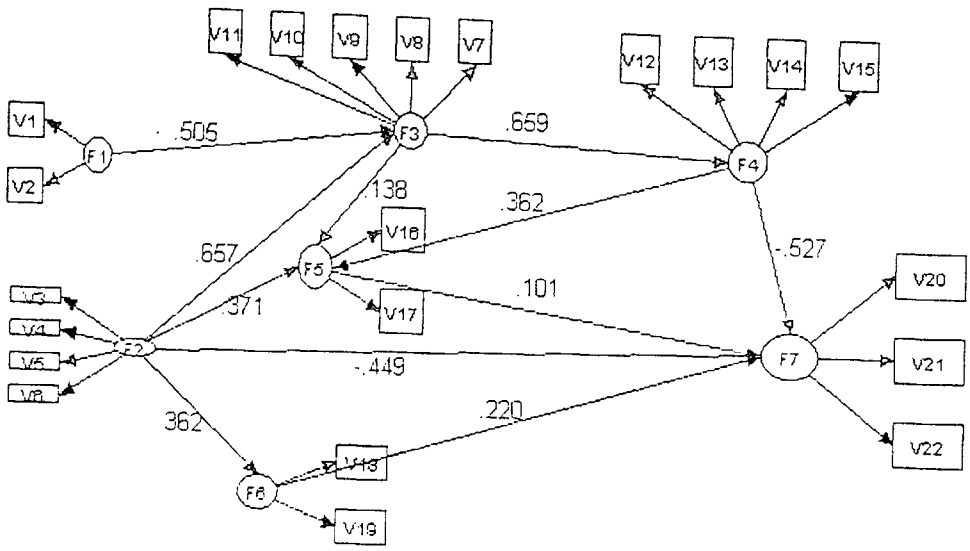
	V136	V137
V136	1.000	
V137	0.100	1.000

Job involvement	V124
Org commit I	V125
Org commit II	V126
Org commit III	V127
Org commit	V128
Work involvement	V129
Work values	V130
Career commit I	V131
Career commit II	V132
Career commit	V133
Role strain I	V134
Role strain II	V135
Role strain	V136
Intention to quit	V137

From Table 73 it can be seen that possibly useful correlations ($r \geq \pm .30$ existed among the variables. The size of the correlations in Table 75 indicates that the variables included in this study are independent from each other. Morrow (1983) indicated that a correlation between .60 and .80 would be an indication of possible redundancy. Only in the case of the correlation between career commitment and job involvement was a correlation of this magnitude obtained. The problems experienced with the items from the job involvement instrument have been discussed earlier and can be attributed to a referent problem rather than a conceptual problem.

From the correlations obtained and deductively from the literature a model was built of a possible set of causal relationships among the variables measured in the present study.

The model is presented in Figure 4.



F1 = Work Involvement	V1 = 138	V12 = 149
F2 = Career Commitment (sum)	V2 = 139	V13 = 150
F3 = Job Involvement	V3 = 140	V14 = 151
F4 = Affective organizational commitment	V4 = 141	V15 = 152
F5 = Role conflict	V5 = 142	V16 = 153
F6 = Role ambiguity	V6 = 143	V17 = 154
F7 = Intention to quit	V7 = 144	V18 = 155
	V8 = 145	V19 = 156
	V9 – 146	V20 = 121
	V10 = 147	V21 = 122
	V11 = 148	V22 = 123

V-variables are aggregates of variables loaded on the different scales.

Figure 4: Causal model of relationships among work commitment facets, role strain and intention to quit

The model was tested by means of the EQS programme developed by Bentler and Wu (1995). The fit indices are shown in Table 74.

Table 74:

Fit indices of Causal model built by means of EQS

Independence model Chi square	16456.113 (df = 190)
Independence AIC	16076.11305
Model AIC	1534.26820
Independence CAIC	14878.63873
Model CAIC	576.28874
Chi square	1838.268 (df = 152)
BBNFI	.888
BBNNFI	.870
CFI	.896
Bollen (IFI)	.897
McDonald (MFI)	.567
LISREL GFI	.881
LISREL AGFI	.835
RMR	1.1810
RMSEA	.086
RNI	.896

From the results in Table 74 it seems as if a reasonable fit between the model and the data is obtained, although the model did not converge. One possible reason for this is that the model is under identified. For instance, the path coefficients between F3 and F5 and between F5 and F7 were not satisfactory. The results must therefore be treated with caution.

Chapter Six: Discussion

6.1 Research question one

In order to answer the first research question namely what are the underlying dimensions of each of the main work commitment facets, responses to the items supposed to measure each facet were factor analyzed separately by means of Exploratory and Confirmatory Factor Analyses. The results of this process, designed to answer the first research question, will be discussed per facet, first for the responses for the total sample and then for the responses for the subsamples.

6.1.1 Job involvement facet

As described in chapter five, a two and a one factor solution were specified regarding the responses of the total sample to the job involvement items since there seemed to be a clear break between the first and second eigenvalues as well as between the second and third eigenvalues. In the two factor solution, a clear factor pattern was obtained after two rounds of analyses. In the two factor solution the two factors could be interpreted as a strong identification with one's job for the first factor and a more negative view of job involvement which can be seen as a detachment from work factor (only three out of the eight items reflected the importance of work as an activity in one's life) for the second factor. The results of the Confirmatory Factor Analysis indicated a reasonable fit between the data and the model for the two factor solution although not as good as one would prefer.

In the one factor solution, a clear factor structure was obtained after two rounds of analyses. This one factor could not easily be interpreted. A possible interpretation is the identification with and the importance of one's job in your life. The Confirmatory Factor Analysis revealed a good fit between the data and the model.

In terms of the problem of dimensionality of job involvement stated in the literature, it had to be decided which solution provided the best fit. This decision was based on various criteria i.e. fit indices, interpretability of factors, eigenvalues and explained variance.

The very large gap between the first (7.52) and second eigenvalue (2.05) gave some indication of the presence of only one factor. In the two factor solution, the combined Alpha coefficient (.92), that is when the two scales are combined to form one scale, was much higher that for the two scales separately (.886 and .772 respectively). The fit indices for the one factor solution was also much better than the two factor solution. In terms of the interpretability of the factors, the two factor solution was more readily interpretable than the one factor solution. A possible reason for this might be that the one factor solution consisted of items from both Kanungo (1982) and Lodahl and Kejner's (1965) scales which implies some excess meaning in the scale.

