



***The Relationship between Perceived Leadership Behaviours and  
Job Satisfaction of Employees in Turkish Mining Industry***

Anonymous assessment number: Z0956719

Degree: MSc Management

Year of submission: 2015

*"Dissertation submitted as part requirement for the degree of Master of Science in  
Management of the University of Durham, 2015".*

**Declaration**

*“This dissertation is the result of my own work. Material from the published or unpublished work of others, which is referred to in the dissertation, is credited to the author in question in text. The dissertation is 9999 words in length. Research ethics issues have been considered and handled appropriately within the Durham University School guidelines and procedures.”*



## Table of Contents

<b>Declaration</b> .....	<b>1</b>
<b>Table of Contents</b> .....	<b>2</b>
<b>List of Figures</b> .....	<b>5</b>
<b>List of Tables</b> .....	<b>5</b>
<b>EXECUTIVE SUMMARY</b> .....	<b>6</b>
<b>CHAPTER 1: INTRODUCTION</b> .....	<b>8</b>
1.1. Research Topic.....	8
1.2. Research Aims and Objectives .....	8
<b>CHAPTER 2: LITERATUREREVIEW</b> .....	<b>8</b>
2.1. Leadership .....	8
2.1.1. Transformational Leadership .....	9
a. Inspirational Motivation .....	10
b. Intellectual Stimulation .....	10
c. Idealized Influence .....	10
d. Individual Consideration .....	11
2.1.2. Transactional Leadership .....	11
2.2. Job Satisfaction .....	12
2.3. Leadership Behaviour and Job Satisfaction .....	12
<b>CHAPTER 3: TURKISH MINING INDUSTRY</b> .....	<b>13</b>
3.1. The Short History of Turkish Mining Industry .....	13
3.1.1. Structural Transformation in the Turkish Mining Industry .....	14
3.2. Lignite Coal Mining Industry .....	15

<b>CHAPTER 4: RESEARCH METHODOLOGY</b> .....	<b>15</b>
4.1. Constructing the Hypothesis .....	<b>15</b>
4.1.1. Empirical Framework .....	<b>16</b>
4.2. Research Approach .....	<b>16</b>
4.3. Questionnaires and Data Collection Methods .....	<b>17</b>
4.4. Sample Size .....	<b>17</b>
4.5. Data Analysis .....	<b>18</b>
4.6. Reliability Analysis .....	<b>19</b>
4.7. Limitations .....	<b>20</b>
<b>CHAPTER 5: THE RELATIONSHIP BETWEEN PERCEIVED LEADERSHIP BEHAVIOURS AND THE JOB SATISFACTION OF EMPLOYEES IN THE TURKISH MINING INDUSTRY: DESCRIPTIVE EMPIRICAL FINDINGS, NON-PARAMETRIC INFERENTIAL AND CORRELATION ANALYSIS</b> .....	<b>20</b>
5.1. Demographic Information of Respondents .....	<b>20</b>
5.2. Inferential Analysis .....	<b>22</b>
5.2.1. Determining Factors of the Given Responses .....	<b>22</b>
a. Demographic Factors of Leadership Related Responses .....	<b>22</b>
b. Demographic Factors of Job Satisfaction Related Responses .....	<b>25</b>
5.3. Leadership Characteristics Analysis .....	<b>26</b>
5.4. Non-Parametric Correlation Analysis .....	<b>27</b>
<b>CHAPTER 6: RESULTS &amp; DISCUSSION, AND CONCLUSION</b> .....	<b>31</b>
6.1. Results & Discussion .....	<b>31</b>
6.2. Conclusion .....	<b>33</b>
REFERENCE .....	<b>34</b>

APPENDIX 1. INFERENCEAL ANALYSIS TABLE (LEADERSHIP RELATED RESPONSES).....	41
APPENDIX 2. INFERENCEAL ANALYSIS TABLE (LEADERSHIP RELATED RESPONSES).....	42
APPENDIX 3. INFERENCEAL ANALYSIS TABLE (LEADERSHIP RELATED RESPONSES).....	46
APPENDIX 4. INFERENCEAL ANALYSIS TABLE (JOB SATISFACTION RELATED RESPONSES).....	48
APPENDIX 5. JOB SATISFACTION SURVEY; FACETS, ITEM NUMBERS, AND STATEMENTS .....	50
MULTIFACTOR LEADERSHIP QUESTIONNAIRE CONSTRUCTS, ITEM NUMBERS .....	51
APPENDIX 6. CORRELATION ANALYSIS RESULTS .....	52
APPENDIX 7. CATEGORY SCORES OF JOB SATISFACTION FACETS .....	61
APPENDIX 8. TEST OF NORMALITY .....	62

**LIST OF FIGURES**

Figure 4.1 Empirical Framework ..... 16

**LIST OF TABLES**

TABLE 4.1. Reliability Analysis Results ..... 19

TABLE 5.1. Demographic Information of Respondents ..... 21

TABLE 5.2. Results of Leadership Characteristics Analysis ..... 26

TABLE 5.3. Overall Correlation ..... 27



## Executive Summary

**Purpose:** The aim of this study is to explore the relationship between perceived leadership behaviours (transformational and transactional) exhibited by the leaders of the Turkish mining company (Adularya) and the impact of these behaviours on the job satisfaction of their followers. The relationship between these variables and the selected demographic characteristics of the employees – namely age, educational qualifications, marital status, number of children, employment duration, department and position- were also examined.

**Design/Method:** A hundred followers completed a questionnaire on their leader's leadership behaviour (MLQ 5X for raters). The job satisfaction level of followers is examined by using Spector's Job Satisfaction Survey (JSS). The questionnaires have been conducted in Adularya Energy, a Turkish company, which was founded in 2007 as a Naksan Holding-owned company and is located in the Mihaliççık district of the Eskişehir province. The company utilizes the most advanced mining technology used in the world called the "longwall longfeed fully mechanical", referring to the process of the extraction and production of coal in the mine so that transportation to the power plant is fully automated and fully mechanical. By using the Kolmogorov-Smirnov and Shapiro-Wilk tests, the quantitative variables were tested for normality. The aim of this was to determine the nature of the statistical instruments to be used in terms of parametric or non-parametric tests. According to the result of normality test, non-parametric tests were utilized. By being in the work-field, hard copies of the questionnaires were handed to responsible personnel who were vigilantly appointed by the company in order to distribute and explain the details to employees. The personnel were well-informed with regard to the details of administration issues before they distributed all questionnaires among departments. Total anonymity was guaranteed and no individual follow-up was attempted because of the sensitive nature of the data requested.

**Findings:** A positive weak level relationship has been found between overall perceived leadership behaviours including transformational and transactional characteristics, and job satisfaction. However, a further correlation analysis of individual statements indicated that while transformational leadership characteristics are found to be in a significant positive correlation with such job satisfaction facets as supervision, co-workers, fringe benefit satisfaction, and pay and contingent reward dissatisfaction, contingent reward characteristic of transactional leadership is found to be in a positive correlation with job satisfaction dimensions including supervision satisfaction, fringe benefit satisfaction and pay satisfaction. Other characteristics of transactional leadership including management by exception and non-leadership are found to be in a negative correlation with supervision satisfaction, co-workers satisfaction and communication satisfaction. In consideration of these individual statements,

it is possible to suggest that the findings of this study is in line with the previous research. Demographic characteristics are further identified as having interaction effects on leadership and job satisfaction.

**Originality/ Value:** This is the first paper to explore relationship between leadership behaviours and the level of job satisfaction in Turkish mining industry that is currently experiencing structural and technological transformation, which is expected to inform the relevant bodies for the better management of organizations within the industry.

**Paper Type:** Empirical paper/research paper.

**Key Words:** Transformational leadership, Transactional leadership, Job Satisfaction, Mining Industry, Turkey.



## CHAPTER I: INTRODUCTION

The relationship between leadership and job satisfaction has become a favourite topic of study among organizational behaviour, psychology and management researchers because organizational effectiveness and competitive advantage are organizational goals that can be achieved by a well-formed relationship influencing the job satisfaction of employees (Wan Omar & Hussin, 2013). Therefore, it is important to facilitate the cooperation between leaders and employees in order to establish a high level of job satisfaction by implementing various leadership methods within an organization (Hanaysha *et al.*, 2012).

Thus, this paper, as an empirical research, aims to study the effect of perceived leadership behaviour on employee job satisfaction by discussing the transformational leadership style that includes the characteristics of idealized influence, inspirational motivation, individualized consideration and intellectual stimulation; and the transactional leadership style that includes the characteristics of contingent reward and management by exception. This paper also aims to study the interaction effect of demographic characteristics of employees on perceived leadership and job satisfaction. To fulfil these aims, this study is constructed with a quantitative research methodology and hence quantitative data collection and analysis methods by adopting questionnaire survey based approach.

As pointed out by Spector (1997), thousands of literature on the topic of job satisfaction can be found in the journals of organizational behaviour as 'it has become a central variable in both research and theory of organizational phenomena ranging from job design to job supervision' (Hanaysha *et al.*, 2012). However, the number of research conducted in the topic with regard to the relationship between leadership styles and job satisfaction is considerably limited in the Turkish context. Furthermore, no research is available which studies the mining industry in Turkey despite the fact that it is a rather appropriate industry for such studies because of its contemporary dynamic concept based on structural and technological transformation.

## CHAPTER II: LITERATURE REVIEW

### 2.1. Leadership

Leadership is considered to be a set of skills that enables a person to lead others as it is defined as the ability to lead (Bass 2008). In this sense, a distinction is made between leadership and management by a number of researchers and authors. For example, Kotter (1990) and Zaleznik (2004) suggest that management is a mix of processes including planning and budgeting, organizing and staffing, and controlling and problem solving while leadership is a mix of skills including establishing direction, aligning people, and motivating and inspiring.

Because not all managers have these leadership skills but are able to fulfil management processes, it is reasonable that there is a distinction between leadership and management as pointed out by Kotter (1990). Therefore, leadership should not be considered to be the same as management. Considering them to be the same will significantly narrow the limits of leadership studies and research.

On the basis of the earlier definition of leadership in this essay, the ability to foresee, the ability to satisfy needs of followers, the ability to lead followers towards desired collective goals, the ability to motivate others, and the ability to inspire are skills included in leadership (Avolio *et al.*, 2009; Alsayah & Asutay, 2015). Other factors including seeking excellence, taking care of other people, exhibiting good character, and leading by example also influence leadership (Alsayah & Asutay, 2015). If a leader fails to have the full trust and confidence of his or her followers, they will have doubts about their leader's decisions and intents (Alsayah, 2011). Eventually they will be reluctant to follow their leader (Alsayah, 2011). Leaders also should be able to inspire others in order to make his or her subordinates follow him or her, and, as such, leaders should have one of the most important characteristics that enables inspiration called charisma (Alsayah & Asutay, 2015; Conger and Kanungo, 1998). In addition to this, the ability to predict the future in advance is an essential, even indispensable, skill of leaders because, by having a such skill, leaders can prepare their followers to take action and also measure and adapt to changes (Bertocci, 2009; Alsayah & Asutay, 2015).

Based on the nature of the relationship between a leader and his or her subordinates, there are two leadership behaviours: transformational and transactional. The foundation of the study of leadership has been provided by these two major paradigms of leadership for the last two decades (Bass *et al.*, 2006; Alsayah & Asutay, 2015). These two paradigms can be regarded as distinct, broad categories of leadership behaviour that are not mutually exclusive (Alsayah & Asutay, 2015; Avolio, 2010).

### **2.1.1. Transformational Leadership**

Transformational leadership represents a paradigm shift with regard to the study of leadership (Medley and Larochelle, 1995). 'As an emerging leadership paradigm, transformational leadership focuses on transformation of the organisation and its members from the current state to a better state that is aligned with organisational vision, mission and goals.' (Top *et al.*, 2015). The term transformational leadership was first coined by Downton (1973). The first clear distinction between transformational and transactional leadership was made by Burns (1978, p.4) in describing the leadership process as 'transformational' (Top *et al.*, 2015). Bass refined the concept of transformational leadership and transactional leadership through numerous research studies in business organizations (Bass, 1999; Bass *et al.*, 2003;

Bass & Riggio, 2006; Yammarino *et al.*, 1993). The vast majority of researchers in existing leadership literature suggest that transformational leadership is one of the most influential approaches towards leadership (Avolio & Bass, 1995; Bass *et al.*, 2003; Bass & Steidlmeier, 1999; Bass, 1995; Bass & Avolio, 1994; Bass *et al.*, 2006; Hater & Bass, 1988; Kouzes & Posner, 2007). The characteristics of transformational leadership are as follows:

#### **a. Inspirational Motivation**

Leaders who have such a characteristic help to accomplish the mission and goals of the organization by characteristically and expressly emphasizing to his followers the need to perform well (Wan Omar & Hussin, 2013). In addition to this, such leaders have a flair for communication, and this significantly helps them to explain important ideas and their vision in the simplest way that can be understood by their followers (Wan Omar & Hussin, 2013). Adopting this kind of behaviour will provide leaders with the ability to enhance and strengthen their followers' responses according to Bass and Avolio (1994). According to Wan Omar and Hussin (2013), the main source of inspirational motivation/charisma is leadership by example. Therefore, transformational leaders set a best example to their followers, encourage hard work, clearly communicate their vision, and simplify the approach of pursuing the goals of the organization (Bass & Avolio, 1994; Wan Omar & Hussin, 2013).

