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EMPLOYEE VOICE: A MULTIDIMENSIONAL SCALE CONSTRUCTION AND VALIDATION

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DECLARATION

I hereby declare that this doctoral titled as “Employee Voice: A Multidimensional Scale Construction and Validation” has been written by myself in accordance with the academic rules and ethical conduct. I also declare that all materials benefited in this thesis consist of the mentioned resources in the reference list. I verify all these with my honor.

Date: …/…/2017

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ABSTRACT

Doctoral Thesis

Doctor of Philosophy (PhD)

Employee Voice: A Multidimensional Scale Construction and Validation

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Doctorate Program

In this study a multidimensional scale for measuring the overall constructs of modern employee voice was developed. The employee voice literature was critically reviewed and a shift of voice arrangement from employee-oriented to organizational-oriented was observed. The previous researches and theories concerning management and employee voice were examined, and a conceptual framework of different phases of the flow of employee voice in an organization was developed. Many reasons underlay this shift but one of the major reasons is the change in attitude of organizations towards their employees. The scales adopted to measure employee voice since the year 1983 were examined. It was found that the scales used in literature are fundamentally measuring the traditional employee voice. As a result of this they lack the ability to validate the overall dimensions of the modern employee voice, hence this thesis aimed to develop a multidimensional employee voice scale to measure modern employee voice.

Items reflecting the logical and semantic content of the concept of employee voice were generated from studies and literature. Content analysis involved 11 PhD students and 4 management professors from different universities in Pakistan and Turkey. For factor analysis, 36 items were selected and they were scaled on a 5 point likert scale. Then the study was conducted in Dokuz Eylul University (DEU) hospital, and a total number of 406 employees at different departments were reached. The data

analysis procedures include Exploratory Factor Analysis, Confirmatory Factors Analysis and different model fit indices were tested.

The results provide support for a three factor multidimensional scale including employee provision of information, platform and manager's response. The overall scale consists of 10 items; 4 items on employee provision of information and 3 items each loading on platform and manager's response. This new multidimensional scale has the ability to measure the overall dimensions of the modern employee voice and is expected to be a valuable tool for both academics and practitioners.

Keywords: Multidimensional Scale of Employee Voice; Modern Employee Voice; Employee Voice Dimensions; Employee-Oriented Voice; Organizational-Oriented Voice

ÖZET

Doktora Tezi

ÇALIŞAN SESİ: ÇOK BOYUTLU BİR ÖLÇEK GELİŞTİRME

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İnglizçe İşletme Anabilim Dalı

Doktora Programı

Bu çalışmada modern çalışan sesini ölçmek için çok boyutlu bir ölçek geliştirilmiştir. Çalışan sesi alanındaki yazın incelenmiş çalışan yönelimli ses uygulamalarının zamanla örgüt yönelimli ses uygulamalarına dönüştüğü gözlemlenmiştir. Çalışan sesi ve yönetim arasındaki ilişkiye dair alandaki çalışmalar ve kuramlar incelenerek çalışan sesinin örgüt içindeki akışının farklı aşamalarını kapsayan bir kuramsal çerçeve geliştirilmiştir. Bu değişimi etkileyen pek çok unsur olmakla beraber bunların en önemlilerinden birisi örgütlerin çalışanlarına olan tavırlarındaki değişimdir. 1983'ten bu yana çalışan sesini ölçmek için kullanılan ölçekler incelenmiştir. Yazındaki ölçeklerin temel olarak geleneksel çalışan sesini ölçmeye yönelik olduğu görülmüştür. Bu ölçekler modern çalışan sesi ve boyutlarını ölçmekte yetersiz kaldıkları için, bu tez modern çalışan sesini ölçmeye yönelik çok boyutlu bir ölçek geliştirmeyi hedeflemiştir.

Çalışan sesi kavramının mantıksal ve anlam bilimsel yönlerini yansıtan maddeler alandaki çalışmalar ve yazın incelenerek geliştirilmiştir. İçerik analizi sürecinde Pakistan ve Türkiye'deki farklı üniversitelerden 11 doktora öğrencisi ve 4 yönetim profesöründen yararlanılmıştır. Faktör analizi için 36 madde seçilerek, 5li likert ölçeği uyarlanmıştır. Çalışma Dokuz Eylül Üniversitesi (DEÜ) hastanesinde uygulanarak farklı bölümlerden 406 çalışana ulaşılmıştır. Data analiz süreçlerinde Açıklayıcı Faktör ve Doğrulayıcı Faktör Analizleri uygulanmış ve çeşitli model uyum endeksleri test edilmiştir.

Sonuçlar çalışanın bilgi sağlaması, platform ve yöneticinin cevabı olmak üzere üç faktörü içeren çok boyutlu bir ölçeği desteklemektedir. 10 maddeden oluşan ölçek, çalışanın bilgi sağlamasına yönelik 4 madde ve platform ile yöneticinin cevabına yönelik 3 er maddeden oluşmaktadır. Geliştirilen bu yeni çok boyutlu ölçeğin modern çalışan sesinin bütününü ölçmeye yönelik yapısıyla hem akademisyenler hem de alandaki uygulamacılar için değerli bir araç olması beklenmektedir.

Anahtar Kelimeler: Çok Boyutlu Çalışan Sesi Ölçeği; Modern Çalışan Sesi; Çalışan Sesi Boyutları; Çalışana Yönelimli Ses; Örgütsel Yönelimli Ses

EMPLOYEE VOICE: A MULTIDIMENSIONAL SCALE CONSTRUCTION AND VALIDATION

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LIST OF ABBREVIATIONS

AGFI	Adjustment Goodness-Of-Fit
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CIPD	Chartered Institute of Personnel and Development
CMIN/DF	Chi Square/Degree Of Freedom Ratio
CWU	Communication Workers Union
DEU	Dokuz Eylul University
EFA	Exploratory Factor Analysis
EVLN	Exit, Voice, Loyalty, and Neglect
FOCC	Felt Obligation For Constructive Change
GFI	Goodness-Of-Fit
HTP	Health Transformation Program
KMO	Kaiser-Meyer-Olkin
MCFA	Multisampling Confirmatory Factors Analysis
MDS	Multidimensional Scaling
MEV	Modern Employee Voice
ML	Maximum Likelihood
OBSE	Organization-Based Self-Esteem
OCB	Organizational Citizenship Behavior
OECD	The Organization for Economic Co-operation and Development
PAF	Principal-Axis Factoring
PCA	Principal Components Analysis
P-E	Person-environment
RBV	Resource-Based View
RMSEA	Root Mean Square Error Of Approximation
SEM	Structural Equation Modelling
SHRM	Strategic Human Resource Management
TEV	Traditional Employee Voice
UN	United Nations

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INTRODUCTION

This thesis aims to examine modern employee voice in today's organizations and to develop a multidimensional scale for measuring employee voice in the modern organization. Changing nature of employee voice from employee-oriented to organizational-oriented is examined and the dimensions related to these two types are explained with the help of a conceptual framework. Beginning from the first scales in 1983, employee voice scales are examined and it is found that these scales lack are not suitable to measure employee voice in the modern era organizations. In order to answer the need for a modern employee voice scale, a scale that measures the overall dimensions of the modern employee voice is developed. This thesis provides an in-depth understanding of the changing nature of employee voice and the different scales of employee voice, which will help both researchers and practitioners related to organizational behavior and employee relational studies and work.

Beginning from the early periods of the twentieth century, employee voice concept has been widely discussed and its definition have widened. In the past, collective employee voice was a function of unions and was defined as a mechanism adopted by employees to resolve their issues or concerns (Freeman and Medoff, 1984; Miller and Mulvey, 1991). This collective voice was employee-oriented, where the arrangement of voice or in other words the platform for voice is provided by employees themselves in the form of union (Bryson, 2004; Dundon and Gollan, 2007). In such voice behavior the union is considered as a platform formed by similar group of employees to collectively challenge the management for their rights or issues related to work place (Millward et al., 2000). In literature different terminologies have been used for this union focused voice behavior such as collective bargaining and collective employee voice (Boxall and Purcell, 2003; Brewster et al., 2007; Freeman, 1976; Hiltrop, 1985).

A shift from collective employee voice to a more individual employee voice was observed in recent decades (Dundon and Gollan, 2007; Dundon et al., 2004; Holland et al., 2009; Wilkinson and Fay, 2011). There are many trends that initiated this transformation such as changing nature of business demanding quick and creative

information sharing, monopolistic approaches of unions, weaknesses and certain problems in union behaviors and structure underlay this shift, but one of the major reasons is the change in attitude of organizations toward their employees (Bowen and Blackmon, 2003; Farndale et al., 2011). This change of attitude was caused by the practical need to cope with the growing competitive business environment, as managers have become widely dependable on information from all levels of organization (Srivastava et al., 2006), and to break the monopolistic approach of union towards issues (Dutt and Sen, 1997; Maffezzoli, 2001). To address these issues organizations provided different mechanisms or platforms to employees through which they can raise their voices directly to the management (Holland et al., 2009). There have been many studies pointing that the weaknesses and certain problems in union behaviors and union structures dissociate employees and these employees moved toward non-unionized direct employee representation (Lloyd, 2001). There have been many debates about the effectiveness of non-unionized direct employee voice. These debates reached important results such as; interest of the organization are best served with the openness of organizational communication (Eisenberg and Witten, 1987); to reduce the problems and deficiencies associated with employee a true dialogue (two-way communication) process is required (Fish, 1990); two-way communication have broadened the scope and nature of employee voice and responsibility for both employee and employer (Dundon and Gollan, 2007; Holland et al., 2009; Wilkinson and Fay, 2011).

According to The Organization for Economic Co-operation and Development (OECD) statistics of trade union density the number of active trade union members and the number of wage and salary earners have decreased around the globe. The graphs of different countries that covers from year 1960 to 2012 can be seen in Appendix 1. Figure 1 in Appendix 1 displays the graph of the union density ratio of different countries shows that the density of the trade unions has decreased from 1960 to 2012. The density ratio of OECD countries show that the ratio was around 34% in 1960 and it decreased to around 16.8% in 2012. Earliest data available for Turkey was from 1986 and the ratio was 20.83%, and in 2012 it can be seen that there had been a major downfall to around 5% in 2012. In highly industrialized and unionized countries like United Kingdom, Germany and France there had been some increase in the decade of

1960-70, then a fall in the 1980-90 and later the rate of decrease onwards was slightly low as compared 1980-90.The graphs of union members and employees of different countries show that the gap between the total employees and the registered members of union are increasing. A similar pattern was observed in data collected for this study.

Data of the OECD database shows that the members of union have decreased dramatically in the last two decades. The main causes of this change were related to the major changes in the world economy and politics. After the collapse of Soviet Union, employees in the developed world have experienced a great decline in their rights. This decline has been accelerated with industrial changes and transfer of the production facilities to the cheap labor and non-unionized developing countries. On the organization level, Human Resources Management (HRM) became more of a substitute of labour unions and organizations began to focus on individual employee voice, employee participation, information sharing, and collective decision making (Benson, 2000; Edgar and Geare, 2005). During this period, organizational reforms toward employee voice and providing platform for the voice have contributed to the decrease in the membership of unions. The focus of voice for employee has shifted from employee oriented to organizational oriented (Wilkinson et al., 2004; Wilkinson and Fay, 2011). Organizational oriented employee voice has drawn attention from employees and also positively transformed the cognitive behavior of employees from only raising voice to providing valuable suggestions on different issues for betterment of organization (Morrison, 2011). In highly competitive business world the importance of individual employee voice cannot be overlooked if organizations want to be successful. Dundon et al. (2004) argued that organization's recognition of individual employee voice helps in identifying and solving problems and it will positively affect productivity and quality. In this study the term used for these two types of voice are: i) employee oriented as "Traditional Employee Voice" (TEV) and ii) organizational oriented as "Modern Employee Voice" (MEV).

In order to gain a deeper understanding of the voice concept, this study aims to provide a conceptual framework of employee voice's flow through organizations. Organizations were more centralized in past, command would follow from top to bottom and inputs from the lower level were not welcomed (Bluestone and Harrison,

1988; Dow, 1988; Jennings, 1959). Individually raising voice would be highly risky and would not pressurize the management to take action so it may result in employee switching job and moving to other organizations (Boswell and Olson-Buchanan, 2004; Olson-Buchanan and Boswell, 2008). Employees feel secure by affiliating themselves to a union as member, where problem faced by a single member would be supported by all members of the union (Newton and Shore, 1992). Collective bargaining and consultation was considered the main focus of representation of employee voice in the industrial relations. The TEV states that the platform for voice is developed by the employees themselves in the form of union (Dundon and Gollan, 2007; Millward et al., 2000). In the last few decades a shift in employee voice mechanism has been observed from TEV towards MEV (Dundon and Gollan, 2007; Holland et al., 2009; Wilkinson et al., 2004; Wilkinson and Fay, 2011). This shift of providing different voice mechanism was initiated by the organizations themselves (Bowen and Blackmon, 2003; Farndale et al., 2011). Modern employee voice (MEV) is an organization-oriented approach towards employee voice. The nature and procedure of MEV is a two-way communication, in which different platforms (medium) are provided by organizations where employees can raise their voice regarding issues and suggestions to their supervisor or top management (Budd et al., 2010; Liu, et al., 2010). The management is responsible for acknowledging the issues and providing solutions in a certain period of time. Keeping the main focus on MEV, the proposed flow of employee voice was classified into two cycles. The cycles are further divided into different phases. The first cycle is related to employees who are confronted with problems and need to raise their voice for the first time whereas the second cycle is concerned with employees who have experienced the first cycle.

MEV framework highlights the importance of reconsidering dimensions of the traditional employee voice scales used in management related studies. A comprehensive research of articles from 1983-2015 was conducted. Selection of articles were based on two criteria; a) Articles that developed a scale and these scales were adopted by other studies and b) Articles that adopted previously constructed scale either fully or partially. Out of 67 articles, 45 articles were selected that fulfilled the criteria. It was found that majority of the studies are using six items scale of voice behavior

developed by Van Dyne and Le Pine (1998). After analyzing these studies, it was concluded that the previous scales failed to consider the overall dimensions of modern employee voice in organizations. Rather it focuses on merely one aspect of MEV that is "provision of information by employee to management".

In order to apply and test the scale, a sample consisting of 406 employees including doctors and paramedical staff at Dokuz Eylul University (DEU) hospital was selected. The reason for selecting a public university hospital is that there is a big change in the health sector implemented by Turkish government as part of the Health Transformation Program to improve the efficiency and quality of the health services. This program has begun in 2008 and still continuing. In such an environment, public university hospital's challenge is retaining the number of doctors and paramedical staffs. This is not an easy task, as employees in the Turkish health sector have dissatisfaction related to job (Bodur, 2002; Kisa and Kisa, 2006; Rojan and Sahin, 2015). So lack of proper employee voice mechanism will prevent them from expressing their discontent and dissatisfaction will escalate more. Hence in this thesis the level of employee voice mechanism in public university hospital is discussed in detail. Based on the conceptual framework a scale was developed for measuring the two-way nature of modern employee voice. Scale's items were generated based on the dimensions identified from the literature. The data were analyzed, adopting EFA and CFA methodology to identify and establish the factors and the underlying items. As a result of the analysis, a three factor model with 10 items; 4 items on employee provision of information and 3 items each loading on platform and manager's response was proven to be the most appropriate model.

As outlined above, there has been a change in the nature of management's approach towards employee voice in the modern era and this resulted in organizations providing different opportunities to support employee voice. These changes have broadened the scope and nature of employee voice from one-way to two-way communication (Dundon and Gollan, 2007; Wilkinson et al., 2004; Wilkinson and Fay, 2011). In the two-way communication the role of the management is also considered within the domain of employee voice (Bryson et al., 2007; Edgar and Geare, 2005), whereas in TEV the management role was seen as a counter-role (Staw and Boettger,

1990). In other words, the domain of employee voice was only limited to voice behavior of employees in the past but nowadays employee voice domain has been widened to include platform and manager's response as in the case of MEV.

Studies related to employee voice show that the previous scales failed to consider the overall dimensions of modern employee voice in today's organizations. Because these scales were focused on "provision of information by employee to management" which is merely one aspect of MEV. Therefore this study aimed to explore this gap in detail, and to develop a new scale that could measure the overall dimensions of employee voice in the modern organization.

The objectives of the study are as follow:

1. To explore and analyze the employee voice concept's development and the scales used in the field.
2. To examine the employee voice mechanisms in the health sector of Turkey by means of doing a research on Dokuz Eylul University hospital.
3. To construct a scale through which the employee voice level of an organization can be measured.

To achieve these objectives a sequence of comprehensive steps were taken that are distributed in to different chapters which can be seen as follows:

Chapter 1 focuses on the literature in depth and positions the research question in the context of the existing discourses in the field of employee voice. An overview of employee voice was presented and the shift of employee voice was explained. This shift of employee voice also builds up two different types of employee voice. These two types are explained in detail in the conceptual framework of the flow of voice in modern organization. This framework helps in constructing the dimensions of employee voice in the modern organization. Also the different scales used in literature to measure employee voice are illustrated and the shortfalls in adapting of these scales in modern era organization are highlighted.

Chapter 2 consists of the explicit research approach, methodology and the philosophical roots of this research. It illustrates the research process and the details of the sample and data collection. The procedure of scale development and the measures for the data analysis are explained in detail.

Chapter 3 explains and discusses the outcomes of the various statistical analysis results of the study. In this chapter the relationships among the employee voice items are explored. It results in developing and validating a scale for measuring employee voice in the modern organization.

Chapters 4, the detail of the outcomes from the results are discussed. Also the research objectives are revisited and discussed. Furthermore the key contributions, limitations and future research are illustrated and conclusion of the study is expressed.

CHAPTER 1

EMPLOYEE VOICE

1.1. INTRODUCTION

This chapter provides a literature review in the field of employee voice. Therefore in the first part, section 1.2 and 1.3 of this chapter an overview of employee voice is presented and then the shift of employee voice is explained. This shift of employee voice also builds up two different types of employee voice. After which the conceptual framework is displayed in section 1.4, illustrating the flow of voice in modern organization. The framework is constructed on the base of previous researches and theories concerning management and employee relation. The framework helps in constructing the dimensions of employee voice in the modern organization. In the last section different scales that were used to measure employee voice are illustrated and the shortfalls in adapting of these scales in modern era organization are highlighted.

1.2. EMPLOYEE VOICE

In the earlier 20 century where most of organizations were centralized and employees had a single option to obey orders from the top management (Pugh et al., 1969). This also limited the voice behavior to one-way process and it allowed no other way for employees to join union to register their grievances. Because organizations were not interested to provide opportunity to employee for voicing their grief and suggestions. In this period, Zander (1962) stated that employees should be given a voice in formulating policy regarding pay level and determining their work condition which will lead to job security. Also Hirschman (1970) stated that employees react to organization's fault in three ways; exit- the option of leaving the organization; voice- the option of staying and protesting in hope of improvement; and loyalty- the option of staying with organization longer although lack of improvement in condition. In time of Zander (1962), Hirschman (1970) and Freeman and Medoff (1984) where majority of organizations were centralized and authoritative, employees were considered as machine. The concept of employee voice in this era can be considered as one-way, because the only valid option for employees to make their demands accepted was through protesting thus forcefully making the other party to agree on mutual terms. In

other words, the only way to create pressure was through union which was a tool of collective bargaining.

Freeman and Medoff (1984) stated that there are two faces of union. The first face is desirable, where union functions as a platform and issues of workers are channel to management creating an improving workplace condition. While the second face is undesirable when union utilize their monopolistic power to make management accept their unjustifiable demands. The undesirable face of union forces organizations to transform their approach towards employees by providing opportunity to raise voice through a platform such as Joint Consultative Committees and Work Councils. Different mechanisms of employee voice were adapted by organizations to their employees in the decision making process which convert the communication process from one- way to two-ways. Eisenberg and Witten (1987) argued that interest of the organization are best served with the openness of organizational communication, where employees reveal all the information about problems and opportunities without having fear of individual's job security and career aspirations. Fish (1990) stated that to reduce the problems and deficiencies associated with traditional flow of one-way commands from the top down, a true dialogue (two-way construction of meaning) process is required.

1.3. TYPES OF EMPLOYEE VOICE

"Voice" and its different types in the organizational behavior studies have been used frequently, but in last decade a type of voice which caught fame is the "employee voice". Many researchers are supporting the employee voice and recommend it to Human resource departments in different organizations. Hirschman (1970) later on Freeman and Medoff (1984) are in view that voice behavior in the organization is raised by employees to speak out to stop inappropriate behavior that are making working environment unsatisfactory. Vandewalle et al. (1995) and Van Dyne and LePine (1998) talk about the positive side when employee raises voice as a promotive behavior that emphasizes expression of constructive challenges. These challenges intend to improve, make innovative suggestions for change and recommend modification to standard procedures even when other disagrees. In these cases the voice of employees are

unforeseen or are not programmed by the top management and it remains a one-way voice (communication) until the top management responds to it. But the "employee voice" which researchers support is totally different, it refers to a formal voice as any institutionalized form of two-way communication between management and employees. There is a predetermined platform provided to the employee where he/she can register their complaints concerning work place issues, or give suggestions for the betterment of organizational policies etc. (Bryson et al., 2004; Dundon et al., 2005).

The two-way communication process consists of a sender (the person sending the message), medium (platform) and a receiver of the message. These three factors are common in both the TEV and MEV, but the differences are the mutual agreement and arrangement of these factors. Platform is one of the major factor where disagreement between employees and organization has been observed. In TEV the employees provide the platform in the form of union while in the MEV this platform is provided by the organization. On the base of these differences, the communication process of employee voice can be categorized into two types as TEV and MEV. These are discussed in detail below.

1.3.1. Traditional Employee Voice

In the past management of organizations were more authoritative and centralized in nature, command would follow from top to bottom, inputs from the lower level were not welcomed, and the management would try to treat employees as machine (Bluestone and Harrison, 1988; Dow, 1988; Jennings, 1959). In such environment, employees raising their voice individually would be highly risky and would not be possible to pressurize the management to take action. In many cases the employee would switch job and move to other organizations, therefore the turnover rate was also high (Boswell and Olson-Buchanan, 2004; Olson-Buchanan and Boswell, 2008). The union concept emerged as employees affiliate themselves to a union as member, where problem faced to single member would be supported by all members of the union (Newton and Shore, 1992). Employees support each other on issues converting "individual voice" to a "collective voice" which would put more pressure on the management to take action. Freeman (1976) considered union as institution of

collective voice which helps strengthening worker communities in some situation. For example, when an individual employee who has expressed discontent on organization's decision experiences difficulties in promotion or being threatened to be fired, union's intervention on the issue may help to solve the problem. By raising collective voice through union, bond of workers communities become strengthened, which make it difficult for the employer to retaliate against union. The collective voice also provides a platform for direct communication between employees and management. Boxall and Purcell (2003) argued that the main focus of representation of employee voice in the industrial relations is collective bargaining and consultation. This is employee oriented approach; platform or arrangement of voice is provided by employee themselves, which is termed as TEV.

The TEV states that the platform for voice is developed by the employees themselves in the form of union (Dundon and Gollan, 2007; Millward et al., 2000). Although union provides a wide range of benefits to both employees and employers (Levinson, 1965), at the same time union can be a threat to organization and for all the stakeholders (Holmlund and Lundborg, 1999). Most of management has aversion towards union in organization, because unions have possibility to become a threat for organizations if not properly managed. For instance, in 1997 United Parcel Service (UPS) strike was one of the largest strike in 1990's in United States led by 185,000 UPS Teamsters (Christen et al., 2002). The demands were creation of full-time jobs rather than part-time, increased wages and the retention of their multiemployer pension plan. The strike affected the operational activities for 16 days and lost more than $600 million in business (Kumar, 2001; Witt and Wilson, 1999).In 1998 GM Auto Company faced a huge damage when its workers went on a strike (Herod, 2001). The strike last for eight weeks and cost the company $809 million, decline in the auto manufacturer market share of 10% domestically and almost 2.5% global market share for the year. Royal Mail privatization report (2014) mentioned that on the issue of pay raise the Communication Workers Union (CWU) were on regular strikes from July to October 2007. These strikes affected not only Royal Mail but also businesses and normal people due to the delay of all the mailing and cargo service across the country. Also on 8 November 2016, IZBAN (a commuter rail system connecting the western province of

İzmir's Turkey suburban area to the metropolitan area) employees went on strike due to disputes in collective bargaining negotiations with their employers. The strike was called because employees of Metro, another leading rail line in İzmir are paid 33% more and also other benefits are provided to them. Due to this strike, beside the financial losses to the company, a number of around 150,000 daily passengers were also affected for more than one week (Wage Indicator, 2017). Pettinger (1999) argued that unions mostly focus on their own short-term benefits rather than securing the long-term future of organization, and it defames union and gives rise to argument that they always work for their own vested interest.

The issue with the TEV is the barriers confronting the mutual acceptance of the platform by both parties (employees and management). Earlier in this study we mentioned that the arrangement of platform in the TEV, union, is by the employees which is not a formal forum recognized by management. Therefore, it is very likely that when issues are raised through this platform, they may not be considered seriously by the management. Consequently when two parties do not mutually agree on a medium, this disrupts the communication processes which indicate a clear flaw in the communication cycle of TEV. Even though employee voice is supposed to be two-way communication, the disagreement of platform restricts TEV to a one-way communication.

1.3.2. Modern Employee Voice

Modern employee voice (MEV) is an organization-oriented approach towards employee voice. In the last few decades a shift in employee voice mechanism has been observed from TEV towards MEV (Dundon and Gollan, 2007; Holland et al., 2009; Wilkinson et al., 2004; Wilkinson and Fay, 2011). This shift of providing different voice mechanism was initiated by the organizations itself (Bowen and Blackmon, 2003; Farndale et al., 2011). There were two basic reasons underlying this decision; a) the changing nature of business which demands quick and creative information sharing from all level of workforce and b) the monopolistic power of union. The factor contributing to the success of MEV was the organizational commitment of implementing the procedure accurately. The other factor which contributed to the

success of MEV was the weaknesses and certain problems in union behavior and union structure which dissociate employees and these employees moved toward a non-unionized direct employee representation (Lloyd, 2001). The platform provided in MEV by organizations is through different ways such as team meeting, open door policy, compliant box, Joint Consultative Committees, and Works Councils. Organizations also assign a specific department to address such issues as Human Resource (HR) department (Bryson et al., 2007; Edgar and Geare, 2005). The nature and procedure of MEV is a two-way communication, in which organizations provide different platforms (medium) and different forms of organizational social media connections where employees can raise their voice regarding issues and suggestions (Budd et al., 2010) to their supervisor or top management (Liu, et al., 2010). Supervisors and management are responsible for acknowledging the issues and provide solutions in a certain period of time. Therefore MEV, if properly implemented and employees are satisfied, it can be considered as one of the reasons for the decline of union in the world (Willman et al., 2007).