In a meta analysis done by S.P. Brown (1996), it was found that the results obtained by using either Kanungo's (1982) unidimensional structure or Lodahl and Kejner's (1965) multidimensional structure made little difference to the strength of the relationships between involvement and other variables. The problem with the Lodahl and Kejner (1965) measure has been that the numbers of dimensions are not stable across different samples and cultures. Lodahl and Kejner (1965) for instance, preferred a three factor solution, whereas other authors found three and four factor solutions which could be interpreted differently from the model presented by Lodahl and Kejner (1965) (Schwyhart and Smith, 1972; Wood, 1974).

Kanungo's unidimensional structure received much more support by various researchers as it was felt that his measure is conceptually much purer measure of psychological identification with one's job. It was, however, felt that his measurement might not measure the entire domain of job involvement and this was one of the reasons why both

Lodahl and Kejner and Kanungo's instruments were included in the present study to measure the job involvement facet. The unidimensional scale that emerged out of the current study seemed to solve this problem to some degree (Alpha coefficient = .902), with 21 items included in the scale. This finding therefore possibly means that job involvement is a wider concept than that which is measured by the ten items in the Kanungo (1982) scale.

Based on these criteria, it was decided that for the total sample a unidimensional factor structure provided the best solution. However, it is suggested that the job involvement items be revised to reflect the same referent i.e. job and not work.

In terms of the responses of members of the subsamples, very similar results were obtained. For the academic, university administrative staff and all university staff subgroups, identical items were eliminated in both the one and two factor solutions. For the financial institution subsample, the same items in the two factor solution were eliminated as for the other subsamples. Item 48 was additionally eliminated in the one factor solution of the responses of this subsample. Results of the Confirmatory Factor Analyses indicated that the unidimensional factor structure provided the best fit in all the subsample groups, although only marginally in some cases. Although the two factor solutions also provided acceptable fit indices, one should in terms of the literature where the multidimensionality of job involvement is not stable, view this with caution. A one factor structure is therefore also recommended as the most suitable solution for the responses of the subsamples.

6.1.2 Organizational facet

With regard to the organizational facet, a three and a four factor solution were specified for the responses of the total sample. A clear factor structure for the four factor solution was obtained after only the first round of Exploratory Factor Analyses. The four factors could be

interpreted as affective commitment, normative commitment, alienative commitment (where the person does not have a choice but to remain with an organization) and continuance commitment for the first, second, third and fourth factors respectively.

In the three factor solution, a clear factor pattern was obtained after two rounds of Exploratory Factor Analyses. The three factors could be interpreted as affective commitment, normative commitment and continuance commitment. The results of the Confirmatory Factor Analyses indicated a reasonably good fit, although not as high as one would prefer. The three factor structure seemed to provide a slightly better solution than the four factor structure. The Alpha coefficients for the three factor structure were slightly higher than for the four factor solution and the three factor solution explained 43.95% of the total variance against the 21.8 % of the four factor solution. In the light of these results a three factor solution is preferred. This is consistent with the results of Meyer and Allen's (1991) three-dimensional organizational commitment scale where the same three factors were identified namely affective, normative and continuance commitment.

In terms of the subsamples two and three factor solutions were specified based on the results of the eigenvalues and a scree test. The number of factors specified were different from the number of factors extracted for the total sample since fewer eigenvalues > 1.00 were obtained for all the subgroups. For all the subgroups, except for the university administrative staff group, the least number of items were lost in for the three factor solutions. In all the cases the three factor solution explained higher percentages of the total variance (see Table 37). Another indication of the number of factors is the percentage total and common variance explained by each factor. In all the cases in the three factor solutions, the third factor explained a large enough percentage of the common variance to justify its inclusion. The results of the Confirmatory Factory Analyses for the subsamples yielded mixed results. For the financial institution subsample, the fit indices of the two

factor structure seemed to indicate that such a solution provided the best fit. For the academic and the total university sample, the fit indices of the three factor solution presented a marginally better fit than the two factor solutions.

6.1.3 The work ethic facet

In terms of the responses of the total sample to the work ethic items, the same procedures as before were followed. Due to the relatively very large first eigenvalue (3.152) and the fact that the second eigenvalue was below 1.00, only one factor was extracted. No items were eliminated (i.e. loaded below .25). The results of the Confirmatory Factor Analysis indicated a very good fit between the model and the data. The results obtained for the subsamples were very similar that for the total sample. The fit indices in all the cases presented a very good fit between the data and the models.

In terms of the composition of the work ethic scale an important conclusion can be made. For the purpose of the current study, the PWE scale developed by Blood (1969) and Kanungo's (1982) work involvement scale were combined. As was pointed out in chapter two, some researchers expressed doubts about the distinction between Kanungo's work involvement scale and the PWE. Kanungo (1982) argued that his work involvement scale was independent from the Protestant Work Ethic scale. The results from the current study for the total sample and for all the subsamples indicated that the items of the two scales measured the same concept namely a general work ethic. These results have been supported by Blau et al. (1993). This has important implications for the future use of Kanungo's work involvement scale. It seems as if Kanungo's work involvement scale measures work ethic instead of work involvement. The results further indicate that the value facet, as measured in the present study, reflects a general, more secularized form of work ethic. This implies that PWE as it was

originally defined by Blood (1969) has changed over the years, at least as measured in the present study.

6.1.4 The Career facet

A two and three factor solution were specified for the responses of the total sample to the career commitment items.

For the three factor solution, a clear factor pattern was obtained after two rounds of Exploratory Factor Analyses. The three factors could be interpreted as identification, career planning and career resilience for the first, second and third factor respectively. This was in line with the results obtained by Carson and Bedeian (1994). The fit indices obtained by Confirmatory Factor Analysis were acceptable but not as high as one would prefer. The small percentage of the total variance explained by the second and third factors (6.45 and 3.63% respectively), seemed to indicate that it was more likely that fewer factors existed.

For the two factor solution, a clear factor pattern was obtained after three rounds of Exploratory Factor Analyses. The two factors explained 45.58 % of the total variance. The two factors could be interpreted as career identification and career planning. The fit indices obtained by Confirmatory Factor Analysis indicated that there was a good fit between the data and the model.

Due to the fact that the first factor explained 82.89% of the common variance and the relatively high first eigenvalue it was decided to also investigate a one-factor solution.

No items were eliminated in the one-factor structure. The results of the Confirmatory Factor Analysis also indicated that the unidimensional factor structure was better than the two and the three factor structures. This factor could be interpreted as a general identification with one's

career. The results are consistent with the results obtained by Blau (1985, 1988) in terms of the unidimensional nature of career commitment. It also seemed that the respondents of the total sample did not distinguish between an occupational and a career referent, which may indicate that Blau et al.'s (1993) concern in terms of the referent used is not such a big problem in some samples where the same concept is measured. It does however become a problem when different concepts are measured together.