#### **b. Intellectual Stimulation**

Adopting such behaviour provides the leader with the ability to keep their followers thinking about the tasks at hand, ask questions, and solve problems (Wan Omar & Hussin, 2013). Based on their own understanding, beliefs and standards, transformational leaders introduce preliminary solutions and ideas to problems (Avolio & Bass, 2002). By doing so, they stimulate followers to be creative in problem solving within their own intellectual capacity (Avolio & Bass, 2002). Followers are not criticized in public for mistakes by transformational leaders (Wan Omar & Hussin, 2013). 'In contrast, they provide their followers with challenging tasks and encourage them to carry out tasks with their own approach.' (Wan Omar & Hussin, 2013)

#### **c. Idealized Influence**

'Idealized influence refers to the view of followers at the leader in terms of power, charisma, self-confidence, trust, consistency and ideals to influence his followers, in which individuals make efforts to imitate and respect' (Wan Omar and Hussin, 2013) and 'where the leader is being trusted and respected, as he or she maintains high moral standards and the followers seek to emulate him or her' (Alsayah & Asutay, 2015). According to Avolio and Bass (2002), such leaders become the target of admiration, inspire a sense of responsibility, and

earn the confidence and respect of their followers. Jung & Avolio (2000) argue that the results of a leader's behaviour, values, beliefs and high moral standards may affect the sources of idealised influence.

#### **d. Individual Consideration**

'Transformational leaders treat employees as individuals and all individuals are treated equitably.' (Alsayah & Asutay, 2015) By doing this, they aim to recognise the needs of their followers (Alsayah, 2011). In addition to this, they delegate assignments that offer learning opportunities to their followers (Alsayah, 2011). The leader displays individualized consideration by showing general support for the efforts of his or her followers, and empower them to take on more responsibility in line with their growing expertise and interest, thus encouraging their autonomy (Avolio and Bass, 1995).

#### **2.1.2. Transactional Leadership**

As described earlier in this essay, there is a distinction between management and leadership. In this sense, it is pointed out by Bass (1985) that leaders are transformational and managers are transactional. Therefore, transactional leadership suggests a leadership style that is strictly tied to the past and traditions (Yucel, 2008). Although traditional leaders describe the task that should be completed, such descriptions are considerably deficient in two issues including vision and motivation (Yucel, 2008). In order to have their followers achieve objectives, transactional leaders define the work and motivate them to progress by proposing rewards for their personnel in order to encourage them to work (Yucel, 2008). However, there is no inspirational motivation stemming from a flair for communication which provides the leader with followers performing significantly well (Bass & Avolio, 1994). Therefore, the motivation of employees is also achieved in transactional leadership by rewarding them with an increase in financial remuneration and or a promotion.

Continuity on the job and work completion are essential in transactional leadership as they attach importance to deviations from standards (Yucel, 2008). Therefore, the vision of a transactional leader who does not prioritise changing organisation is limited. (Yucel, 2008). Transformational leaders, on the other hand, by explaining 'the significance of the aims which give the vision to the followers' (Yucel, 2008), provide their own future understanding, plans and ideas, and hence their own vision.

Taken all together, in order to achieve effective leadership, it is necessary to apply both transactional and transformational leadership as they are not substitutes but are complements of each other (Joyce, 1994; Bass, 1999). This is because while a transformational leader, who represents what leadership is, motivates employees to work beyond expectations, a

transactional leader exhibiting characteristics of managers maintains stability in performance by standardisation and control and satisfies the tangible needs of employees (Cooke and Rousseau, 1988). Therefore there are a significant number of empirical studies suggesting that both leadership styles should be applied at the same time in order to achieve effective leadership (Conger, 2004; Cascio, 1995; Wang *et al.*, 2005).

## **2.2. Job Satisfaction**

How employees view their respective jobs define job satisfaction (Yucel, 2008). Those who like their job experience are considered to be feeling satisfied while those who do not like their job experience can be regarded as feeling dissatisfaction (Spector, 1997; Yucel 2008).

Treating employees fairly and respecting them are components of fair management which positively affect employee psychological health, hence affecting their job satisfaction (Yucel, 2008). In addition to this, the job satisfaction of the employees is one of the main factors that affects the function of an organisation (Yucel, 2008). The regular examination and observation of job satisfaction, and the spending of a significant amount of time on understanding the critical parts of the examination and observation of results will provide the organisation with the easy identification and correction of critical problems within the organisation, and with productivity increase (Cranny *et al.*, 1992; Carrol *et al.*, 1977; Spector, 1997; Gruneberg, 1981). Therefore, the organizations that consider the well-being of their employees also prioritize the job satisfaction of their employees and the functionality of activities within the organization (Yucel, 2008). Thus, job satisfaction is a vital objective that is the goal of employees and includes factors such as salary increases, better working environment and conditions, etc. (Spector, 1997; Yucel, 2008); and is also a goal for organizations and includes factors such as productivity increase (Hunt, 1968; Hopkins, 1983; Spector, 1997; Brandi, 2005).

## **2.3. Leadership Behaviour and Job Satisfaction**

There are several variables which have been reported to be job satisfaction predictors such as work assignment and working conditions. However, leadership is seemingly becoming the core determinant of job satisfaction (Alsayah; 2011). Considering previous studies on the relationship between leadership and job satisfaction, the choices of leadership can significantly affect the degree of employee job satisfaction (Wan Omar & Hussin, 2013; Shim *et al.*, 2002; Yousef, 2000). Transformational leadership especially has been considered to be positively related to job satisfaction in various sectors of organization as compared to transactional and laissez-faire leadership styles (Wan Omar and Hussin, 2013; Fatima *et al.*, 2011). This is because there is a positive relationship between charisma and the leader's positive mood which is contagious and can motivate their followers and therefore influence

their job satisfaction (Bono & Illies, 2006). Also, due to reduced work pressure, transformational leadership creates more job satisfaction than other leadership styles (Medley and Larochelle, 1995). Essentially, both empirical and meta-analytic studies on transformational leadership suggest that followers working with transformational leaders are not only more satisfied but more involved, empowered, motivated, trusted and committed to their organizations (Bono & Judge, 2003; Walumbwa & Lawler, 2003; Walumbwa *et al.*, 2004).

However, it is possible to suggest that both transformational and transactional leadership behaviours necessitate establishing good relationships between employees and their immediate leaders with different methods (Alsayah, 2011). 'Transformational leadership involves ideological transformation of organization's leadership behaviour, the outcome of which is a shrewd leader who is capable of turning around the fortunes of his or her organizations' (Alsayah, 2011). Therefore, transformational leaders are able to develop by intellectually inspiring and stimulating their follower by becoming a role model for them (Bass *et al.*, 2006). Based on this argument, it is possible to suggest that the rewards of transformational leadership that affect the job satisfaction of employees are intangible and facilitate a relationship that goes beyond merely exchanging inducements.

On the other hand, transactional leaders display leadership behaviours that satisfy the needs of their followers by entering into a mutual-dependence relationship (Alsayah, 2011). As pointed out by Judge and Piccolo (2004) and Alsayah (2011), this is based on the reward of job completion and mutual agreement on the expectations of the followers and their leader. Therefore, the rewards of transactional leadership, unlike those of transformational leadership, are tangible and are provided when job completion is successfully fulfilled. With such rewards, transactional leaders may satisfy the follower's needs and secure their work performance (Northouse, 2007; Alsayah 2011).

## **CHAPTER III: TURKISH MINING INDUSTRY**

### **3.1. The Short History of Turkish Mining Industry**

The mining operation's modes and traditions of the Ottoman Empire have had a considerable effect on the Turkish mining industry in terms of the demographic characteristics of its employees as these traditions include regulations concerning gender and the age range of workers (Kahveci, 2015). According to these traditions, workers had to be able-bodied males and had to be between the ages of 13-50 (Kahveci, 2015). Due to the hard and primitive conditions of mines, the job satisfaction of workers was not even an issue; thus, a substantial

proportion of the labour force were slaves, nomads, army convicts and forced labourers from the peasantry aged between 13-50 (Kahveci, 2015).

After the foundation of the Turkish Republic in 1923, the *İş Bankası* (Business Bank) was established. Two companies were opened by the bank in Zonguldak in 1924, the year of the establishment of the Business Bank (Kahveci 2015). However, the Zonguldak coal basin was under the control of foreign capital granted by French and Italian companies (Kahveci, 2015). New industrialization projects by the government and the formulation of five year plans dominated Zonguldak's coal production as major emphasis was placed on the development of fuel and power to meet the energy needs of industry (Kahveci, 2015). Therefore, companies in Zonguldak were nationalized in 1937 in order to secure supplies (Kahveci, 2015). Because of war conditions, the National Protection Law (NPL) was implemented by the government in order to solve labour shortage problems (Kahveci, 2015). In 1942, 58,000 forced labourers worked for the nationalized Zonguldak companies and were prohibited from changing their employment (Kahveci, 2015). Also, due to the primitive conditions of the mines, fatal injury rates were considerably high at the time (Kahveci, 2015). As might be expected, the job satisfaction of employees was not even considered by the companies; their only objective was to keep the production of coal at the necessary levels. 'Because of low wages, and harsh working conditions, including long working hours and high industrial injury rates, many workers abandoned the mines as soon as the NPL ended in 1948.' (Kahveci, 2015) Therefore, the coal mine industry in Turkey experienced significant difficulties in terms of finding labour and creating satisfactory conditions for employees for a long time after the NPL in the republican period.

### **3.1.1 Structural Transformation in the Turkish Mining Industry**

Since the 1980s, the extensive transformation of the general economic policy of Turkey has significantly affected the mining industry and mining legislation, and the institutional structure of the industry have therefore undergone comprehensive changes (Anac & Tamzok, 2008). Labour-intensive working practices and the public-dominant structure of the mining sector of Turkey have been transformed into capital intensive technology and have become private sector-dominant since the 1990s (Anac & Tamzok, 2008). The main force influencing this process were the reforms designed to transform the structure of the economy in order to establish an open, liberal and market-oriented system after the 1980s (Anac & Tamzok, 2008).

It is claimed that public enterprises cause unproductivity because of the absence of motives towards reducing production costs and increasing technological investments and product quality, and that the effective usage of resources including the labour force would be obtained by the market mechanism (Anac & Tamzok, 2008). Because of these vital reasons

affecting productivity, structural transformations were initiated. This transformation, of course, brings transformational leaders into the forefront as they are capable of adapting to the changes around their organization. By making the bureaucratic structure efficient, increasing the added value through affecting the job satisfaction of employees, and improving the organization compliance with the changes in the mining industry of Turkey, leadership methods have become a crucial factor for private enterprises in the industry because 'today, the main strategy of the Turkish mining industry is to encourage exploration and exploitation activities in the sector to provide necessary low cost and high quality raw materials demanded by domestic industrial sectors and to increase the competitiveness of the economy.' (Anac & Tamzok, 2008).

### **3.2. Lignite Coal Mining Industry**

Coal has always been an important fuel in the Turkish energy system, and the cumulative coal production of Turkey between 1957 and 2010 was 1853 million tonnes, of which 89% (1649.3 million tonnes) was lignite (Ediger et al., 2015). Demand for lignite has always been met by domestic production as it is the most abundant fossil fuel resource in Turkey (WEC-TNC, 1990, 1994, 1997, 2000, 2002, 2006; MENR, 2014). On the production side, lignite has again been ranked first among other energy resources since 1976 (Ediger et al., 2015). Despite that, there have always been minor fluctuations (Ediger et al., 2015) in production. For example, the production decreased by 28.5% from 12.792 million tonnes to 9.141 million tons between 1998 and 2004 and then increased again to 17.860 million tonnes in 2012 (Ediger et al., 2015). However, such production fluctuations have not affected the lignite coal production rank as it has always been the most produced fossil fuel because of its large abundance of at least 9.3 billion tonnes of reserves (Anac & Tamzok, 2008).