The role of union in the presence of an effective HR department becomes quite ambiguous and redundant because HR department supports individual employee voice, information sharing, collective decision making, and employee participation (Batt et al., 2002; Benson, 2000; Guest, 1987). The decline of unionization in organizations were due to political factors, globalization and other internal factors with in the union and organization. Major changes in the world economy and politics such as the collapse of Soviet Union and the developed world experiencing a great decline in employee rights etc. have contributed to the decline. Ackers and Payne (1998) stated that recent legislations which have promoted a more individualistic approach to the rights in the workplace made it much harder for collective representation to have a role. As for globalization, formation of intergovernmental organizations such as World Trade Organization, United Nations, and The North Atlantic Treaty Organization articulate interactions and integrations among different nations. (Ramajo et al., 2008). For example, the United Nations (UN) published "Universal Declaration of Human Rights", which addresses inclusive issues regarding human rights. The declaration includes articles about workers which organizations can refer to implement in their

human resource management. Through social media employees can convey their voice directly to numerous people, when their rights are violated, which creates pressure on organization regarding organization's public image and reputation (Miles and Mangold, 2014). The other reason documented in literature is internal problems faced by members of union. Sometimes members of union do not have equal opportunities to address their issues since dominant members of the union used to hijack the functioning and divert the main purpose of the existence of the union for self-interest (Callus, 1991).Another important reason is due to the alternative direct non-union voice mechanisms provided by organization such as employee voice, team meeting, open door policy, and work councils. For example, countries such as United States, United Kingdom, and Western European countries have alternative direct voice mechanisms and they experience decline of union activities (Taras and Kaufman, 2006; Willman et al., 2007).

Effective management of employee voice in the modern era is a great challenge for the organizations. Strategic advantages can be created if appropriate mechanism and proper context is provided to smooth flow of voice in the organization. For example IBM introduced social computing guideline which encourages employees to participate in social conversations regarding issues and suggestions of workplace and it contributed to the success of organization (McCarty, 2013). Therefore, there is a need to study the flow of employee voice in modern organizations and the issues organizations face if voice mechanism is not properly managed. In the next section framework of flow of employee voice is represented. We identified the different cycles and phases which can be considered as possible dimensions of employee voice for future studies.

In Table 1.1 the main differences between TEV and MEV are highlighted. The first and main difference is type of communication, where TEV is a one-way and MEV is formally a two-way communication. The second difference is the platform for the raising voice, in TEV it is employee oriented while in MEV it's organizational oriented. The employee oriented platform is arranged by employees themselves in the form of union. While in organization oriented approach the platform is provided by the organization such as compliant and suggestion box, open door policy, Joint Consultative Committees, and Works Councils. The nature of the voice is different in TEV which is collective and in MEV it is more individual. The TEV is informal, no

support from the organizational side while the MEV has a formal process which is followed by both parties (employees and managers). The type of voice mostly raising through TEV and MEV are also different in nature. Through TEV the voices raised is related to problems and dissatisfaction in workplace. On the other hand through MEV besides issues and complaints, suggestions and creative ideas are also raised. The last difference shown in the table is the "psychological safety", in TEV the employee has psychological safety and job security from the organization. While in MEV the employee perceives psychological safety and job security because organization supports voice by providing different mechanisms to encourage employee voice.

Table 1.1: Comparison of TEV and MEV

	Type of communication	Platform	Nature	Formality	Type of voice recorded	Psychological safety
Traditional Employee Voice (TEV)	One-way communication	**Employee Oriented** The platform is arranged by employees themselves in the form of unions	Mostly collective	Informal	Problem that leads to dissatisfaction in workplace	Organization does not provide any psychological or job related safety for raising voice. Instead it is provided by union (collective support or standing beside one another on issues faced by one member or all)
Modern Employee Voice (MEV)	Two-way communication	**Organization Oriented** The platform is provided by the organization such as compliant and suggestion box, open door policy, Joint Consultative Committees, and Works Councils	Mostly individual	Formal	Suggestions and creative ideas as well as issues and complaints	Organization supports voice by providing different mechanisms to encourage employee voice, and employees perceive psychological safety and job security

1.4. FRAMEWORK OF EMPLOYEE VOICE

Allowing employee voice does not guarantee the satisfaction of the employees. However, creating a satisfactory communication cycle between employee and employer is the backbone of successful organizations. Lind and Tyler (1988) found in their study that converting employee voice into a two-way communication positively affect employees' performance; employees feel that they are valued members of organization, therefore they can concentrate on their jobs which increases job performance. According to the Chartered Institute of Personnel and Development (CIPD) (2013) employee outlook survey, employee voice is defined as *"two-way communication between employer and employee. It is the process of the employer communicating to the employee as well as receiving and listening to communication from the employee".* Positive communication climate where there is openness of top management, sharing of information between colleagues, and employees' involvement in organizational decision increases trust, profit, and employees' feeling of self-worth (McCauley and Kuhnert, 1992; Rosenberg and Rosenstein, 1980; Smidts et al., 2001).

Studies contributing to employee voice have concluded that employee voice leads to job performance (Colquittet al., 2002), low turnover rate (Iverson and Currivan, 2003), and extra role performance (Purcell et al., 2008). However, examining more in depth, it is clear that the MEV contributes more to the job performance, retention and extra role activities rather than TEV. For example, as the number of direct voice mechanism increases, employees' attitude towards work tends to improve (Purcell et al., 2008). Also the "Workplace Industrial Relations Survey, 1990" and "Workplace Employment Relations Survey, 2004"conducted by Fernie and Metcalf (1995) and Kersley et al. (2006) respectively found a positive association between direct voice practices and productivity.

In order to effectively manage communication, we believe that it is crucial to understand voice flow mechanism that occurs in organizations. Therefore, literature on employee voice flow has been examined and a framework of employee voice flow has been formulated. It is demonstrated in Figure 1.1 below. This conceptual framework is expected

to be helpful in that it provides tentative dimensions for studying MEV. The first cycle is related to employees who encounter a problem and need to raise their voice for the first time. The second cycle depends on reaction of employees who have experienced the first cycle. Once employees raise their voice and pass through the first cycle, they have two options; a) if employees had a fair and satisfactory experience then they might continue with the same phases as in the first cycle, or b) if the experience was not satisfactory and employees did not exit from the organization then they will adopt the alternative options in the second cycle. Each of the different cycles and phases are defined and presented in detail below.

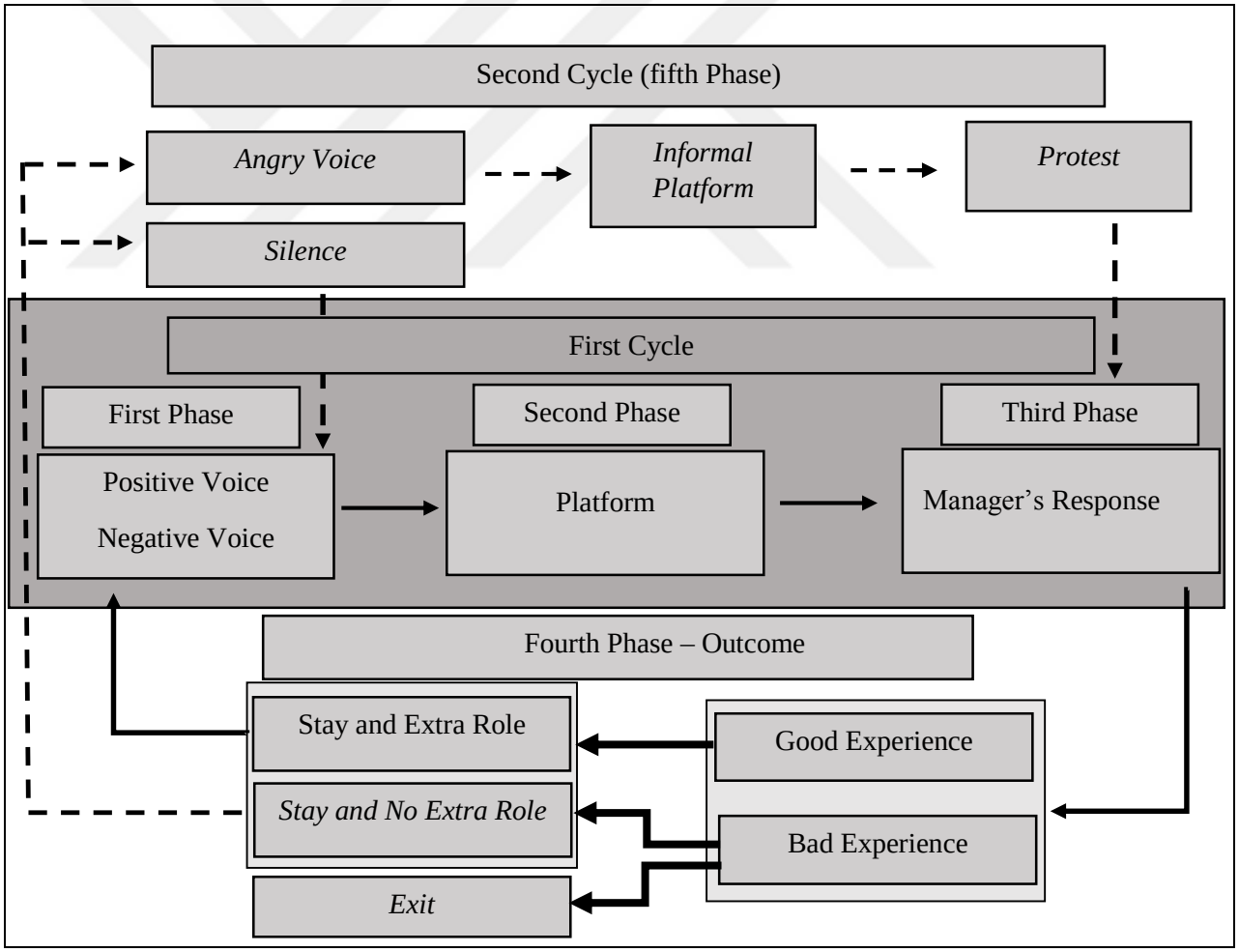

Figure 1.1: Framework of Employee Voice Flow Through the Organization

1.4.1. First Cycle

1.4.1.1. First phase – Reasons Underlying Voice Behavior

The first phase consists of reasons underlying the voice behavior of employees. In the voice studies, two main reasons are quoted for causing employees to raise their voice. The first reason is employee's satisfaction towards workplace, appraisal, and leadership (Brief and Weiss, 2002; Fisher, 2000; Rich et al., 2010; Weiss, 2002). In response to their satisfaction, employees would want to contribute by giving creative ideas for the betterment of organizational performance and productivity. This satisfactory voice behavior is termed as "positive voice" in this study. Offering different direct voice mechanisms as in MEV, the perception and emotional state of employees are expected to be positively changed since they think that management values and considers their suggestions and recommendations.

The second reason is dissatisfaction in the job because of stress or strain employees encounter in organizations. This voice is termed as "negative voice" in this study. De Jonge and Dormann (2006) stated that the continuous cognitive, emotional, or physical effort which are required from employees to perform their job make them stressed and their adverse reaction to the stress leads to strains (Jex et al., 2001).In the TEV as union is the only communication platform and other ways to raise their voice to management are lacking, enormous amount of time and energy would be required for management to handle the negative voice.

Positive and negative voice is the reaction of employee towards the behavior of the organization. The employee voice behavior has been grounded in social exchange theory (Blau, 1964). Individuals who feel respected reciprocate with the same amount of respect in return (Cropanzano and Mitchell, 2005). According to Stamper et al. (2009), employees who perceive organizational working environment as positive will in return behave pro organizational, and will use their voice for the betterment of the organization. In contrast if employees perceive the working environment negative, then they will raise negative voice.

1.4.1.2. Second Phase - Platform

Employee voice in an organization does not become a two-way communication until organization provides a platform or mechanism where employees can register their concerned issues or ideas. When an employee encounters an issue or has a suggestion he or she would like to have a platform in their organizations through which they can register their voice. In some organizations there are different voice mechanisms provided by the management such as suggestion or complaint box, team meetings, work councils, open door policy, and etc. On the contrary, many organizations still follow the TEV and do not provide any voice mechanism. In this cases, employees form union and individual employees have few choices other than joining a trade union or raising their voice by protesting which is unfavorable for the management. In the presence of voice mechanism, positive voice is expected to be more frequent than negative voice.

The voice is registered in a formal way through platform. It gives the management's responsibility to address the issue, while employees wait for the result of their complaints without disturbing the workplace.

If a platform is provided by the organization then employee gains the opportunity through which they forward issues to their concerning authority. Detert and Trevino (2010) stated that when employees desire to initiate action or make suggestions for changes, they need to *"direct their concerns or suggestions to a specific target with the formal authority to act".* In the presence of platform the "positive and negative voice behavior" has a high chance of converting to a two-way communication. In contrast when there is no formal platform, employees adapt union or other informal paths to speak upward to manager in organizational hierarchy to address the issues.

1.4.1.3. Third Phase – Manager's Response

Manager's response is the third phase of the first cycle. In employee voice communication process, employee is one party while manager is the other party. Manager's response is an important factor that contributes to the future of employee voice behavior

and impacts the employee's future decision to stay (willingly or unwillingly) or exit from the organization. Freeman and Medoff (1984) argued that manager's response is the focal point for the future of voice practices in any organization. Line manager and senior manager positions are critical and they are obligated to have openness to employee voice even if it is in the form of bad news, dissent, warnings, and problem signs (Seeger and Ulmer, 2003). Managers who lack openness to employee voice can negatively influence the effectiveness of employee voice (Kassing, 1997; Wright and Edwards, 1998).

Managers confront the voice in two ways, either through a formal platform as in first cycle or protest followed by means of informal platforms which is described under the second cycle. If the employee voice is through a formal platform as in MEV then either the manager or human resource department is responsible to address the issues in certain time which is mostly imbedded by the organizational policy. The manager can demand an appropriate time for response and engage employee by creating a peaceful environment where the two parties can approach to situation. In this condition, "give and take" agreement can be established for the greater interests of the organization. On the contrary, TEV does not obligate managers to respond to employee voice and managers sometimes even avoid facing employee voice if it is from employees in lower levels of the organizational hierarchy. (Beer, 2009).

1.4.1.4. Fourth Phase – Outcomes

After the manager's response, employee voice moves to the outcome phase. In this phase, employees evaluate the response of the manager and based on the response they make future decision regarding staying in the organization or exiting.

If the manager's response is satisfactory for employees it will direct the employees to take extra role in the future (Borman and Motowidlo, 1997; Vandewalle et al., 1995; Van Dyne and LePine, 1998). When employees perceive manager's response positive then the employees feel the need of reciprocation and become devoted in their jobs (Van Dyne et al., 2008). In contrast, when employees perceive that the managers are deceiving them,

then negative voice will increase more and it will lead to conflict between employee and employer. This might lead to exit, if employees have alternative job opportunity. However, if the cost of exiting is high then the employee will remain with organization but the efficiency and effectiveness of the employee will decrease (Withey and Cooper, 1989). The commitment of such employee to an organization is based on necessity rather than emotional attachment to the values and goals of organization. This type of commitment is referred as "continuance commitment" (Allen and Meyer, 1996). The continuance committed employees may either be passive regarding job and will fulfill the minimum requirement or proactively try to change the unfavorable working situation (Cummings and Oldham, 1997).During this process, they can become a source for organizational cynicism.

The level of the five categories of organizational citizenship behavior (OCB) presented by Organ (1997) that are; Altruism, Courtesy, Sportsmanship, Conscientiousness, and Civic Virtue are differently impacted by manager response. If the manager doesn't fully satisfy the employee or couldn't solve the issue (may be due to lack of resources) but had honestly tried his or her best to address the issue and employee also perceives the positive attitude of manager, it will lead to positive behavior of employee. For instance in this case sportsmanship will be weighted more than the other categories of organizational citizenship behavior, and the intension of the manager will not be questioned. On the other hand if the manager fully satisfies the employee, the employee will address all the five categories. Research in the field shows that employees' satisfaction is an important factor that contribute to the organizational citizenship behavior (Organ and Ryan, 1995).

The first cycle completes with the fourth phase. Some employees exit while other employees decide to stay in the organization willingly or unwillingly. These employees who stay with the organization can be categorized into two types; the first are those who had good experience throughout the communication cycle, and the second are those who had bad experience. These past experience has a spillover effect on the second cycle of the employee voice communication cycle.

1.4.2. Second Cycle

The impact of the first cycle continues on the second cycle. If the employee had a good experience during the first cycle then the employee mostly adopt the same way moving on to the platform phase. This process continues till the level of positive perception regarding the employee voice process is confronted by bad experience. However, if employee experience was bad during the first cycle, but the employee decides to stay in the organization, then the employee may adopt an alternative path.

This fifth phase is the alternative path that employees adopt when their experience was bad in the first cycle. The fifth phase consists of three stages; at the first stage when employees are encountered with workplace problem, they adopt two paths, i) employee is confronted with workplace issue and their negative voice is converted into angry voice, and ii) employee is hopeless from the management response thus he or she will remain silent. In the second stage, employees who have angry voice adopt informal platform such as union and move on to the protesting stage. Therefore in the fifth phase these dissatisfied employees bypass the formal platform provided by the organization and revert to TEV process. This alternative cycle will continue until the employees' perception regarding dissatisfaction is covered by favorable positive experience.

In the fifth phase the silent employee will continue to remain silent until there is prominent change in the behavior of the manager or if new manager is replaced (VanDyne et al., 2003; Lutgen, 2003; Milliken et al., 2003). Once the employee perceives there is prominent change in the behavior of manager or a new manager is assigned, then employee will give another chance to the communication process. If he or she is encountered with workplace issues, the voice flow starts from first phase through fourth phase. And if the experience was satisfactory then employee will continue with this cycle, otherwise the employee will either exit the organization or move to the fifth phase. Increasing number of silent employees lead to a phenomenon known as organizational silence, where employees withhold information about potential problems and issues (Morrison and Milliken, 2000). The reason of withholding of information is employees' perception that their voice falls on

"deaf ears" (VanDyne et al., 2003; Harlos, 2001; Piderit and Ashford, 2003). Not only employees' remaining silent but also raising angry voice harms organization in that it creates workplace problem for co-workers (Robinson and Bennett, 1995). This results in a toxic environment that can destroy the future of an organization. If the manager does not response accordingly to the requirement of the situation then this would lead to chaotic circumstances (Chen and Spector, 1992; Piderit, 2000). Therefore the manager needs to response in time to settle down the situation by acquiring a reasonable time period for making a right decision. The best way is to engage the employees in the process by continuous bargaining and arranging meetings to discuss the demands of the employee (Hiltrop, 1985; Tracy, 1987).

In this section we demonstrated the different phases through which employee voice flows in the organization. In the following section, dimensions of the MEV have been examined by means of combining together the different phases of employee voice with communication theory.

1.5. DIMENSIONS OF EMPLOYEE VOICE

The framework of employee voice in Figure 1.1 can be divided into two parts; "two-way communication" and "one-way communication". In two-way communication there are two parties; one is the sender and the other is receiver and there should be a medium through which the communication takes place. It can also be stated as a process in which a sender sends a message through some medium to a receiver and receiver replies in the form of feed back to the sender.

The first three phases in the first cycle refers to a two-way communication cycle as in MEV. There is a sender of message in the form of either positive or negative voice. The message is delivered to receiver through a platform. And the receiver responds to the message. Researches also support that employee voice is a two-way communication where information is exchanged (Benson and Brown, 2010; Dundon et al., 2004; Wilkinson et al., 2004). The parts written in Italics refer to one-way communication; decisions of employees

whether to stay or exit and employees' reaction toward the organization when he or she decided to stay unwillingly. Even though there is message sent by sender, the platform is informal and not mutually accepted.

In terms of two-way communication, it can be classified into three dimensions; i) provision of information by employee- positive and negative voice behavior in the first cycle and the angry voice in the fifth phase, ii) platform- the second phase, and iii) manager's response- the third phase (Benson and Brown, 2010; Bryson and Freeman, 2007; Marchington, 2006; Van Dyne et al., 2008). These dimensions are explained as below.

1.5.1. Provision of Information by Employee

There are many different terms for defining the provision of information by employees to management, such as voice behavior, employee participation, employee engagement, and etc. Information provided by employees is basically two types; the first is information (concerns or complaints) provided when employees encountered workplace problems or different stress and strain related to job. The second occurs with suggestions for effectiveness and efficiency of organization, or by means of innovative ideas regarding new products or policies. These two types of information are classified as a) negative voice and b) positive voice respectively.

1.5.1.1. Negative voice

Negative voice behavior is a reaction of employee to a situation which constantly extend over the limits of his/her physical and mental power. Also negative voice could be raised due to the strained relationships, unfairness or mistakes conducted by manager. De Jonge and Dormann (2006) stated that continuous cognitive, emotional or physical efforts that employee requires are condition of stressors. According to Jex et al. (2001) the adverse reaction to these stressors leads to strains. Therefore the reaction to stressors and strains in the form of voice is considered as negative voice behavior. Violence in work place such as interpersonal aggression, sabotage and hostility is associated to stressors and those

individual mostly have intention to leave the organization or actually exit (Chen and Spector, 1992). Mathieu and Zajac (1990) found that there is strong evidence that the commitment level of individual associated with stressors is low.

An average of more than 25 percent of the employees in an organization are associated with stress, for example The National Institute for Occupational Safety and Health in 1999 conducted a survey related to organizational stress from various organization in the USA and found that 26 to 40 percent of all the surveyed workers admitted their work as stressful. Another report published by the European Union mentioned that 28 percent of the workers experience their work as stressful (Levi and Lunde-Jensen, 1996). The percentage is even higher in Japan (Harnois and Gabriel, 2000). Stress have a negative effect on the performance of organization in the form of high absenteeism (Cooper et al., 1996; Elkin and Rosch, 1990) high health care costs (Goetzel et al., 1998). According to Cox et al. (2003) the organization losses billions of dollars due to absenteeism.

Tett and Burnett (2003) stated that on a daily basis employee confront with three different level of working environment, which can be categorized as: the task level, the social level, and the organizational level. So stressors and strains related to such workplace after increasing a limit of sustainability forces the employee to raise voice, if this negative voice is not engaged in an appropriate approach which may later increase the density of the anger of the employee and will shift the voice to a higher stage that may be the angry voice.

These stressors and strains could be divided in to three levels.

a. Job stressors and strains
b. Social stressors and strains
c. Organizational stressors and strains

Job stressors is consider as the efforts of employee related to the attribute of the work itself which requires constant mental, physical and emotional effort (De Jonge and

Dormann, 2006). Thomas and Daniel (2012) classified the attributes of work as job autonomy, job challenge, work conditions, pay and promotion. Oldham and Cummings (1996) states that job autonomy and challenge both are considered as the desirable characteristics of job, therefore jobs that are lacking of these two characteristics are perceived boring or underutilization. Lacking of job autonomy and challenge undermine the employee from achieving their goals and this in turn induce stress even more (Hobfoll, 1989).

According to De Jonge and Dormann (2006) social stress is the stress related with interpersonal relationship that requires constant mental, physical and emotional efforts. These include strained relationships with supervisors, the supervisor's interactional unfairness and the strained relationships with coworkers, dissatisfaction with supervisors and coworkers (Thomas and Daniel, 2012). When there is low level of relationship between colleagues, the employees feel panic and there is an increase of fear that they will face marginalization from their supervisors and peers in regard to tangible rewards or intangible support. Detert and Burris (2007) states even if employee provides any constructive suggestions, there is a risk that supervisors might consider it as implicit criticisms of their leadership abilities and might negatively react. In such environment where there is poor social relationship, Botero and Van Dyne (2009) are in opinion that employee may withhold voice to feel protected from retaliation of supervisor or peers. In contrast Fuller et al. (2007) argues that in stressful social environment employee would vigorously voice their opinions and suggestions so that they can build new social ties with colleagues who can minimize some of their social stress.

Organizational stressors are consider to be the constant utilization of mental, physical and emotional effort to overcome the broader organizational environment from employees (De Jonge and Dormann, 2006). According to Thomas and Daniel (2012) these include the breaches of promises or expectations, distributive unfairness, procedural unfairness, lack of organizational support, lack of organizational communication, and lack of openness to employee voice. According to Harrison (1978) Person-environment (P-E)

fit theory which assumes that the reason behind stress is the misfit between individual employee and the organizational environment. There are two types of misfit, the first is the lack of fit between the competencies of the individual employee and the demands of organizational environment, and the second is the lack of fit between needs of the person and supplies from the organizational environment. According to Tangirala and Ramanujam (2008) if organizational environment is highly stressful and employee perceive deeply flaws in the procedures, policies and system, they may be motivated to raise voice to identify or remove those defects.

1.5.1.2. Positive voice

Positive voice is the voice behavior in which employee suggests creative ideas which contributes to the effectiveness and increase the efficiency of the organization. This voice behavior is not the result of stress or strain but rather a reciprocal behavior to the satisfaction that employee perceives from the working environment and also the respect from management. In the case of such satisfaction, employee feels an obligation to the organization and in return provides suggestions and creative ideas for the betterment of organization (Withey and Cooper, 1989).

The difference between negative and positive voice is that; negative voice is the voice behavior that is raised due to the job dissatisfaction, it may be in the form of job, organizational and social strain and stressors that employee confront in organization. In contrast positive voice is the voice behavior that results in job satisfaction, in other word it's the voice behavior when employee perceives that organization is supportive and facilitates them to achieve a satisfactory job, organizational and social environmental condition. In such condition employee will contribute their valuable suggestions and ideas to improve the work flow of the organization (McCabe and Lewin, 1992).

Job satisfaction is the perception or appraisal of the degree of fit between individual and organization (Lok and Crawford, 2001).The underlying factors contributing to job satisfaction are feeling regarding supervisor, compensation package, and co-worker

relations (Saari and Judge, 2004; Spector, 1997; Hulin and Smith, 1965; Locke, 1969). Blegen (1993) states organizational variable such as individual empowerment are highly related to job satisfaction. The central practices underpinning individual empowerment includes information sharing and job autonomy (Seibert et al., 2004; Wang and Lee, 2009). According to Gardell (1977) employees who have job autonomy contribute more creative ideas and have greater willingness for participation in comparison to employees lacking job autonomy.