Similar procedures were followed for the subsamples and a one, two and three factor solution of the responses of each subsample were specified. In the one factor solutions, no items loaded < .25 in any of the subgroups. Very similar items were eliminated in the two and three factor solutions for the various subgroups. Results of the Confirmatory Factor Analyses indicated that the one-factor structure clearly provided the best solution for all the different subgroups.

6.1.5 Work values

Although the work values facet did not form part of the facets identified as part of the work commitment construct by various researchers (Morrow, 1983; Randall and Cote 1991; Cohen, 1993), it was decided to investigate the possibility that work values might be another facet of work commitment. Since work values as defined by Elizur (1984) have never been studied in this way, this part of the analysis/study was purely exploratory.

For the total sample, a one, two and three factor solution were in terms of previous research, specified in the Exploratory Factor Analysis, although the large gap between the first and second eigenvalues and the relative low percentage common variance explained by the 2nd factor in the two factor solution and the third factor in the three-factor solutions seemed to indicate the presence of only one factor. Multiple

loading problems were experienced in both the two and three factor solutions during the next three rounds of the Exploratory Factor Analysis. All the items loaded > .25 on the one factor solution in the first round. In order to test the fit between the models and the data Confirmatory Factor Analysis was carried out. The results of the Confirmatory Factor Analyses for both the two and three factor solutions were unsatisfactory.

The results of the one-factor solution indicated a very good fit between the data and the model. The scale also had a high Alpha coefficient of .9402 and explained 40.41% of the total variance.

Although the results from the one-factor structure were very good, it is somewhat inconsistent with the results reviewed in the literature. For instance, Elizur (1984) obtained a two factor solution which he labelled as modality outcome and performance contingency. Wheeler (1994) successfully replicated Elizur's factor structure on a South African sample. Tillquist (1996) obtained a three factor solution by means of factor analysis. In the first phase of the research programme of which the present study formed the second phase, a unidimensional structure was also obtained. One of the reasons for the inconsistent results may be the fact that Elizur (1984) and Wheeler (1994) used facet analysis. It is not certain whether Elizur's scale which was developed through facet analysis can be factor analyzed. Although Tillquist (1996) used factor analysis in his study, his sample was too small to obtain stable factor loadings which may explain the difference between his results and those obtained in the present sample. However, the one factor solution in the current study is somewhat difficult to interpret. One possible interpretation is that the factor reflects the existing incentives or attractiveness in one's work. The possibility that intercultural differences in responding to the construct measured by this instrument exist should lead to further work in this regard.

With regard to the subsamples, again very similar results were obtained. In all cases, except for one item in the academic subsample, no items were eliminated in the one factor solution. The results of the Confirmatory Factor Analyses indicated that the one-factor structure was a much better solution than the two or three-factor solutions. The fit indices of the one-factor structure indicated a very good fit between the models and the data. The consistency of the results with regard to work values for the total sample and the subsamples indicates that the work values facet as measured in the present study is probably a unidimensional construct.

6.2 Second Research Question

With regard to the second research question namely "What are the underlying dimensions of the work commitment construct?" the results will be discussed first for the total sample and then for the subsamples.

Firstly, all the responses to the job involvement, organizational commitment, career commitment, work involvement / work ethic and work values items were subjected to Exploratory and Confirmatory Factor Analyses. The items of the work values questionnaire were included in this line of analyses because, as has been mentioned earlier on it is uncertain whether the work values facet is part of the work commitment construct. Three and four factors were extracted respectively. A clear factor pattern was obtained after three rounds of Exploratory Factor Analyses. Numerically more items in the three factor solution did not meet the specified criteria (i.e. loading > .25 and not cross loading).

The four factor solution could be interpreted as follows:

The first factor could be interpreted as mainly a career commitment factor with eight of the 29 items loading on this factor belonging to other facets. Seven of these eight items were job involvement items. One

would expect a certain degree of redundancy among the different facets and since the job involvement items loading on this factor appeared relatively on the lower end of the scale i.e. had lower loadings and had a work referent, it seems as if respondents did not clearly distinguish between a career and one's work if the referent of the items are not clear.

The second factor was clearly a work values facet. None of the items in the Elizur scale loaded on any other factor, which made it doubtful whether this factor belonged to the work commitment construct as defined up to now. It can be argued that there must be moderate correlation between the items of the different facets if they belong to the same construct, which did not seem to be the case with the work values items.

The third factor consisted of job involvement and work involvement items. Although the majority of the items (11 out of 18) belonged to the job involvement facet, al the work involvement/work ethic items loaded on this factor. As has been discussed in chapter two, the referent used in an instrument is very important. Looking at the wording of the job involvement items, one finds that a number of the items have a work referent instead of a job referent. It is therefore understandable that respondents could not distinguish between the job and work involvement items. Other researchers such as Brook et al. (1988) also found a positive significant relation between job and work involvement. Morrow (1993) expressed some doubt about the distinctiveness between Kanungo's (1982) job and work involvement concepts. The results presented above seem to be in agreement with her views.

The fourth factor could be interpreted as organizational commitment.

In the three factor solution the majority of items which loaded on the first factor came from the career commitment measure. Twenty career

commitment items, seven job involvement items and four organizational commitment items loaded on the first factor.

The second factor was clearly a work value factor and all 24 items from the work value facet loaded on this factor. Once again it was clear that the work value items did not correlate with any of the items of the other work commitment facets.

The third facet consisted of mainly job and work involvement items. All the work involvement items loaded on this factor as well as four items measuring normative organizational commitment.

In order to determine the fit between the data and the models Confirmatory Factor Analyses were carried out. Results of the Confirmatory Factor Analyses indicated that the three factor solution provided the best solution although it was only marginally better than the four factor solution.

In terms of the subsamples the same line of analyses were followed. Again a three and a four factor solution were specified. In the cases of the three factor solutions for all the subsamples, the Alpha coefficients were above .80, but for the four factor solutions the fourth scale tended to have an Alpha coefficient below .8, except for the academic and university all staff subgroups where all the Alpha coefficients were above .8. The small additional percentage of common variance explained by the fourth factor in the four-factor solutions seemed to give some indication that fewer factors than four existed.

The fit indices obtained from the Confirmatory Factor Analyses provided mixed results. In some cases a four factor solution provided the best solution and in other cases a three factor solution. For the financial institution subgroup, a three factor structure seemed to provide the best fit, although only marginally. For the academic subgroup the four factor solution provided only a slightly better solution. For the administrative

and all university staff subgroups the four factor solutions seemed to provide the best fit. Although the fit indices were in all cases satisfactory (the fit indices were above .90) only for the financial institution (three and four factor solutions) and administrative (four factor solution) subgroups.