## **CHAPTER IV: RESEARCH METHODOLOGY**

### *Constructing the Hypothesis*

To fulfil the identified aim, as expressed in the introduction, the following null hypotheses are developed to test the relationship identified in figure 4.1:

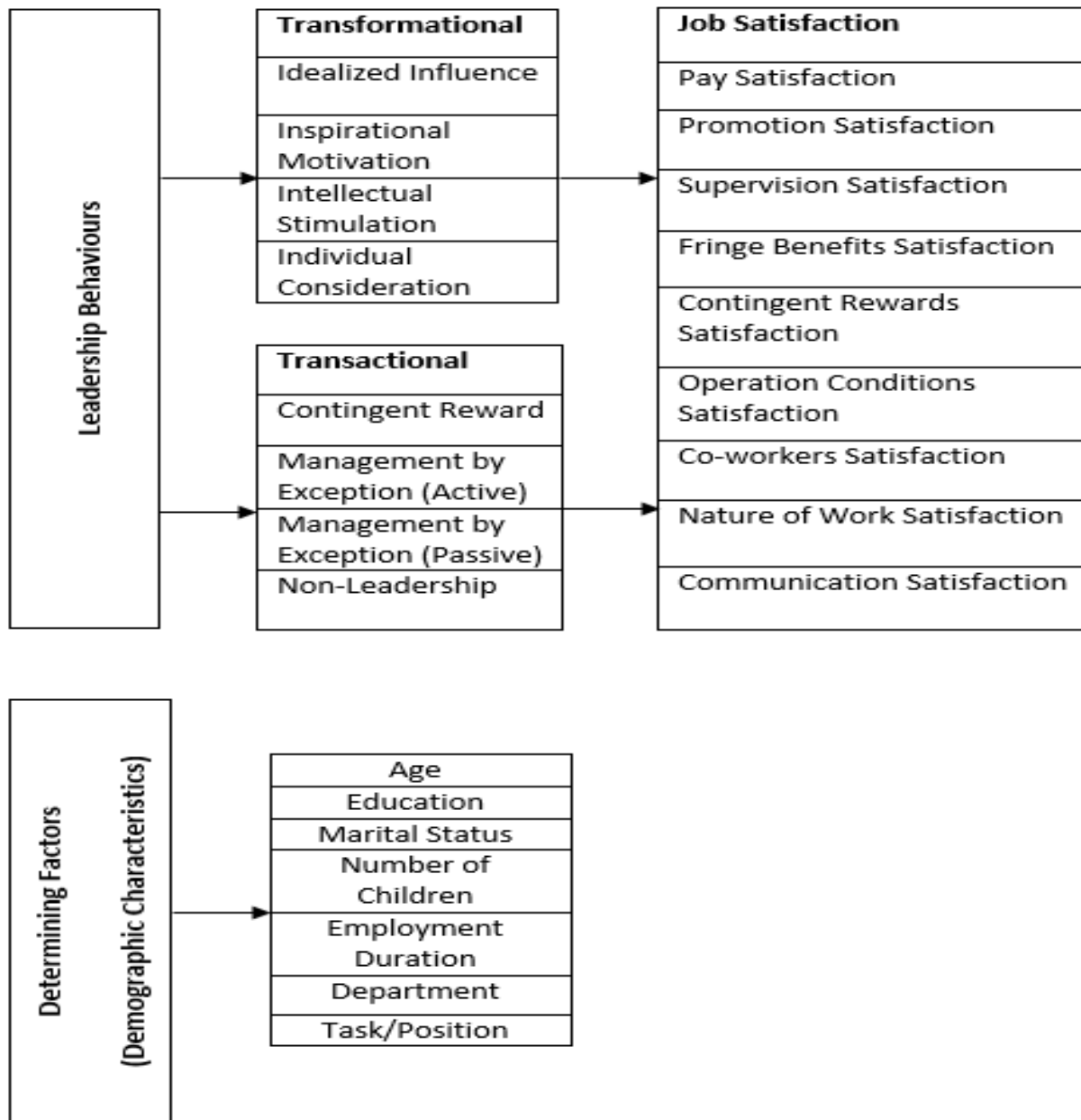
H<sub>10</sub>: The leadership behaviour perceived by the employees does not predominantly include the transformational leadership characteristics.

H<sub>20</sub>: There is no significant relationship between the overall perceived leadership behaviour and job satisfaction among the sampled employees.

H<sub>30</sub>: The level of job satisfaction of employees is low.

H<sub>40</sub>: There is no significant differences in the perceived leadership behaviour and in the job satisfaction of employees based on their demographic characteristics, namely, age, education, marital status, number of children, employment duration, department, and position.

**Figure 4.1: Empirical Framework**



*Research Approach*

This study is constructed with a quantitative research methodology and hence quantitative data collection and analysis methods. The main reason behind utilizing the quantitative research methodology is that the exploration, examination, and interpretation of the data can

be accomplished in order to develop the data and make beneficial use of it as information (Saunders et al., 2012).

#### *Questionnaires and Data Collection Methods*

It should be noted that in order to obtain the demographic information relevant to the sample with regard to the participants' gender, age, educational background, marital status, number of children, employment duration, department, and position; a self-developed questionnaire was conducted.

The leadership style of the leaders was determined by the followers' ratings on Bass and Avolio's 45-item Multifactor Leadership Questionnaire (MLQ) with five choices per item ranging from "not at all" to "frequently, if not always". Two scores are generated by the MLQ, one for transformational leadership and one for transactional leadership. Four factors describe transformational leadership: idealized influence, inspirational motivation, intellectual stimulation, and individual consideration. Four factors describe transactional leadership: contingent reward, management by exception (active), management by exception (passive), and non-leadership. The MLQ is regarded as a remarkable questionnaire in terms of obtaining information with regard to the perceptions of followers on the behaviours of leaders and in terms of classifying these behaviours within transformational and transactional styles (Bass et al., 2006). Therefore, it has been vastly utilized in previous research (Yucel, 2008; Alsayah, 2011; Medley and Larochelle, 1995).

The job satisfaction level of employees was determined by the followers' ratings on Spector's 36-item Job Satisfaction Survey (JSS) with six choices per item ranging from "strongly disagree" to "strongly agree". The nine facets including individual statements were identified by Spector as pay, promotion, supervision, fringe benefits, contingent rewards, operation conditions, co-workers, nature of work, and communication. As it is possible to show a relationship between leadership factors and these nine facets, the JSS was considered to be a useful tool for obtaining information with regard to the job satisfaction level of employees and has been vastly utilized in previous research (Yucel, 2008; Alsayah, 2011).

By being in the work-field, hard copies of the questionnaires were handed to responsible personnel who were vigilantly appointed by the company in order to distribute and explain the details to employees. The personnel were well-informed with regard to the details of administration issues before they distributed all questionnaires among departments. The choice of departments was regarded as an important issue because of the fact that including every aspect of the industry experiencing transformation in terms of technology and structure may provide the study with more realistic findings in the end. Total anonymity was guaranteed and no individual follow-up was attempted because of the sensitive nature of the data requested.

#### *Sample Size*

The sample for this study is drawn from a population of around 1,500 full-time employees from Adularya Energy which was founded in 2007 as a Naksan Holding-owned company and is located in the Mihaliççık district of the Eskişehir province. It should be noted that the company utilizes the most advanced mining technology used in the world called the “longwall longfeed fully mechanical”, referring to the process of the extraction and production of lignite coal in the mine so that transportation to the power plant is fully automated and fully mechanical. The sampling frame was comprised of employees of the company. 150 copies of the questionnaire were handed out, 122 of them were returned, and 100 of the returned questionnaires were acceptable in terms of given responses to included statements.

#### *Data Analysis*

After collecting the completed questionnaires, as was recommended by Saunders et al. (2012), the data was input into the computer and checked. In doing so, the Statistical Package of Social Science (SPSS) program was utilized to process the data in an advanced and efficient way. As pointed out by Kinnear and Gray (2009), it is possible to implement an array of methods offering considerable assistance in producing the results and interpreting the findings of the research by utilizing the SPSS when analysing the data. Firstly, the types of data were classified as either categorical or numerical and were then coded appropriately. The data was required to be coded such that it represented categorical data, numerical data or missing data. The second stage was to enter the data into the computer correctly. Finally, the data was checked twice by looking for irrational relationships and illegitimate codes.

By using the Kolmogorov-Smirnov and Shapiro-Wilk tests, the quantitative variables were tested for normality. The aim of this was to determine the nature of the statistical instruments to be used in terms of parametric or non-parametric tests. The findings are depicted in Appendix Table 8, which indicates the output from the SPSS statistics. As can be seen from the table, significance is achieved since the normality test produced a 0.000 significance level indicating that the data significantly deviates from a normal distribution. Hence, non-parametric tests were utilized.

Having identified the nature of statistical instruments, a non-parametric inferential analysis was conducted in order to reveal significant differences in perceived leadership behaviour and in the job satisfaction of employees based on their demographic characteristics and also to elucidate the pattern of group categories that scored the highest mean rankings within each demographic characteristic at the 5% significance level on the statements from the MLQ and the JSS.

A non-parametric correlation analysis is conducted in order to reveal the overall correlation between perceived leadership behaviour and job satisfaction level. Furthermore,

the correlation level between individual statements from both the questionnaire, the MLQ and the JSS was found in order to enhance the understanding of the relationship between leadership characteristics and the job satisfaction dimensions. The findings are depicted in Appendix Table 6 representing correlations at the 1% and 5% level significance. Finally, a descriptive analysis is also performed to analyse the demographic information of the sample.

### *Reliability Analysis*

For determining the consistency of a question precisely and its comparison to other scaled items, the Cronbach's alpha test is one of the most regularly utilized statistical tests (Pallant, 2010). The estimates of the Cronbach's alpha test range between 0-1 and Pallant (2010) suggests that the higher the value of the Cronbach's alpha, the higher the reliability of the data. In the estimation, 0.7 was regarded as the lowest value of accepted reliability of the data gathered (Pallant, 2010).

The present study used this consistency approach to show the reliability of the data gathered. If the estimates for the Cronbach's alpha were higher than 0.7, this indicated higher reliability. In this study, the Cronbach's alpha value was 0.919 as shown in Table 4.1, which confirms the basis for testing the attributes to be reliable and preferable. Therefore, it can be suggested that the consistency was verified by the data provided, which indirectly justifies the scale used as reliable.

**Table 4.1**

<b>Case Processing Summary</b>			
		N	%
Cases	Valid	77	77.0
	Excluded <sup>a</sup>	23	23.0
	Total	100	100.0

<b>Scale Statistics</b>			
Mean	Variance	Std. Deviation	N of Items
220.19	2081.027	45.618	81

<b>Reliability Statistics</b>	
Cronbach's Alpha	N of Items
.919	81

### *Limitations*

The main reason behind the limitations of this study is predicated upon limited time. It constrained the study from extending into other companies and constrained the expansion of the size of the sample. Conducting a study without a time limit may provide results with more sound findings. Also, the fact that there were no female participants may be regarded as a limitation of the study despite the fact that it actually represents the Turkish mining industry's general state with respect to gender distribution among employees. Finally, qualitative methods could have been used to further the understanding of the effect of the technological and structural transformation of the industry on perceived leadership behaviours by receiving the opinions and ideas of employees. However, the time only allowed the study to include the quantitative methods above.

## **CHAPTER V:**

### **THE RELATIONSHIP BETWEEN PERCEIVED LEADERSHIP BEHAVIOURS AND THE JOB SATISFACTION OF EMPLOYEES IN THE TURKISH MINING INDUSTRY: DESCRIPTIVE EMPIRICAL FINDINGS, NON-PARAMETRIC INFERENTIAL AND CORRELATION ANALYSIS**

#### **5.1. Demographic Information of Respondents**

The demographic questionnaire conducted in this study aims to provide valuable insight with regard to the employees in the mining industry of Turkey. In addition to this, in the literature, some of the questions included in the questionnaire were found to be correlated with job satisfaction, such as that of the number of children, working area, marital status and age.

Table 5.1 depicts the demographic findings and shows that, in regard to gender distribution, all respondents were male, which is a result that should be considered normal in the mining industry. With respect to the age of the respondents, the findings show that the centrality of samples was between 30-39, as indicated by the mean value of 2.09 which is close to 2. With regard to the educational background of the sample, the findings show that 58.6% of respondents are graduates of high school, vocational high school or college. In terms of marital status, the survey results depict that a majority of the sample, namely 76.8%, were married, and, with respect to the number of children, the respondents on average had between 1-3 children, as indicated by the mean value 0.3 which is close to 0. The findings of the survey analysis also showed that 87.0% of the sample represented a significant number of the respondents who had been working with the company for more than 3 years. With respect to

the working area, as can be seen in Table 5.1, the findings show that a considerable proportion of the sample (68.0%) had been working above ground with a mean value of 0.72 which is close to 1. However, 30% of the respondents were mainly miners working underground. A number of the respondents worked in the mechanics department with 41.0% while another 30.0% of the respondents worked in the mine and extractions department. With regard to the task and the position of sample, 80% of the respondents were mainly employed as workers, with particular job descriptions defined by their respective departments. Therefore, it is possible to suggest that the questionnaire survey concerning leadership and job satisfaction conducted for this research was answered by workers who have responsibilities in various tasks in the mining industry.