Relationship with supervisor and coworker are also important factors that contribute to employee satisfaction (Bass, 1997; Campion et al., 1993; Cohen et al., 1996). Supervisor is the focal person the employees has direct interaction and also considered as the key role person in modeling and setting the goals of a team (Mclntyre and Salas, 1995). Therefore employee's positive perception of supervisor and the relationship with coworkers can increase the satisfaction of employee regarding working environment (Kozlowski and Doherty, 1989). This can result in a very valuable outcome, employees can suggest creative ideas that can effectively contribute to the effectiveness of achieving the organizational goal.

1.5.2. Platform

Provision of information by employees to management requires a medium through which they can direct their voice. Medium is one of the important elements for successful communication, and platform plays the role of the medium in MEV. Budd et al. (2010) suggested that organizations must provide a medium to conduct successful communication between their employees and management. When the organizations provide platform for employees to raise their voice, favorable outcomes such as decrease in absenteeism and increase in job performance and productivity have been observed (Macleod and Clarke, 2009). Platform also encourages employees' contribution on their jobs and further enhances productivity in organizations (Cascio, 1998; Pettinger, 1999).

Providing platform to employees have also impacted union in organization, According to Taras and Kaufman (2006) and Willman et al. (2007) unions have gradually decreased due to the direct voice mechanisms which are provided by organization in advanced economies like: United States, United Kingdom and western European countries. In the absence of platform employee diverts toward union and union provides an alternate where employee can raise their voice collectively to pressurize employer (Freeman and Medoff, 1984). Batt et al. (2002) suggests that unionized organizations have higher compensation than the same level job in nonunionized setup, because union can collectively rectify work place issues, negotiate higher compensation packages and also strengthen employees by providing them a platform from which they can determine the policies that reduce pay inequality, grievance and arbitration procedures for appealing managerial decisions.

In situation where nonunionized organization are lacking platform is an indication to silent employee voice. Research has proven that employee silence has a negative effect on organizational learning, error correction, and crisis prevention (Graham 2002, Perlow and Williams 2003). The efficiency of work-group problem solving can be increased through providing opportunities for minority to express their viewpoints (Nemeth et al., 2001). MacKenzie et al. (2011) showed that if employees are given voice rather than silencing, they have positively contributed to the work-group task performance and ultimately benefited the organizational-level performance.

According to Grant and Ashford (2008) and Van Dyne et al. (2003), platform provided by the organization is pro-social in nature which motivates employee to bring constructive suggestions for the improvement of performance or change in the procedure of conducting activities related to any of the stakeholder. Morrison (2011) states that the pro-social nature of organization of providing a platform creates a sense of obligation in the mind of employees in and urges them to make constructive suggestions to help organization to operate more effectively and more efficiently.

1.5.3. Manager's Response

In a two-way communication, provision of information by employees and platform will not be completed until manager's response is added to it. Manager's response is an essential dimension which plays a vital role in the conversion of employee voice into an effective two-way communication. If the manager's response is appropriate from employee's point of view, then the employee will respond in a favorable way. Cropanzano and Mitchell's study (2005) concluded that one shows respect to another as much as he or she feels to be respected by that person. Blau (1964) also stated that social change and stability in organizational environment is due to the social psychology developed through the process of negotiation and information exchange among parties. According to Stamper et al. (2009) if the working environment of organization is positive and the perception of the manager's disregard is low then the employee will behave pro-organizational and will use voice more constructively for the betterment of organization. In contrast negative working environment with lower interpersonal trust and organizational commitment would lead to counterproductive voice behavior (Korsgaard et al., 1995; Cohen-Charash and Spector, 2001). These counterproductive voice behavior may create conflict among group members due to the continuous inability or unwillingness of manager to respond effectively (Detert and Trevino, 2010; Dutton and Ashford, 1993; Spector, 1978).

In cases where manager lack resources or do not have access to resources limit the ability of resolving issues raised by employee, such circumstance engage employee in behavior that tend to increased voluntary or involuntary exit (McClean et al., 2013). If employees perceive that the manager lacks the power to act or not willing to address their concerns, this will lead to conflict within the organization (Vries et al., 2012). According to Morrison and Milliken (2000) such perception of employee may cause them to exhibit destructive rather than constructive organizational citizenship behaviors (OCB) and Van Dyne et al. (2003) added that such employees slow down the work process intentionally, they keep silent but create disturbance in work place.

Expectancy theory (Vroom, 1964) states that employee belief is based on three factors; i) valence- value attach by employee to reward, ii) expectancy- belief that effort will lead to reward and iii) instrumentality- perception of receiving reward. The interaction of these factors creates a motivation force towards pleasure and avoids pain. Therefore employees attach a cognitive value to manager's response, which if not fulfilled will lead to pain rather than pleasure. Scholl (1981) argues that commitment is also an independent force that influences the employee behavior. It constructs an expectancy/commitment model which results in three potential behaviors: the first behavior is that employee exit due to dissatisfaction and low perception towards management's concern in solving the problem. Second behavior is the employee stays with the organization because he is satisfied and the third behavior is that the employee stays with the organization despite dissatisfaction because of the management engagement and commitment of providing satisfactory solution.

According to resource-based view (RBV) organization can obtain sustainable competitive advantage within the industry based on their human resource, which is the most difficult resource to be imitable (Wan et al., 2011; Reed and Defillippi, 1990). The strategic human resource management (SHRM) demand that employees (human resource) must have distinctive set of attitude and behavior that formulate and implement strategy (Cappelli and Singh, 1992; Wright et al., 2001). The management needs to address and resolve issues and facilitate the process of employee involvement and engagement to acquire these qualities of employee (Wright et al., 2001; Wernerfelt, 1984; Barney, 1991). Therefore organization need to provide opportunity to the employee to voice their issues related to work place stress and strain (Markey et al., 2001). Managers need to engage their concern to create an environment which increase perception of employee feelings of fairness, trust, decision control, inclusion in the group, and respect, which will strengthen the relation between leader and employee (Thibaut and Walker, 1975; Lind and Tyler 1988; Miller and Monge 1986).

The three dimensions discussed above that are; provision of information by employee, platform and manager's response contribute to the MEV, while in the TEV only the first dimension (provision of information by employee) is available leaving the other two dimensions (platform and manager's response) questionable. The TEV is a one-way communication having a single dimension while MEV is a two-way communication having three dimensions. This leads to the argument that the previous scales used to measure employee voice is basically measuring TEV and lack the ability to measure the overall dimensions of the MEV. In the next section scales used to measure employee voice and the strengths and weaknesses of these scales are examined.

1.6. SCALES TO MEASURE EMPLOYEE VOICE

As it can be seen in the discussion above, there is an important shift of dimensions of voice behavior from TEV to MEV models. Considering the change of employee voice behavior, one can raise a question; can the scale developed in the past and used to measure TEV also measure the overall dimensions of contemporary MEV? To answer this question, a number of scales developed to measure employee voice in the literature from 1983 to 2015 were investigated. The selection of articles was based on the fulfillment of two criteria;

a) Articles that developed a scale and these scales were adopted by other studies
b) Articles that adopted previously constructed scale either fully or partially.

While articles which developed employee voice behavior scale for specific study but were not utilized by other studies were not included. These articles were 22 in number. Out of 67 articles, 45 articles from 1983 to 2015 related to employee voice were selected.

Examination of the articles show that four scales were most commonly used in the voice studies. The first two scales are Farrell's (1983) and Rusbult et al. (1988), no such relation was found in these scales. Also the purpose of both studies were different. Farrell (1983) conducted a multidimensional scale development study while Rusbult et al. (1988) study was not a scale developing study. Rather, the aim of Rusbult et al. (1988) was to

measure the impact of exchange variables (job satisfaction, investment size and quality of alternatives) on "response to job dissatisfaction" (Exit, Voice, Loyalty, and Neglect). Rusbult et al. (1988) scale consists of 16 different voice behavior items and the items are not the same as Farrell (1983), which had only three items for voice. The voice behavior items of both studies are provided in the scale section (2.6.1 and 2.6.2). Furthermore Rusbult et al. (1988) had referred to Farrell (1983) study for hypothesis construction purpose and not for items adoption or criticism. Both of the scales were developed to measure the Exit, Voice, Loyalty, and Neglect (EVLN) response of employees. The third scale is Van Dyne and Le Pine's (1998), which consisted of six items. The fourth scale is developed by Liang et al., (2012), for promotive voice and prohibitive voice which consisted of six items each. Out of these 67 voice studies from 1983 to 2015, 81 percent adapted Van Dyne and Le Pine's (1998) voice scale, 9 percent included Rusbult et al. (1988) voice scale, and the rest 10 percent of the studies used scale of Farrell (1983) and Liang et al. (2012).

Thomas and Daniel (2012) also conducted a meta-analysis study about employee voice which consists of 58 studies that were conducted before 2010. The selection of articles in Thomas and Daniel (2012) study was based on five criteria: i) included studies that were conducted in natural or field settings, ii) included studies that examined voice behavior at the individual level of analysis and excluded studies at the group or organizational level, iii) included articles that reported correlations between voice and any other key variables in the study, iv) included studies that operationalized voice as "positive" and excluded studies that examined "negative" voice behavior and v) included conference papers that provided data on scale properties and effect sizes.

The difference in the selection criteria of articles followed in this study and Thomas and Daniel (2012) study is that; i) we have considered both positive and negative voice while Thomas and Daniel (2012) only included positive voice, ii)The second difference is that in this study published articles in journals are considered and conference papers or unpublished dissertations are excluded, while Thomas and Daniel (2012) have considered

both, and iii) The third difference is that new constructed scales which are not adopted by other studies are excluded in this study, only scales developed and adopted by other studies are included, in contrast Thomas and Daniel (2012) considered all new constructed and adopted scales studies.

The outcome of Thomas and Daniel (2012) were that 20 (34%) studies used the voice scale developed by Van Dyne and Lepine (1998), while 11(20%) of the studies adopted the scale created by Rusbult et al. (1988). They also mentioned that 14(24%) adapted other published scales of voice, and the remaining 13 (22%) articles created new items specifically for their own studies. when the 13 article that have developed their own scale are removed and the percentage are revised then out of 45 studies 20 (44.45%) of the studies have used Van Dyne scale. Which also indicates that most of the researchers are interested in adopting Van Dyne (1998) six items voice scale.

A brief summary of each of the four study is provided below.

1.6.1. Farrell's (1983) Scale

Farrell's (1983) proposed a multidimensional scaling (MDS) analysis to capture the specific work behavior of employee in response to job dissatisfaction. The theoretical categories of work behavior are labeled as exit, voice, loyalty, and neglect (EVLN). Farrell's study was based on the seminal work "Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations and States" of Albert Hirschman (1970).Regardless of the previous studies related to employee voice, Hirschman's book titled "Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States" which was published in 1970 was a milestone in adding a wide range of information in understanding the behavior of people in the business, organizational, political and economic related area.. In the book Hirschman explains three behaviors adopted to address an organization's deterioration; i) "exit," the option of leaving the organization, ii) "voice," the option of sticking with the organization and protesting in the hope of improving it, and iii) "loyalty," an internal concern or emotional attachment that encourages you to stay with the

organization longer. Most of the studies in organization behavior are especially related to voice are traces back to Hirschman (1970) seminal work. Farrell established the dimensions of the scale based on the behavior of employee identified by Hirschman (1970).

To conduct the multidimensional scaling analysis an expert and two non-expert subject groups were utilized. The expert subject group consists of academic and business affiliated specialists in the areas of organizational behavior and human resource management. They sort 12 specific employee behavioral responses to job dissatisfaction into perceived categories. The entire non-expert subject group was enrolled in graduate business course. The first non-expert subjects group made paired similarity ratings of the 12 job behaviors and the second set of non-expert subjects rated each of the 12 responses to dissatisfaction on 6 attribute scales. The 12 behavioral responses were analyzed for the similarity data and the attribute rating. After which the least squares method developed by Young et al. (1976) was implemented. Based on the multidimensional scaling mapping the 12 behaviors were grouped in to four clusters (exit, voice, loyalty, and neglect).

We will only focus on the voice behavior items because it will not divert from the employee voice focus of the study. The expert and non-expert subject specialist consider voice behavior as one of the reaction to the work place dissatisfaction. There were three items of voice behavior:

1. Talking to supervisor in order to try making things better
2. Putting a note in the suggestion box hoping to correct the problem
3. Writing a letter to a government agency to find out what can be done

These items measure the behavior of employee when he/she is faced to dissatisfaction situation. The first two items are measuring the "provision of information by employee to management". While the third item "writing to government agency", which is involving the state to create pressure on the management. This step is mostly taken by union rather than individual. The two items that are measuring the "provision of information by employee to management" are capturing one of the dimension of MEV. Therefore the voice scale of Farrell's (1983) can be used in the traditional organization

where employees are not provided with the voice opportunity because this scale can capture the one-way communication aspect of TEV. But it is lacking the ability to measure the two-way communication in the MEV.

1.6.2. Rusbult, Farrell, Rogers and Mainous (1988) Scale

Rusbult et al. (1988) presented the effects of three exchange variables as job satisfaction, investment size and quality of alternatives on four general responses to dissatisfaction highlighted by Hirschman (1970) - exit, voice, loyalty, and neglect. Three studies were designed to empirically test the model. The first study was a simulation experiment which tested the causal impact of the variable of the model on response to dissatisfaction. A cross sectional field survey was conducted on a large scale in study two. In study two they first explored the exchange variables on generalized tendencies toward exit, voice, loyalty, and neglect (EVLN) and secondly the respondents were actual employees. The third study was a laboratory experiment in which additional and more behavioral measures of EVLN were used.

All the variables were measured by a 9 point scale (1=definitely would not react in this way and 9=definitely would react in this way). The items of the variable were different for each of the three study. Focusing on the voice variable the items of the voice for the three studies are as follow.

a. Voice, dependent measures (Study 1)

1. I would go to my immediate supervisor to discuss the problem.
2. I would ask my co-workers for advice about what to do.
3. I would talk to the office manager about how I felt about the situation.
4. I would try to solve the problem by suggesting changes in the way work was supervised in the office.

b. Voice, dependent measures (Study 2)

1. When I think of an idea that will benefit my company I make a determined effort to implement it.

2. I have at least once contacted an outside agency (e.g., union) to get help in changing working conditions here.
3. I sometimes discuss problems at work with my employer.
4. When things are seriously wrong and the company won't act, I am willing to "blow the whistle."
5. I have made several attempts to change working conditions here.

c. Voice, dependent measures (Study 3)

1. I have an idea that I think will improve the feedback system, and I will make a serious effort to implement it.
2. I want to discuss the evaluation/feedback system with my supervisor.
3. I want to talk things over with my co-workers to get their help in changing working conditions.
4. I want to suggest changes in the procedures by which work is assigned or evaluated.
5. I want to change the way in which things are done in the newsroom.
6. I want to talk to my supervisor about the difficulty of the job and/or the nature of the feedback.
7. I will work harder-this job is difficult, but "do-able."

The finding of the study shows that high satisfaction and investment will encourage voice and loyalty and discourage exit and neglect. The interaction of satisfaction and investment strongly promote voice. On the other hand when the cost of leaving the job is low and there is an alternative job opportunity it encourages exit and voice, while loyalty is discouraged.

Both of the studies conducted by Farrell (1983) and Rusbult et al. (1988) consider voice behavior as a part of the four factors (exit, voice, loyalty, and neglect) scale to measure the employee response behavior towards dissatisfaction. Therefore those studies that adopt the four factors scale as it is, for the purpose of measuring the exit, voice, loyalty, and neglect response behavior would be acceptable. Also in the literature studies have

taken the voice items from the four factor scale to measure voice behavior in traditional organization that is the TEV. There is no issue with adopting the voice items for TEV but the problem arise when these voice items are adopted for measuring MEV. Because the four items lacks the power to measure the two-way nature of MEV.

1.6.3. Van Dyne and Le Pine's (1998) Scale

The study of Van Dyne and Le Pine's (1998) is the most important in the field of employee voice, most of the employee voice studies conducted after 1998 have referred to Van Dyne and Le Pine's (1998) voice scale. The items of this scale are adopted from previous study conducted by Van Dyne and colleagues (1994) and Whithey and Cooper (1989). These items were basically used to measure the participation behavior of employee in the Van Dyne and colleagues (1994). In this study Van Dyne and Le Pine (1998) has examined the extra-role and in-role behavior from multiple perspectives which included self, peer, and supervisor. They assessed the construct and predictive validity of two forms of extra-role behavior (helping and voice).

The findings of the study have shown a high correlation for supervisor-reported data and the lowest correlation for self-reported data among helping, voice, and in-role behavior. The regression results indicate that self-reported in-role behavior represents the weakest predictor of supervisor-rated performance. The rating score plays an important role because extra-role behavior is rated differently from in-role behavior by employees, peers, and supervisors.

The important aspect of Van Dyne and Le Pine's (1998) study is the voice scale. The items for voice was adapted from the study previously conducted by Van Dyne et al. (1994) and Withey and Cooper (1989). The scale consists of six items and all items were measured on a scale ranging from 1, "strongly disagree," to 7, "strongly agree", which are below.

1) This particular co-worker develops and makes recommendations concerning issues that affect this work group.

2) This particular co-worker speaks up and encourages others in this group to get involved in issues that affect the group
3) This particular co-worker communicates his/her opinions about work issues to others in this group even if his/her opinion is different and others in the group disagree with him/her
4) This particular co-worker keeps well informed about issues where his/her opinion might be useful to this work group
5) This particular co-worker gets involved in issues that affect the quality of work life here in this group
6) This particular co-worker speaks up in this group with ideas for new projects or changes in procedures.

The six items of Van Dyne and Le Pine's (1998) voice scale focus on the measurement of the participation of employee towards voice behavior or the provision of information by employee to management. This scale could also be adopted for measuring the voice behavior in organization where there is TEV. As mentioned earlier in the chapter MEV is a two-way communication process and multi-dimensional. Provision of information by employee to management is one of the dimension and the other dimensions are including platform and manager's response. However, the six items scale of Van Dyne and Le Pine's (1998) ignore these two other dimensions of MEV that is a platform predetermined by the management and the willingness of management to listen to employees (manager's response). Therefore the studies that have adapted Van Dyne and Le Pine's (1998) voice scale to measure the employee voice in modern organization basically measured provision of information by employee to management. Those study which measure the participation of employee to voice behavior can adapt the scale, but on the other hand if they are measuring the employee voice in the modern organization the scale won't be suitable. Hence the main focus of this study is to address this gap and to develop a scale that measure the overall dimensions of the MEV.

1.6.4. Liang, Farh and Farh (2012) Scale

Liang et al. (2012) demonstrated how three psychological antecedents predict supervisory reports of promotive and prohibitive voice behavior. They consider promotive and prohibitive voice as two types of employee voice. They tested how the three psychological antecedents; psychological safety, felt obligation for constructive change (FOCC), and organization-based self-esteem (OBSE) were uniquely, differentially, and interactively predict promotive and prohibitive forms of voice.

To measure promotive and prohibitive voice they created an item pool from previous studies both from voice and organization citizenship behavior literature. The pool consist of total of 56 items, out of which 38 items represented the promotive voice and 18 items captured prohibitive voice. After content evaluation procedure by expert's judgment and factor analysis, ten items (five items for each) were left to measure the promotive and prohibitive voice. They used a 5 point scale ranging from 1 ("strongly disagree") to 5 ("strongly agree").

The items are below.

a. Promotive voice

1. Proactively develop and make suggestions for issues that may influence the unit.
2. Proactively suggest new projects which are beneficial to the work unit.
3. Raise suggestions to improve the unit's working procedure.
4. Proactively voice out constructive suggestions that help the unit reach its goals.
5. Make constructive suggestions to improve the unit's operation.

b. Prohibitive voice

1. Advise other colleagues against undesirable behaviors that would hamper job performance.
2. Speak up honestly with problems that might cause serious loss to the work unit, even when/though dissenting opinions exist.

3. Dare to voice out opinions on things that might affect efficiency in the work unit, even if that would embarrass others.
4. Dare to point out problems when they appear in the unit, even if that would hamper relationships with other colleagues.
5. Proactively report coordination problems in the workplace to the management.

The findings of the study shows that all the three psychological factors were positively related to temporal changes in promotive and prohibitive voice, there was only a single reverse link between promotive voice and temporal change in organization-based self-esteem were observed. The unique effect of the variables showed that two psychological factors that are felt obligation for constructive change and psychological safety were most strongly uniquely related to promotive voice and prohibitive voice respectively. The result of the interactive effects showed that the relationship between psychological safety and both forms of voice was enhanced by felt obligation for constructive change. On the other hand, relationship between psychological safety and promotive voice was weakened by organization-based self-esteem.

The study shows that psychological factor plays a virtual role in the both types; promotive and prohibitive voice behavior. While keeping in view the TEV and MEV, three conclusions could be obtained from Liang et al. (2012) scale of employee voice (promotive and prohibitive voice). First the scale is measuring one-way voice behavior of employee which is the provision of information by employee to management. Secondly, the finding of the study is supporting the MEV process, because in MEV the employee is given physiological safety by the organization by providing a platform to raise their voice. Third, although this scale consider both types; positive and negative of "provision of information by employee to management" but it is a single dimension therefore researcher adopting Liang et al. (2012) scale to measure employee voice in modern origination will be measuring a single dimension.

Earlier in this study we demonstrated that the MEV is a two-way communication and basically have three components; i) provision of information by employee to

management, ii) platform predetermined by the management, and iii) willingness of management to listen to employees. However, studies related to employee voice shows that majority of the studies are adopting Van Dyne and Le Pine's (1998) scale as a measures for employee voice in modern organization. As mentioned earlier Van Dyne and Le Pine's (1998) scale measures one dimension (willingness of employees to participate in voice behavior) and lacks the ability of measuring the overall dimensions of MEV. This dimension is the first phase of conceptual framework. The scale of Farrell (1983), Rusbult et al. (1988) and Liang et al. (2012) also measures merely employees' tendency to engage in voice behavior, yet does not highlight other dimensions of MEV. If these scales are adapted for the purpose of measuring employee voice in modern organization, based on the conceptual framework it will lack the ability. Because in modern organization the employee voice is multidimensional rather than one-dimensional. All the previous scales were one-dimensional and were only measuring the willingness of employees to participate in voice behavior and ignore the other two dimensions. Therefore in this study the aim is to develop a scale that has the ability to measure the overall dimensions of employee voice in modern organization.

Methodology of this scale development will be explained in the following chapter.

1.7. SUMMARY

This chapter highlights the changing nature of attitude of organizations towards employee voice in the modern era and different opportunities provided by organizations to support employee voice. These changes have broadened the scope and nature of employee voice from one-way to two-way communication (Dundon and Gollan, 2007; Wilkinson et al., 2004; Wilkinson and Fay, 2011).In one-way communication management role was seen as a counter-role (Staw and Boettger, 1990).whereas in the two-way communication the role of the management is also considered within the domain of employee voice (Bryson et al., 2007; Edgar and Geare, 2005).In other words, the domain of employee voice was only limited to voice behavior of employees in the past but nowadays employee voice domain has been widened to include platform and manager's response as in the case of

MEV. The previous scales mostly measured a single dimension *"the provision of information by employees to management"* which is the only dimension of TEV and lacking the ability of considering *"platform"* and *"manager's response"*.

With the changing nature and domain of employee voice in case of MEV, debates to consider voice behavior as in-role job responsibility for employees has increased (Detert and Burris, 2007; Thomas and Daniel 2012). According to Van Dyne et al. (2008) there is differences among employees regarding consideration of voice behavior as a core aspect of their job (in-role behavior) or a behavior above and beyond call of duty (extra-role).In-role behavior refers to a check and reward mechanism as in MEV, where employees are encouraged to participate in voice behavior and the management is responsible to acknowledge the issues and provide solutions (Batt et al., 2002; Benson, 2000). On the contrary, when an organization does not have the concept of MEV, the employees who raised voice to bring positive change in organization are considered as doing extra-role (Organ and Ryan, 1995; Van Dyne and Lepine, 1998). The previous voice scale developed by Van Dyne and Le Pine's (1998) measures employee voice participation as an extra role behavior. Therefore, we argue that the MEV, in which voice behavior is considered as in-role and platform and manager's response come under the domain of employee voice, cannot be measured with the currently available scales. All these scales measure only one component; willingness of employees to participate in voice behavior, which is the first phase of our framework, yet does not highlight other dimensions of MEV.

Therefore it is important to revisit the scales that are used to measure employee voice. With the changing nature of employee voice mechanisms from indirect one-way to direct two-way communication, it is necessary to develop a multidimensional scale to understand employee voice. The previous single dimensional scales need to be reconsidered to fulfill the measurement requirement of the multi-dimensionality of MEV. Because using the previous voice behavior scales in the modern organization which have the concept of MEV will be incorrect. Because it will not measure the actual employee voice but rather a single dimension of MEV. Therefore it is important to develop a

multidimensional scale that has the power to measure the MEV. In the following chapter methodology of this scale development will be given.

CHAPTER 2

RESEARCH METHODOLOGY

2.1. INTRODUCTION

This chapter explains the research methodology of the study. In section 2.1 research question is given, section 2.2 explains the research process, while section 2.3 provides the procedure of scale development which includes details of sample and data collection. In section 2.4 insight information is provided regarding the measures that were used in data analysis.

2.2. RESEARCH QUESTION

The research purpose of this study is to develop a scale that could measure employee voice in the modern organization. The previous scales had shortfalls and did not have the power to measure the overall dimensions of the modern employee voice. Researchers in organizational behavior area in recent decades found that employee voice has shifted from collective employee voice to a more individual employee voice (Dundon and Gollan, 2007; Dundon et al., 2004; Holland et al., 2009; Wilkinson and Fay, 2011). In other words the arrangement of voice for employee has shifted from "employee oriented" to "organizational oriented" (Wilkinson et al., 2004; Wilkinson and Fay, 2011).