Due to the fact that the work values items did not load on any other factors and also did not correlate with any other factors (as can be seen in the intercorrelations presented in Table x), it was decided that it was quite possible that the work values facet lays on a different level and was not likely to be part of the work commitment construct. It was therefore decided to further investigate the work commitment factor structure excluding the work values items. This was done firstly for the total sample and then for the subsamples.

With regard to the responses of the total sample a three and four factor solution were specified. Exploratory Factor Analysis was carried out until a clear factor pattern was obtained for both the three and four factor solutions. In the case of the four factor solution, the four factors could be interpreted as career commitment (all the items except for three items came from the career facet), a job and work involvement factor (with work as the main referent), affective organizational commitment and continuance organizational commitment. The results obtained from the four factor solution are somewhat inconsistent with the available theory in the literature.

The three factors of the three-factor solution could be interpreted as follows: The first factor reflected mainly career commitment items with eight job involvement items also loading on this factor. The main referent of these eight items were a work referent and it seemed as if respondents did not distinguish between their career and the work they were doing. The second factor consisted of mainly job involvement items, but again all the work involvement items loaded on this factor. The third factor represented an organizational commitment factor,

where most of the items of this scale reflected continuance commitment with five items reflecting normative commitment.

Confirmatory Factor Analyses were then carried out to determine the fit between the data and the factor models. The results indicated that the three factor solution presented a much better fit between the data and the model and was therefore preferred. Although the three factor solution is also not in line with previous results, it is more interpretable and understandable than the four factor solution.

The same procedures were then carried out on the responses of the various subsamples. Three and four factor solutions were subjected to Exploratory and Confirmatory Factor Analyses. The results obtained from the fit indices of the Confirmatory Factor Analyses indicated that the three factor solutions in all the subgroups provided the best fit between the data and the factor models.

From the results discussed so far in this section, some points seem to stand out i.e. the influence of the referents used in the different facets, the existence of some degree of redundancy in some facets and the number of factors obtained.

In the cases where items from different facets loaded on one factor, it seemed to be attributable to the fact that these items shared the same referents in their original scale. For instance, the results showed that some job involvement items loaded with the career commitment items and more so those items with a work instead of a job referent. Likewise, in the case of the job and work involvement items loading together, it seemed as if all the items with a work referent loaded together.

From the results obtained, it also seemed as if Kanungo's (1982) work involvement scale is redundant with the job involvement scale as well as with Blood's (1969) PWE scale. In all the cases all the work

involvement items loaded on the job involvement factor. Another explanation which can be given for this notion is again the fact that the items from the job and work involvement scales shared similar referents which made it very difficult for respondents in the present study to distinguish between work and job involvement. A possible explanation for this can be that words such as work and job are interpreted differently due to cultural differences. In spite of the very good fit obtained for the work involvement scale, it seems likely that the items for the job involvement scale must be revised, especially in the light of the difficulty to interpret the job involvement factor. Similar results were obtained by Blau et al. (1993) were they found that the PWE and work involvement scales measured the same concept.

The last observation that can be made with regard to the second research question is concerned with the number of underlying dimensions or factors identified. As has been discussed earlier on, the results obtained in the present study are somewhat inconsistent with the results of previous studies carried out in the USA. Where previous researchers identified four main facets of work commitment, only three facets are clearly identified in the present study. Although the fact that the job and work involvement items loaded together can be ascribed to referent problems, it is also possible that employees in South African organizations tend to respond less discriminantly to items than their American counterparts. Similar results have been obtained during the first phase of the research programme of which the current study is part of and where the responses of 1019 employees of approximately 50 South African organizations were subjected to the same statistical procedures (Boshoff et al., 1997). The differences can possibly be attributed to the influence of culture which makes the issue of portability of items and scales even more important and valid. This possibility must obviously be further investigated in other South African samples.

6.3 The third research question

In order to answer the third research question i.e. what are the relationships among the work commitment facets, role stress (role conflict and role ambiguity) and intention to quit, a more intuitive approach had to be followed. Since very little theory is available to indicate how these different variables are related when studied together and what the causal nature of these relationships is, it was decided to firstly calculate the intercorrelations among the scores of the total sample on the different facets and subfacets in order to give some indication of how these variables might be related in a possible causal model.

The decision of which variables had to be included in the model was based on the correlations obtained as seen in Table 73 and supported by available theory on the relationships between different combinations of variables included in the present study.

Based on this criteria, the model illustrated in Figure 4 was built.

In terms of available theory, both work involvement and career commitment were in general found to be positively significantly related to job involvement. Because work involvement were correlated higher to job involvement than to affective organizational commitment, work involvement is indicated as a predictor of job involvement in the model. Career commitment was significantly related to job involvement, affective organizational commitment, role conflict and intention to quit. Because career commitment was correlated higher to job involvement than to affective organizational commitment, it was felt it is more likely to be related to affective organizational commitment through job involvement. Career commitment was therefore also identified as a predictor of job involvement, role conflict and intention to quit. According to the literature job involvement, career and organizational commitment correlated negatively with role conflict. The results of the

calculation of intercorrelations supported this notion. The specified relations between role ambiguity and role conflict (positive significant relation) and intention to quit were also consistent with available theory. In terms of the relationship between organizational commitment and intention to quit, literature generally supports the notion that organizational commitment is one of the best predictors of intention to quit. Blau and Boal (1987, 1989) also found that the interaction between job involvement and organizational commitment predicted turnover.

The general argument for the specified relationships in the model is that the importance of work in one's life will determine how job involved one will be. The level of career commitment will also influence one's job involvement. The more career committed one is the harder one will work and the deeper one will become involved in one's job to achieve one's career goals. It is further argued that the more career, job and organizational committed one is, the more likely it will be that one will experience role conflict and role ambiguity. This is in line with the theory of multiple commitments. This will also influence organizational commitment negatively. The higher the perceived role strain, the higher the intention to quit. A review of the literature on role strain showed that the majority of studies investigated role strain as a predictor variable and little research has been done on role strain as a dependent variable. This model is investigating role strain as a dependent variable to shed some more light in this regard.

The model was tested by means of the structural equations programme of EQS developed by Bentler and Wu (1995). The fit indices were satisfactory and generally well above .8. Although the model did not converge, which is usually a sign of an underidentified model (as can be seen in the path coefficients between F3 and F5 and between F5 and F7), the results are promising in terms of future research.

6.4 Limitations of the present study

First of all, although great care has been taken to make the sample as large and representative as possible, the results can still not be generalized to all South African organizations. Future samples should equally include the different ethnic groups in South African organizations to give a better indication of the work commitment structure for South African employees.