Table 5.1

Variable Group		Frequency	Valid Percent	Mean	Std. Deviation
Gender	Male	100	100.0	.00	.000
Age	21 - 29	26	26.0	2.09	.830
	30 - 39	43	43.0		
	40 - 49	27	27.0		
	50 - 59	4	4.0		
Education	Primary school/ Secondary school	36	36.4	.69	.565
	High school graduate, diploma/ Vocational high school, diploma or the equivalent/ College	58	58.6		
	Bachelor's degree/ Master's degree/ Doctorate Degree	5	5.1		
Marital Status	Married	76	76.8	.23	.424
	Single	23	23.2		
Children	1 - 3	69	97.2	.03	.167
	4 - 6	2	2.8		
Employment Duration	0 - 11 Months	4	4.0	1.83	.473
	1 - 3 Years	9	9.0		
	Over 3	87	87.0		
Working Area	Underground	30	30.0	.72	.494
	Aboveground	68	68.0		
	Both	2	2.0		
Department	Mine	30	30.0	1.81	2.326
	Mechanic/Workshop/Both	41	41.0		
	Electric	11	11.0		
	Material Planning	8	8.0		
	Coal Washery	10	10.0		
Task/Position	Worker/ Foreman/ Personnel	80	80.0	.31	.720
	Overseer/ Unit Supervisor	13	13.0		
	Manager/ Supervisor	3	3.0		
	Other	4	4.0		

## **5.2. Inferential Analysis**

### **5.2.1. Determining Factors of the Given Responses**

In conducting the inferential statistics of this study, non-parametric tests were utilised to identify the determining factors of the given responses. Each of the statements under 'leadership' and 'job satisfaction' were subjected to non-parametric tests in the form of the KW test and the results are presented in the following sections. The independent variables were chosen among the demographic variables as it is considered that they had an impact on the answers given to each of the statements. It should be noted that only the statistically significant variables constructing patterns at the 5% level of significance were reported due to the length limitation, which implies that if a particular result was not reported it would be due to the fact that it was not significant at the 5% level of significance or that there were no particular patterns within the demographic category. In assessing the results, it is hypothesised that, in the given statements, the independent or demographic variables had an impact on determining the answers, which is evidenced by the dispersion of the mean rank value. The empirical sections also relate to the size of the 'mean ranking' as the highest mean rank by a particular sub-group would imply that they relate to the respective statement more strongly than others.

#### **a. Determining Factors of Leadership Related Responses**

The findings relating to the KW tests conducted to identify the determining factors of leadership are depicted in Appendix Table 1, 2, and 3.

As an important deterministic factor, 'employment duration' is found to be significant at 5% on four statements and there is a pattern among three of them as the highest mean ranks were attained by the subgroup of working for 0-11 months. The 'employment duration' control variable was statistically significant with an estimated  $p$ -value of 0.020 on the statement that asked the participants 'to what extent your leader considers you as having different needs, abilities and aspirations from others'. As pointed out, the subgroup '0-11 months' scored the highest mean rank at a level of 82.38. They also scored the highest mean rank value of 81.88 on the statement that asks the respondents to what extent your leader is effective in meeting your job-related needs. The  $p$ -value of the employment duration control variable for this statement is 0.004. Lastly, for the statement relating to the participants' view on 'to what extent your leader works with you in a satisfactory way', as can be seen in Table 1 (in the appendix), the highest mean ranking of 69.88 was attained by those who had been working for 0-11 months, and the  $p$ -value of the employment duration control variable for this was 0.020. Taken all together, such findings may be an indication of the fact that the newcomers in the company may receive relatively more support from their leaders because they are new to the job and therefore they regard their leaders as a person who meets their job-related needs, considers

their personalities, and works with them in a satisfactory way, and these significant statements relate to the 0-11 months 'employment duration' group,

The findings show that 'position of employees', as an independent variable, is found to be statistically significant at 5% on six statements of the Multifactor Leadership Questionnaire (MLQ). The results in Appendix Table 1 indicate that there is a particular pattern among the statements consisting of the highest mean rankings of employees who work as supervisors in the company. For example, the position control variable is found to be statistically significant with an estimated  $p$ -value of 0.032 on the statement relating to the time the leaders spend on 'teaching and coaching'. Supervisors also scored the highest mean rank of 80.00 on this statement. Supervisors, as a group, also scored the highest mean rank of 76.00 on the statement of 'to what extent their leaders treat them as an individual rather than just as a member of a group', for which the control variable is again found to be significant with an estimated  $p$ -value of 0.038 for this statement. As for the statement 'to what extent your leader gets you to look at problems from many different angles' 'position', as an independent variable it is also found to be statistically significant with an estimated  $p$ -value of 0.040. The highest mean rank of 82.00 was attained by supervisors. The position control variable is found to be significant in the case of responses given to 'to what extent your leader works with you in a satisfactory way' with an estimated  $p$ -value of 0.042. The results overall suggest a pattern as the highest mean rank is attained by supervisors at 80.50. They also scored the highest mean rank of 80.33 on the statement 'to what extent your leader heightens your desire to succeed as well' with a  $p$ -value of 0.029. Finally, in the case of the statement that 'their leaders' effectiveness in meeting organizational requirements', the 'position' control variable was found to be significant with an estimated  $p$ -value of 0.028. In line with this pattern, the highest mean rank was attained by supervisors at a level of 89.50. The results, hence, indicate a pattern in the sense that 'supervisors' scored the highest mean ranking among the significant variables, which may indicate that supervisors may have more opportunities to communicate with leaders because of their position. Thus, in the case of these variables, 'supervisors' seem to have stronger feelings about the respective variables or statements.

Another determining independent control variable, 'education', is found to be significant at 5% on several statements, and it can be seen in Appendix Table of 2 that a particular pattern exists that consists of the highest mean rankings of employees who have a bachelor's degree, master's degree or doctorate degree. The education control variable was statistically significant with an estimated  $p$ -value of 0.006 on the statement regarding the time their leaders spend on teaching and coaching. The subgroup graduated from bachelor's degree or master's degree or doctorate degree scored the highest mean rank with a value of 71.80. They also scored the highest mean rank of 63.70 on the statement relating to the power and confidence

displayed by their leader. The education control variable was statistically significant with an estimated  $p$ -value of 0.021 for this statement. It was also statistically significant with an estimated  $p$ -value of 0.040 on the statement that asks the participants to what extent your leader articulates a compelling vision of the future. The highest mean rank of 67.00 was attained by the same subgroup. The highest mean rank on the statement that asks the participants to what extent your supervisor is effective in meeting your job related needs was 67.30, which was attained by the subgroup graduated from bachelor's degree or master's degree or doctorate degree. The  $P$ -value of the education control variable on this statement was 0.023. In line with this pattern, they scored the highest mean rank with a value of 66.30 on the statement relating to satisfactory leadership methods used by their leaders. The education control variable was statistically significant on this statement with an estimated  $p$ -value of 0.024.

Other statements in which the education control variable was statistically significant at 5% is as follows. The highest mean rank of 62.00 on the statement relating to the effectiveness of the leader in representing employees to higher authority was attained by the subgroup graduated from bachelor's degree or master's degree or doctorate degree, and the education control variable was found to be significant with an estimated  $p$ -value of 0.048. It was again statistically significant with an estimated  $p$ -value of 0.032 on the statement that asks the participants to what extent your leader works with you in a satisfactory way, and the highest mean rank at a value of 73.00 was attained by the same subgroup. They again scored the highest mean rank of 73.10 on the statement that asks the respondents to what extent your leader heightens your desire to succeed, and the education control variable is found to be statistically significant with an estimated  $p$ -value of 0.027. It was also statistically significant with an estimated  $p$ -value of 0.018 on the statement regarding the effectiveness of the leader in meeting organizational requirements. The subgroup graduated from bachelor's degree or master's degree or doctorate degree scored the highest mean rank at a value of 75.80. Finally, they once again scored the highest mean rank of 56.90 on the statement that asks the participants to what extent your leader leads a group that is effective, and the education control variable is found to be statistically significant with an estimated  $p$ -value of 0.023. The pattern of the highest mean ranking indicates that the higher the educational background, the more realization and the more appreciation there is of leadership characteristics, behaviour and methods.

The last determining independent control variable is the department group control variable. It is found to be statistically significant at 5% on fifteen elements of the Multifactor Leadership Questionnaire as can be seen in Appendix table 3. Due to the length limitation, only those statements which have the highest mean rankings attained by the electric

department will be elucidated. The main reason behind this is that there is a particular pattern consisting of the highest mean rankings of the electric department among several statements. The department control variable was statistically significant at 5% on the statements that asks participants to what extent your leader instills pride in you for being associated with him or her ( $p$ -value of 0.035), to what extent your leader discusses specific terms and is responsible for achieving performance targets ( $p$ -value of 0.028), to what extent your leader specifies the importance of having a strong sense of purpose ( $p$ -value of 0.022), to what extent your leader keeps track of all mistakes ( $p$ -value of 0.44), to what extent your leader helps them to develop their strengths ( $p$ -value of 0.039), to what extent your leader expresses confidence that goals will be achieved ( $p$ -value of 0.006), to what extent your leader uses methods of leadership that are satisfying ( $p$ -value of 0.012), and to what extent your leader works with you in a satisfactory way ( $p$ -value of 0.034). All the highest mean rankings on all these statement were attained by those who work in the electric department (respectively at values of: 68.91, 70.41, 67.95, 53.27, 69.00, 74.36, 72.91, 70.73).

#### **b. Determining Factors of Job Satisfaction Related Responses**

The findings are depicted in Appendix Table 4. The significant independent variables on the question that asks the respondents to what extent their supervisor is competent in doing his or her job are depicted in the table, and the education control variable was statistically significant at the 5% level with an estimated  $p$ -value of 0.019. Participants who had a bachelor's degree, master's degree or doctorate degree scored the highest mean rank at a value of 74.30. They also scored the highest mean rank in other questions that asks the respondents to what extent you are satisfied with the benefits you received, with mean rank at a value of 60.00; and that asks them to what extent you feel that your efforts are rewarded, with mean rank at a value of 67.10. For the former, the education control variable was statistically significant at the 5% level with an estimated  $p$ -value of 0.027 while for the latter it was significant at the 5% level with an estimated  $p$ -value of 0.016. Since all the highest mean ranks for these statements were scored by those who have a bachelor's degree or master's degree or doctorate degree, there was a pattern within the education control variable indicating that having a higher educational background provided those with a better understanding of their needs related to their jobs.

The children control variable is found to be significant at 5% with an estimated  $p$ -value of 0.013 on the statement relating to the paperwork employees have to complete. The subgroup of 1-3 children scored the highest mean rank value of 55.51, which may be because the time they spend with their children is restricted by overtime work due to the paperwork that must be done.

The employment duration control variable is found to be significant at the 5% level with an estimated  $p$ -value of 0.046 on the statement regarding the scarce rewards for those who work for the company. The subgroup that has been working for the company for 1-3 years scored the highest mean rank value of 70.89, which may be because they have a higher expectation of rewards as they are not new employees and do not have a longstanding background in the company like those who have worked for more than 3 years.

### 5.3. Leadership Characteristics Analysis

Before analysing the correlation between the leadership and job satisfaction variables, the leadership characteristics in the Turkish mining industry should be elucidated. The findings are depicted in Table 5.2. It is found that transformational leadership characteristics scored relatively higher than those identified as characteristics of transactional leadership as indicated by the overall mean value of the transformational leadership categories at 2.29 with an overall mean value of transactional leadership categories at 1.58. Although all category scores among transformational leadership characteristics are rather close, the highest score of 2.41 was attained for idealized influence behaviour. With regards to transactional leadership, the contingent reward characteristic scored the highest mean value of 2.22 with an evident difference. Following these findings, it is possible to suggest that perceived leadership behaviour predominantly includes characteristics of transformational leadership in the Turkish mining industry.

**Table 5.2.**

Construct	Variable Name	Category Score	Construct	Variable name	Category Score
Transformational: Idealised Influence (Behaviour)	IIB	2.41	Transactional: Management by Exception (Active)	MbE Active	1.86
Transformational: Idealised Influence (Attributed)	IIA	2.20	Transactional: Management by Exception (Passive)	MbE Passive	1.35
Transformational: Inspirational Motivation	IM	2.27	Non-leadership: Laissez-Faire (Transactional Leadership-Passive)	LF	0.91
Transformational: Intellectual Stimulation	IS	2.37	Transactional: Contingent Reward	CR	2.22
Transformational: Individual Consideration	IC	2.22			
Overall		2.29	Overall		1.58

#### 5.4. Non-Parametric Correlation Analysis

The overall correlation table 5.3 summarizes the individual statements for both leadership and job satisfaction. The result indicates that the correlation is at the 3.6% level which implies that there is a positive weak level relationship between the two. However, this result comprises both perceived transformational and transactional leadership behaviours and therefore there is need for a further correlation analysis of individual statements.