The main purpose of this study is to bring forward a scale that can measure the two-way nature of modern employee voice. As discussed in literature chapter the management attitude towards employees has prominently changed in the modern era. Employees are given opportunity to express their issues and suggestions to the management. Hence, on the one hand if employee is given a voice on the other hand manager's responsibility has also increased and managers have to address the issues in due time. These changes have broaden the scope and nature of employee voice from one-way to two-way communication which the platform arrangement have shifted from "employee oriented" to "organizational oriented" (Dundon and Gollan, 2007; Wilkinson et al., 2004; Wilkinson and Fay, 2011).Therefore it could be stated that the employee voice in modern organization has

transformed into multidimensional because it included many factor as shown in conceptual framework. Hence it is argued that previous scales of employee voice failed to consider the overall dimensions of employee voice in modern organizations. It also leads to the research question of this study "do the previous scales have the ability to measure the overall dimensions of employee voice in the modern organization". To answer the research question, the different dimensions of employee voice are explored based on the literature and a scale is developed that could measure the overall dimensions of employee voice in the modern organization

2.3. RESEARCH PROCESS

The most important stage in research is to identify problem and the most relevant research method. According to Wilkinson (1991) two most important stages in research are a) identifying and setting out the research questions and b) establishing a framework which helps understand the context of the study. In this study quantitative methodology was utilized. Ary et al. (1972) stated that quantitative approach is perceived as a scientific approach to inquiry and stems from positivist foundation. In positivism, experimental and quantitative methods are adopted to test hypothetical generalizations and measure the causal relationships between variables (Denzin and Lincoln, 1998; Hoepfl, 1997). Quantitative methodology emphasizes on facts and causes; information is in number which is quantifiable; analysis is performed through a mathematical process; and the results are demonstrated in statistical terminologies (Bogdan and Biklen, 1998; Charles, 1995). In scale development studies mostly quantitative methodology is adopted, the reason behind is the reliability and validity of the scale, which is an essential part of any scale development process. Mix observation are presented regarding testing of reliability and validity in the qualitative research (Maxwell, 1992; Patton, 2002; Stenbacka, 2001).

Differences appear in the definition of reliability and validity among researches. The definition of reliability appearing in literature are; "agreement between two efforts to measure the same thing with the same methods" (Hammersley, 1987); "ability to measure consistently" (Black and Champion, 1976); and "accuracy or precision of a measuring

instrument" (Kerlinger, 1964). On the other hand validity is defined as; "agreement between two efforts to measure the same thing with different methods" (Hammersley, 1987); "degree of approximation of reality" (Johnston and Pennypacker, 1980); and "measuring what we think we are" (Kerlinger, 1964). The aggregate goal of these definitions that could be concluded is two concepts as replicability and accuracy.

The same leads to different opinions regarding the accurate option of adopting quantitative or qualitative approach to measure reliability and validity (Kirk and Miller, 1986; Charles, 1995; Denzin and Lincoln, 1998; Gubaand Lincoln, 1989; Hammersley, 1987). According to Simco and Warin (1997) reliability and validity are tools of an essentially positivist epistemology. Therefore a quantitative approach would be more appropriate. Qualitative researcher have argued that in qualitative research the term validity is not applicable and have suggested a more appropriate term, for instance trustworthiness, relevant, confirmable, credible or representative (Denzin and Lincoln, 1998; Hammersley, 1987; Mishler, 1990; Wolcott, 1990). The criteria for reliability and validity roots in positivism and also positivism is based on systematic approach supporting the reliability and validity of any test. On the other hand, in quantitative research three types of reliability are identified and tested which are; 1) degree of measurement repeatedly remains the same; 2) stability of a measurement over time; and 3) similarity of measurement within a given time period (Kirk and Miller, 1986). Regarding the scale development Charles (1995) describes reliability as the consistency with which the items of questionnaire are answered and through the test-retest method the individual's scores relatively remain the same. The reliability score of a test-retest may change depending on some characteristic of the respondent and the answer of the respondent at one period may differ at the second period of time. According to Crocker and Algina (1986) it is the responsibility of the researcher to demonstrate high consistency and accuracy of scores from their test. The validity related to quantitative research is described as "construct validity" (Wainer and Braun, 1988). The initial concept, notion, research question or the hypothesis of the study determines the construct of the study and indicates which data to be gathered and how it should be gathered. Validity also establishes whether the means of measurement are accurate and are

actually measuring what they are intended to measure. Therefore any scale having a valid score in terms of reliability and validity would be an effective scale.

2.4. PROCEDURE OF SCALE DEVELOPMENT

The guidance for the procedure of scale development was adopted from the descriptions of DeVellis (1991) and Spector (1992). According to Churchill (1979) the steps for developing scale are; a) specifying a domain of construct, b) generating a number of sample items from literature, after which c) collection of initial data, d) conducting a pilot study through which purification of the measure and assessing the reliability take place. After conducting the pilot study e) the new data are recollected and again reliability is assessed. The last step is, f) checking construct validity and developing the norms which take place.

2.4.1. Items Generation

The first step in items generation was collecting and analyzing different items that were related to employee voice. These items were collected from previous questionnaire and also from studies and literature reflecting the logical and semantic content of the concept of employee voice. All the items were tabulated and the list of items was progressively reduced by eliminating the questions not related to employee voice. The items that had similar meaning were also removed. These items were rephrased to fit to the current study and also new items were developed based on the dimensions identified from the conceptual framework of employee voice. At this stage the number of items that were remained was 77. The list of the 77 items and the list of the studies from where these items were selected are presented in Appendix 2.

For content validity a total of 11 PhD students and 4 management professors were selected. Content validity is important because it helps in specifying that the set of items reflect the content domain (DeVellis, 1991). According to Churchill (1979) content validity helps to ensure that the items used are actually measuring what they are supposed to measure. Among the 11 PhD students 8 were doctorate students in management science at

different universities in Pakistan and 3 were studying in a university in Turkey. All of these doctorate students were in their research phase. The Pakistani universities include International Islamic University Islamabad, Iqra National University, and Institute of Management Sciences Peshawar and the number of PhD students representing each university are 3, 2 and 3 respectively. The gender distribution of these 8 PhD students were that, five were male and the remaining three were female while all the 3 PhD students in Turkey were from Dokuz Eylul University and were male. The 4 management professors were from Dokuz Eylul University, Turkey.

The content validity was conducted in two phases; a) in the first phase the 8 PhD students from management science from Pakistan were contacted and among them 6 were agreed to participate. The two students out of the 8 PhD students could not participate due to personal problems. One was the student of International Islamic University Islamabad and the other was from Iqra National University. The remaining 6 PhD students were contacted in person and the list of 77 items were provided and recollected in person also. These PhD students suggested 38 items to be drop, in total 39 items were remained. The 38 items were dropped due to two reasons; i) irrelevant with the conduct of employee voice and ii) similarity among questions. The irrelevant items were 16 in number which were 4, 6, 9, 12, 27, 28, 31, 41, 51, 56, 67, 69, 71, 74, 75 and 76. The number of similar items was 31 and these items were categorized into 9 different groups which had similar meaning. One item of each group was retained that was recommended by the PhD students and the remaining 22 items were dropped. The list of items retained and dropped is presented in Table 2.1.

Table 2.1: Retained and Dropped Items

Group	Retained items	Dropped Similar items
1	42	1, 65, 24, 44
2	55	38,16
3	39	57
4	60	7,32,33,36,37
5	47	8
6	19	59
7	15	49
8	40	47,72,29,30,14
9	11	53,18

In the second phase of content validity, the three PhD students and four professors from business faculty of Dokuz Eylul University were asked their opinion for adding, dropping or changing any unclear items. The 39 items were provided for their suggestions and they recommended making some rephrasing so that the items are easily understandable. They also suggested splitting the following items;

The first item that was suggested to split was “Have you rise your voice/protested regarding job related issues e.g. pay, job autonomy, work load, timings, job security, etc.” into four items targeting each job related issues. Second was “Does your manager give response to your complaints or recommendations in adequate time?” into two items that could measure manager’s response towards complaint and recommendation separately. The third item was “Have you communicated creative suggestions to coworker or management about product and services” into two items targeting manager and coworker separately, for instance; a) I communicate creative suggestions to management about product and services; and b) I communicate creative suggestions to coworker about product and services.

The other suggestion made was to eliminate 8 items which had similarity with other items. After making these changes, finally 36 items were left, the list is presented in Appendix 3. All the items responses were scaled from Strongly Disagree = 1 to Strongly Agree = 5.

2.4.2. Questionnaire

The questionnaire items were constructed in English and the respondents from whom the survey would be conducted were native Turkish. For this reason the forward and backward translation of the 36 items were conducted according to the procedure of Brislin (1980). Initially the items were translated from English to Turkish by an English language expert whose native language was Turkish. Then three experts who were professors at the Dokuz Eylul University and were Turkish native speaker checked the Turkish grammar and necessary corrections were made. The Turkish version was backward translated by an independent translator whose mother tongue was Turkish and was an English teacher. She had not seen the original items before. As a result after making some comparisons, it was decided that there is consistency in the meaning between the original and Turkish version. Both the English and Turkish version of the questionnaire is shown in Appendix 4 and 5.

The questionnaire was accompanied with an introduction letter explaining the purpose of the study and researcher's personal identity and contact information. In the letter it was ensured that the collected data will be utilized only for research purpose and would not be disclosed to anyone.

2.4.3. Pilot Study

Both the English and Turkish version of questionnaire was pre-tested prior to its use. The Turkish version questionnaire was pre-tested on 36 respondents which included 21 graduate students at Dokuz Eylul University hospital, 9 PhD management science students and 6 staff members at Dokuz Eylul University, Turkey. Pilot group for English questionnaire version consisted of 39 doctors at hospital in Pakistan. These surveys were conducted face to face and the completion time of the respondent was calculated. The

demographic of the Turkish pilot group was that it consisted of 22 female and 14 male, average age was 30. Pakistanis pilot group consisted of 20 female and 19 male respondents, had an average age of 34 and average 4.9 year tenure in current organization. It was confirmed from the pilot groups that the instructions and questions were clear and the form design was user-friendly. The average questionnaire completion time for the Turkish version was 9.8 minutes and English version was 10.3 minutes.

2.4.4. Data Collection

The population consists of all the employees in Dokuz Eylul University (DEU) hospital. The reason selecting a public university hospital is that Turkish government introduced Health Transformation Program (HTP) in 2008 with an initiative to improve the efficiency and quality of the health services. Under this program the number of doctors and paramedical staffs were increased to approximately two times but retaining these employees is still a challenge for the government. Many reasons have been explained in literature contributing to low retention rate, but the major reason is job dissatisfaction in majority of the cases. Literature describes that one of the best remedies for the dissatisfied employees is to provide them with a voice (Purcell et al., 2008).The Ministry Of Health anticipated that the total health workforce will increase by 89.34% that is 563,852 in 2008 to 1,067,572 in 2023 under the Health Transformation Program. But recent statistics show that the university hospital's employees are decreasing. The statistics are in Appendix 6. The university hospitals are also public property and a portion of budget of the university hospitals are provided by the government. According to the OECD (2008) review of health systems in Turkey, large amount of the budget of university hospital is covered by the revolving fund revenue. Revolving fund revenue is a primary source of financing for Ministry of Health and university hospitals, covering more than 80% of the total hospital budget. Hence the property of university hospitals are also public property and the problems in university hospitals can affect the government hospitals. Therefore the university hospital could be considered as a case study and could be analyzed for problem and solution. To achieve this target the Ministry Of Health and university hospital have to take into consideration a number of factors. One of them is the retention rate of employees.

Different researchers have highlighted that employees in the Turkish health sector are dissatisfied due to pay, promotion and communication facets (Rojan and Sahin, 2015), feeling discontented and unhappy with their work situation (Kisa and Kisa, 2006). Bodur (2002) conducted a survey and found that health care workers at public health centers in Konya city have low satisfaction scores and the reasons identified were working conditions and income. To improve the health sector and motivate the employees the Ministry needs to revisit its HR policies regarding employee voice. Because if the health sector of a country needs satisfied and motivated doctors and paramedical staffs they should give voice opportunity to every level of employees so that they can bring forward their issues and suggestions.

Therefore in this study Turkish health sector is under consideration for testing the level of employee voice. In this respect, a public university hospital was selected so that it could be a test case in evaluating the employee voice mechanisms in health sector. Hence, DEU hospital was selected because it is in the top three public university hospitals in Izmir. According to the information provided by the HR department, there are 2309 employees which are classified in the table below:

Table 2.2: Employees Classification

	Categories	**Number**
a.	Administrative staff	376
b.	Doctors	1190
c.	Nurses	743
	Total	**2309**

These 2309 employees serve as the population in this study. The administrative staff included the managing director (Hastane Başmüdür) of the hospital to the lower level staffs that are related to non-clinical work. The Head doctor (Başhekim) and assistant head doctor to the level of medical technicians are considered in the group of doctors. In this study convenience sampling was conducted. The reason for conducting convenience sampling was mostly the doctors and nurses at hospital were busy with caring patients.

Hence it is very difficult to make them fill the questionnaire. Therefore the ones who were free and were in their offices or cafeteria were selected at that moment. Convenient sampling is inexpensive and saves time. On the other hand convenient sampling often suffers from biases which may lead to the under-representation or over-representation of particular groups within the sample. To address this issue one of the alternatives was to make frequent visits to different offices and areas where data could be collected from a mix of doctors and paramedical staffs. Before starting data collection a letter was written to the managing director of the DEU hospital for permission. It took a few days and a permission letter was provided which is shown in Appendix 7.

The data collection was conducted in two ways; a) personally visiting the hospital and distributing the questionnaire, and b) through email. Personal visits were conducted for the nursing staffs and administrative staffs while the doctors were contacted through email due to their busy routine. In personal visit to different administrative offices and nurses to fill the questionnaire, first a small introduction was taken place and then the permission letter which was taken from head of hospital was shown to them. Employees who had free time filled it on the spot. For others who were not able to answer the questionnaire on the spot, the questionnaire was left and recollected a few days later.

The doctors and a few administrative staffs were contacted through email. An introduction letter, the permission letter from head of the hospital and questionnaire were emailed along with the Google form link. The Google form link was utilized by all the respondents who contributed through email. The questionnaires collected through personal visits were entered into an Excel spreadsheet.

A total number of 406 respondents contributed to this study, which is 17.58 percent of the population. The female respondents are 60.84 % while the remaining 39.16 % consists of male. In 406 respondents 47.78% are doctors, while 1.48 % are medical technicians. Administrative staffs are 26.60 %, nurses are 19.21 %, and research assistants consist of 4.93% of the respondents.

2.4.5. Data Entry

After finalizing the questionnaire and completion of data collection the next phase is entering data to statistical software for analysis. All the questionnaires were double-checked and all the data were entered manually into the IBM SPSS Statistics 20 software. A data file was created, each demographic variable and questionnaire items were defined after which the data were typed and saved in the data files.

2.4.6. Data Screening

Once the data were entered in to the SPSS, the data need to be examined and cleaned from outliers and remedies should be provided for dealing with missing values. Missing data can be harmful to a research study and primarily results from errors in data collection or data entry, or from omission of answers from respondents (Hair et al., 2006). Outliers or extreme responses also influence the outcome of multivariate analysis, therefore solution to defuse their impact should be considered.

It is difficult to detect outliers in survey-based research using Likert type items. Because the respondents may enter the data incorrectly or sometimes the respondents intentionally or unintentionally answer all the items with same answer (Wentland and Smith, 1993). One technique to handle this type of problem is to add reversed Likert items, which occasionally are added to serve as control questions (Swain et al., 2008). In this study two reversed Likert items such as item number 9 and 22 are used. While entering the data, the data were checked for outliers where respondent had filled all the items with same answer or same pattern, but the data had no such outliers. According to Liu et al. (2010) ordinal response scale limits the respondent to select value which cannot exceed a certain value. On the other hand in continuous scale there is a high probability that outliers may exist. The investigation of outliers in ordinal response scale is more complicated as compared to continuous scale and previous studies have documented inconsistent results on effect on Cronbach's Alpha based on number of response categories. But studies like Aiken (1983), Matell and Jacoby (1971), and Wong et al. (1993) concluded that Cronbach's Alpha is not or hardly affected by number of response categories.

While entering the data to excel file a primarily screening was made for error and missing values, and 17 cases were identified which had unanswered all the questions. Those cases were not entered in excel file, so the final sample size was 406. Regarding sample size, both exploratory and confirmatory factor analysis are shown to be susceptible to sample size effect. The confidence that observed factor loading is accurately reflecting true population values is determined through larger sample size. Comrey and Lee (1992) categorized the adequate sample size regarding factor analysis as; 100 = poor, 200 = fair, 300 = good, 500 = very good, 1,000 or more = excellent. Different researchers have recommended different absolute sample size for factor analysis such as; Guilford (1954) recommended 200 at least, Cattell (1978) argued the minimum desirable sample size to be 250, Kline (1979) and Gorsuch (1983) are both claiming the sample size to be at least 100.

Therefore the sample size of 406 is a reasonable and lies between the good and very good scale of Comrey and Lee's (1992) adequate sample size. Once the data were verified and there were no errors the next step was the analysis phase.

2.5. DATA ANALYSIS

In this section insight information is provided regarding the measures that were used in data analysis. First of all descriptive statistics including frequencies and graphs representations were conducted. Cross-tabulation was also conducted. Following this, the exploratory factor analysis, internal consistency and confirmatory factor analysis including structural equation modeling were conducted. These measures are explained in detail in the following sub-sections.

2.5.1. Descriptive Statistics and Frequencies

Descriptive analysis and frequency distribution are essential part of research findings. Raw data were transformed into a structure that would present information. In frequency distribution large amount of data were condensed and summarized into useful and easy to understand tables and graphs. Through these analysis the demographic characteristics such as; gender, age group, job position, tenure and education level of the

respondents are presented in a simplistic form that is straightforward and easy to comprehend. The raw numbers are converted into percentages which provide useful description of the data.

2.5.2. Cross-Tabulations

Cross-tabulation tables and graphs were constructed to organize the data by group categories and classes to fit comparisons. It provides joint frequency distribution information of two or more variables. According to Barghoorn (1996) categorical (nominal measurement scale) data are best analyzed and presented through cross-tabulations. Thus in this study cross-tabulation were used to compare and analyze the nominal measurement scale items. Cross-tabulation between job position and three different demographic factors; a) age group, b) tenure and c) education level are displayed to provide more in-depth information regarding the experience of employees at each job position. Also question number 3 (Does your organization have labor unions?) and 4 (Are you a part of the Union?) were cross-tabulated which help in comparing employees' awareness and participation regarding unions.

2.5.3. Exploratory Factor Analysis

In scale development exploratory factor analysis (EFA) plays a virtual role. EFA discerned regularity and order in phenomena and patterns structure of scientific theories and hypotheses. Through EFA the underlying factors which are responsible for the co-variation among the observed variables are found. These underlying factors are always less than the number of observed variables. The reason why researchers conduct an EFA is because he/she is not sure about the number of underlying dimensions for the given data (Kim and Mueller, 1978). The value of factor analysis is that it provides a meaningful organizational scheme that can be used to achieve a more parsimonious explanation of the variables (Tinsley and Tinsley, 1987). The EFA are commonly used by researchers in social sciences for scale development studies and according to Costello and Osborn (2005) based on two year review in PsycInfo database, 1700 studies have used some form of EFA.

Hinkin (1995) conducted a review about scale development and found that factor analysis is the most widely used method for scale development.

This study's main objective is to develop a scale that could measure the overall dimensions of MEV. Therefore, EFA is used to reduce the items and develop the underlying factors. Guidelines are taken from the procedure of Kerlinger and Lee (2000). According to Kerlinger and Lee (2000) three aspects of a factor analysis are important to observe: a) data and factorability, b) factor extraction and c) factor rotation.

a) Data and Factorability

Data are important element of factor analysis. Researcher must make sure that sample size is sufficient which is relative to the number of variables. In this study the sample size is 406 and according to Guadagnoli and Velicer (1988) in EFA to obtain an accurate solution a sample size of 150 should be sufficient. Therefore the sample size used in this study is reasonable and through which accurate solution could be obtained.

Data screening was conducted primarily to check for the basic assumptions underlying factor analysis. Hair et al. (2006) states that normality, homoscedasticity and linearity are rarely used in factor analysis and especially when Likert-scale is used. On the other hand, certain level of correlation is required for conducting factor analysis which is the factorability assumption. Factorability of data is tested to evaluate meaningful interrelationships among the items, mostly based on Pearson's correlation. But high correlation above r= +/- 0.9 may lead to multicoillinearity problem which can be observed from correlation matrix (Yong and Pearce, 2013). There were no multicollinearity problem in the dataset and according to the correlation matrix (Appendix 8) the highest correlation value was.788 while the rest are below this value.

The commonly adopted test to assess the strength of relationship and to suggest the factorability of the variables are Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin Test of Sampling Adequacy (KMO) (Ogunlana, 2008; Williams et al., 2010). According to Pett et al. (2003), the null hypothesis of Bartlett's test states that the observed correlation

matrix is equal to the identity matrix. This means that the observed correlation matrix is not factorable. On the other hand if the null hypothesis is rejected, it suggests that linear combinations exist because the observed correlation matrix is statistically different from a singular matrix.

b) Factor Extraction

There are three factor extraction methods which are frequently used in factor analysis.

i) principal-axis factoring (PAF)
ii) principal components analysis (PCA)
iii) the maximum likelihood (ML) method

According to the research conducted by Conway and Huffcutt (2003) 371 EFA studies during the years 1985-1999, published in the Journal of Applied Psychology, Personnel Psychology and Organizational Behavior, and Human Decision Processes were analyzed, which showed that the most used extraction method is PCA 39.6%, followed by PAF 22.4% and then ML 3.8%. Henson and Robert's (2006) research also obtained similar findings and revealed the prominence of PCA also. There are overwhelmingly large numbers of different combination of factor extraction and rotation techniques adapted by researchers but the result of extraction are similar regardless of which method used (Tabachnick and Fidell, 2001).

In this study PCA extraction method was adopted. One advantage is that PCA reduce noise as small variations are automatically ignored in the back-ground, when maximum variation basis is selected (Jolliffe, 2002). Most of the previous studies have adopted PCA for scale development where reduction of dimensionality of data set is required consisting of large number of interrelated variables (Hinkin, 1995). In this study the objective was also to reduce dimensionality and retain as much as possible the variation presented in the data set. Therefore PCA was used in this study as a method for extracting factors.

c) Factor Rotation

Two major approaches of factor rotation are described in literature that is; a) orthogonal and b) oblique. Factor rotation is a tool through which researchers can better establish and interpret the existing relationships among the factors. The difference between orthogonal and oblique is that the prior assume that the factors in the analysis are uncorrelated while the later assume it correlated. The SPSS statistical software offers five rotation methods, three of those are orthogonal that are; i) varimax, ii) quartimax, and iii) equimax, and two are oblique that are; iv) direct obliminand v) promax. According to Gorsuch (1983) there are four different orthogonal methods (equamax, orthomax, quartimax, and varimax) and 15 oblique methods (binormamin, biquartimin, covarimin, direct oblimin, indirect oblimin, maxplane, oblinorm, oblimax, obliquimax, optres, orthoblique, orthotran, promax, quartimin, and tandem criteria).

Basically factor rotation is a process where the two reference axes are rotated to permit a virtual infinity of different solution (DeCoster, 1998). Each rotation of a factor would give new loadings for each new position (Kline, 1994). The orthogonal rotation are always rotated in such a way that the axes are right angles (90 degrees) to each other and uncorrelated (correlation is zero), while in oblique the factor axes are not held right angles and are allowed to form acute or obtuse angles (Kerlingler and Lee, 2000). According to Kline (1994) oblique rotation allows correlated factors and selection of position of factors with less restriction. In contrast Kim and Mueller (1978) stated that it does not matter whether the factors are correlated or not, because this characteristic will not affect the exploratory stages of analysis to a large extent. Therefore employing a method orthogonal rotation may be preferred over oblique rotation because the former is much simpler to understand and interpret. Therefore the orthogonal varimax rotation method is adopted to obtain simple structure.

In summary, factor analysis is a process which combines group of different variables based on similar underlying characteristics. These sets which are grouped together are called a factor or component. These factors are then confirmed through

confirmatory factor analysis to test if the same variables are loaded to the same factor for different set of data.

2.5.4. Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) is a process through which the hypothesis is tested to determine if there is a relationship between observed variables and their underlying latent constructs. The relationship patterns are prior postulated based on knowledge of the theory, empirical research, or both and then hypothesis are tested statistically (Schumacker and Lomax, 1996; Kline, 1998; Hoyle, 1995). CFA in scale development is important to determine if the variables are loaded to the same factor for different data set. In this study once the PCA was conducted and different factors are obtained, then the CFA is important to test if the items load to the same factor. Structural Equation Modelling (SEM) is mainly used in literature for CFA. According to Byrne (2001) SEM is a statistical technique that is used to test causal relations i.e. hypothesis-testing and for CFA. Therefore in this study SEM is adopted to test CFA and the hypotheses with IBM SPSS AMOS, software version 20. The data set is divided into two sub-groups based on job position. The first group consists of 220 respondents which is a combination of doctors, research assistants and medical technicians and second group is a combination of nurses and administrative staff and consists of 186 respondents. According to Hair et al. (2006) if the sample size permits, the researcher may randomly split the sample into two subsets and estimate confirmatory perspective. Feldhusen et al. (2000) and Bryant and Yarnold (1995) conducted EFA and CFA in combination to explore and then confirmed the factor structure by splitting the sample in to two sub groups randomly. Both of the sub-groups had sufficient sample size to be tested in accordance to the requirement of CFA (Comrey and Lee, 1992; Gorsuch, 1983; Guilford, 1954; Kline, 1979).

Different fit indices are observed to determine the relationships which includes chi square/degree of freedom ratio (CMIN/DF), goodness-of-fit (GFI), adjustment goodness-of-fit (AGFI), comparative fit index (CFI), root mean square residual (RMR), standardized root mean square residual (SRMR) and root mean square error of approximation

(RMSEA).The Chi-Square value is used to evaluate overall model fit and, "assesses the magnitude of discrepancy between the sample and fitted covariance's matrices" (Hu and Bentler, 1999). However, using Chi-square value has a number of limitations such as a) sensitive to sample size, b) test assumes multivariate normality and severe deviations from normality (Bentler and Bonnet, 1980; Jöreskog and Sörbom, 1993; McIntosh, 2007). To minimize the impact of limitations of Chi-square, the CMIN/DF is an alternative fit indices (Wheaton et al., 1977) and the value recomended is between 1 to 5 (Tabachnick and Fidell, 2007;Wheaton et al., 1977).

The GFI is also used as an alternative to the Chi-Square test (Tabachnick and Fidell, 2007). It takes into consideration the variance and covariance accounted for by the model, which shows how close the model comes to replicating the observed covariance matrix (Diamantopoulos and Siguaw, 2000). The AGFI is an adjustment value of GFI which is adjusted to the degree of freedom (Tabachnick and Fidell, 2007). The statistcal range of GFI and AGFI both are between 0 and 1, a high cut-off point of 0.90 and greater indicates well fitting models (Shevlin and Miles, 1998).