Secondly, the possible influence of mono-method bias on the results obtained must also be taken in consideration. It is a well known phenomenon that the use of only one method of data gathering will result in a certain degree of correlation among the variables. Together with the limitation of mono-method bias, all the data was gathered at only one point in time. It was therefore not possible to determine the changing nature of work commitment over time.

In terms of the causal model built and in order to try and explain the interrelationships among the variables, it was obvious that all the relevant variables were not included in the model, since convergence was not obtained. According to the literature, variables such as work-family conflict have a profound influence on employees' levels of commitment in organizations. The inclusion of such relevant variables will most likely improve the fit of the model. The lack of a well-established theory may also be one reason contributing to the fact that the model did not converge. As has been discussed in chapter two, relative little research has been done where all the work commitment facets were investigated in relation to role stress and intention to quit. An intuitive approach had to be followed in the present study, which is ideal and even advisable.

6.5 Contributions of the present study

First of all, it was endeavoured throughout the study to conduct rigorous scientific research. It is especially noticeable in the large and diverse sample, which not only increases the generalizability of the results, but also made it possible to use powerful statistical techniques such as structural equation modeling. An attempt was made to make the objectives of the study clear and replicable, and limitations are noted as far as possible. The present study further tried to build on previous research and build on the theory of work commitment. The method of data analysis was also chosen to complement the research design in the present study.

Secondly, it has been noted in the literature that care must be taken in the application of measurement instruments developed in one country to another country. All the instruments used in the current study were revalidated for South African conditions, both in the first phase of the research programme and for the present study. This is very important since different results were obtained for the South African sample.

Probably the most important contribution of the present study is the fact that no study could be found investigating the interrelationships among the work commitment facets, role strain and intention to quit in the same study. In most cases only two or three of the facets were included. The results of the present study were able to bring some clarity on the dimensions of the different work commitment facets as well as the underlying dimensions of the work commitment construct. An important finding was the fact that fewer dimensions tended to be obtained in the South African sample. It is be very important to extend this research to other samples and countries.

Another important contribution of the present study is that some knowledge has been gained on the possible causal relations among the work commitment, role strain and intention to quit variables. Although

the results must be treated with care, the fit indices indicated that the data fit the model relatively well. Since no work of this nature has been done before, this must be considered as a very fruitful direction to increase our knowledge in this regard.

6.6 Recommendations for future research

The following recommendations can be made for future research:

1. Firstly, it is recommended that the current research be extended to other more diverse samples in South African organizations. One cannot accept that the different ethnic groups will perceive the work commitment facets, role strain and intention to quit in similar fashion. It is also preferable that this research design be replicated in other countries.

2. Further investigation of the proposed model is also needed and other relevant variables such as work-family conflict must be included. It is important that other disciplines be included in future studies. Other fields such as Sociology have done excellent research which is not always sufficiently utilized in Organizational Behaviour research.

3. The problems experienced with regard to the job involvement facet are an indication that special attention must be given to the items in the job involvement scale especially with regard to the referent of the items.

4. Another area where research is needed is longitudinal studies where the changing nature of work commitment can be investigated.

5. Other methods of data gathering are recommended, especially a combined qualitative/quantitative approach.

6. Lastly, it is recommended that future research must continue to build on previous research in order to improve the theory on the work commitment literature and that research must be conducted in a proper well-planned manner.

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NAGRAADSE BESTUURSKOOL
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APPENDIX A

NAGRAADSE BESTUURSKOOL
GRADUATE SCHOOL OF MANAGEMENT
UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA

18 Junie 1997

Mnr
Hoofbestuurder: Menslike Hulpbronne

Geagte mnr

Eerstens wil ek u baie hartlik bedank vir die tyd wat u op Dinsdag 17 Junie aan my afgestaan het asook vir die vriendelike ontvangs wat my te beurt geval het. Ek waardeer u wellewendheid baie hoog.

Ek en 'n kollega, mej Crystal Hoole, is tans besig met 'n groot internasionale navorsingsprojek oor werkbetrokkenheid en ons vra u hulp ten einde die projek 'n sukses te maak. Werkbetrokkenheid bestaan skynbaar uit 'n hele aantal fasette. Die vernaamstes hiervan is die waarde wat aan werk as 'n menslike aktiwiteit geheg word, wat 'n mens uit jou werk wil kry, organisasie-verbondenheid, loopbaan- of beroepsbetrokkenheid en posbetrokkenheid. Ons het 'n vraelys saamgestel om hierdie aspekte te meet en die vraelys vir Suid-Afrikaners gestandaardiseer. Die standaardisasie-groep is ongeveer 1000 groot en bestaan uit werknemers van ongeveer 50 verskillende winssoekende organisasies.

Ons wil hierdie vraelys wat tussen 30 en 40 minute neem om te voltooi graag op 1000-1100 van u werknemers toepas - die kruisvalidering van die konstrukte betrokke en om vas te stel of daar verbande bestaan tussen biografiese veranderlikes (bv ouderdom), organisasie-vlak, siening van die organisasie-klimaat en response op die verskillende veranderlikes wat deur die vraelys gemeet word. Dit is die voordeel wat die studie vir ons sal hê. Vir u sal die studie inligting verskaf oor u personeel se houding teenoor u organisasie, hul vlak van werkbetrokkenheid en hoe dit vergelyk met dié van die standaardisasie-groep.

Die studie sal nie vir u enige koste meebring nie - slegs die tyd van die respondente sal gebruik word. Ons sal die vraelyste finaliseer, dupliseer, na die verskillende sentra vervoer en self die afneem daarvan behartig. Ons onderneem om die werksaamhede in u organisasie so min as moontlik te ontwrig.

Ons stel voor dat die vraelys deur groepe (± 100-150 op 'n keer) van u werknemers voltooi sal word. As u 'n geskikte lokaal kan voorsien sal ons baie dankbaar wees. Ons stel voor dat u 'n steekproef van werknemers in posvlakke 3 - 8 trek en die persone vra om die vraelys, soos gesê, in groepe te voltooi. Ons meen dat die volgende datums goed sal wees.

Kaapstad-streek	:	Dinsdagmiddag 22 Julie 1997
Hoofkantoor	:	Woensdag (heel dag) 23 Julie 1997
Pretoria-streek	:	Vrydag 25 Julie 1997
Johannesburg-streek	:	Maandag 28 Julie 1997

Ons sal verkies dat 500-600 van die respondente uit Hoofkantoor-personeel kom en ongeveer 200 uit elkeen van die Streke soos hierbo voorgestel.