**Table 5.3**

Kendall's tau_b		Satisfaction Averages
Leadership Averages	Correlation Coefficient	0.036
	Sig. (2-tailed)	0.600
	N.	100

To enhance the analysis, individual leadership statements including significant correlations with job satisfaction categories will be elucidated under the characteristics that they are identified with. The categories are depicted in Appendix Table 5. It should be noted that only the statistically significant correlations at the 1% significance level have been reported due to the length limitation. The findings for all individual statements are depicted in Appendix Table 6.

To begin with, the transformational leadership categories (Appendix 5) will be elucidated and the idealized influence behaviour category will firstly be taken into consideration. Under this category, statements relating to the frequency that a leader talks about his or her most important values and beliefs is found to be significantly correlated to the statement included by the supervision satisfaction category at a correlation coefficient of 0.333, the statement regarding pay dissatisfaction at a correlation coefficient of 0.239, the statement relating to the nature of work satisfaction at a correlation coefficient of -0.227, and the statement included by promotion satisfaction at -0.233. Secondly, the statement included by the category that relates to the frequency that a leader specifies the importance of having a strong sense of purpose is found to be significantly correlated with the statement regarding the competency of the supervisor at a correlation coefficient of 0.293.

Another statement under this leadership category which asks participants to what extent your leader considers the moral and ethical consequences of decisions is found to be significantly correlated with the job satisfaction statement relating to supervision satisfaction at a correlation coefficient of 0.249. The last statement under this category, which is regarding the frequency a leader emphasises the importance of having a collective sense of mission, is significantly correlated with the statement that relates to the competency of the supervisor in doing his or her job at a correlation coefficient of 0.230.

As identified in Appendix Table 5, another transformational leadership category consists of attributed statements to idealised influence. Under this category, the statement that asks the participants to what extent your leader goes beyond self-interest for the good of the group is found to have a significant correlation with the job satisfaction statement that asks them to what extent you like your supervisor at a correlation coefficient of 0.256. There is also a significant correlation between the statement under this category relating to the power and confidence displayed by leaders and the job satisfaction statement included in the supervision satisfaction category at a correlation coefficient of 0.251. This leadership statement is also found to be significantly correlated with the statement regarding co-worker satisfaction at a correlation coefficient of 0.253 and with the statement regarding fringe benefit satisfaction at a correlation coefficient of 0.228.

Another leadership characteristic which is identified as a category in Appendix Table 5 is inspirational motivation. Under this category, the statement relating to a leader that talks optimistically about the future is found to be significantly correlated to the job satisfaction statement regarding the competency of a supervisor in doing his or her job at a correlation coefficient of 0.273. Another statement within this category that asks the participants to what extent your leader talks enthusiastically about what needs to be accomplished is found to be significantly correlated with the same statement at a correlation coefficient of 0.213. The statement within this category related to the frequency that leaders articulate a compelling vision of future is significantly correlated with the same statement at a correlation coefficient of 0.242, the statement regarding promotion satisfaction at a correlation coefficient of 0.251, and the statement relating to fringe benefit satisfaction at a correlation coefficient of 0.216. The last statement within this category is about the confidence expressed by leaders to achieve goals, which is found to be significantly correlated with the same statement at a correlation coefficient of 0.304; and with the statement included by the same job satisfaction category with the former statement called supervision satisfaction, which represents the extent employees like their supervisor, at a correlation coefficient of 0.223.

Another leadership category is individual consideration and the first statement identified with this category relates to the time leaders spend teaching and coaching their employees. It is found to be significantly correlated with the statement regarding the supervision satisfaction category at a correlation coefficient 0.210 and with the statement relating to the fringe benefit satisfaction at a correlation coefficient of 0.229. Another statement within this category that asks the participants to what extent your leader considers you as having different needs, abilities, and aspirations from others is again in significant correlation with the statement included by the supervision satisfaction category at a correlation coefficient of 0.285. The last statement within this category related to the strengths of employees developed with the help of their leaders and is found to be significantly correlated with the statement regarding the competency of a supervisor in doing his or her job at a correlation coefficient of 0.240, the statement relating to fringe benefit satisfaction at 0.234, and the statement relating to the statement that asks the participants to what extent you like your supervisor at a correlation coefficient of 0.211.

The last category of transformational leadership consists of statements based on the characteristic called intellectual stimulation. The statement within this category asks the participants to what extent your leader re-examines critical assumptions to question whether they are appropriate is found to be significantly correlated with the job satisfaction statement concerning limited contingent reward satisfaction at a correlation coefficient of 0.307. Another statement within this category relating to the frequency that a leader seeks differing perspectives when solving problems is significantly correlated with the same aforementioned statement at a correlation coefficient of 0.236; with the statement relating to supervision satisfaction at a correlation coefficient of 0.292; and with the statement regarding co-worker satisfaction at a correlation coefficient of 0.228. The statement that asks the participants to what extent your supervisor gets you to look at problems from many different angles is found to be significantly correlated with supervision satisfaction at a correlation coefficient of 0.223, co-worker satisfaction at a correlation coefficient of 0.221, and fringe benefit satisfaction at a correlation coefficient of 0.230. The last statement relating to the suggestion frequency of new ways that a leader may look at problems is in a significant correlation with the statement regarding supervision satisfaction. In general, for this category it is possible to suggest that intellectual stimulation leads employees to be satisfied with their jobs in terms of supervision while they feel that there is limited contingent reward. This may be because of the fact that transformational leaders do not utilize contingent rewards to get the job done but instead stimulate their followers to do so.

Having completed all transformational leadership categories, the correlation between transactional leadership categories and job satisfaction categories will be elucidated. First, the

prominent transactional leadership category, including statements related to contingent reward, will be analysed. The statement within this category relating to the frequency that a leader provides his or her followers with assistance in exchange for their efforts is found to be in a significant negative correlation with the statement that asks participants to what extent your supervisor is unfair to you at a correlation coefficient of -0.299. Another statement that asks the respondents to what extent your leader discusses in specific terms who is responsible for achieving performance targets is found to be significantly correlated with supervision satisfaction at a correlation coefficient of 0.208, the statement regarding fringe benefit satisfaction at a correlation coefficient of 0.312, and the statement relating to pay satisfaction at a correlation coefficient of 0.244. The statement relating to the frequency that a leader makes clear what one can expect to receive when performance goals are achieved is significantly correlated with co-worker satisfaction at a correlation coefficient of 0.252 and with the fringe benefit satisfaction at a correlation coefficient of 0.220. The last statement within this category relating to the expression of satisfaction by leaders when jobs get done is significantly correlated to the statement relating to supervision satisfaction at a correlation coefficient of 0.286. In consideration of these findings it is possible to suggest that, unsurprisingly, the contingent reward category is positively and significantly correlated at the 1% significance level with pay satisfaction and fringe benefit satisfaction.

Another category includes statements based on the characteristic called passive management by exception. Within this category the statement relating to the frequency that a leader waits for things go wrong before taking action is found to be significantly correlated with the job satisfaction statement that asks the respondents to what extent work assignments are not fully explained at a correlation coefficient of 0.228. This may be an indication of the fact that such a characteristic leads to dissatisfaction in terms of communication with their leaders while they are doing their jobs as work assignments relating to their jobs are not fully explained.

The last category within transactional leadership characteristics include statements related to non-leadership behaviour. Within this category, the statement that asks the participants to what extent your leader avoids getting involved when important issues arise is found to be significantly correlated with the job satisfaction that asks them to what extent you find you have to work harder at your job because of the incompetence of people you work with at a correlation coefficient of 0.233. This may be because of the fact that the incompetency of a leader in terms of leading his or her followers makes them incompetent in doing their jobs, and, therefore, employees find themselves having to work harder. Another statement within this category relating to the frequency that a leader avoids making decisions is found to be in a significant negative correlation with the statement related to the competency of a leader in doing his or her job at a correlation coefficient of -0.223 and the statement that asks the

respondents to what extent you like your supervisor at a correlation coefficient of -0.276. It is also in a significant negative correlation with the statement relating to contingent reward satisfaction at a correlation coefficient of -0.216. The last statement within this category relating to the frequency that a leader delays responding to urgent questions is found to be significantly correlated with the job satisfaction statement regarding goals of organization that are not clear to employees at a correlation coefficient of 0.216 and with the statement relating to limited communication satisfaction at a correlation coefficient of 0.218. In consideration of this findings, in regard to the non-leadership category, it is possible to suggest that such behaviours within this category lead to dissatisfaction in terms of supervision, communication and co-worker relationship.

## **CHAPTER VI: RESULTS & DISCUSSION, AND CONCLUSION**

### **6.1. Results & Discussion**

The result of this study indicate that employees working in the mining industry do perceive their leaders as demonstrating transformational leadership and transactional leadership styles in spite of the fact that this perceived leadership style predominantly includes the characteristics of a transformational one. From the findings presented in Table 5.2 and from the relevant discussion, it is concluded that the null hypothesis (H10) is rejected, suggesting that the perceived leadership characteristics among the sampled employees do not predominantly include transformational leadership characteristics.

As can be seen in the findings presented in Table 5.3, and the relevant discussion, it is concluded that null hypothesis (H20) is accepted, implying that there is no significant relationship between the overall perceived leadership behaviours and job satisfaction among the sampled employees. However, in accordance with the literature, transformational leadership characteristics are found to be in a significant positive correlation with job satisfaction statements relating to supervision satisfaction, co-workers satisfaction, fringe benefit satisfaction, and pay and contingent reward dissatisfaction at the 5% and 1% significance levels as depicted in Appendix Table 6. Once again, in line with the literature, they are also found to be in a negative significant correlation with promotion satisfaction. As pointed out earlier, the rewards of transformational leadership are intangible, facilitating a relationship that goes beyond merely exchanging inducements and facilitating a work environment that establishes effective co-worker relationship and work environment (Bass et al., 2006). Therefore, employees working under leadership of transformational leaders may unsurprisingly experience dissatisfaction in terms of pay, promotion and contingent reward while they are satisfied with their supervision, their co-workers, and the communication as found in this study.

In regard to transactional leadership, the findings show that unlike the other characteristics of transactional leadership, one of its characteristics, which is contingent reward, is found to be in a positive correlation with job satisfaction statements regarding supervision satisfaction, fringe benefit satisfaction and pay satisfaction. As pointed out earlier, the rewards of transactional leadership are tangible and they are provided when job completion is successfully fulfilled as there is a mutual dependence relationship between a leader and followers based on contingent reward (Bass et al., 2006). According to the result of this study, in addition to transformational leadership characteristics, contingent reward is also found to be a factor enhancing job satisfaction, showing that satisfying the tangible needs of followers are remarkable as characteristics of transformational leadership (Northouse, 2007).

Other characteristics within the transactional leadership style are found to be factors causing supervision and co-worker dissatisfaction and unclear communication between leaders and followers. These characteristics, namely non-leadership and management by exception, leads employees to be unsure about what work assignments are required for them to complete as there is little to no leader action explaining the activities to followers. This may be the reason for the supervision dissatisfaction associated with followers regarding leaders as being incompetent in doing their jobs. In turn, this may impair the relationship between co-workers as they may consider each other incompetent in doing their jobs.

The null hypothesis (H30) is rejected implying that the job satisfaction of sampled employees is low. The findings presented in Appendix Table 7 indicate that the job satisfaction of employees is slightly higher than the moderate level at 3.91 implying ambivalence according to Spector (*Interpreting Satisfaction Scores with the Job Satisfaction Survey*, 2007). It should be noted that nature of work satisfaction, supervision satisfaction, and co-worker satisfaction scored the highest category mean rankings, entailing an increase in overall job satisfaction.

Finally, as can be seen in the findings presented in Appendix Tables 1, 2, 3, and 4, and the relevant discussion based on the inferential analysis, it is concluded that the null hypothesis (H40) is also rejected, implying that there is no significant differences in the perceived leadership behaviour and in the job satisfaction of employees based on their demographic characteristics, namely, age, education, marital status, number of children, employment duration, department, job grade, and position.