The CFI was introduced by Bentler (1990).This statistic assumes that all latent variables are uncorrelated (null/independence model) and compares the sample covariance matrix with this null model. The value of CFI also has a high cut of 0.90 and greater but CFI $\geq$ 0.95 is an indication of a good fit (Hu and Bentler, 1999).

The RMR and the SRMR are the square root of the difference between the residuals of the sample covariance matrix and the hypothesized covariance model. In the case of RMR it is difficult to interpret the result if the questionnaire contains items with varying different levels for instance 1 to 5 or 1 to 7. But on the other hand SRMR could be interpreted. The acceptable range of SRMR should be between zero and 0.1 (Byrne, 1998; Diamantopoulos and Siguaw, 2000). A value of zero in SRMR indicates a perfect fit while a value as high as 0.08 are deemed acceptable (Hu and Bentler, 1999).

RMSEA is an absolute fit measure assessing badness of fit of a model per degree of freedom in the model. The RMSEA is used for adjusting sample size where chi-square statistics are used (Byrne, 1998). The closer the value to zero is considered as a good-fit, range of 0.05 to 0.10 is considered as a fair fit (Browne 1990) and the value above 0.10 indicates poor fit (MacCallum et al., 1996). Hu and Bentler (1999) and Steiger (1989) stated that RMSEA indicates reasonable fit below .10 and good fit at less than .06.

2.5.5. Internal Consistency

Internal consistency of a test indicates whether items on a test that are intended to measure the same construct, produce consistent scores. Cronbach (1951) is the first who proposed to use the average inter-item correlation to measure internal consistency. To determine the reliability of the factor the Cronbach's alpha was used.

2.5.6. Invariance Test

Invariance test was conducted to test whether the same CFA is valid in each group. The goal of test of invariance is to find out which of the loadings, intercepts and error variance differ across groups. So, the Multisampling Confirmatory Factors Analysis (MCFA) extends the CFA as multi-groups are determined and tested for invariance (or equivalence). This comparison test is based on chi-square difference (ΔX^2), where overall comparison is accepted if a set of constraint is applied and model-fit does not show a significant increase. The measurement invariance methodology is widely adopted for the comparison of the different groups. The basic objective is to ensure that the measurement models conducted under different conditions yield equivalent representation of the same construct. Measurement invariance is concerned with the psychometric properties of the measurement scales and includes configural invariance, metric invariance, scalar invariance and measurement error invariance (Cheung and Rensvold, 2002; Little, 1997).Different procedures are adopted to test for Multi-group invariance; Jöreskog (1971) developed the first classical approach where evidence of non-invariance is based on the chi-square and difference of chi-square test and no baseline model is considered for comparing. The second approach was introduced by Byrne et al., (1989), where the

configural model is considered as baseline and the other invariances are compared against it. The decision of non-invariance is tested by representing the difference between the chi-square and difference between degree of freedom values for the configural and other models in which equality constraints have been imposed on particular parameters (Byrne, 2010). Both approaches are made on the bases of chi-square differences, but the one approach does not consider baseline whereas the other approach does.

Also the invariance test takes in to consideration the chi-square, CFI and RMSEA. According to Hair et al. (2006) the chi-square, CFI and RMSEA for all the groups and models are calculated for the entire set. The comparison can be made on the base of chi-square differences (ΔX^2) which can be accessed with a statistical significant level. The groups are initially tested for configural invariance, which ensures that for each group CFA model has same number of factors and the same number of items are associated with the construct. Moreover, it tests that the model identified in each group meets an appropriate level of model fit and construct validity (Irvine, 1969; Suzuki and Rancer, 1994). The metric invariance takes into consideration the factor loadings of each group and involves the equivalence of the factor loadings across the groups. The constraint is set so that the factor loadings are equal across groups and the ΔX^2 is computed between groups. Non-significant ΔX^2 establishes that the factor loadings across the groups are similar (Horn and McArdle, 1992; Meredith, 1993). On the other hand, scalar invariance tests the equality of the measured variable intercepts among the factors of different groups. The scalar invariance is required if any comparison of level is conducted across groups (Meredith, 1993; Steen kamp and Baumgartner, 1998; Vandenberg and Lance, 2000). Measurement error invariance tests the amount of error presented in the indicators and determine the extent to which it is equivalent across the groups (Mullen, 1995; Singh, 1995). Means, variance and covariance of between-group differences in latent are also considered and tested as part of invariance. Once the invariance are tested and all the parameters are the same in each group relative to a type of invariance, then it is considered as full invariance (Byrne et al., 1989; Hair et al., 2006). Partial invariance is when at least multiple estimates

per factor have to be equivalent across groups while another argument is that minimum two parameters per construct are found to be invariant (Byrne et al., 1989).

Therefore, the measurement invariance was tested for different sample to determine if the items loading is the same or different among samples.

2.6. SUMMARY

This chapter discussed how the data were collected and analyzed. It also provided a detail of procedure of scale development which included the items generation and questionnaire. It also made explicit how the data were collected, entered and screened processes were conducted to ensure quality of the data set. The data analysis procedures, which include both EFA and CFA were explained. This chapter has provided a detail account and justification for the research methodology. Based on the methodology adopted, the next chapter presents the results for this study.

CHAPTER 3

ANALYSIS AND RESULTS

3.1. INTRODUCTION

This chapter explains and discusses the outcomes of the various statistical analysis used to explore the relationships among the employee voice items, towards developing and validating a scale for measuring employee voice in organization.

3.2. DEMOGRAPHIC

In Table 3.1, the different demographic factors of the respondents are displayed based on the demographic questions asked in "section A" of the questionnaire. It includes the information regarding; gender, age group, job position, tenure and education level. The table shows that out of 406 respondents, 60.84 percent (247) of the respondents are female while the remaining 39.16 percent (159) are male.

Age, job position, and tenure in current organization were open ended questions. Based on the response of the respondents these questions were categorized into groups. The age group was divided into five groups; 20-30, 31-40, 41-50, 51-60 and 61 and above. It is observed from the table that majority of the respondents that is 43.84 percent (178) are in the age group of 31-40. There is only one respondent whose age is above 61. The age group of 20-30 consists of 16.75 percent (68) respondents while 41-50 and 51-60 consists of 29.31 percent (119) and 09.85 percent (40) respondents respectively.

Table 3.1 shows that there are five different job groups; doctors, nurses, administrative staff, research assistants, and medical technicians. Majority of the respondents (47.78 percent) are doctors while the medical technicians are 1.48 percent (6) which is the lowest. The remaining 50.74 percent of the respondents comprise of administrative staff as 26.60 percent (108), nurses as 19.21 percent (78) and research assistants as 4.93 percent (20).

Table 3.1: Demographic Characteristics

a.		Female	Male
Gender	Frequency	247	159
	Percent	60.84	39.16

b.		20-30	31-40	41-50	51-60	61- above
Age group	Frequency	68	178	119	40	1
	Percent	16.75	43.84	29.31	9.85	0.25

c.		Doctors	Nurses	Administrative Staff	Research Assistants	Medical Technician
Job Position	Frequency	194	78	108	20	6
	Percent	47.78	19.21	26.60	4.93	1.48

d.		less than 5	6-10	11-15	16-20	21-25	26-30	31 and above
Tenure group	Frequency	148	129	58	42	15	6	8
	Percent	36.45	31.77	14.29	10.34	3.69	1.48	1.97

e.		Undergraduate	Master's degree	PhD	Other
Education	Frequency	216	93	75	22
	Percent	53.20	22.91	18.47	5.42

The tenure of the respondents is classified into seven categories. The first and last groups are “less than five years” and “31 and above”, while the rest 6 to 30 years is divided into five groups consisting of 5 years each. The percent of respondents whose tenure is “less than five years” are 36.45 percent (148). The next largest group is 31.77 percent (129) who have worked between 6 to 10 years. The lowest group of respondents are 1.48 percent (6) and these respondents have experience between 26 to 30 years. The remaining groups 11-15, 16-20, 21-25 and above 31 consists of 14.29% (58), 10.34% (42), 3.69% (15) and 1.97% (8) of respondents respectively.

The education level is classified into four categories; undergraduate, master’s degree, PhD and other. The other education category includes education less than undergraduate (elementary/middle/high school) or any other formal certification. Most of the respondents are undergraduate as 52.96 percent (215), while 22.91% (93) have master’s degree. There were 18.72% (76) who have done PhD and the rest of the respondents 5.42% (22) had other education.

3.2.1. Cross Tabulation between Job Position and Different Demographic Factors

Table 3.2 shows the cross tabulation between job position and three different demographic factors; a) age group, b) tenure and c) education level. The reason to display the cross tabulation between these variables is that it provides a comparison summary of the respondents at different job position in relation to their experience and expertise. The more employees of a certain organization have experience and expertise at a certain job level while other variables remaining constant, the better the organization will be in implementing the two-way communication process of employee voice. Table 3.2 demonstrates that 194 doctors had responded to this study and majority of the doctors 76.8% (149) are in the age group of “31 to 50”.The doctors between 20 to 30 age are 7.7% (15). The tenure of the doctors in Table 3.2-b shows that 60.3% (117) have job tenure in this organization is less than 10 years, 31.4% (61) have less than 5 year’s tenure. The doctors having 11 to 20 years tenure are 32.4% (63) while tenure more than 20 years are 7.2% (14). 36.1% (70) have education level of master’s degree, while 35.6 % (69) have

PhD degree. There are also 8 doctors who state that they have other education. These might be mistakenly marked as they had not provided any explanation about the type of the other education.

The nursing staff in this study are 78 in total and majority of them are below 40 years old as 82% (64). Out of these 82% high number of nursing respondents are between the age group 31-40 (56.4%), while 25.6% are in the age bracket of 20-30. The nursing respondents above 40 are 17.9% (14). These statistics are also reflected in the job tenure demographics. It can be seen in Table 3.2 that 87.2% (68) of the nurse respondents have tenure less than 15 years while 9% (7), 2.6% (2) and 1.3% (1) have tenure of 16-20 years, 26-30 years and more than 30 years respectively. There are no nurses who have been working for between 20 to 25 years in the organization. Majority of the nurses are undergraduate, while 10.3% (8) have master's degree.

The number of administrative staff as shown in the demographic Table 3.2 are 108 in total. The majority 48.1% (52) are between 31-40 age group. There are no administrative staffs above 61 age while the second lowest7.4% (8) are in the age group of 51-60. The administrative staffs between 20 to 30 age group are 15.7 percent (17) and 28.7% (31) are between the age group of 41-50. The tenure of the administrative staffs below 10 years are 73.1% (79), whereas 6.5% (7) staffs have the most experience in their position. The education level distribution of administrative staff is similar with that of nursing staff; majority of them are undergraduate as 83.3% (90).

Table 3.2: Cross Tabulation among Job Position and other Demographic factors

a.		Doctors	Nurses	Administrative Staff	Research Assistants	Medical Technician	Total
Age group	20-30	15 (7.7)	20 (25.6)	17 (15.7)	14 (70.0)	2 (33.3)	68 (16.7)
	31-40	74 (38.1)	44 (56.4)	52 (48.1)	5 (25.0)	3 (50.0)	178 (43.8)
	41-50	75 (38.7)	11 (14.1)	31 (28.7)	1 (5.0)	1 (16.7)	119 (29.3)
	51-60	29 (14.9)	3 (3.8)	8 (7.4)	0 (0.0)	0 (0.0)	40 (9.9)
	61- above	1 (0.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.2)
	Total	194 (100.0)	78 (100.0)	108 (100.0)	20 (100.0)	6 (100.0)	406 (100.0)
b.							
Tenure group	less than 5	61 (31.4)	28 (35.9)	40 (37.0)	17 (85.0)	2 (33.3)	148 (36.5)
	6-10	56 (28.9)	29 (37.2)	39 (36.1)	3 (15.0)	2 (33.3)	129 (31.8)
	11-15	34 (17.5)	11 (14.1)	11 (10.2)	0 (0.0)	2 (33.3)	58 (14.3)
	16-20	29 (14.9)	7 (9.0)	6 (5.6)	0 (0.0)	0 (0.0)	42 (10.3)
	21-25	11 (5.7)	0 (0.0)	4 (3.7)	0 (0.0)	0 (0.0)	15 (3.7)
	26-30	3 (1.5)	2 (2.6)	1 (0.9)	0 (0.0)	0 (0.0)	6 (1.5)
	31 and above	0 (0.0)	1 (1.3)	7 (6.5)	0 (0.0)	0 (0.0)	8 (2.0)
	Total	194 (100.0)	78 (100.0)	108 (100.0)	20 (100.0)	6 (100.0)	406 (100.0)

c.							
Education	Undergraduate	47 (24.2)	68 (87.1)	90 (83.3)	9 (45.0)	2 (33.3)	216 (53.2)
	Master's Degree	70 (36.1)	8 (10.3)	7 (6.5)	8 (40.0)	0 (0.0)	93 (22.9)
	PhD	69 (35.6)	0 (0.0)	3 (2.8)	3 (15.0)	0 (0.0)	75 (18.5)
	Other	8 (4.1)	2 (2.6)	8 (7.4)	0 (0.0)	4 (66.7)	22 (5.4)
	Total	194 (100.0)	78 (100.0)	108 (100.0)	20 (100.0)	6 (100.0)	406 (100.0)

There are 20 research assistants, whose majority ages (70%) are between 20 to 30 years. The age group of 31-40 includes 25% (5) while only one research assistant is between 41-50. The tenure of all the research assistants are less than 10 years. Majority has less than 5 years and 15% (3) have tenure between 6 to 10 years. The distribution of education level of the research assistants are 45% (9), 40% (8) and 15% (3) for undergraduate, master's degree and PhD degree respectively.

The lowest number of all the respondents are the medical technicians. The age group distribution of these medical technicians are; 2 from 20-30, 3 from 31-40 and 1 from 41-50. The tenure distribution of these respondents is equally distributed; that is 2 respondents for each group of less than 5years, 6-10 and 11-15. 33.3% (2) of them are undergraduate while the rest of them are in other education category.

Also these statistics in Table 3.2 are displayed in the bar chart in Figure 3.1 to 3.3.

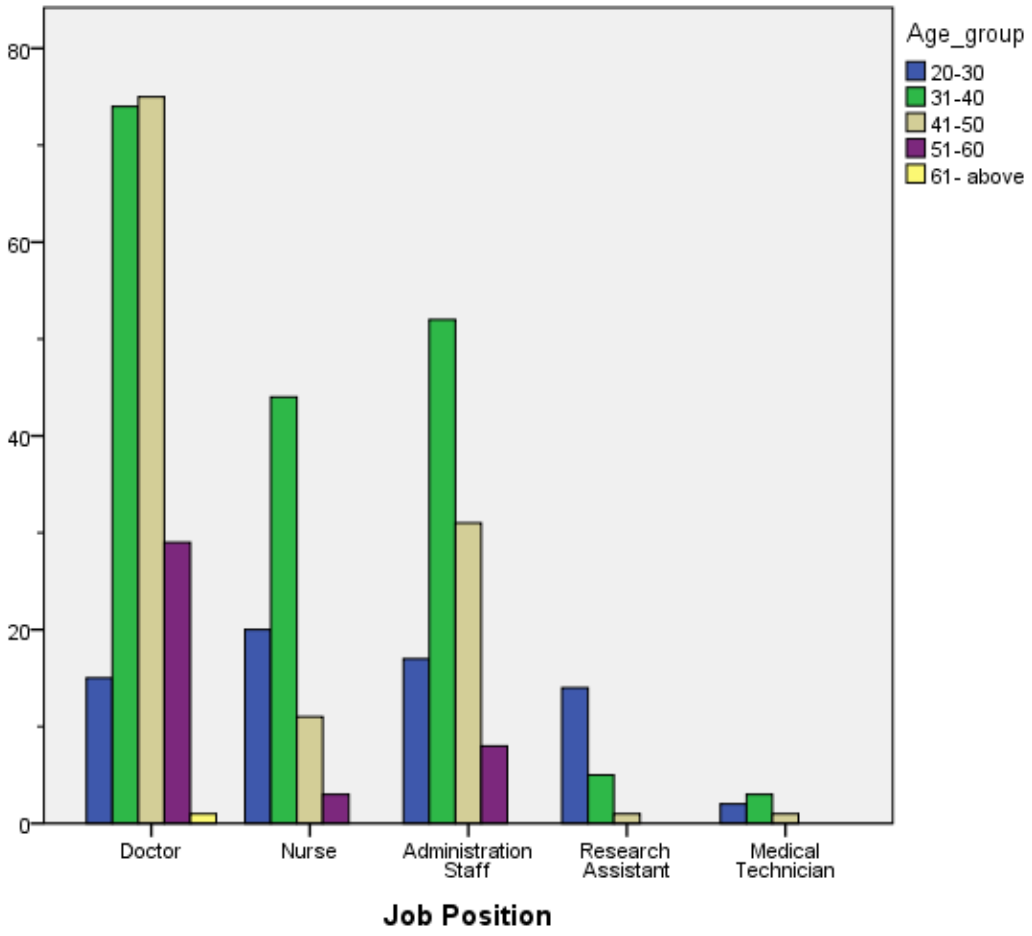

Figure 3.1: Job Position and Age Group

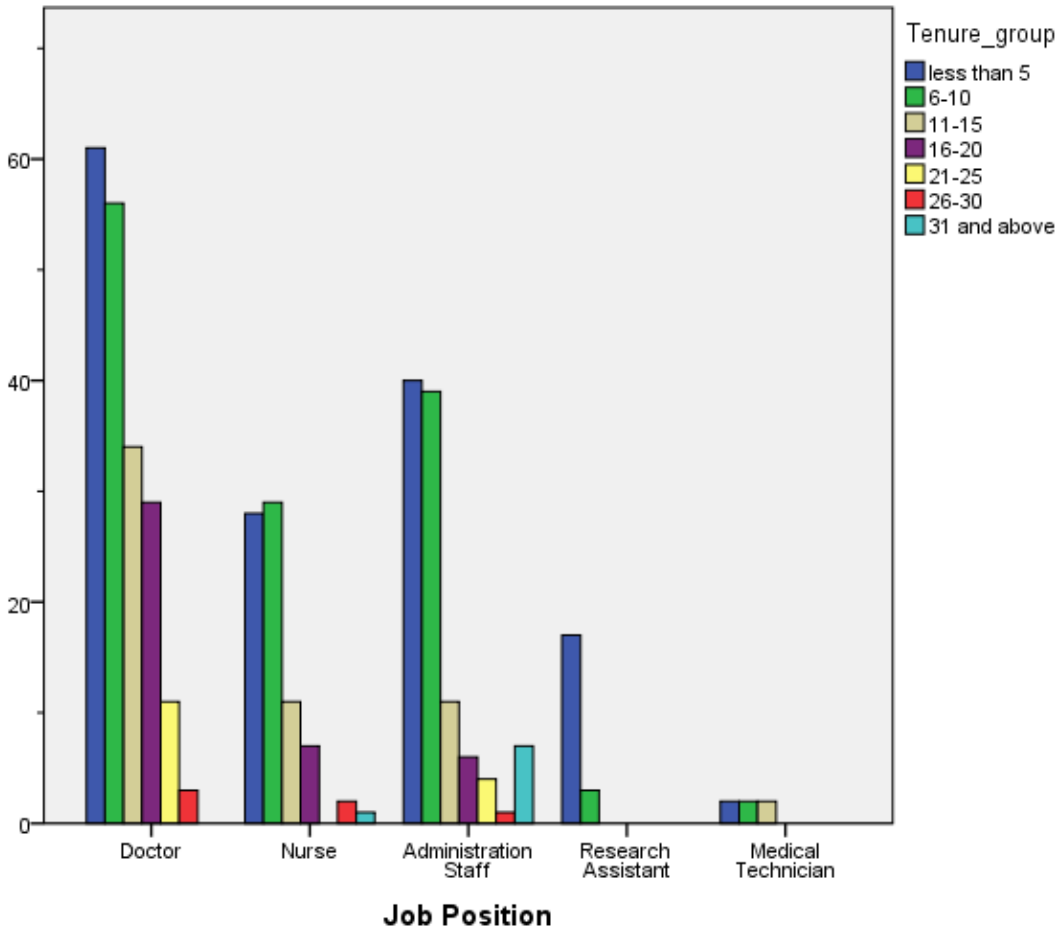

Figure 3.2: Job Position and Tenure

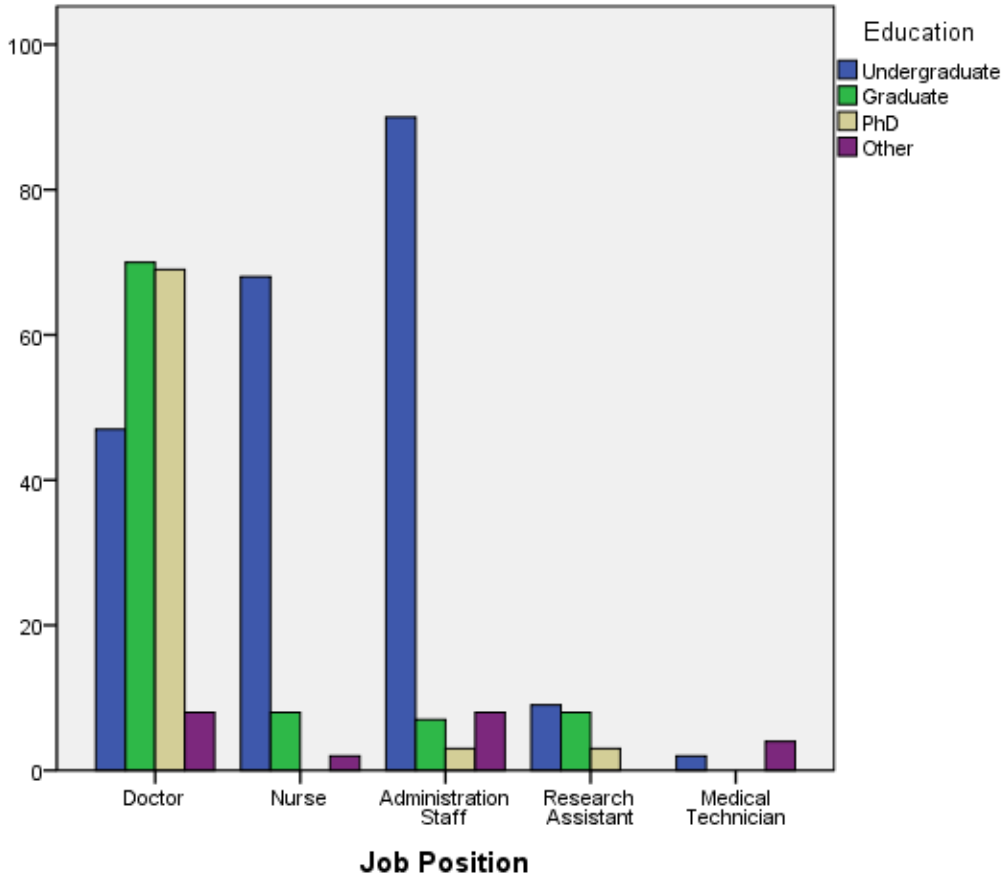

Figure 3.3: Job Position and Education

In Figure 3.1 the bar chart between job position and age group is displayed which shows that majority of the doctors, nurses and administrative staffs are between the age 31-40. While most of the research assistants are between 20 to 30 age brackets. This indicates that most of the employees are in the beginning stage of their job. This statistic is also supported by the bar chart between job position and job tenure, which shows that in every job category the employees having less than 5 year tenure are the most in number, after which the 6-10 year of tenure are second most in number. The education level across the different job categories are different, in doctors master's degree and PhD are almost the same and are the highest in number, while in other job categories undergraduate are the most. From Table 3.2 and Figure 3.1 to 3.3 it could be illustrated that the employee voice in such organization/situation will not be that easy to implement. Because at one side the experience level as indicated from the tenure of majority of respondent is less and on the other hand the education level except the doctors are undergraduate. The organization may face difficultly in implementing employee voice policies due to various characteristics of employees' age distribution, education level and less experiences in their position. Hence employees may need training or information regarding employee voice according to their ages and education level. These employees need to be educated with the process and procedure of MEV which is a two-way communication. In the next section the employee voice understanding is discussed and will further highlight the issues regarding MEV.

3.3. EMPLOYEE VOICE UNDERSTANDING

In Section B of the questionnaire, 5 questions about employee voice were asked to the respondents. These questions were to evaluate the level of their understanding of employee voice. The first question was "do you understand the meaning of employee voice" and the results are displayed in Table 3.3-a.

As shown in Table 3.3-a more than half (56.7%) of the respondents answered "no", while 43.3% (176) of the respondents understood the meaning of employee voice. This result is not favorable for the awareness of employee voice in the organization, because as

more than half of the respondents are unaware of the meaning of employee voice, organization's providing a platform or mechanism will not be utilized properly.

Table 3.3: Employee Voice Understanding

a.	Yes	No	Total
1. Do you understand the meaning of employee voice?	176 (43.3)	230 (56.7)	406 (100)
b.	One-way communication	Two-way communication	Total
2. What is your concept regarding the employee voice?	31 (17.4)	145 (82.6)	176 (100)
c.	Yes	No	Total
3. Does your organization have labor unions?	294 (72.4)	112 (27.6)	406 (100)
d.	Yes	No	Total
4. Are you a part of the union?	89 (21.9)	317 (78.1)	406 (100)
e.	Yes	No	Total
5. Have your organization provided you with a platform or proper forum	276 (68)	130 (32)	406 (100)

*Percentages are in parentheses

The second question was for the respondents who had marked "yes" answer to the first question. These respondents are 176 in numbers. The question was "what is your concept regarding employee voice? Is it a one-way or two-communication process". Table

3.3-b shows that 17.4% (31) says, it's a one-way communication, while the remaining 82.6% (145) replied as a two-way communication process. Based on this question it can be stated that these 31 respondents who answered as a one-way communication do not have a fully understanding about employee voice. Therefore if these 31 respondents are added to the 230 respondents who had marked "no" for the first question, then the percentage of respondents who do not understand the meaning of employee voice reaches to 64.3%.This highlights that the organization does not have a proper employee voice mechanism or it lacks the ability to educate its employees regarding the process and procedure of employee voice. Therefore it is important for the organization to educate employees regarding the new system which is the two-way communication process before implementing it. This will benefit the organization and the employees, where both of the stakeholders will be able to maximum utilize the new two-way employee voice mechanism.