Die uwe

A B BOSHOFF
PROFESSOR

a:vvuuren\word\abb

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APPENDIX B

NAGRAADSE BESTUURSKOOL
GRADUATE SCHOOL OF MANAGEMENT
UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA

28 Julie 1997

Geagte Kollega,

Ons is tans besig met 'n internasionale navorsingsprojek oor werkbetrokkenheid en organisasie-klimaat. Die studie word gedoen in Nieu-Zeeland, Australië, die Verenigde State van Amerika en in Suid-Afrika.

Die projek word van die Universiteit van Pretoria af deur my gelei en die data word ook deur ons ontleed.

Die doel van die studie is om te bepaal wat die verwantskappe is tussen veranderlikes wat deel uitmaak van die werkbetrokkenheid konstruk en hoe die vlak van dié veranderlikes beïnvloed word deur die klimaat van die organisasie waarin 'n persoon werksaam is.

Die ontwerp van die navorsingsprojek maak dit nodig dat die personeel van ten minste een universiteit in elke land se steekproef ingesluit moet word.

Ons vra u dus om ons asseblief te help. By hierdie brief is 'n vraelys wat die verskillende fasette waarin ons belangstel meet. Dit sal vir ons van baie groot waarde wees as u hierdie vraelys sorgvuldig kan invul en na voltooiing in die ingeslote koevert aan my kan terugstuur, indien moontlik vòòr 12 Augustus 1997.

U response sal vanselfsprekend absoluut vertroulik hanteer word, net vir navorsingsdoeleindes gebruik word en aan niemand anders as die navorsers wie se name op die vraelys aangedui word, beskikbaar wees nie. U beantwoord die vraelys vanselfsprekend ook anoniem tensy u anders verkies.

U samewerking is noodsaaklik ten einde ons in staat te stel om 'n sukses van die projek te maak en sal baie hoog waardeer word.

Instruksies met betrekking tot die voltooiing van die vraelys word in die vraelys gegee. U kan telefonies met my in verbinding tree by 420-3345 of 083-2590090 indien u enige vrae oor die projek of die vraelys het.

Met opregte dank,

Die uwe,

A.B. BOSHOFF
PROFESSOR

APPENDIX C

STUDY OF WORK

Responsible researchers

Crystal Hoole Graduate School of Management University of Pretoria PRETORIA 0002 South Africa	André B Boshoff Graduate School of Management University of Pretoria PRETORIA 0002 South Africa

Dear Respondent

You are kindly requested to respond to the statements in the following questionnaire. The statements are related to work and life in organizations.

Your responses are of great importance to us as this survey forms part of a world-wide study of the aspects mentioned above. We therefore value your co-operation very highly.

There are no right or wrong answers to any of the questions. We are only interested in your personal opinions. As far as we are concerned the 'right' answer to any question is your frank and truthful response.

Please ensure that you respond to every question. If you want feedback on the pattern of your responses in comparison with the other people who also responded to the questions please fill in the form at the end of the questionnaire.

Different instructions will precede different sets of statements. Please follow the instructions as carefully as possible and answer all questions.

Your answers will be treated in strict confidence and will only be used for research purposes. Your name should not appear anywhere on this document, unless you want feedback on your responses. Please turn to the next page.

For office use only

1.	Respondent number	V1		1-4
2.	Card number	V2	0 1	5-6
3.	Repeat number	V3		7

Please respond to the following statements. Use the following scale to reflect your views (in the space provided below each statement)

I complete disagree	=	1
I disagree	=	2
I disagree somewhat	=	3
I agree somewhat	=	4
I agree	=	5
I agree completely	=	6

For office use only:

4	If I could I would go into a different occupation		V4	8
5	The most important things that happen to me involve my present job		V5	9
6	I can see myself in my present occupation for many years.		V6	10
7	Life is worth living only when people get absorbed in work.		V7	11
8	My choice of my present occupation was a good decision		V8	12
9	The most important things that happen in life involve work.		V9	13
10	To me my job is only a small part of who I am.		V10	14
11	Hard work makes one a better person		V11	15
12	If I could have a choice again I would not choose my present occupation again.		V12	16
13	I am very much involved personally in my job		V13	17
14	Even if I were not to need any money I would still continue to work in my present occupation.		V14	18
15	Work is something people should get involved in most of the time.		V15	19

		For office use only		
16	I am sometimes dissatisfied with my occupation. ☐	V16	☐	20
17	I like my occupation too well to give it up. ☐	V17	☐	21
18	Work should be considered central to life. ☐	V18	☐	22
19	I live, eat and breathe my job. ☐	V19	☐	23
20	My education/training was not aimed at my present occupation. ☐	V20	☐	24
21	In my view, an individual's personal life goals should be work-oriented. ☐	V21	☐	25
22	I have the ideal occupation in which to do my life's work. ☐	V22	☐	26
23	A good indication of a person's worth is how well he/she does his/her job. ☐	V23	☐	27
24	Most of my interests are centred around my job. ☐	V24	☐	28
25	I wish I had chosen a different occupation. ☐	V25	☐	29
26	Usually I feel detached from my job. ☐	V26	☐	30
27	I am disappointed that I entered into my present occupation. ☐	V27	☐	31
28	Most of my personal life goals are job-oriented. ☐	V28	☐	32
29	I consider my job to be very central to my existence. ☐	V29	☐	33
30	I like to be absorbed in my job most of the time. ☐	V30	☐	34

Please respond to the following statements in terms of the following scale

For office use only

I strongly disagree	=1
I disagree	=2
I do not agree or disagree	=3
I agree	=4
I strongly agree	=5

31	I'll stay overtime to finish a job even if I am not paid for it. ☐	V31 ☐	35
32	I have very strong ties with my present job which would be very difficult to break ☐	V32 ☐	36
33	My line of work/career field is an important part of who I am ☐	V33 ☐	37
34	The major satisfaction in my life comes from my job. ☐	V34 ☐	38
35	To me work is only a small part of who I am. ☐	V35 ☐	39
36	My line of work/career field has a great deal of personal meaning to me. ☐	V36 ☐	40
37	For me, mornings at work really fly. ☐	V37 ☐	41
38	The most important things that happen to me involve my work. ☐	V38 ☐	42
39	I do not feel "emotionally attached" to this line of work/career field. ☐	V39 ☐	43
40	I strongly identify with my chosen line of work/career field. ☐	V40 ☐	44
41	I do not have a strategy for achieving my goals in my present line of work/career field. ☐	V41 ☐	45

		For office use only		
42	I have other activities more important than work.	V42	☐	46
43	I would probably keep working even if I did not need the money.	V43	☐	47
44	Quite often I feel like staying home from work instead of coming in.	V44	☐	48
45	I have created a plan for my development in this line of work/career field.	V45	☐	49
46	I do not identify specific goals for my development in this line/career field.	V46	☐	50
47	I do not often think about my personal development in this line of work/career field.	V47	☐	51
48	I avoid taking on extra duties and responsibilities in my work.	V48	☐	52
49	Given the problems I encounter in this line of work/career field, I sometimes wonder if I get enough out of it.	V49	☐	53
50	I used to be more ambitious about my work than I am now.	V50	☐	54
51	Most things in life are more important than work.	V51	☐	55
52	Given the problems in this line of work/career field, I sometimes wonder if the personal burden is worth it.	V52	☐	56
53	I used to care more about my work but now other things are more important than work.	V53	☐	57
54	The discomforts associated with my line of work/career field seem too great.	V54	☐	58

For office use only

Please read the following statements. Please respond to each statement in terms of the following scale.