## **6.2. Conclusion**

The aim of this dissertation has been to study the relationship between perceived leadership behaviour and employee job satisfaction. It has been concluded that there is a positive weak level relationship between the two. However, with a closer look at the relationship between leadership characteristics and job satisfaction categories, it has been concluded that the transformational leadership characteristics and the contingent reward characteristics of transactional leadership are positively correlated with a substantial proportion of job satisfaction dimensions while the rest of the characteristics of transactional leadership are negatively correlated with the job satisfaction dimensions. It has also been concluded that transformational leadership characteristics were predominantly included by the perceived leadership behaviour among the sampled employees. This study was conducted within limited time and therefore there were some difficulties experienced in terms of expanding the sample and extending the research into other companies. Therefore, further research may extend this field of study into other companies in the Turkish mining industry and add new constructs in terms of structural and technological transformation by utilizing qualitative and quantitative methods together.

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## Appendices

### Appendix 1

Statement	Group (Control Variables)	Group Categories	Mean Rank	Asymp. Sig. (p)	Test
<b>Considers me as having different needs, abilities, and aspirations from others</b>	Employment Duration	0 – 11 Months	82.38	0.020*	KW Test
		1 – 3 Years	34.83		
		Over 3 Years	50.66		
<b>Delays responding to urgent questions</b>		0 – 11 Months	44.50	0.027*	
		1 – 3 Years	73.50		
		Over 3 Years	48.40		
<b>Is effective in meeting my job-related needs</b>		0 – 11 Months	81.88	0.004*	
		1 – 3 Years	27.00		
		Over 3 Years	51.49		
<b>Works with me in a satisfactory way</b>		0 – 11 Months	69.88	0.020*	
		1 – 3 Years	28.00		
		Over 3 Years	51.94		
<b>Spends time teaching and coaching</b>	Position	Worker/ Foreman	46.58	0.032*	
		Overseer/ Unit Supervisor	62.04		
		Manager/ Supervisor	80.00		
		Other	69.38		
<b>Treats me as an individual rather than just as a member of a group</b>		Worker/ Foreman	46.50	0.038*	
		Overseer/ Unit Supervisor	63.96		
		Manager/ Supervisor	76.00		
		Other	67.63		
<b>Gets me to look at problems from many different angles</b>		Worker/ Foreman	46.93	0.040*	
		Overseer/ Unit Supervisor	58.96		
		Manager/ Supervisor	82.00		
		Other	70.75		
<b>Works with me in a satisfactory way</b>	Worker/ Foreman	46.69	00.42*		
	Overseer/ Unit Supervisor	63.04			
	Manager/ Supervisor	80.50			
	Other	63.50			
<b>Heightens my desire to succeed</b>	Worker/ Foreman	46.05	0.029*		
	Overseer/ Unit Supervisor	64.73			
	Manager/ Supervisor	80.33			
	Other	44.13			
<b>Is effective in meeting organizational requirements</b>	Worker/ Foreman	47.94	0.028*		
	Overseer/ Unit Supervisor	50.12			
	Manager/ Supervisor	89.50			
	Other	73.75			

Note: (\*) Statistically significant at a 5% level

## Appendix 2

Statement	Group (Control Variables)	Group Categories	Mean Rank	Asymp. Sig. (p)	Test
Spends time teaching and coaching	Education	Primary school/ Secondary School	39.07	0.006*	KW Test
		High school/ Vocational high school/ College	54.91		
		Bachelor's Degree/ Master's Degree/ Doctorate Degree	71.80		
Displays a sense of power and confidence		Primary school/ Secondary School	39.97	0.021*	
		High school/ Vocational high school/ College	55.04		
		Bachelor's Degree/ Master's Degree/ Doctorate Degree	63.70		
Articulates a compelling vision of future		Primary school/ Secondary School	41.33	0.040*	
		High school/ Vocational high school/ College	53.91		
		Bachelor's Degree/ Master's Degree/ Doctorate Degree	67.00		
Avoids making decision		Primary school/ Secondary School	62.60	0.002*	
		High school/ Vocational high school/ College	43.79		
		Bachelor's Degree/ Master's Degree/ Doctorate Degree	31.30		
Is effective in meeting my job-related needs	Primary school/ Secondary School	40.44	0.023*		
	High school/ Vocational high school/ College	54.44			
	Bachelor's Degree/ Master's Degree/ Doctorate Degree	67.30			

Statement	Group (Control Variables)	Group Categories	Mean Rank	Asymp. Sig. (p)	Test
Avoids getting involved when important when important issues arise	Education	Primary school/ Secondary School	58.81	0.030*	KW Test
		High school/ Vocational high school/ College	45.99		
		Bachelor's Degree/ Master's Degree/ Doctorate Degree	33.10		
Talks about their most important values and beliefs		Primary school/ Secondary School	40.81	0.034*	
		High school/ Vocational high school/ College	52.22		
		Bachelor's Degree/ Master's Degree/ Doctorate Degree	69.60		
Instils pride in me for being associated with him/her		Primary school/ Secondary School	40.01	0.013*	
		High school/ Vocational high school/ College	53.21		
		Bachelor's Degree/ Master's Degree/ Doctorate Degree	72.90		
Specifies the importance of having a strong sense of purpose		Primary school/ Secondary School	39.31	0.010*	
		High school/ Vocational high school/ College	55.11		
		Bachelor's Degree/ Master's Degree/ Doctorate Degree	67.70		

Statement	Group (Control Variables)	Group Categories	Mean Rank	Asymp. Sig. (p)	Test
Uses methods of leadership that are satisfying	Education	Primary school/ Secondary School	40.38	0.024*	KW Test
		High school/ Vocational high school/ College	54.57		
		Bachelor's Degree/ Master's Degree/ Doctorate Degree	66.30		
Gets me to do more than I expected to do		Primary school/ Secondary School	39.04	0.019*	
		High school/ Vocational high school/ College	55.66		
		Bachelor's Degree/ Master's Degree/ Doctorate Degree	51.30		
Is effective in representing me to higher authority		Primary school/ Secondary School	41.04	0.048*	
		High school/ Vocational high school/ College	54.53		
		Bachelor's Degree/ Master's Degree/ Doctorate Degree	62.00		
Works with me in a satisfactory way		Primary school/ Secondary School	42.08	0.032*	
		High school/ Vocational high school/ College	52.93		
		Bachelor's Degree/ Master's Degree/ Doctorate Degree	73.00		
Heightens my desire to succeed	Primary school/ Secondary School	41.19	0.027*		
	High school/ Vocational high school/ College	51.68			
	Bachelor's Degree/ Master's Degree/ Doctorate Degree	73.10			

<b>Is effective in meeting organizational requirements</b>	<b>Education</b>	Primary school/ Secondary School	41.76	0.018*	<b>KW Test</b>
		High school/ Vocational high school/ College	52.89		
		Bachelor's Degree/ Master's Degree/ Doctorate Degree	75.80		
<b>Leads a group that is effective</b>		Primary school/ Secondary School	39.83	0.023*	
		High school/ Vocational high school/ College	55.72		
		Bachelor's Degree/ Master's Degree/ Doctorate Degree	56.90		

Note: (\*) Statistically significant at a 5% level



## Appendix 3

Statement	Group (Control Variables)	Group Categories	Mean Rank	Asymp. Sig. (p)	Test
<b>Provides me with assistance in exchange for my efforts</b>	Department	Mine	50.93	0.006*	KW Test
		Mechanic/ Workshop/ Both	43.62		
		Electric	70.32		
		Material Planning	72.19		
		Coal Washery	38.25		
<b>Re-examines critical assumptions to question whether they are appropriate</b>		Mine	49.40	0.011*	
		Mechanic/ Workshop/ Both	41.39		
		Electric	68.95		
		Material Planning	69.56		
		Coal Washery	55.60		
<b>Avoids getting involved when important issues arise</b>		Mine	51.63	0.032*	
		Mechanic/ Workshop/ Both	57.65		
		Electric	48.55		
		Material Planning	27.38		
		Coal Washery	38.45		
<b>Talks about their most important values and beliefs</b>		Mine	40.95	0.019*	
		Mechanic/ Workshop/ Both	46.67		
		Electric	64.95		
		Material Planning	49.50		
		Coal Washery	69.20		
<b>Instils pride in me for being associated with him/her</b>	Mine	39.92	0.035*		
	Mechanic/ Workshop/ Both	50.15			
	Electric	68.91			
	Material Planning	62.06			
	Coal Washery	49.20			
<b>Discusses in specific terms who is responsible for achieving performance targets</b>	Mine	53.27	0.028*		
	Mechanic/ Workshop/ Both	41.79			
	Electric	70.41			
	Material Planning	61.50			
	Coal Washery	47.20			
<b>Specifies the importance of having a strong sense of purpose</b>	Mine	45.33	0.022*		
	Mechanic/ Workshop/ Both	44.41			
	Electric	67.95			
	Material Planning	54.50			
	Coal Washery	68.55			

Statement	Group (Control Variables)	Group Categories	Mean Rank	Asymp. Sig. (p)	Test
<b>Keeps track of all mistakes</b>	Department	Mine	62.43	0.044*	KW Test
		Mechanic/ Workshop/ Both	44.23		
		Electric	53.27		
		Material Planning	36.31		
		Coal Washery	44.95		
<b>Avoids making decision</b>		Mine	59.32	0.009*	
		Mechanic/ Workshop/ Both	53.18		
		Electric	41.68		
		Material Planning	22.00		
		Coal Washery	45.55		
<b>Helps me to develop my strengths</b>		Mine	48.05	0.039*	
		Mechanic/ Workshop/ Both	45.55		
		Electric	69.00		
		Material Planning	68.44		
		Coal Washery	43.45		
<b>Delays responding to urgent questions</b>		Mine	45.83	0.039*	
		Mechanic/ Workshop/ Both	56.65		
		Electric	46.77		
		Material Planning	28.38		
		Coal Washery	61.10		
<b>Expresses confidence that goals will be achieved</b>	Mine	50.43	0.006*		
	Mechanic/ Workshop/ Both	43.80			
	Electric	74.36			
	Material Planning	66.88			
	Coal Washery	38.80			
<b>Uses methods of leadership that are satisfying</b>	Mine	45.38	0.012*		
	Mechanic/ Workshop/ Both	44.01			
	Electric	72.91			
	Material Planning	66.88			
	Coal Washery	54.70			
<b>Works with me in a satisfactory way</b>	Mine	50.53	0.034		
	Mechanic/ Workshop/ Both	45.15			
	Electric	70.73			
	Material Planning	63.88			
	Coal Washery	39.40			
<b>Goes beyond self-interest for the good of the group</b>	Department	Mine	48.08	0.08	KW Test
		Mechanic/ Workshop/ Both	47.18		
		Electric	71.95		
		Material Planning	64.13		
		Coal Washery	31.60		

Note: (\*) Statistically significant at a 5% level.

## Appendix 4

Statement	Group (Control Variables)	Group Categories	Mean Rank	Asymp. Sig. (p)	Test
My supervisor is quite competent in doing his/her job	Education	Primary School/Secondary School	41.33	0.019*	KW Test
		High School/ Vocational High School/ College	53.28		
		Bachelor's Degree/ Master's Degree/ Doctorate Degree	74.30		
I am not satisfied with the benefits I receive		Primary School/Secondary School	39.10	0.027*	
		High School/ Vocational High School/ College	53.85		
		Bachelor's Degree/ Master's Degree/ Doctorate Degree	60.00		
I don't feel that my efforts are rewarded the way they should be		Primary School/Secondary School	39.54	0.016*	
		High School/ Vocational High School/ College	54.25		
		Bachelor's Degree/ Master's Degree/ Doctorate Degree	67.10		
I have too much paperwork	Children	No children	41.12	0.013*	
		1 - 3	55.51		
		4 - 6	13.50		
There are few rewards for those who work here	Employment Duration	0 – 11 Months	35.88	0.046*	
		1 – 3 Years	70.89		
		Over 3 Years	49.06		
My supervisor is quite competent in doing his/her job	Department	Mine	42.42	0.006*	
		Mechanic/ Workshop/ Both	44.78		
		Electric	71.09		
		Material Planning	62.06		
		Coal Washery	66.30		
I do not feel that the work I do is appreciated		Mine	46.53	0.021*	
		Mechanic/ Workshop/ Both	58.63		
		Electric	57.36		
		Material Planning	41.19		
		Coal Washery	28.95		
My efforts to do a good job are seldom blocked by red tape		Mine	36.97	0.012*	
		Mechanic/ Workshop/ Both	52.45		
		Electric	46.15		
		Material Planning	69.06		
		Coal Washery	63.00		
The benefits we receive are as good as most other organizations	Mine	67.35	0.001*		
	Mechanic/ Workshop/ Both	41.46			
	Electric	42.35			
	Material Planning	35.50			
	Coal Washery	52.20			

I like my supervisor	Position	Mine	43.98	0.001*
		Mechanic/ Workshop/ Both	45.49	
		Electric	74.05	
		Material Planning	76.06	
		Coal Washery	44.25	
I don't feel that my efforts are rewarded the way they should be		Mine	41.28	0.009*
		Mechanic/ Workshop/ Both	49.07	
		Electric	42.60	
		Material Planning	67.00	
		Coal Washery	73.75	
There is too much bickering and fighting at work		Mine	52.82	0.029*
		Mechanic/ Workshop/ Both	56.52	
		Electric	53.68	
		Material Planning	28.63	
		Coal Washery	32.85	
My supervisor is quite competent in doing his/her job		Worker/Foreman/Personnel	46.32	0.025*
		Overseer/ Unit Supervisor	64.58	
		Manager	65.00	
		Other	77.50	
My efforts to do a good job are seldom blocked by red tape		Worker/Foreman/Personnel	45.16	0.009*
	Overseer/ Unit Supervisor	73.38		
	Manager	53.83		
	Other	53.25		
Work assignments are not fully explained	Worker/Foreman/Personnel	54.77	0.019*	
	Overseer/ Unit Supervisor	37.35		
	Manager	23.33		
	Other	28.25		

Note: (\*) Statistically significant at 5% level.