The next two questions are related to the labor union because the Organization for Economic Corporation and Development (OECD) labour force statistic shows that the number of union members is decreasing. The questions were about the presence of labor union in the organization and whether the respondents are part of the union. Table 3.3-c shows that 72.4% (294) respondents stated the organization has labour union, while 27.6% (112) respondents said that there is no labour union. This finding indicates that there exist at least one labor union in the organization, and majority of the employees are aware of the presence of labor unions. However, it is also noteworthy that more than one fourth of the whole employees do not know the presence of labor unions.

The next question was "Are you a part of the Union", the results in Table 3.3-d shows that 21.9% (89) of the respondents answered that they are part of the labour unions, while the remaining 78.1% (317) are not part of the unions.

When question number 3 and 4 of Section B are cross tabulated as shown in Table 3.4, the results show that out of 294 respondents who had marked "yes" for the question "Does your organization have labor union?", 29.30% (86) of them are part of a labour union. The remaining 70.7% (208) have stated that they are not part of any labour

organizations. On the other hand 3 of the 112 number of respondents who had marked "no" when asked about the presence of any labour union in their organization, have answered "yes" for the question about being a member of the union. They would have answered it mistakenly because while admitting that there is no union in the organization and on the other side being a part of union is not possible. Answers of these respondents were maintained in the study, since the number would have insignificant effect on the analysis compared with the total sample size. But the main point to be highlighted is that there are 294 employees who know about the presence of labour unions and majority of them as 208 (70.70%) employees do not participate in labour unions. This statistic also supports the report of OECD which shows that memberships in union have decreased from the past decades.

Table 3.4: Cross Tabulation Between Items 3 and 4 of Section B of Questionnaire

		4. Are you a part of the Union?		
		Yes	No	Total
3. Does your organization have labor unions?	Yes	86 (29.30)	208 (70.70)	294 (100.00)
	No	3 (2.70)	109 (97.30)	112 (100.00)
	Total	89 (21.90)	317 (78.10)	406 (100.00)

*Percentages are in parentheses

The next question displayed in Table 3.3-e is regarding the presence of a platform or proper forum where employee can register their concerns and issues in the organization. 32% (130) of the respondents stated that the organization has not provided a platform or proper forum while 68% (276) answered that a proper platform is present in the organization. This shows that although the organization provides platform (since there are many yes) almost one third of the employees are not aware of the fact that there are platform or forum. As discussed earlier regarding the meaning of employee voice in Tables 3.3-a and3.3-b, more than half of the respondents did not understand the meaning and 17.4 percent of the respondents misunderstand the meaning of employee voice as one-way

communication. These statistics show how proper education for employees about two-way employee voice is important for effective implementation.

Those 68% respondents who admitted that the organization provided a platform or proper forum were further asked about what kind of platforms are provided. The question had 5 types of employee voice options including; complaint box, suggestion box, open door policy, works council, team meeting and sixth option was "other". The respondents could mark multi option. The details of the response is provided in Table 3.5.

Table 3.5: Information regarding platform in organization

Complaint box	188 (66.11)
Suggestion box	99 (35.86)
Open door	188 (66.11)
Works Council	78 (28.26)
Team meeting	45 (16.30)
Other	6 (2.17)

*Percentages are in parentheses

The table shows that majority of the respondents that is 188(66.11%) stated that the organization has a complaint box and also open door policy, while 99(35.86%) of the respondents marked the suggestion box option. Regarding the work council, 78(28.26%) respondents answered that there is work council in the organization. Team meeting was marked by 45(16.30%) of the respondents. 6(2.17%) respondents stated other options that included informing management through email and internet.

3.4. FACTOR ANALYSIS RESULTS

For the factors extraction method the principal component analysis was adopted and the retained factors were rotated to simple structure using Varimax with Kaiser Normalization. Factor analysis for the 36 items was conducted using varimax rotation method. After continuously adding and dropping of cross-loaded items and the items which were theoretically inconsistent with their factors, 11 items in three factors explaining 69.836% of the variance were retained. Detailed explanation with the tables and figures are discussed below.

The dataset was tested for the basic assumption underlying factor analysis, specifically factorability of the data. For factorability usually Pearson's correlation test is conducted to evaluate data for meaningful interrelationships among the items. Generally, the correlations coefficient greater than .30 explain enough evidence of commonality to justify comprising factors (Tabachnick and Fidell, 2001; Thompson, 2004). A visual inspection of the full correlation matrix (Appendix 8) was conducted and it was determined that there was a number of significant correlations greater than 0.3. Therefore we can say that sample data met the underlying assumption of factorability.

Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin Test of Sampling Adequacy (KMO) are also commonly adopted to examine the relationship and factorability of the variables under consideration (Ogunlana, 2008; Williams et al., 2010). Bartlett's Test of Sphericity must be significant which indicates that factorability exist in the dataset (Pett et al., 2003).The KMO is a measure of the shared variance in the items. According to Kaiser (1974) the KMO value of 0.5 or greater is an acceptable measure for further conducting factor analysis and indicates significant correlation between the variables. The value between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good/middling, values between 0.8 and 0.9 are great/meritorious and values above 0.9 are superb/Marvelous (Hutcheson and Sofroniou, 1999).

The Bartlett's and KMO test result for the initial 36 items is shown in Table 3.6. The statistical significance of Bartlett's test of sphericity suggests that there is linear relation between the 36 items. The KMO test value of 0.865 also shows that factorability exist among the variables. According to Hutcheson and Sofroniou (1999) the KMO value of 0.865 is at the great/meritorious status. Therefore, the sample data is favorable for factor analysis.

Table 3.6: KMO and Bartlett's Test of the 36 Items

Bartlett's Test of Sphericity	Approx. Chi-Square	7786.493
	df	630
	Sig.	.000
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.865

Moving further to factor analysis the retention of factors are most commonly determined by the eigenvalues criteria by Kaiser Criterion (Gorsuch, 1983), which states that a factor having an eigenvalue greater or equal to 1 should be retained (Osborne and Costello, 2009). Table 3.7 shows the eigenvalue and the total variance explained for the 36 items. The initial factors recommended by eigenvalues having value above 1 are seven in number. These seven factors explain 62.22% percent of the total variance.

Table 3.7: Total Variance Explained for 36 Items

Factors	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	(i) Total	(ii) Percent of Variance	(iii) Cumulative Percent	(i) Total	(ii) Percent of Variance	(iii) Cumulative Percent	(i) Total	(ii) Percent of Variance	(iii) Cumulative Percent
1	8.343	23.175	23.175	8.343	23.175	23.175	5.124	14.233	14.233
2	5.977	16.602	39.777	5.977	16.602	39.777	4.927	13.687	27.920
3	2.467	6.854	46.631	2.467	6.854	46.631	4.695	13.040	40.961
4	1.583	4.396	51.027	1.583	4.396	51.027	2.596	7.210	48.171
5	1.497	4.159	55.186	1.497	4.159	55.186	2.116	5.877	54.048
6	1.384	3.845	59.031	1.384	3.845	59.031	1.517	4.215	58.263
7	1.149	3.192	62.223	1.149	3.192	62.223	1.425	3.959	62.223
8	.979	2.720	64.943						
9	.906	2.516	67.459						
10	.863	2.396	69.855						
11	.790	2.195	72.050						
12	.749	2.080	74.130						
13	.735	2.043	76.172						
14	.649	1.802	77.974						
15	.628	1.744	79.718						
16	.608	1.689	81.406						

17	.574	1.595	83.001
18	.558	1.551	84.552
19	.496	1.378	85.930
20	.466	1.295	87.225
21	.462	1.284	88.509
22	.424	1.179	89.688
23	.390	1.084	90.772
24	.379	1.054	91.826
25	.352	.976	92.802
26	.329	.914	93.716
27	.313	.869	94.585
28	.292	.812	95.397
29	.275	.763	96.160
30	.258	.717	96.877
31	.238	.661	97.539
32	.221	.613	98.152
33	.197	.547	98.699
34	.175	.485	99.183
35	.162	.449	99.632
36	.132	.368	100.00

Extraction Method: Principal Component Analysis.

The eigenvalues is also graphically presented in Cattell's Scree Plot in Figure 3.4.

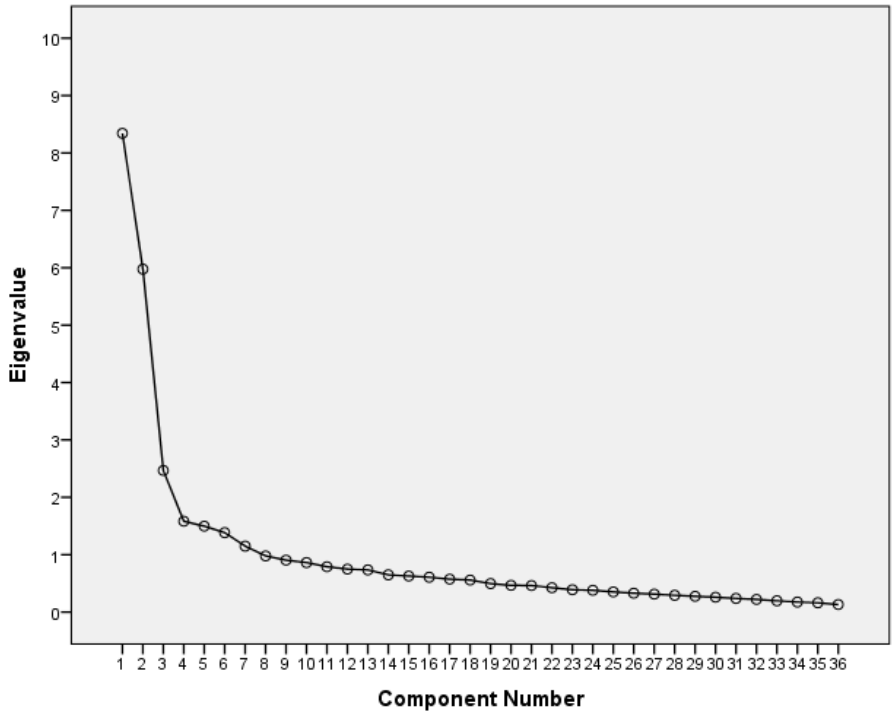

Figure 3.4: Scree Plot for 36 Items

From the scree plot in Figure 3.4 it can be observed that the three factors are above the eigenvalue 2 and they are wide spread apart and vertically in straight line. The differences of eigenvalue between the factors are descending precipitously and levels out after 4 factors. There are two criteria which are widely adopted regarding factors extraction, i) the factors above eigenvalue of 1(Kaiser, 1960) and ii) the scree test Criteria, the point where the slope of the curve in the scree plot is clearly leveling off ("elbow shape") (Bryant and Yarnold, 1995). The initial factors extracted through the eigenvalue criteria were seven while the scree test criteria extracted four factors. In this study the eigenvalue criteria was selected, The reason of selecting the eigenvalue criteria was to initially start from a high number of factors and remove cross loading and low communalities values items which will actually reduce the number of factors retained (Worthington and Whittaker, 2006).

Table 3.8: Exploratory Factor Analysis Results of Employee Voice Items: Unrotated Component Analysis Factor Matrix of 36 Items

		Factor loading			Communality
SQ_12	I rise my voice about supervisor's unfairness	.769			.646
SQ_33	I rise my voice on lack of proper forum for registering concerns regarding job related issues	.736	-.342		.736
SQ_25	I rise my voice on lack of organizational support related to taking unfair advantage from employee	.735	.204		.626
SQ_8	I rise my voice on issues related to unfairness related to work schedule	.724	.296		.659
SQ_4	I rise my voice on issues related to decision making on inaccurate information by management	.707	.337		.677
SQ_6	I rise my voice on issues related to unfairness related to manager decision on base of inaccurate information	.703	.399		.699
SQ_19	My organization encourages employee to express their disagreements regarding company issues through proper forum	.692	-.435		.741
SQ_5	I rise my voice on issues related to ill treatment of management	.682	.446		.740
SQ_7	I encourage others to use proper forum to register their voice about issues regarding to working environment	.662		-.241	.593

SQ_11	I rise my voice on lack of organizational support related to not giving appreciation on achievement	.661					.512
SQ_21	I communicate creative suggestions to coworker about product and services	.646	.294	-.251		-.246	.663
SQ_15	I encourage others in my group to rise their voice regarding issues that affect the group performance	.628				-.329	.530
SQ_2	My organization have a systematic and organized procedure to express ideas, recommendations or issues to the management	.617		-.319			.556
SQ_26	The management of my organization often communicates with employees about issues and recommendation	.576		-.215		-.320	.534
SQ_27	I have been given adequate opportunity to speak about the issues I face in the organization	.564		-.392		.249	.580
SQ_14	I often express my disagreements to my managers concerning issues related to job satisfaction such as salary and working conditions	.508	.299				.418
SQ_13	I rise my voice although I perceive that manager doesn't have access to required resources	.454			.253	.336	.344	.545
SQ_24	The manager give response to employees' complaints in adequate time		.721	.245	.215	-.314	-.330	.837

SQ_1	I rise my voice on issues related to unfairness related to treatment of employees differently by management		.716		-.259	.204		.205	.680
SQ_30	I rise my voice when organization does not fulfill its promises		.708		-.332				.665
SQ_35	I have been given adequate opportunity to communicate my recommendations or ideas with the management		.686		-.309				.657
SQ_20	I communicate creative suggestions to management about product and services		.686						.546
SQ_28	I rise my voice on lack of organizational support e.g. not caring about well-being of employees	-.233	.685					.210	.626
SQ_22	The response of the management in reaction to my recommendation or comments is unsatisfactory (R)		.674		.230	-.405	-.286		.776
SQ_34	I rise my voice on issues related to unfairness related to work load		.609	-.252		.235	.266		.619
SQ_36	The suggestions or recommendations I provide to the manager are truly considered by them		.605	.333	.326	-.251	-.208		.711
SQ_29	I rise my voice on lack of openness to management	.296	-.555						.466
SQ_16	I can easily express my disagreements to the management concerning company issues		.551	.297					.503

SQ_10	I often inform the management through a platform provided by organization about issues where my opinion might benefit organization		.516			.219		.347
SQ_23	I recommend ideas for new projects or changes in procedures through a proper forum	.339	-.403	-.219	.372	-.204	.310	.608
SQ_3	I rise my voice on issues related to unfairness of level of pay	.462		.566			.202	-.246	.668
SQ_9	The manager does not give response to employee's recommendations in adequate time (R)	.272	.262	-.454		.448	-.324		.663
SQ_17	I communicate my opinions about work issues to others in group even if my opinion is different and others in the group disagree with me	.213	.315		.482			-.334	.526
SQ_32	I often get involved in such type of voice behavior that creates difficulties for other employees to perform their job		.346		.447		.435	.279	.636
SQ_18	I recommend ideas concerning issues that affect my work group through a proper forum	.337	.338	-.314	.408	.260	-.367		.718
SQ_31	I rise my voice on issues related to unfairness related to job security	.364		.259			.270	-.611	.694

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 5 iterations.

Table 3.9: Exploratory Factor Analysis Results of Employee Voice Items: Varimax Rotated Component Analysis Factor Matrix of 36 Items

		Factor loading					Communality
SQ_5	I rise my voice on issues related to ill treatment of management	.822					.740
SQ_6	I rise my voice on issues related to unfairness related to manager decision on base of inaccurate information	.792	.218				.699
SQ_4	I rise my voice on issues related to decision making on inaccurate information by management	.702	.269			.315	.677
SQ_8	I rise my voice on issues related to unfairness related to work schedule	.674	.359				.659
SQ_7	I encourage others to use proper forum to register their voice about issues regarding to working environment	.645	.231	-.250	.204		.593
SQ_12	I rise my voice about supervisor's unfairness	.629	.460				.646
SQ_3	rise my voice on issues related to unfairness of level of pay	.614				.508	.668
SQ_15	I encourage others in my group to rise their voice regarding issues that affect the group performance	.500	.338		.304	-.243	.530
SQ_11	I rise my voice on lack of organizational support related to not giving appreciation on achievement	.484	.412		.262		.512

SQ_14	I often express my disagreements to my managers concerning issues related to job satisfaction such as salary and working conditions	.426	.256		.210	.248	.418
SQ_19	My organization encourages employee to express their disagreements regarding company issues through proper forum		.824				.741
SQ_33	I rise my voice on lack of proper forum for registering concerns regarding job related issues	.268	.755		.222		.736
SQ_21	I communicate creative suggestions to coworker about product and services	.221	.754				.663
SQ_2	My organization have a systematic and organized procedure to express ideas, recommendations or issues to the management		.717				.556
SQ_27	I have been given adequate opportunity to speak about the issues I face in the organization		.696			.241	.580
SQ_26	The management of my organization often communicates with employees about issues and recommendation		.690				.534
SQ_25	I rise my voice on lack of organizational support related to taking unfair advantage from employee	.389	.651				.626
SQ_1	I rise my voice on issues related to unfairness related to treatment of employees differently by management			.795			.680

SQ_30	I rise my voice when organization does not fulfill its promises			.780				.665
SQ_28	I rise my voice on lack of organizational support e.g. not caring about well-being of employees			.701	.244		.215	.626
SQ_20	I communicate creative suggestions to management about product and services			.684				.546
SQ_35	I have been given adequate opportunity to communicate my recommendations or ideas with the management			.637	.439			.657
SQ_34	I rise my voice on issues related to unfairness related to work load	-.296		.618		.275		.619
SQ_29	I rise my voice on lack of openness to management	.299		-.601				.466
SQ_23	I recommend ideas for new projects or changes in procedures through a proper forum		.303	-.571			.356	-.236 .608
SQ_16	I can easily express my disagreements to the management concerning company issues	.297		.491	.214		.320	.503
SQ_10	I often inform the management through a platform provided by organization about issues where my opinion might benefit organization			.464		.289		.347
SQ_24	The manager give response to employees' complaints in adequate time			.353	.831			.837

SQ_22	The response of the management in reaction to my recommendation or comments is unsatisfactory (R)			.281	.806			.776
SQ_36	The suggestions or recommendations I provide to the manager are truly considered by them			.254	.754		.201	.711
SQ_18	I recommend ideas concerning issues that affect my work group through a proper forum		.204		.224	.787		.718
SQ_9	The manager does not give response to employee's recommendations in adequate time (R)		.229	.201		.680	-.283	.663
SQ_17	I communicate my opinions about work issues to others in group even if my opinion is different and others in the group disagree with me					.582	.322	.526
SQ_32	I often get involved in such type of voice behavior that creates difficulties for other employees to perform their job	-.202			.243		.712	.636
SQ_13	I rise my voice although I perceive that manager doesn't have access to required resources	.452				.202	.490	.545
SQ_31	I rise my voice on issues related to unfairness related to job security		.230				.768	.694

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 5 iterations.

The non-rotated and rotated component matrix of the 36 items is displayed in Table 3.8 and Table 3.9 respectively. Factor loadings less than .2 were excluded from the list. The criteria for retaining and dropping of items depend on the item loading, cross loading and communality value of the items. Also items that fail to contribute meaningfully to any of the potential factor may be dropped. Researchers such as Worthington and Whittaker (2006) and Osborne and Costello (2009) suggest that rather retaining or dropping an item totally based on empirical condition, conceptual interpretability of the item should also be taken into consideration. Matsunaga (2010) argued that more often researchers make some subjective decision regarding items retention and dropping when they find themselves in a delicate situation. Since the decision of how large should an item loading be to retain is controversial (Comrey and Lee, 2013; Gorsuch, 1983),there is no single guideline of determining the threshold of a lower limit of loading, cross loading or communality value, the magnitude is described as a matter of research preference (Tabachnick and Fidell, 2001). On one side by setting a high level of minimum value of factor loading, and on the other side setting as low as possible for the absolute magnitude of cross loading will results in better approximation of simple structure and fewer cross loading (Kline, 1994; Osborne and Costello, 2009). In this study the minimum value for factor loading was set as .6 and the low limit for cross-loading was .3. The acceptable communality was items having value higher than .5.

The non-rotated component matrix illustrates cross loading and low loading for most of the items including item number 33, 4, 6, 19, 5, 15, 2, 26, 27, 14, 13, 24, 30, 35, 22, 36, 29, 16, 10, 23, 3, 9, 17, 32, 18 and 31. Some of these items had cross loading above .3 on two or more items while other had loading less than .6. Three items that are; 14, 29 and 10 had communality less than .5. The varimax rotation was conducted which is shown in Table 3.9. The cross loading and low loading was reduced from 26 to 15 items, these items included 4, 8, 12, 3, 15, 11, 14, 25, 35, 23, 16, 10, 24, 17, 13.The low communality items include 10, 14, and 29. The loading of each item was improved towards a specific factor after varimax rotation. In the next step adding and dropping of items was conducted.

First of all the items with factor loading lower than .6 were deleted and they were item number 15, 11, 14, 23, 16, 10, 17, and 13.Then, factor analysis was conducted on the remaining 28 items. This time factor loading value was improved but there were some of items that were cross loaded. So, items 12, 3, 25, and 35 were deleted.

The same procedure was followed several times by removing items which had cross loading issues and adding back some of the items to check if it could load significantly on any of the factor. As the items were dropped, the number of factors also decreased. At the stage when there were 22 items (1, 2, 3, 4, 5, 6, 9, 18, 19, 20, 21, 22, 23, 24, 26, 27, 28, 29, 30, 33, 35 and 36) under consideration the number of factors had decreased to 5. One of the factor had only 2 items loaded. According to the literature less than three items in a factor has been opposed to retain by different researchers (Tabachnick and Fidell, 2001; Worthington and Whittaker, 2006).Item 9 which was "The manager does not give response to employee's recommendations in adequate time" and item 18, "I recommend ideas concerning issues that affect my work group through a proper forum" were loaded to same factor. Item 9 measure the response of manager while item 18 addresses employee raising voice. Also item 29 had cross loading on factor 2 and 3. Therefore item 29 was dropped and then item 9 and 18 were dropped one by one at a time and each time factor loading was examined. When item 9 and 29 were dropped, factor loading value of item 18 was below .6, had cross loading of .443 and .392 on factors 1 and 4, and the number of factors decreased to 4. The same situation arose when item 18 and 29 were dropped, in such case the number of factors decreased to four and item 9 had low loading of .459 on factor 1. Therefore three of the items were dropped from the analysis.

After dropping four more items that were item number 3, 4, 6 and 35 due to cross factor loading, 15 items were left which loaded on three factors. In the last stage item number 5 which was "I rise my voice on issues related to ill treatment of management" had

low loading of .401on factor 1. This item number 5 was dropped. Item 21 which was "I communicate creative suggestions to coworker about product and services" was also dropped due to not matching with other items in the group. Later item number 23 and 26 were dropped due to cross loading and not fitting in the group respectively. The final items were 11 which were loaded on three different factors. The details and statistics are provided below.

The descriptive statistic of the items which include mean and standard deviation of the 11 items are presented in Table 3.10.There are 406 respondents, item 2 had the highest mean value of 3.7291 and the lowest is of item 1 which is 2.5296. On the other hand the highest standard deviation is of item 28 which is 1.14311, while the lowest is 0.88916 of item 2.

Table 3.10: Descriptive Statistics of the Final 11 Items

	Mean	Std. Deviation	N
SQ_1	2.5296	1.00756	406
SQ_2	3.7291	.88916	406
SQ_19	3.4877	.97555	406
SQ_20	2.5764	1.05308	406
SQ_22	3.0985	1.07274	406
SQ_24	3.0246	1.04911	406
SQ_27	3.4286	.91007	406
SQ_28	2.6429	1.14311	406
SQ_30	2.7759	1.06644	406
SQ_33	3.6379	1.00342	406
SQ_36	3.3251	1.02208	406

Table 3.11 :Correlations Matrix Between the Final 11 Items

	SQ_1	SQ_2	SQ_19	SQ_20	SQ_22	SQ_24	SQ_27	SQ_28	SQ_30	SQ_33	SQ_36
SQ_1	1										
SQ_2	.003	1									
SQ_19	.000	.523**	1								
SQ_20	.526**	-.046	-.015	1							
SQ_22	.333**	.033	.058	.352**	1						
SQ_24	.408**	-.001	.017	.394**	.788**	1					
SQ_27	-.140**	.556**	.523**	-.081	.038	-.045	1				
SQ_28	.561**	-.125**	-.147**	.477**	.347**	.429**	-.106*	1			
SQ_30	.614**	-.004	.001	.487**	.339**	.332**	-.076	.540**	1		
SQ_33	-.010	.524**	.764**	-.024	.070	.041	.462**	-.141**	-.030	1	
SQ_36	.300**	.043	-.031	.275**	.563**	.683**	-.033	.334**	.294**	-.034	1

**. Correlation is significant at the 0.01 level (1-tailed).
*. Correlation is significant at the 0.05 level (1-tailed).
Listwise N=406

The correlation of the final 11 items is displayed in Table 3.11 which indicates that there is evidence of significant correlation between the items. 25 values out of 55 correlation values have a significant correlation laying between .788 and .300. There are four correlation values above than .6, eight values are between .5 and .6, and 13 values are between .3 and .5. Therefore it could be stated that there is evidence of factorability.

The Bartlett's and KMO test result of the 11 items is shown in Table 3.12. Bartlett's test of sphericity is statistically significant ($p < 0.001$) suggesting that the null hypothesis is rejected and the observed matrix is statistically different from a singular matrix, indicating linear combination between the variables. The KMO value is 0.781, which shows that based on Hutcheson and Sofroniou (1999) guideline the shared variance is a middling value.

Table 3.12:KMO and Bartlett's Test of 11 Items

Bartlett's Test of Sphericity	Approx. Chi-Square	2067.892
	df	55
	Sig.	.000
		0.781
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		

The total variance explained for 11 items is shown in Table 3.13, which also list the eigenvalues associated with each linear factor before extraction, after extraction and after rotation. The factors and their corresponding eigenvalues is graphically represented in Cattell's Scree Plot in Figure 3.5. The retention of a factor is most commonly determined by the eigenvalue criteria by Kaiser Criterion (Gorsuch, 1983), which states that a factor having an eigenvalue greater or equal to 1 should be retained (Osborne and Costello, 2009).