I disagree completely	=	**1**
I disagree	=	**2**
I disagree somewhat	=	**3**
I do not agree nor disagree	=	**4**
I agree somewhat	=	**5**
I agree	=	**6**
I agree completely	=	**7**

55 I would be very happy to spend the rest of my career with this organization. ☐ V55 ☐ 59

56 I enjoy discussing my organization with people outside of it. ☐ V56 ☐ 60

57 I really feel as if this organization's problems are my own. ☐ V57 ☐ 61

58 I do not feel like "part of the family" at my organization. ☐ V58 ☐ 62

59 I do not feel "emotionally attached" to this organization. ☐ V59 ☐ 63

60 This organization has a great deal of personal meaning for me. ☐ V60 ☐ 64

61 I do not feel a strong sense of belonging to my organization. ☐ V61 ☐ 65

62 I am not afraid of what might happen if I quit my job without having another one lined up. ☐ V62 ☐ 66

63 It would be very hard for me to leave my organization right now, even if I wanted to. ☐ V63 ☐ 67

64 Too much in my life would be disrupted if I decided I wanted to leave my organization now. ☐ V64 ☐ 68

65 Right now, staying with my organization is a matter of necessity as much as desire. ☐ V65 ☐ 69

For office use only

66 I feel that I have too few options to consider leaving this organization. ☐ V66 ☐ 70

67 One of the few serious consequences of leaving this organization would be the scarcity of available alternatives. ☐ V67 ☐ 71

68 One of the major reasons I continue to work for this organization is that leaving would require considerable personal sacrifice - another organization may not match the overall benefits I have here. ☐ V68 ☐ 72

69 I think that people these days move from company to company too often. ☐ V69 ☐ 73

70 One of the major reasons I continue to work for this organization is that I believe that loyalty is important and therefore feel a sense of moral obligation to remain. ☐ V70 ☐ 74

71 If I got another offer for a better job elsewhere I would not feel it was right to leave my organization. ☐ V71 ☐ 75

72 I was taught to believe in the value of remaining loyal to one organization. ☐ V72 ☐ 76

73 Things were better in the days when people stayed with one organization for most of their careers. ☐ V73 ☐ 77

74 I do not think that wanting to be a "company man" or "company woman" is sensible anymore. ☐ V74 ☐ 78

Please read the following statements. Respond to each statement in the appropriate space according to the following scale.

It is very important	**=**	**1**
It is important	**=**	**2**
It is somewhat important	**=**	**3**
It is somewhat unimportant	**=**	**4**
It is unimportant	**=**	**5**
It is very unimportant	**=**	**6**

75 Achievement in work. ☐ V75 ☐ 79

For office use only

76 Advancement, chances for promotion. ☐ V76 ☐ 80

For office use

77 Respondent number — v77 ☐☐☐☐ 1-4

78 Card number — v78 0 2 5-6

79 Repeat number — v79 ☐ 7

80 Benefits, vacation, sick leave, pension, insurance, etc. ☐ V80 ☐ 8

81 Company, to be employed by a company for which you are proud to work. ☐ V81 ☐ 9

82 Contribution to society. ☐ V82 ☐ 10

83 Convenient hours of work. ☐ V83 ☐ 11

84 Co-workers, fellow workers who are pleasant and agreeable. ☐ V84 ☐ 12

85 Esteem, that you are valued as a person. ☐ V85 ☐ 13

86 Feedback concerning the results of your work. ☐ V86 ☐ 14

87 Independence in work. ☐ V87 ☐ 15

88 Influence in the organization. ☐ V88 ☐ 16

89 Influence in work. ☐ V89 ☐ 17

90 Job interest, to do work which is interesting to you. ☐ V90 ☐ 18

91 Job security, permanent job. ☐ V91 ☐ 19

92 Job status. ☐ V92 ☐ 20

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93 Meaningful work. ☐ V93 ☐ 21

94 Opportunity for personal growth. ☐ V94 ☐ 22

95 Opportunity to meet people and interact with them. ☐ V95 ☐ 23

96 Pay, the amount of money you receive. ☐ V96 ☐ 24

97 Recognition for doing a good job. ☐ V97 ☐ 25

98 Responsibility. ☐ V98 ☐ 26

99 Supervisor, a fair and considerate boss. ☐ V99 ☐ 27

100 Use of ability and knowledge in your work. ☐ V100 ☐ 28

101 Work conditions, comfortable and clean. ☐ V101 ☐ 29

Please read the following statements. Please respond to each statement in terms of the following scale

I disagree completely	**=1**
I disagree	**=2**
I disagree somewhat	**=3**
I do not agree nor disagree	**=4**
I agree somewhat	**=5**
I agree	**=6**
I agree completely	**=7**

102 I make most of the decisions that effect the way my job is performed. ☐ V102 ☐ 30

103 I determine my own work procedure. ☐ V103 ☐ 31

104 I schedule my own work activities. ☐ V104 ☐ 32

For office use only

105 I set the performance standards for my job. ☐ V105 ☐ 33

106 I organize my work as I see best. ☐ V106 ☐ 34

107 University of Pretoria people pitch in to help each other out. ☐ V107 ☐ 35

108 There is a lot of "team spirit" among University of Pretoria people. ☐ V108 ☐ 36

109 University of Pretoria people tend to get along with each other. ☐ V109 ☐ 37

110 University of Pretoria people take a personal interest in one another. ☐ V110 ☐ 38

111 I feel like I have a lot in common with the University of Pretoria people I know. ☐ V111 ☐ 39

112 I can count on my boss to keep the things I tell him confidential. ☐ V112 ☐ 40

113 My boss has a lot of personal integrity. ☐ V113 ☐ 41

114 My boss is the kind of person I can level with. ☐ V114 ☐ 42

115 My boss follows through on his commitments to me. ☐ V115 ☐ 43

116 My boss is not likely to give me bad advice. ☐ V116 ☐ 44

117 I have too much work and too little time to do it in. ☐ V117 ☐ 45

118 University of Pretoria is a relaxed place to work . ☐ V118 ☐ 46

119 At home, I sometimes dread hearing the telephone ring because it might be someone calling about a job-related problem ☐ V119 ☐ 47