## Appendix 5

Facet	Item no	Item Statement
Pay Satisfaction	1	I feel I am being paid a fair amount for the work I do
	10	Raises are too few and far between
	19	I feel I am being paid a fair amount for the work I do
	28	I feel satisfied with my chances for salary increases
Promotion Satisfaction	2	There is really too little chance for promotion on my job
	11	Those who do well on the job stand a fair chance of being promoted
	20	Employees get ahead as fast here as they do in other organisations
Supervision Satisfaction	33	I am satisfied with my chances for promotion
	3	My supervisor is quite competent in doing his or her job
	12	My supervisor is unfair to me
	21	My supervisor shows too little interest in the feelings of employees
Fringe Benefits Satisfaction	30	I like my supervisor
	4	I am not satisfied with the benefits I receive
	13	The benefits we receive are as good as most other organisations offer
	22	The benefit package we have is equitable
Contingent Rewards Satisfaction	29	There are benefits we do not have which we should have
	5	When I do a good job, I receive the recognition for it that I should receive
	14	I do not feel that the work I do is appreciated
	23	There are few rewards for those who work here
Operating Conditions Satisfaction	32	I don't feel my efforts are rewarded the way they should be
	6	Many of our rules and procedures make doing a good job difficult
	15	My efforts to do a good job are seldom blocked by red tape
	24	I have too much to do at work
Co-Workers Satisfaction	31	I have too much paperwork
	7	I like the employees I work with
	16	I find I have to work harder at my job because of the incompetence of employees I work with
	25	I enjoy my co-workers
Nature of Work Satisfaction	34	There is too much bickering and fighting at work
	8	I sometimes feel my job is meaningless
	17	I like doing the things I do at work
	27	I feel a sense of pride in doing my job
Communication Satisfaction	35	My job is enjoyable
	9	Communications seem good within this organisation
	18	The goals of this organisation are not clear to me
	26	I often feel that I do not know what is going on with the organisation
	36	Work assignments are not fully explained

Source: Spector (1997)

Construct	SPSS variable name	Item No. <sup>a</sup>	Construct	SPSS variable name	Item No. <sup>a</sup>
Transformational: Idealised Influence (Behaviour)	IIB	6	Transactional: Management by Exception (Active)	MbE Active	4
		14			22
		23			24
		34			27
Transformational: Idealised Influence (Attributed)	IIA	10	Transactional: Management by Exception (Passive)	MbE Passive	3
		18			12
		21			17
		25			20
Transformational: Inspirational Motivation	IM	9	Non-leadership: Laissez-Faire	LF	5
		13			7
		26			28
		36			33
Transformational: Intellectual Stimulation	IS	2	Outcomes: Satisfaction with leadership	SAT	38
		8			41
		30			
		32			
Transformational: Individual Consideration	IC	15			
		19			
		29			
		31			
Transactional: Contingent Reward	CR	1			
		11			
		16			
		35			

<sup>a</sup> The items in each construct are scored in one logical direction using a 4 point scale (0 = Not at all, 1 = Once in a while; 2 = Sometimes; 3 = Fairly Often; 4 = Frequently, if not always).

## Appendix 6

Statement								
Provides me with assistance in exchange for my efforts	Statement	My supervisor is quite competent in doing his/her job	My supervisor is unfair to me	The benefit package we have is equitable	Work assignments are not fully explained			
	Correlation Coefficient (Kendall's tau_b)	0.183*	-0.299**	0.190*	-0.171*			
Re-examines critical assumptions to question whether they are appropriate	Statement	My supervisor is quite competent in doing his/her job	I like the people I work with	My supervisor is unfair to me	People get ahead as fast here as they do in other places	There are few rewards for those who work here	I enjoy my co-workers	
	Correlation Coefficient (Kendall's tau_b)	0.196*	0.177*	-0.192*	-0.183*	0.307**	0.176*	
Fails to interfere until problems become serious	Statement	My supervisor is unfair to me	There are few rewards for those who work here					
	Correlation Coefficient (Kendall's tau_b)	0.186*	-0.240**					
Focuses attention on irregularities, mistakes, exceptions, and deviations from standards	Statement	I find I have to work harder at my job because of the incompetence of people I work with	People get ahead as fast here as they do in other places	I am satisfied with my chances for promotion				
	Correlation Coefficient (Kendall's tau_b)	-0.185*	-0.201*	-0.195*				
Avoids getting involved when important issues arise	Statement	My supervisor is quite competent in doing his/her job	I like the people I work with	I do not feel that the work I do is appreciated	I find I have to work harder at my job because of the incompetence of people I work with	I enjoy my co-workers	I am satisfied with my chances for promotion	Work assignments are not fully explained
	Correlation Coefficient (Kendall's tau_b)	-0.197*	-0.205*	0.200*	0.223**	-0.165*	-0.201*	
Talks about their most important values and beliefs	Statement	There is really too little chance for promotion on my job	My supervisor is quite competent in doing his/her job	Raises are too few and far between	I like doing the things I do at work	People get ahead as fast here as they do in other places	There are few rewards for those who work here	
	Correlation Coefficient (Kendall's tau_b)	0.188*	0.333**	0.239**	-0.227**	-0.233**	0.202*	

Statement									
Is absent when needed	Statement	I find I have to work harder at my job because of the incompetence of people I work with							
	Correlation Coefficient (Kendall's tau_b)	0.220*							
Seeks differing perspectives when solving problems	Statement	My supervisor is quite competent in doing his/her job	I like the people I work with	I find I have to work harder at my job because of the incompetence of people I work with	I find I have to work harder at my job because of the incompetence of people I work with	The benefit package we have is equitable	There are few rewards for those who work here	I enjoy my co-workers	Work assignments are not fully explained
	Correlation Coefficient (Kendall's tau_b)	0.292**	0.228**	-0.161*	-0.197*	0.195*	0.236**	0.191*	-0.166*
Talks optimistically about the future	Statement	My supervisor is quite competent in doing his/her job							
	Correlation Coefficient (Kendall's tau_b)	0.273**							
Instils pride in me for being associated with him/her	Statement	My supervisor is quite competent in doing his/her job	I like the people I work with	Raises are too few and far between	I enjoy my co-workers	I like my supervisor	My job is enjoyable	Work assignments are not fully explained	
	Correlation Coefficient (Kendall's tau_b)	0.202*	0.177*	0.220*	0.180*	0.161*	0.171*	-0.178*	

Statement							
Discusses in specific terms who is responsible for achieving performance targets	Statement	My supervisor is quite competent in doing his/her job	The goals of this organization are not clear to me	The benefit package we have is equitable	I feel satisfied with my chances for salary increases	I like my supervisor	Work assignments are not fully explained
	Correlation Coefficient (Kendall's tau_b)	0.208**	-0.185*	0.312**	0.224**	0.181*	-0.200*
Waits for things to go wrong before taking action	Statement	My supervisor is unfair to me	I do not feel that the work I do is appreciated	My job is enjoyable	Work assignments are not fully explained		
	Correlation Coefficient (Kendall's tau_b)	0.208*	0.193*	-0.196*	0.228**		
Talks enthusiastically about what needs to be accomplished	Statement	My supervisor is quite competent in doing his/her job	Raises are too few and far between	I enjoy my co-workers	My job is enjoyable	Work assignments are not fully explained	
	Correlation Coefficient (Kendall's tau_b)	0.213**	0.184*	0.172*	0.172*	-0.194*	
Specifies the importance of having a strong sense of purpose	Statement	There is really too little chance for promotion on my job	My supervisor is quite competent in doing his/her job	Raises are too few and far between			
	Correlation Coefficient (Kendall's tau_b)	-0.184*	0.283**	0.219*			
Spends time teaching and coaching	Statement	My supervisor is quite competent in doing his/her job	The benefit package we have is equitable	Work assignments are not fully explained			
	Correlation Coefficient (Kendall's tau_b)	0.210**	0.229**	-0.198*			

Statement					
Makes clear what one can expect to receive when performance goals are achieved	Statement	I like the people I work with	The benefit package we have is equitable	Work assignments are not fully explained	
	Correlation Coefficient (Kendall's tau_b)	0.252**	0.220**	-0.193*	
Shows that he/she is a firm believer in "If it ain't broke, don't fix it."	Statement	My supervisor is unfair to me	I am satisfied with my chances for promotion		
	Correlation Coefficient (Kendall's tau_b)	0.187*	-0.184*		
Goes beyond self-interest for the good of the group	Statement	My supervisor is quite competent in doing his/her job	My supervisor is unfair to me	I find I have to work harder at my job because of the incompetence of people I work with	I like my supervisor
	Correlation Coefficient (Kendall's tau_b)	0.193*	-0.178*	-0.161*	0.256**
Treats me as an individual rather than just as a member of a group	Statement	I sometimes feel my job is meaningless	My supervisor is unfair to me	I like my supervisor	
	Correlation Coefficient (Kendall's tau_b)	-0.169	-0.201*	0.174*	
Demonstrates that problems must become chronic before taking action	Statement	There are benefits we do not have which we should have	I am satisfied with my chances for promotion		
	Correlation Coefficient (Kendall's tau_b)	0.200*	-0.198*		
Acts in ways that builds my respect	Statement	My supervisor is quite competent in doing his/her job	I like the people I work with	Those who do well on the job stand a fair chance of being promoted	My job is enjoyable
	Correlation Coefficient (Kendall's tau_b)	0.164*	0.169*	0.169*	0.168*

Statement							
Concentrates his/her full attention on dealing with mistakes, complaints, and failures	Statement	My supervisor is quite competent in doing his/her job	There are few rewards for those who work here	I like my supervisor	Work assignments are not fully explained		
	Correlation Coefficient (Kendall's tau_b)	0.178*	0.193*	0.256*	-0.213*		
Considers the moral and ethical consequences of decisions	Statement	My supervisor is quite competent in doing his/her job	I am not satisfied with the benefits I receive	I like the people I work with	There are few rewards for those who work here	I like my supervisor	
	Correlation Coefficient (Kendall's tau_b)	0.249**	0.195*	0.189*	0.180*	0.170*	
Keeps track of all mistakes	Statement	My supervisor is quite competent in doing his/her job	I find I have to work harder at my job because of the incompetence of people I work with				
	Correlation Coefficient (Kendall's tau_b)	0.206*	-0.181*				
Displays a sense of power and confidence	Statement	My supervisor is quite competent in doing his/her job	I like the people I work with	The benefit package we have is equitable			
	Correlation Coefficient (Kendall's tau_b)	0.251**	0.253**	0.228**			
Articulates a compelling vision of future	Statement	My supervisor is quite competent in doing his/her job	I like the people I work with	Those who do well on the job stand a fair chance of being promoted	My efforts to do a good job are seldom blocked by red tape	The benefit package we have is equitable	I enjoy my coworkers
	Correlation Coefficient (Kendall's tau_b)	0.242**	0.195*	0.251**	0.180*	0.216**	0.173*

Statement									
Directs my attention toward failures to meet standards	Statement	The goals of this organization are not clear to me	I like my supervisor	I don't feel that my efforts are rewarded the way they should be					
	Correlation Coefficient (Kendall's tau_b)	0.180*	0.197*	0.192*					
Avoids making decision	Statement	My supervisor is quite competent in doing his/her job	When I do a good job, I receive the recognition for it that I should receive	I feel satisfied with my chances for salary increases	I like my supervisor				
	Correlation Coefficient (Kendall's tau_b)	-0.223**	-0.216**	-0.179*	-0.276**				
Considers me as having different needs, abilities, and aspirations from others	Statement	My supervisor is quite competent in doing his/her job	When I do a good job, I receive the recognition for it that I should receive	Raises are too few and far between	There are few rewards for those who work here	I enjoy my co-workers	I like my supervisor	My job is enjoyable	Work assignments are not fully explained
	Correlation Coefficient (Kendall's tau_b)	0.285**	0.182*	0.211*	0.179*	0.209*	0.196*	0.188*	-0.187*
Gets me to look at problems from many different angles	Statement	My supervisor is quite competent in doing his/her job	I like the people I work with	I feel unappreciated by the organization when I think about what they pay me	The benefit package we have is equitable	There are few rewards for those who work here	I enjoy my co-workers	I like my supervisor	My job is enjoyable
	Correlation Coefficient (Kendall's tau_b)	0.223**	0.221**	0.170*	0.230**	0.201*	0.189*	0.191*	0.204*