Table 3.13 shows that the first three factors have eigenvalue greater than one (3.712 (33.745), 2.702 (24.567) and 1.268 (11.523)) while the remaining components have eigenvalue below one. The first factor explains 33.745% of the total variance, the second factor explains 24.567% and the third factor 11.523%. In total it represents 69.836% of the total variance. Total variance of the variables after rotation is also presented in Table 3.13. The effect of rotation is to optimize the factors structure. The after rotation variance of the first factor decreases to 24.573%, while the second factor remains almost the same, that is 23.943%. The third factor increases by almost 10% to 21.320%.

Table 3.13: Total Variance Explained of 11 Items

Factors	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	(i) Total	(ii) Percent of Variance	(iii) Cumulative Percent	(i) Total	(ii) Percent of Variance	(iii) Cumulative Percent	(i) Total	(ii) Percent of Variance	(iii) Cumulative Percent
1	3.712	33.745	33.745	3.712	33.745	33.745	2.703	24.573	24.573
2	2.702	24.567	58.312	2.702	24.567	58.312	2.634	23.943	48.516
3	1.268	11.523	69.836	1.268	11.523	69.836	2.345	21.320	69.836
4	.673	6.115	75.951						
5	.555	5.045	80.996						
6	.506	4.600	85.596						
7	.438	3.978	89.574						
8	.405	3.685	93.259						
9	.341	3.104	96.363						
10	.226	2.054	98.417						
11	.174	1.583	100.000						

Extraction Method: Principal Component Analysis.

Figure 3.5 displays graphical representation of the factors and their corresponding eigenvalues. On the x-axis the factors are listed and the eigenvalues are along the y-axis. It can be observed from Figure 3.5 that the first factor account for the greatest amount of variance having the highest eigenvalue. The second and third factor are above one while the remaining eigenvalues continually decrease, creating an "elbow" shape. According to Fabrigar et al., (1999) the number of factors should be limited to those above the bend in the elbow shape.

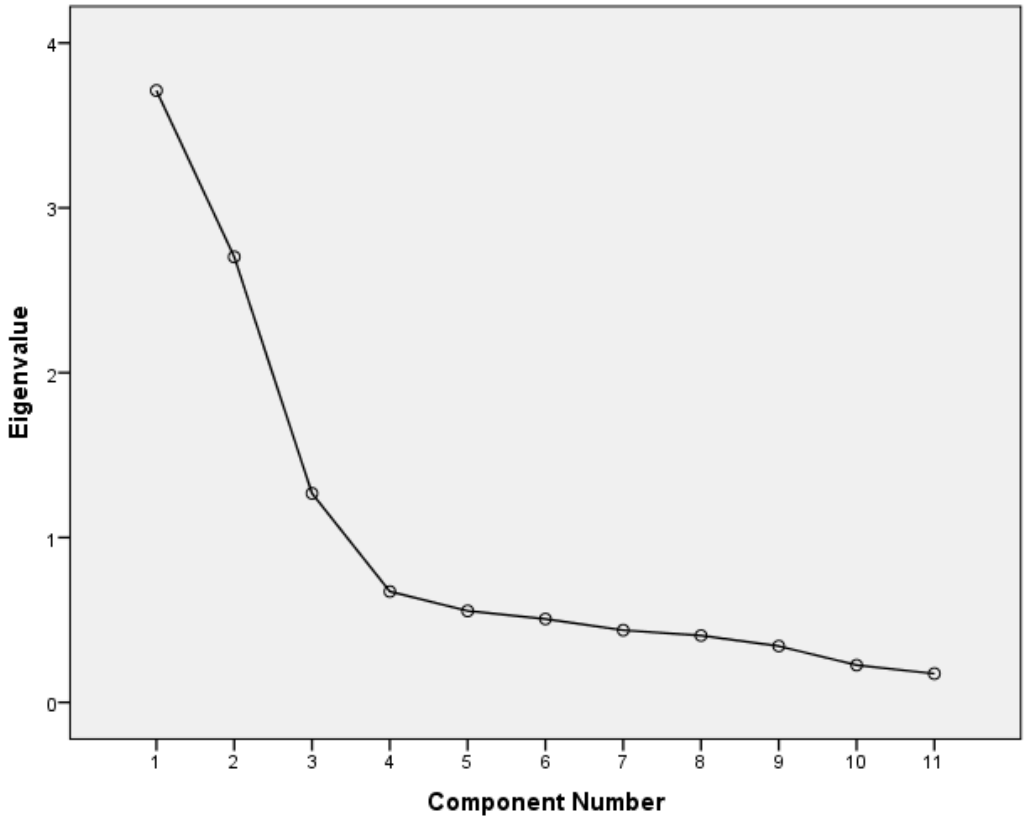

Figure 3.5: Scree Plot of 11 Items

11 items are loaded to these three factors as shown in Table3.14 and also in the component plot in rotated space as Figure 3.6.

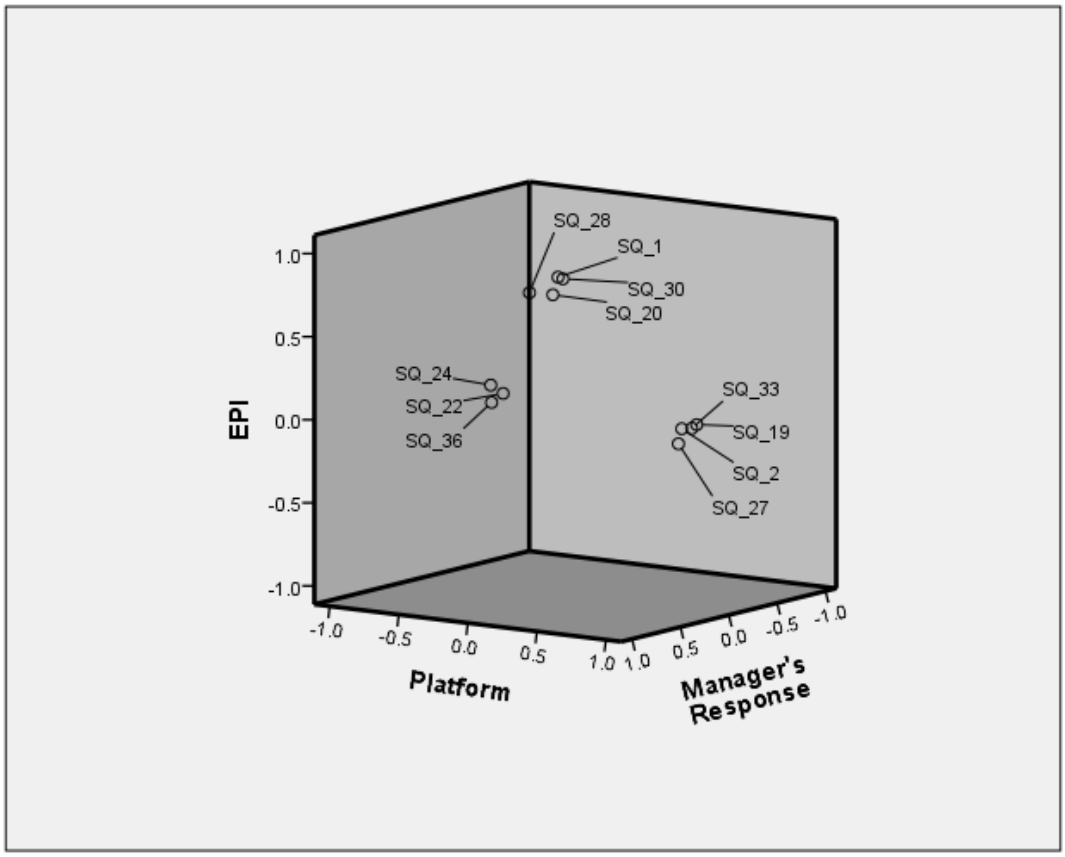

Figure 3.6: Component Plot in Rotated Space

These three factors were named as; i) employee provision of information, ii) platform and iii) manager's response. The factor's name were based on literature and the nature of the items were in line with the description identified in the conceptual framework of modern employee voice.

The first factor "employee provision of information" has four items loaded, which are;

i) I rise my voice on issues related to unfairness related to treatment of employees differently by management.
ii) I rise my voice when organization does not fulfill its promises.

iii) I rise my voice on lack of organizational support e.g. not caring about well-being of employees.
iv) I communicate creative suggestions to management about product and services.

The pattern coefficients of each of these items are 0.834, 0.821, 0.737 and 0.732 respectively. The total variances explained by the "employee provision of information" factor is 23.943%.

Four items are highly loaded on the second "platform" factor and they have pattern coefficients of 0.873, 0.852, 0.785 and 0.754 with variance explained 24.573%. The items are;

i) My organization encourages employee to express their disagreements regarding company issues through proper forum.
ii) I rise my voice on lack of proper forum for registering concerns regarding job related issues.
iii) My organization have a systematic and organized procedure to express ideas, recommendations or issues to the management.
iv) I have been given adequate opportunity to speak about the issues I face in the organization.

The third factor is "manager's response", consisting of three items and have loading of 0.887, 0.848 and 0.827. The total variance explained by the third factor is 21.320%. The items of the "manager's response" factor are below.

i) The manager give response to employees' complaints in adequate time.
ii) The response of the management in reaction to my recommendation or comments is unsatisfactory.
iii) The suggestions or recommendations I provide to the manager are truly considered by them.

Varimax rotated component matrix for final 11 items are presented on Table 3.14.

Table 3.14: Exploratory Factor Analysis Results of the Employee Voice Items: Varimax Rotated Component Matrix of the Final 11 Items

		Factor loading			Communality
		Employee provision of information	Platform	Manager's response	
SQ_1	I rise my voice on issues related to unfairness related to treatment of employees differently by management	0.834			.725
SQ_30	I rise my voice when organization does not fulfill its promises	0.821			.692
SQ_28	I rise my voice on lack of organizational support e.g. not caring about well-being of employees	0.737			.632
SQ_20	I communicate creative suggestions to management about product and services	0.732			.579
SQ_19	My organization encourages employee to express their disagreements regarding company issues through proper forum		0.873		.762
SQ_33	I rise my voice on lack of proper forum for registering concerns regarding job related issues		0.852		.727

SQ_2	My organization have a systematic and organized procedure to express ideas, recommendations or issues to the management	0.785		.618
SQ_27	I have been given adequate opportunity to speak about the issues I face in the organization	0.754		.581
SQ_24	The manager give response to employee complaints in adequate time		0.887	.870
SQ_22	The response of the management in reaction to my recommendation or comments is unsatisfactory		0.848	.782
SQ_36	The suggestions or recommendations I provide to the manager are truly considered by them		0.827	.714

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 5 iterations.

The internal consistency of the three factors obtained from the factor analysis is displayed in Table 3.15. The first column shows the name of the factor, which is followed by Cronbach's Alpha value, the standardized alpha in the third column and in the last the number of items included in each factor. The Cronbach's Alpha, standardized alpha and number of items for the 1st factor that is "employee provision of information" is .820, .821 and 4 respectively. The 2nd factor which is "platform" has a Cronbach's Alpha value of .836, standardized alpha of .835 and it consists of 4 items. The 3rd factor is named as "manager's response", which consists of 3 items. The Cronbach's Alpha of this factor is .864 and standardize alpha is .863.The combined reliability of 11 items are shown in Table 3.15, in which Cronbach's Alpha is .759 and standardized Cronbach's Alpha is .753.

Table 3.15: Reliability Statistics of 11 Items

Factors	Cronbach's Alpha	Cronbach's Alpha Standardized	N of Items
Employee provision of information	.820	.821	4
Platform	.836	.835	4
Manager's response	.864	.863	3
Combined Reliability of 11 items	.759	.753	11

Three factors naming employee provision of information, platform and manager's response were identified as the underlying factors based on the exploratory factor analysis. These three factors are also in line with the tentative dimensions identified in the conceptual framework of MEV. The reliability of the factors are all above .8, which is acceptable range identified in literature.

3.5. CONFIRMATORY FACTOR ANALYSIS

According to Hair et al. (2006) it is essential to validate the factor analysis results when identifying underlying factors, and some form of confirmatory factor analysis (CFA) is widely used such as Structural equation modeling (SEM). Therefore for further model fitting SEM was conducted. CFA could be conducted through two ways; a) new sample whose characteristics are similar to the original sample and b) if original sample is large then randomly subsamples are formed for the purpose of CFA. In the study of Feldhusen et al. (2000) although they had a relatively small sample of 176 students, they further selected randomly two subsamples for CFA. Bryant and Yarnold (1995) recommended that EFA and CFA could be tested with a sample that can be randomly divided into two groups. Isabel et al. (2014) conducted a survey and found that one third of the studies had conducted factor analysis, both EFA and CFA, out of which 73.3% were using the same sample. Therefore for the CFA two sub-samples were selected. One consists of a combination of doctors, research assistants and medical technicians and the other consists of 186 respondents and is a combination of nurses and administrative staffs. The purpose of making this group was based on two reasons i) to come up with similar sample size and ii) to have a diverse mix of the data set.

In CFA first model fit was checked for the 11 items which are loaded on 3 factors for all the 406 sample. This stage move on to validate for model fit of single factor, two factor, and three factor model and at last multi group CFA was conducted.

SEM was conducted to test for model fit with the help of IBM SPSS Amos 20 software. SEM helped in re-specifying the model based on the model fit statistics. Several statistics were used for analyzing the model fit such as CMIN/DF (chi square/degree of freedom ratio), goodness-of-fit (GFI), adjustment goodness-of-fit (AGFI), comparative fit index (CFI) root mean square residual (RMR), standardized root mean square residual (SRMR) and root mean square error of approximation (RMSEA). Liden and Maslyn (1998) also developed a scale and adopted these model fit statistics.

Initially the 11 items which were loaded on 3 factors were tested for model-fit. The statistics showed that there is high covariance between residual e7 and e8 of the platform factors. When the two residuals were connected, the loading of item SQ_27 falls from .60 to .57. The SEM diagram of initial model and connected residual model are displayed in Figure 3.7 and Figure 3.8. According to researchers when SEM do not illustrate good fit, re-specification or subsequently retesting of model is conducted (Gerbing and Hamilton, 1996; MacCallum et al., 1992). Therefore for re-specification of the model item SQ_27 was dropped and retested, where all the statistic of model-fit were improved.

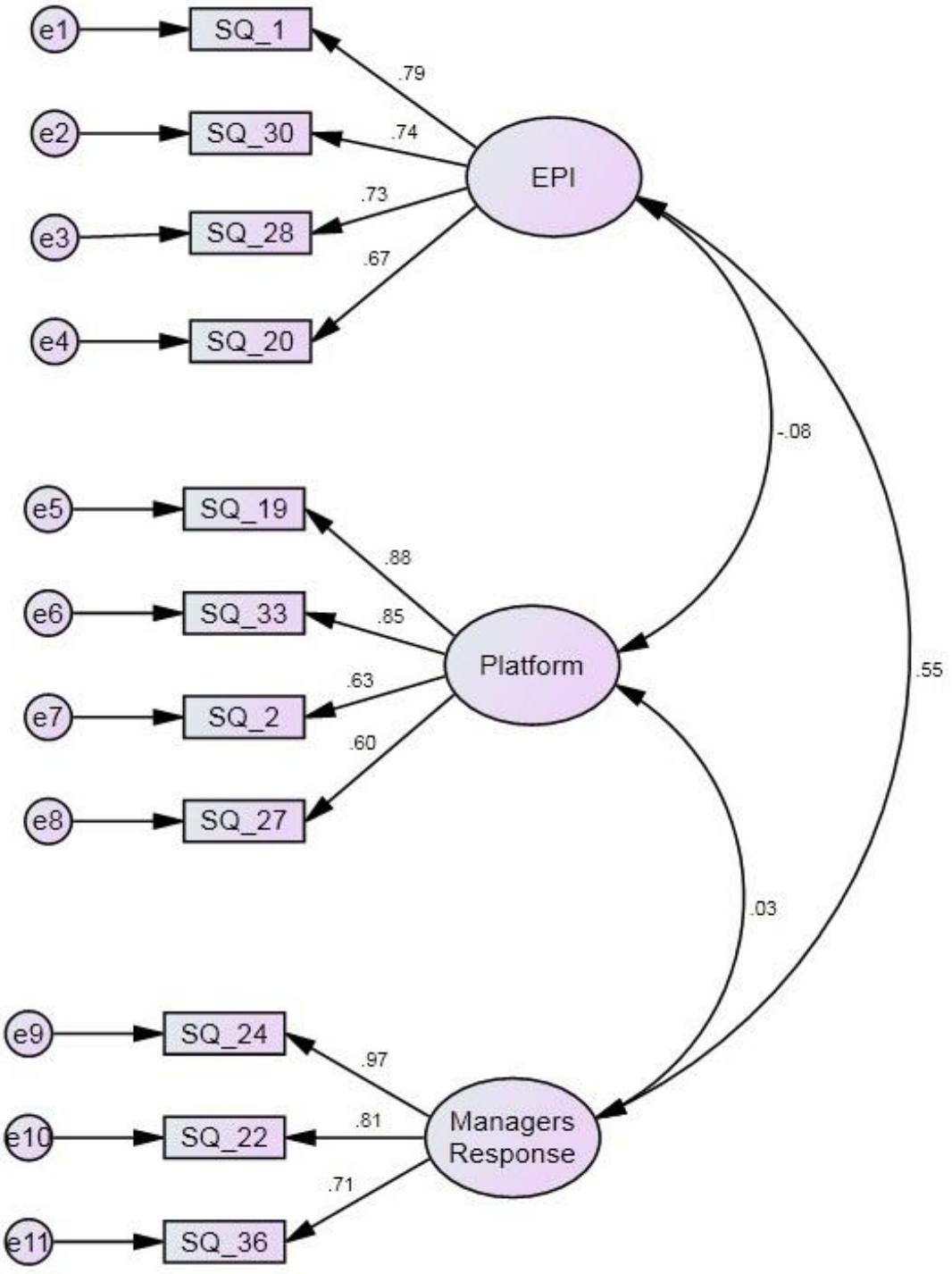

Figure 3.7: Confirmatory Factor Analysis Results Based on 11 Items

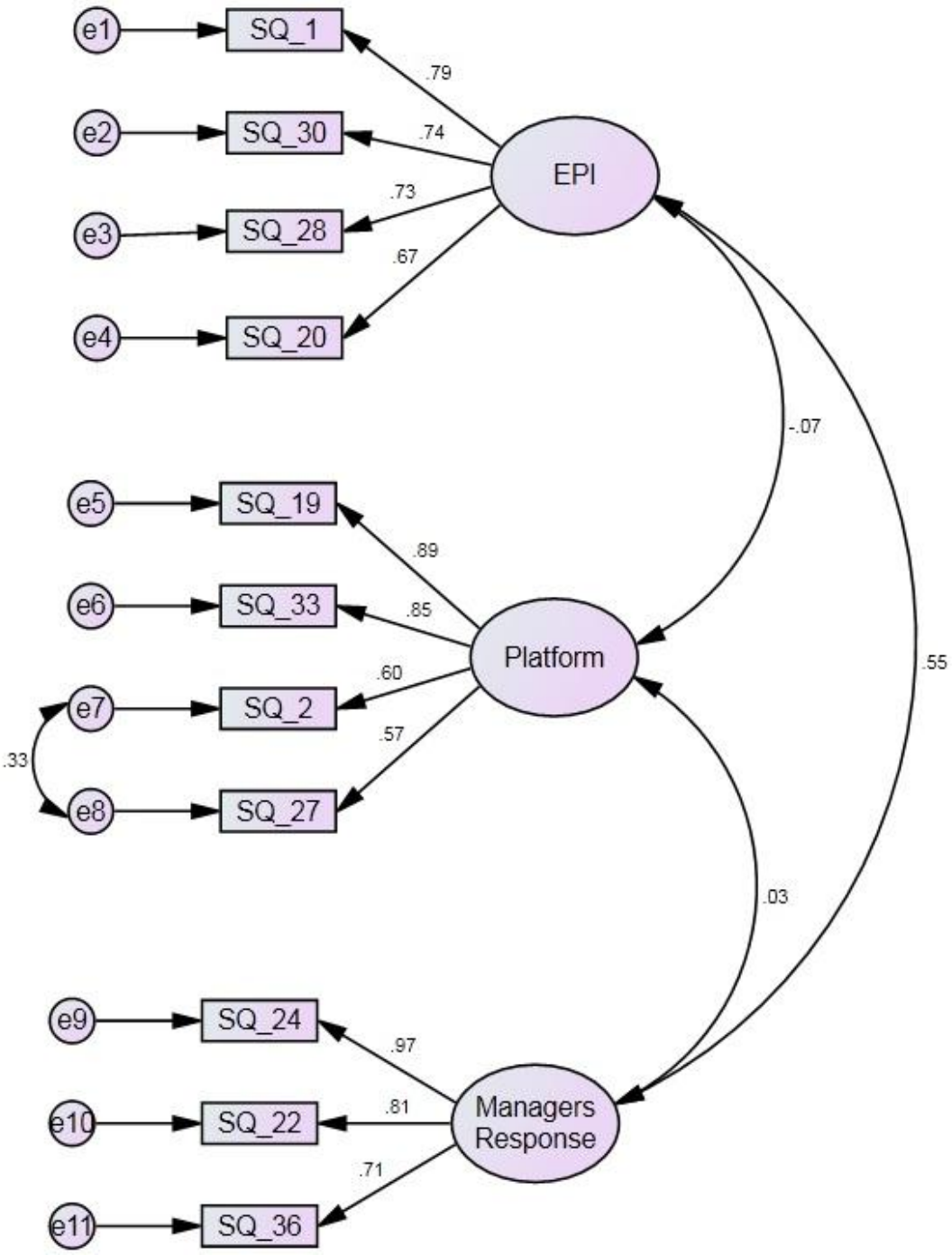

Figure 3.8: Confirmatory Factor Analysis Results Based on 11 Items with Connected Residuals

In Table 3.16 the model fit statistics of the three models including unmodified, unmodified with connected residuals and re-specified model are displayed. The statistics show that CMIN/DF, GFI, AGFI, CFI, RMR, SRMR and RMSEA are 2.921, 0.950, 0.920, 0.043, 0.0435, .961 and .069 respectively for unmodified model but RMSEA is significant. When the residuals were connected as shown in Figure 3.8 the results improved to CMIN/DF: 1.990, GFI: 0.966, AGFI: 0.943, CFI: 0.981, RMR: 0.039, SRMR: 0.0377 and RMSEA: 0.049 and becomes insignificant. The statistics are more improved when item SQ_27 is dropped as shown in the Table 3.16. The value CMIN/DF, GFI, AGFI, CFI, RMR, SRMR and RMSEA of re-specified model are 1.658, 0.974, 0.955, 0.988, 0.037, 0.0343 and 0.040 while the P-value is insignificant for RMESA. Therefore according to the result shown in Table 3.16 the re-specified model in which item 27 is dropped shows the best model fit beside the other two; unmodified model and unmodified model with connecting residuals.

Table 3.16: Fit Index of Unmodified and Re-specified Model

	N	CMIN/ DF	GFI	AGFI	CFI	RMR	SRMR	RMSEA	PCLOSE
unmodified model	406	2.921	0.950	0.920	.961	0.043	0.0435	.069	.015
unmodified model with connecting residuals	406	1.990	0.966	0.943	0.981	0.039	0.0377	0.049	0.500
re-specified model	406	1.658	0.974	0.955	0.988	0.037	0.0343	0.040	0.787

The Bartlett's and KMO test result of the 10 items is shown in Table 3.17. Bartlett's test of sphericity is statistically significant and KMO value is 0.776, based on Hutcheson and Sofroniou (1999) guideline shows that the shared variance is a middling value.

Table 3.17:KMO and Bartlett's Test of the Final 10 Items

Bartlett's Test of Sphericity	Approx. Chi-Square	1852.945
	df	45
	Sig.	.000
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.776

The total variance explained and the eigenvalues associated with each linear factor before extraction, after extraction and after rotation for the 10 items is shown in Table 3.18. The initial eigenvalue in table shows that three factors have eigenvalue greater than one, while the reaming components have eigenvalue below one. The total variance explained by the first factor is 36.917%, second factor explains 22.562% and the third factor 12.676%. In total the total variance explained by the 10 items scale explain higher variance than the prior 11 items scale which is 72.155% compared to 69.836% of 11 item scale. After rotation the variance is distributed almost evenly among the three factors that are 26.211, 23.524 and 22.420 for factor one, two and three respectively.

Table 3.18:Total Variance Explained of Final 10 Items

Factors	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	(i) Total	(ii) Percent of Variance	(iii) Cumulative Percent	(i) Total	(ii) Percent of Variance	(iii) Cumulative Percent	(i) Total	(ii) Percent of Variance	(iii) Cumulative Percent
1	3.692	36.917	36.917	3.692	36.917	36.917	2.621	26.211	26.211
2	2.256	22.562	59.479	2.256	22.562	59.479	2.352	23.524	49.735
3	1.268	12.676	72.155	1.268	12.676	72.155	2.242	22.420	72.155
4	.602	6.024	78.178						
5	.520	5.205	83.383						
6	.452	4.515	87.899						
7	.414	4.140	92.039						
8	.386	3.863	95.902						
9	.235	2.346	98.248						
10	.175	1.752	100.00						

Extraction Method: Principal Component Analysis.

The factors and their corresponding eigenvalues is graphically represented in Cattell's Scree Plot in Figure 3.9. The figure displays that three factors are clearly above the eigenvalue 1 and the rest of the values are below one.