120 I feel like I never have a day off. ☐ V120 ☐ 48

For office use only

121	Too many University of Pretoria employees at my level get "burned out" by the demands of their jobs.	V121	49
122	I can count on my boss to help me when I need it.	V122	50
123	My boss is interested in me getting ahead in the company.	V123	51
124	My boss is behind me 100%.	V124	52
125	My boss is easy to talk to about job-related problems.	V125	53
126	My boss backs me up and lets me learn from my mistakes.	V126	54
127	I can count on a pat on the back when I perform well.	V127	55
128	The only time I hear about my performance is when I screw up .	V128	56
129	My boss knows what my strengths are and lets me know it.	V129	57
130	My boss is quick to recognize good performance.	V130	58
131	My boss uses me as an example of what to do.	V131	59
132	I can count on a fair shake from my boss.	V132	60
133	My boss is not likely to give me a "greasy meal."	V133	61
134	My boss does not play favourites	V134	62
135	If my boss terminates someone, the person probably deserved it.	V135	63
136	My boss encourages me to develop my ideas.	V136	64
137	My boss likes me to try new ways of doing my job.	V137	65
138	My boss encourages me to improve on his methods.	V138	66

For office use only

139 My boss encourages me to find new ways around old problems. ☐ V139 ☐ 67

140 My boss "talks up" new ways of doing things. ☐ V140 ☐ 68

141 The objectives my boss sets for my job are reasonable. ☐ V141 ☐ 69

Please read the following statements. Please respond to each statement in terms of the following scale

I disagree completely	**=1**
I disagree	**=2**
I disagree somewhat	**=3**
I do not agree nor disagree	**=4**
I agree somewhat	**=5**
I agree	**=6**
I agree completely	**=7**

142 My authority matches the responsibilities assigned to me. ☐ V142 ☐ 70

143 I don't know what is expected from me. ☐ V143 ☐ 71

144 My responsibilities are clearly defined ☐ V144 ☐ 72

145 I feel certain about how much authority I have. ☐ V145 ☐ 73

146 I know what my responsibilities are ☐ V146 ☐ 74

147 I have clear planned goals and objectives for my job. ☐ V147 ☐ 75

148 The planned goals and objectives are not clear. ☐ V148 ☐ 76

149 I don't know how I will be evaluated for a raise or promotion. ☐ V149 ☐ 77

150 I don't know how to develop my capabilities for future success in my job. ☐ V150 ☐ 78

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151 I often have unclear orders from my boss. ☐ — 151 ☐ 79

152 I know exactly what is expected from me. ☐ — V152 ☐ 80

153 Respondent number V — 153 ☐☐☐☐ 1-4

154 Card number V — 154 0 3 5-6

155 Repeat number V — 155 ☐ 7

156 I work under unclear policies and guidelines. ☐ — V156 ☐ 8

157 Explanations are clear of what has to be done. ☐ — V157 ☐ 9

158 I don't know what are the opportunities for advancement and promotion. ☐ — V158 ☐ 10

159 I don't know how to improve my performance on the job. ☐ — V159 ☐ 11

160 My boss makes it clear how he will evaluate my performance. ☐ — V160 ☐ 12

161 I work with two or more groups who operate quite differently. ☐ — V161 ☐ 13

162 I often get myself involved in situations in which there are conflicting requirements. ☐ — V162 ☐ 14

163 There are unreasonable pressures for better performance. ☐ — V163 ☐ 15

164 I am often asked to do things that are against my better judgement. ☐ — V164 ☐ 16

165 I receive an assignment without adequate resources and materials to execute it. ☐ — V165 ☐ 17

166 I have to buck a rule or policy in order to carry out a policy. ☐ — V166 ☐ 18

For office use only

167 I receive incompatible requests from two or more people. ☐ V167 ☐ 19

168 I have to do things that should be done differently under different conditions. ☐ V168 ☐ 20

169 I know how to allocate my efforts to be more effective. ☐ V169 ☐ 21

Please indicate your agreement with the following items in terms of the following scale

I strongly disagree =1

I disagree =2

I do not disagree or agree =3

I agree =4

I strongly agree =5

170 I think a lot about leaving the organization. ☐ V170 ☐ 22

171 I am actively searching for an alternative to the organization. ☐ V171 ☐ 23

172 When I can, I will leave the organization ☐ V172 ☐ 24

Please go the next page

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BIOGRAPHIC INFORMATION

Please provide the following information

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173 **Age (years)** [ ] v173 [ ] 25-26

174 **Gender**

M	1	
F	2	

v174 [ ] 27

175 **Marital status** v175 [ ] 28-29

Never married	1
Married	2
Widow(er)	3
Divorced	4
Cohabiting	5

176 **Home language** v176 [ ] 30-31

Afrikaans	1
Xhosa	2
Zulu	3
English	4
Venda	5
Ndebele	6
South Sothu	7
North Sothu	8
Tsonga	9
Tswana	10
Swazi	11
Sign Language	12
Other (Specify).....	13

177 **Number of dependents** [ ] v177 [ ] 32-33

For office use only

178 **Qualifications (Mark only one please)**

v178 [ ] 34

Primary school	1
Secondary school	2
Std X or equivalent	3
Post-school certificate / diploma	4
Bachelor's degree or equivalent	5
Master's degree or equivalent	6
Doctoral degree or equivalent	7

179 **How long have you been working for your present organization?**

V179

[ ] years [ ] 35-36

180 Assume that your organization has nine hierarchical levels. On which level would you consider yourself to be?
Level 1 = lowest level
Level 9 = highest level

[ ] v180 [ ] 37

For office use only

181 How many people are directly reporting to you?

v181 [ ] 38-40

182 How many people in the organization are you responsible for?

v182 [ ] 41-45

183 How many hours do you, on. average, work per week?

v183 [ ] 46-47

184 Are you working on a full-time or part-time basis in your organization?

Full-time [1] Part-time [2] v184 [ ] 48

185 Are you working on a permanent or temporary basis in your present organization?

Permanent [1] Temporary [2] v185 [ ] 49

186 How many days (excluding vacation leave) have you been absent from work during the past year?

v186 [ ] 50-52

187 How many organizations have you worked for up to the present time?

187 [ ] 53-54

If you want to receive feedback on how your responses compare with the responses of the other individuals who completed the questionnaire please write your name and address in the space below:

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