Statement						
Helps me to develop my strengths	Statement	My supervisor is quite competent in doing his/her job	I like the people I work with	I feel unappreciated by the organization when I think about what they pay me	The benefit package we have is equitable	I like my supervisor
	Correlation Coefficient (Kendall's tau_b)	0.240**	0.170*	0.195*	0.234**	0.211**
Suggests new ways of looking at how to complete assignments	Statement	My supervisor is quite competent in doing his/her job	I like the people I work with	I like my supervisor		
	Correlation Coefficient (Kendall's tau_b)	0.304**	0.172*	0.179*		
Delays responding to urgent questions	Statement	The goals of this organization are not clear to me	I like my supervisor	I have too much paperwork	I am satisfied with my chances for promotion	Work assignments are not fully explained
	Correlation Coefficient (Kendall's tau_b)	0.216**	-0.170*	0.163*	-0.179*	0.218**
Emphasizes the importance of having a collective sense of mission	Statement	My supervisor is quite competent in doing his/her job	There are benefits we do not have which we should have			
	Correlation Coefficient (Kendall's tau_b)	0.230**	0.169*			
Expresses satisfaction when I meet expectations	Statement	My supervisor is quite competent in doing his/her job	I like the people I work with	There are benefits we do not have which we should have	I like my supervisor	
	Correlation Coefficient (Kendall's tau_b)	0.286**	0.189*	0.213*	0.210*	
Expresses confidence that goals will be achieved	Statement	My supervisor is quite competent in doing his/her job	When I do a good job, I receive the recognition for it that I should receive	I like the people I work with	I sometimes feel my job is meaningless	I like my supervisor
	Correlation Coefficient (Kendall's tau_b)	0.304**	0.172*	0.195*	-0.165*	0.223**

Statement								
Is effective in meeting my job-related needs	Statement	I feel I am being paid a fair amount of for the work I do	My supervisor is quite competent in doing his/her job	I like the people I work with	The benefit package we have is equitable			
	Correlation Coefficient (Kendall's tau_b)	-0.190*	0.259**	0.186*	0.207*			
Uses methods of leadership that are satisfying	Statement	My supervisor is quite competent in doing his/her job	Raises are too few and far between	The benefit package we have is equitable	There are few rewards for those who work here	I enjoy my coworkers	I like my supervisor	Work assignments are not fully explained
	Correlation Coefficient (Kendall's tau_b)	0.383**	0.187*	0.187*	0.189*	0.239**	0.239**	-0.167
Gets me to do more than I expected to do	Statement	My supervisor is unfair to me	The benefit package we have is equitable					
	Correlation Coefficient (Kendall's tau_b)	-0.178*	0.224**					
Is effective in representing me to higher authority	Statement	My supervisor is quite competent in doing his/her job	My supervisor is unfair to me	I find I have to work harder at my job because of the incompetence of people I work with	The benefit package we have is equitable	I like my supervisor	Work assignments are not fully explained	
	Correlation Coefficient (Kendall's tau_b)	0.240**	-0.246**	-0.195*	0.247**	0.189*	-0.199*	

Statement							
Works with me in a satisfactory way	Statement	My supervisor is quite competent in doing his/her job	My supervisor is unfair to me	The benefit package we have is equitable	I enjoy my co-workers	I like my supervisor	Work assignments are not fully explained
	Correlation Coefficient (Kendall's tau_b)	0.308**	-0.204*	0.182*	0.177*	0.333**	-0.213**
Heightens my desire to succeed	Statement	My supervisor is quite competent in doing his/her job	Many of our rules and procedures make doing a good job difficult	I feel unappreciated by the organization when I think about what they pay me	I like my supervisor		
	Correlation Coefficient (Kendall's tau_b)	0.299**	0.167*	0.174*	0.171*		
Is effective in meeting organizational requirements	Statement	My supervisor is quite competent in doing his/her job	I like the people I work with	The benefit package we have is equitable	I like my supervisor		
	Correlation Coefficient (Kendall's tau_b)	0.253**	0.185*	0.218**	0.184*		
Increases my willingness to try harder	Statement	My supervisor is quite competent in doing his/her job	The benefits we receive are as good as most other organizations	I like my supervisor			
	Correlation Coefficient (Kendall's tau_b)	0.243**	0.200*	0.170*			
Leads a group that is effective	Statement	My supervisor is quite competent in doing his/her job	I like the people I work with	There are benefits we do not have which we should have	I like my supervisor	Work assignments are not fully explained	
	Correlation Coefficient (Kendall's tau_b)	0.278**	0.200*	0.169*	0.169*	-0.184*	

Note: (\*\*) Statistically significant at a 1% level; (\*) statistically significant at 5%

**Appendix 7**

Construct	Variable Name	Category Score (Satisfaction/Dissatisfaction)	Construct	Variable Name	Category Score (Satisfaction/Dissatisfaction)
Pay Satisfaction	PS	Satisfaction: 2.14 Dissatisfaction: 4.77	Nature of Work Satisfaction	NoWS	Satisfaction: 4.70 Dissatisfaction: 2.75
Promotion Satisfaction	PRS	Satisfaction: 3.10 Dissatisfaction: 3.38	Communication Satisfaction	CS	Satisfaction: 3.56 Dissatisfaction: 3.50
Supervision Satisfaction	SS	Satisfaction: 4.16 Dissatisfaction: 3.01	Overall		Satisfaction: 3.91
Fringe Benefits Satisfaction	FBS	Satisfaction: 2.48 Dissatisfaction: 4.21			
Contingent Reward Satisfaction	CRS	Satisfaction: 3.33 Dissatisfaction: 3.55			
Operating Conditions Satisfaction	OCS	Satisfaction: 3.17 Dissatisfaction: 3.51			
Co-workers Satisfaction	CWS	Satisfaction: 4.41 Dissatisfaction: 3.12			

## Appendix 8

## Tests of Normality

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Provides me with assistance in exchange for my efforts	.166	77	.000	.894	77	.000
Re-examines critical assumptions to question whether they are appropriate	.233	77	.000	.889	77	.000
Fails to interfere until problems become serious	.243	77	.000	.832	77	.000
Focuses attention on irregularities, mistakes, exceptions, and deviations from standards	.226	77	.000	.883	77	.000
Avoids getting involved when important issues arise	.261	77	.000	.776	77	.000
Talks about their most important values and beliefs	.173	77	.000	.886	77	.000
Is absent when needed	.478	77	.000	.523	77	.000
Seeks differing perspectives when solving problems	.194	77	.000	.882	77	.000

Talks optimistically about the future	.187	77	.000	.882	77	.000
Instills pride in me for being associated with him/her	.194	77	.000	.884	77	.000
Discusses in specific terms who is responsible for achieving performance targets	.136	77	.001	.899	77	.000
Waits for things to go wrong before taking action	.315	77	.000	.780	77	.000
Talks enthusiastically about what needs to be accomplished	.251	77	.000	.872	77	.000
Specifies the importance of having a strong sense of purpose	.178	77	.000	.878	77	.000
Spends time teaching and coaching	.238	77	.000	.857	77	.000
Makes clear what one can expect to receive when performance goals are achieved	.187	77	.000	.901	77	.000
Shows that he/she is a firm believer in "If it ain't broke, don't fix it."	.179	77	.000	.902	77	.000

Goes beyond self-interest for the good of the group	.211	77	.000	.834	77	.000
Treats me as an individual rather than just as a member of a group	.197	77	.000	.892	77	.000
Demonstrates that problems must become chronic before taking action	.199	77	.000	.870	77	.000
Acts in ways that builds my respect	.211	77	.000	.885	77	.000
Concentrates his/her full attention on dealing with mistakes, complaints, and failures	.240	77	.000	.857	77	.000
Considers the moral and ethical consequences of decisions	.172	77	.000	.893	77	.000
Keeps track of all mistakes	.192	77	.000	.885	77	.000
Displays a sense of power and confidence	.221	77	.000	.876	77	.000
Articulates a compelling vision of future	.208	77	.000	.881	77	.000
Directs my attention toward failures to meet standards	.251	77	.000	.825	77	.000
Avoids making decision	.253	77	.000	.808	77	.000

Considers me as having different needs, abilities, and aspirations from others	.178	77	.000	.871	77	.000
Gets me to look at problems from many different angles	.234	77	.000	.872	77	.000
Helps me to develop my strengths	.242	77	.000	.843	77	.000
Suggests new ways of looking at how to complete assignments	.214	77	.000	.877	77	.000
Delays responding to urgent questions	.300	77	.000	.792	77	.000
Emphasizes the importance of having a collective sense of mission	.184	77	.000	.881	77	.000
Expresses satisfaction when I meet expectations	.223	77	.000	.859	77	.000
Expresses confidence that goals will be achieved	.185	77	.000	.871	77	.000
Is effective in meeting my job-related needs	.207	77	.000	.875	77	.000
Uses methods of leadership that are satisfying	.177	77	.000	.863	77	.000

Gets me to do more than I expected to do	.227	77	.000	.880	77	.000
Is effective in representing me to higher authority	.151	77	.000	.892	77	.000
Works with me in a satisfactory way	.200	77	.000	.876	77	.000
Heightens my desire to succeed	.210	77	.000	.882	77	.000
Is effective in meeting organizational requirements	.151	77	.000	.888	77	.000
Increases my willingness to try harder	.214	77	.000	.855	77	.000
Leads a group that is effective	.214	77	.000	.841	77	.000
I feel I am being paid a fair amount of for the work I do	.390	77	.000	.630	77	.000
There is really too little chance for promotion on my job	.238	77	.000	.871	77	.000
My supervisor is quite competent in doing his/her job	.216	77	.000	.860	77	.000
I am not satisfied with the benefits I receive	.236	77	.000	.783	77	.000

When I do a good job, I receive the recognition for it that I should receive	.194	77	.000	.904	77	.000
Many of our rules and procedures make doing a good job difficult	.171	77	.000	.906	77	.000
I like the people I work with	.265	77	.000	.799	77	.000
I sometimes feel my job is meaningless	.262	77	.000	.825	77	.000
Communications seem good within this organization	.160	77	.000	.896	77	.000
Raises are too few and far between	.314	77	.000	.633	77	.000
Those who do well on the job stand a fair chance of being promoted	.250	77	.000	.804	77	.000
My supervisor is unfair to me	.244	77	.000	.852	77	.000
The benefits we receive are as good as most other organizations	.203	77	.000	.838	77	.000
I do not feel that the work I do is appreciated	.249	77	.000	.817	77	.000
My efforts to do a good job are seldom blocked by red tape	.179	77	.000	.899	77	.000

I find I have to work harder at my job because of the incompetence of people I work with	.207	77	.000	.872	77	.000
I like doing the things I do at work	.278	77	.000	.793	77	.000
The goals of this organization are not clear to me	.200	77	.000	.875	77	.000
I feel unappreciated by the organization	.267	77	.000	.768	77	.000
when I think about what they pay me						
People get ahead as fast here as they do in other places	.205	77	.000	.855	77	.000
My supervisor shows too little interest in the feelings of subordinates	.184	77	.000	.895	77	.000
The benefit package we have is equitable	.274	77	.000	.756	77	.000
There are few rewards for those who work here	.249	77	.000	.777	77	.000
I have too much to do at work	.194	77	.000	.887	77	.000
I enjoy my coworkers	.271	77	.000	.812	77	.000

I often feel that I do not know what is going on with the organization	.220	77	.000	.851	77	.000
I feel sense of pride in doing my job	.306	77	.000	.739	77	.000
I feel satisfied with my chances for salary increases	.343	77	.000	.656	77	.000
There are benefits we do not have which we should have	.244	77	.000	.784	77	.000
I like my supervisor	.240	77	.000	.838	77	.000
I have too much paperwork	.232	77	.000	.873	77	.000
I don't feel that my efforts are rewarded the way they should be	.201	77	.000	.868	77	.000
I am satisfied with my chances for promotion	.178	77	.000	.880	77	.000
There is too much bickering and fighting at work	.228	77	.000	.845	77	.000
My job is enjoyable	.296	77	.000	.748	77	.000
Work assignments are not fully explained	.264	77	.000	.842	77	.000