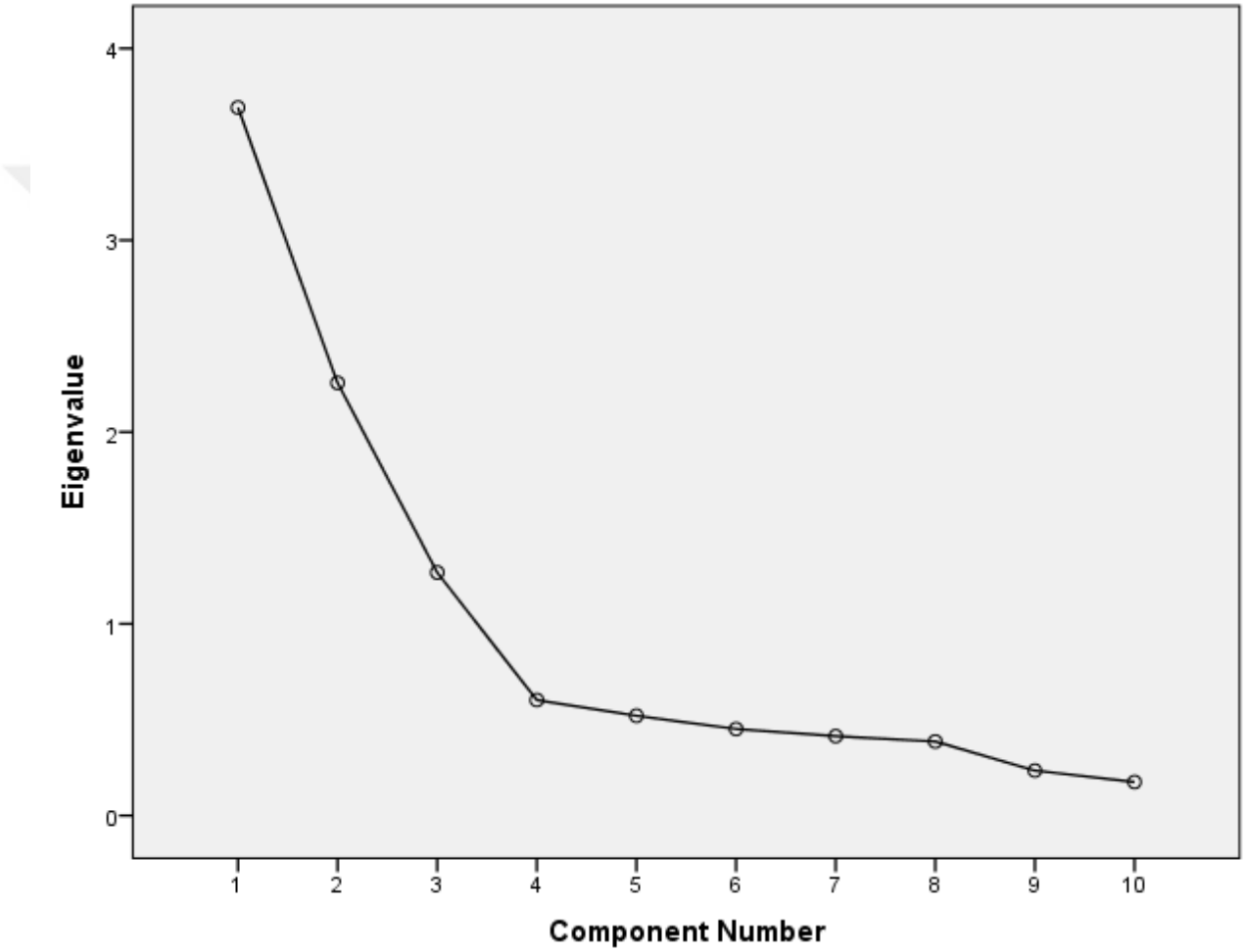

Figure 3.9: Scree Plot of 10 Items

The varimax rotation factor loading and the communality value of the 10 items are displayed in Table 3.19. It shows that these 10 items are highly loaded on 3 factors and the communality value of all the items are above .5.

Table 3.19: Varimax Rotated Factor Loading Component Matrix of the Final 10 Items

		Factor loading			Communality
		Employee provision of information	Platform	Manager's response	
SQ_1	I rise my voice on issues related to unfairness related to treatment of employees differently by management	.832			.723
SQ_30	I rise my voice when organization does not fulfill its promises	.820			.693
SQ_28	I rise my voice on lack of organizational support e.g. not caring about well-being of employees	.743			.646
SQ_20	I communicate creative suggestions to management about product and services	.732			.579
SQ_19	My organization encourages employee to express their disagreements regarding company issues through proper forum		.899		.808
SQ_33	I rise my voice on lack of proper forum for registering concerns regarding job related issues		.897		.806
SQ_2	My organization have a systematic and organized procedure to express ideas, recommendations or issues to the management		.770		.595

SQ_24	The manager give response to employee complaints in adequate time	.888	.871
SQ_22	The response of the management in reaction to my recommendation or comments is unsatisfactory	.849	.782
SQ_36	The suggestions or recommendations I provide to the manager are truly considered by them	.827	.714

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 5 iterations.

The overall loading of the items have been improved after dropping the SQ_27 item.

The first factor which is "employee provision of information" has four items having factor loading of 0.832, 0.820, 0.743 and 0.732. The items loaded are the same as the previous 11 item scale.

i) I rise my voice on issues related to unfairness related to treatment of employees differently by management.
ii) I rise my voice when organization does not fulfill its promises.
iii) I rise my voice on lack of organizational support e.g. not caring about well-being of employees.
iv) I communicate creative suggestions to management about product and services.

Factor loadings of items on the platform factor are 0.899, 0.897 and 0.770 and the items are listed below.

i) My organization encourages employee to express their disagreements regarding company issues through proper forum.
ii) I rise my voice on lack of proper forum for registering concerns regarding job related issues.
iii) My organization have a systematic and organized procedure to express ideas, recommendations or issues to the management.

The third factor which is the manager's response have 3 items. The factor loading are 0.888, 0.849 and 0.827. The items are below.

i) The manager give response to employees' complaints in adequate time.
ii) The response of the management in reaction to my recommendation or comments is unsatisfactory.
iii) The suggestions or recommendations I provide to the manager are truly considered by them.

The component plot Figure 3.10 illustrates the 10 items which are loaded on three different factors.

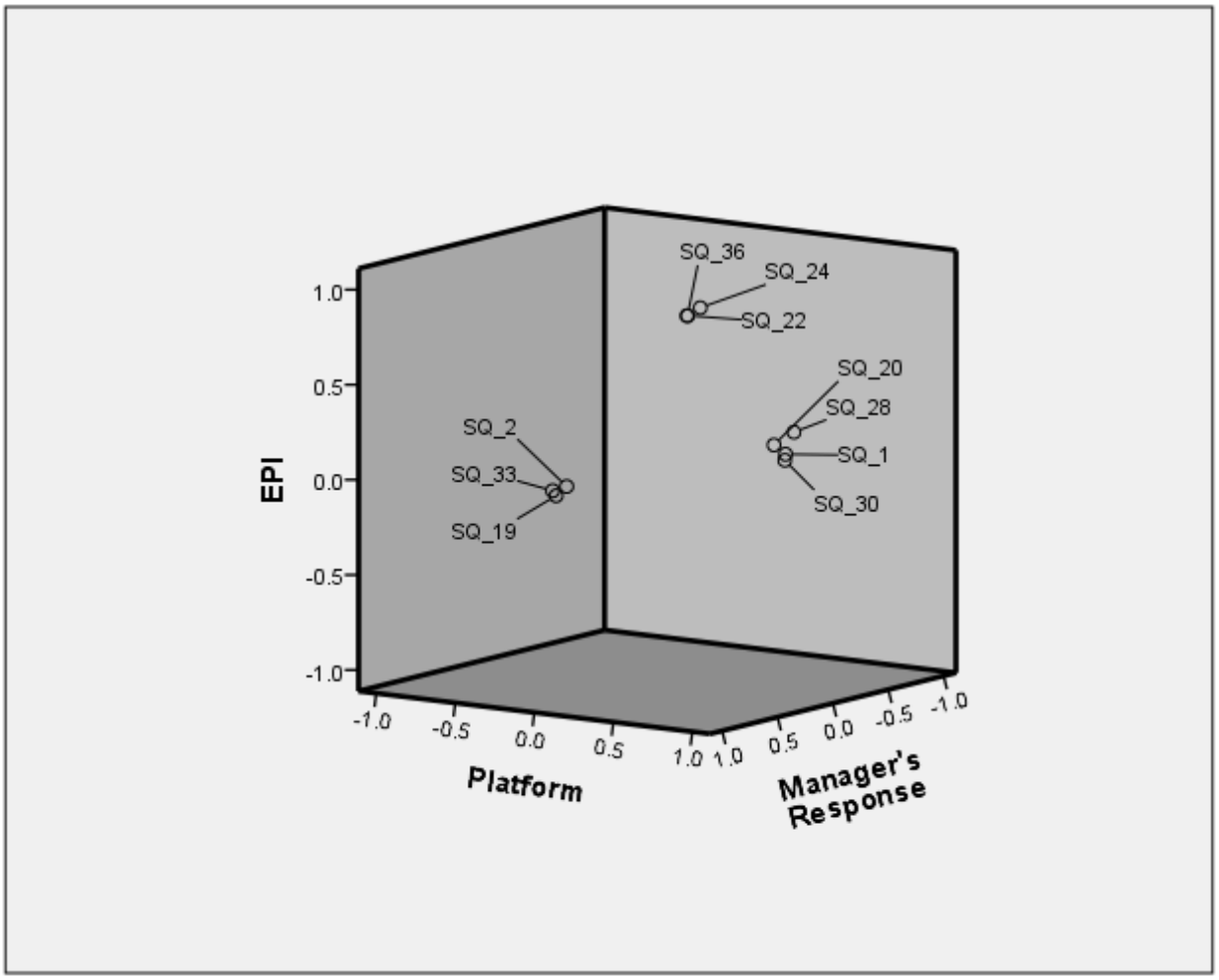

Figure 3.10: Component Plot in Rotated Space

The internal consistency of the three factors (Appendix 9) obtained from the 10 items factor analysis is displayed in Table 3.20. The Cronbach's Alpha value of employee provision of information and manager's response are the same as that of 11 items scale but the Cronbach's Alpha value for the platform factor have decreased to 0.822 due to dropping of one item. All the Cronbach's Alpha values for the factor are above 0.8 which are

acceptable range according to literature. The combined factors Cronbach's alpha value is .767 and standardized Cronbach's Alpha is .760

Table 3.20: Reliability Statistics of 10 Items

Factors	Mean	Variance	Cronbach's Alpha	Cronbach's Alpha Standardized	N of Items
Employee provision of information	2.631	1.142	.820	.821	4
Platform	3.618	.916	.822	.820	3
Manager's response	3.149	1.099	.864	.863	3
Combined value	30.8276	34.232	.767	.760	10

After confirming that the model fit and internal consistency are valid for the 10 items scale (Appendix 9), the next step in the CFA is the testing the goodness of fit of the three factors model in comparison to competing models. According to Mulaik et al. (1989) alternative models may be considered in SEM because goodness of fitting models can suffer from misspecification. Therefore the competing models where; a) a single factor model in which all items were loaded to a single factor, b) two factor model in which items of manager's response and platform are combined as first factor and employee provision of information (EPI) is the second factor, and the c) hypothesized three factor model of the study. The reason to combine manager's response and platform factor is that these two factors are the main contributor to the shift of employee voice to two-way process and they are provided by the organization. As discussed prior in the literature chapter, organization regulates manager's responsibility in giving response in a predetermined time frame and platform is also organization oriented. Therefore these two factors are considered as one factor. The goodness of fitting of all the models were tested on the sub-sample1 and are displayed in Table 3.21.

The chi-square of all the models except the 3 factor model were significant as it is mostly the case in large sample (Bentlerb and Bonett, 1980). The goodness of fit statistics

in Table 3.21 show that the hypothesized baseline 3 factor model provide a good-fit that is GFI=0.966, AGFI=0.942, CFI=0.994, RMR=0.036, SRMR=0.0356 and RMSEA=0.029 for the sub-sample 1 and the RMSEA were insignificant. On the other hand the first and second model having significant chi-square value and also the comparative indices did not have valid statistics which are required for a good model fit. The GFI and AGFI which is required to be greater than 0.90, are below for 1-factor and 2 factor model for sub sample 1. The CFI value also requires to be greater than .90 and better if above than .95, but for 1 and 2 factor model are below the cut off value. The RMR as the literature states that it is difficult to interpret (Kline, 2005) when the questionnaire contains items with varying levels on the other hand the SRMR for 1-factor and 2-factor are also not significant. Also the RMSEA which examines the closeness of fit is out of range for 1 and 2 factor model. But for the baseline three factor model it is in the acceptable range.

Table 3.21: Summary of Confirmatory Factor Analyses of Different Models

	Chi-square	CMIN/DF	GFI	AGFI	CFI	RMR	SRMR	RMSEA	PCLOSE
1-factor model	499.176	14.262	0.668	0.479	0.535	0.171	0.1838	0.246	0.000
2- factor model	470.204	13.434	0.744	0.597	0.564	0.282	0.2039	0.238	0.000
3- factor model	38.052	1.189	0.966	0.942	0.994	0.036	0.0356	0.029	0.841

The complete standardized factor loading is shown in Figure 3.11, further support the hypothesized 3 factor model. The range of the standardized factor loading is .63 to .97 for the sub-sample 1. Also the average standardized factor loading is above .7 for each of the three factors.

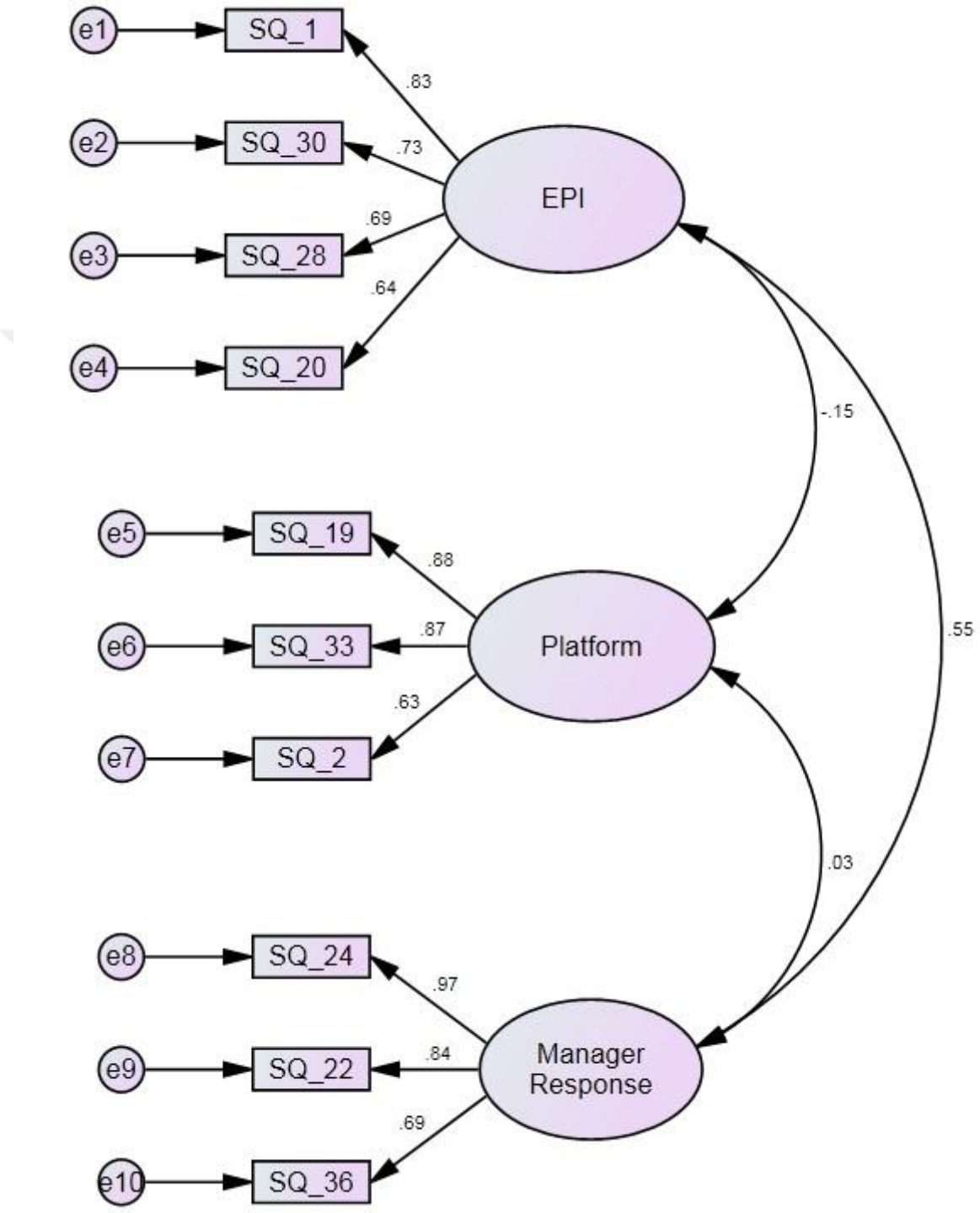

Figure 3.11: Confirmatory Factor Analysis Results Based on 10 Items

3.6. RELIABILITY

The internal consistency reliabilities of the factors are shown in Table 3.22. Reliability test was constructed for the three different data sets separately. The coefficient alphas for the three factors; employee provision of information, platform and manager's response were 0.820, 0.822 and 0.864 respectively for all the respondents. For the sub-sample 1, the internal consistency reliabilities were also acceptable for the three factors which were 0.808, 0.833 and 0.867. The alpha coefficients for the sub-sample 2 were 0.833, 0.787 and 0.859 for employee provision of information, platform and manager's response respectively.

Table 3.22: Reliability of all the Data sets for 10 Items

	Employee provision of information	Platform	Manager's response
All respondents	0.820	0.822	0.864
Sub sample 1	0.808	0.833	0.867
Sub sample 2	0.833	0.787	0.859

3.7. MEASUREMENT INVARIANCE TEST

The next step after finalizing the baseline model is the construct validity test. This provides a reliability and validity across different potential situation in which it can be applied. The Multisampling Confirmatory Factors Analysis (MCFA) where groups are compared based on personal differences (gender) or even context (type of workplace setting etc.) is widely adopted to establish reliability and validity across different potential situation (Cheung and Rensvold, 2002; Vandenberg and Lance, 2000). As mentioned earlier, in this study the data set was divided into two sub-samples based on job position; Sub-sample 1 consists of doctors, research assistants and medical technicians while sub-sample 2 consists of nurses and administrative staff.

Table 3.23: Measurement Invariance Test for Sub-Sample 1 Versus Sub-Sample 2

	Model Fit Measures					Model Differences		
Model Tested	**X^2**	**df**	**P**	**RMSEA**	**CFI**	**ΔX^2**	**Δ df**	**P**
Separate Group								
Sub-sample 1	38.052	32	.213	.029	.994			
Sub-sample 2	71.608	32	.000	.082	.952			
Configural invariance	109.66	64	.000	.042	.975			
Metric invariance	117.926	74	.001	.038	.976	8.267	10	.603
Scalar invariance	143.471	74	.000	.048	.962	33.811	10	.000
EPI scalar invariance	116.363	68	.000	.042	.974	6.703	4	.152
Platform scalar invariance	133.027	67	.000	.049	.964	23.367	3	.000
Manager response scalar invariance	112.172	67	.000	.041	.975	2.512	3	.473
Factor Covariance invariance	111.781	67	.000	.041	.975	2.122	3	.548
Error Variance invariance	124.889	74	.000	.041	.972	15.230	10	.124

In this study configural invariance, metric invariance, scalar invariance, factor covariance invariance and measurement error invariance are tested as part of measurement invariance test following the approach of Byrne et al. (1989). In Table 3.23 the model fit statistic of each model and the chi-square differences for each model comparison are displayed. The separate models for sub-sample 1 and 2 exhibit acceptable level of model fit that are X^2=38.052, df=32, p=.213, RMSEA=.029, and CFI=.994 for Sub-sample 1 and X^2=71.608, df=32, p=.000, RMSEA=.082, and CFI=.952 for sub-sample 2. While the model fit level for the combined MCFA model is X^2=109.66, df=64, p=.000, RMSEA=.042, and CFI=.975. This signifies acceptable fit measures of the MCFA and across the two groups and indicates the configural invariance.

The metric invariance test shows that ΔX^2 is 8.267 with 10 degree of freedom and indicates a non-significant difference. The 10 degree of freedom represents the 10 item loadings that were constrained to be equal across the groups. Thus the two group's exhibit equal factor loadings and the non-significant of the test refers full metric invariance.

The scalar invariance result shows that the ΔX^2 is 33.811 with 10 degree of freedom but the differences is statistically significant. This indicates that full scalar invariance is not supported. Modification indices were examined and found that two factors; EPI and manager's response factor had statistically non-significant intercept loading while the platform factor indicated a statistically significant intercept loading. Therefore partial scalar invariance can be supported.

The factor covariance invariance and error variance invariance had ΔX^2 =2.122 with 3 degree and ΔX^2 =15.230 with 10 degree respectively with statistically non-significant differences. Therefore there is full factor covariance invariance and also full error variance invariance.

The measurement invariance analysis demonstrate that the five invariance tests for three factor model met the criteria of configural invariance, full metric invariance, partial scalar invariance, full factor covariance invariance and full error variance invariance.

3.8. SUMMARY

The objective of this chapter was to provide the findings that were obtained from the analysis of the data. The chapter commences by providing the different demographic characteristics of the respondents. This included the information regarding; gender, age group, job position, tenure and education level. After this, the results of the second section of the questionnaire which was related to level of understanding of employee voice was presented. The results exhibited that although the employees were aware of labour union, the tendency of being part of the union was low. Have done this, it proceeds to present the result of EFA and then CFA. In EFA 11 items were identified loading on three factors that are employee provision of information, platform and manager's response. Later during the model-fit analysis re-specified model was identified by dropping an item of platform construct, which left the model with 10 items; 4 items on employee provision of information, 3 items on platform and 3 items of manager's response as shown in Appendix 9.

Furthermore the summary of the model-fit analysis of the three factor model in comparison to competing models were presented. The fit indexes of 3 factor model demonstrated highly acceptable model-fit statistics while those of the 1 and 2 factor models did not. MCFA was tested comprising of measurement invariance test. The results showed support for configural invariance, full metric invariance, partial scalar invariance, full factor covariance invariance and full error variance invariance.

In the next chapter the discussion and conclusion is presented, where some of the general points made here is further explored.

CHAPTER 4

DISCUSSION AND CONCLUSION

In this thesis, the employee voice concept has been examined and illustrated, showing that in past, collective employee voice (union) was a mechanism adopted by employees to resolve their issues or concerns. The collective employee voice mechanism in recent decades slowly shifted to a more individual employee voice concept. The percentage of this shift varies from country to country. The shift of employee voice is described in detail in chapter one. A few reasons underlying this shift are the attitude of organizations toward their employees, weaknesses and certain problems in union behavior, governmental laws and changing political trends. This shift as discussed in the thesis is also interrelated with the arrangement of the platform where the arrangement of platform for employee voice has shifted from "employee oriented" to "organizational oriented". The main difference in these two types is that in employee oriented, the platform for raising voice is provided by employees in form of union while in "organizational oriented" the organization provides a platform for employees to raise voice. In this thesis, these two types of voice behavior are stated as; i) employee oriented as "Traditional Employee Voice" (TEV) and ii) organizational oriented as "Modern Employee Voice" (MEV). The shift has also broadened the scope and nature of employee voice from one-way to two-way communication. As stated in introduction section that this thesis has attempted to address three objectives; first, to explore and analyze the employee voice concept's development and the scales used in the field; second, to explore and analyze the employee voice mechanisms in one of university hospitals in Turkey and third, to construct a scale through which the employee voice level of an organization can be measured.

These objectives have provided several research outcomes. In particular, to address these objectives primarily, a conceptual framework was constructed based on the literature. This framework illustrated the different phases through which voice follows in an organization focusing on the modern organization. The framework illustrates that three dimensions could be part of the MEV, these are; i) provision of information by employee,

ii) platform, and iii) manager's response. These dimensions also lead to the importance of reconsidering the traditional scales used to measure employee voice in management related studies. In order to investigate the traditional scale, a comprehensive research including articles related to employee voice behavior from 1983 was performed. Examination of these studies illustrated that majority of the articles are using the six items scale of voice behavior developed by Van Dyne and Le Pine (1998). But all the items of the scale of Van Dyne and Le Pine (1998) focus on conceptual framework's "provision of information by employee" dimension. In order to address the multi-dimensional nature of the employee voice in modern organization, this research further extends the study to develop a multi-dimensional scale.

Scale development was conducted to bring forward a scale that could measure the two-way nature of modern employee voice. Various items that could address different dimensions of employee voice were explored from the literature. These items were part of the survey question, in which 406 respondents consisting of doctors and paramedical staff contributed. The data were analyzed, adopting EFA and CFA methodology to identify and establish the factors and the underlying items. The results of the thesis are displayed in chapter 3, showing that a three factor model with 10 items is the most suitable model. These 10 items' loading patterns are; 4 items on employee provision of information and 3 items each loading on platform and manager's response as shown in Appendix 9.

This chapter discusses in detail the outcomes from the result and in section 4.1 research objectives are revisited. Furthermore it illustrates the key contributions of the study and finally a conclusion is presented.

4.1. REVISITING OBJECTIVES

In this section the objectives have been revisited and discussed in detail. The first objective of the study was to explore and analyze employee voice and to evaluate the scales used in the field. To achieve this objective primarily an overview of employee voice background was presented and the shift of employee voice was illustrated based on the

conceptual framework. After which the different scales that were used to measure employee voice were illustrated and the shortfalls in adapting of these scales in modern era organization were also highlighted.

It was determined from the literature that in earlier periods of the twentieth century employees were preferring collective voice because of the nature and attitude of organizations toward its employees. This collective voice was traditional employee voice (TEV), where the platform is provided by employee themselves in the form of union. Most of the organizations at that time were centralized, management style was authoritative and employees were treated as machine (Pugh et al., 1969). But in recent decades a shift has been observed in the behavior of employees as well as the organizations. This trend could also be reflected from the researches published in the area concerning voice behavior through the timeline from 1960 to 2016. For instance, in the period between 1960-1975 researchers were arguing and debating about providing opportunity or voice to employees in formulating policy regarding pay level and determining their work condition which will lead to job security (Hirschman, 1970; Pugh et al., 1969; Zander, 1962). The next phase from 1976 to 2000, the debate has circulated around the role of union, such as Freeman and Medoff (1984) argues about the desirable and undesirable face of union; new legislations promoting individualistic approach making it much harder for collective representation to have a role (Ackers and Payne, 1998). Benson (2000) argued about the role of union in the presence of an effective HR department. As it can be seen in Figure 1 of Appendix 1, the number of union memberships also started to decline in this period. The recent phase starting from 2000 onwards, researchers have discussed about the shift and considered that organizations have promoted more individual two-way voice mechanism (Dundon and Gollan, 2007; Holland et al., 2009; Wilkinson et al., 2004; Wilkinson and Fay, 2011).

The examination of the literature shows that employee voice had a shift in the recent decades and it is supported by many studies such as Dundon and Gollan (2007), Holland et al. (2009), Wilkinson et al. (2004) and Wilkinson and Fay (2011). In accordance with

researches like Bowen and Blackmon, (2003), Farndale et al., (2011), Budd et al. (2010) and Liu, et al. (2010) it is seen that in the modern organization employees are provided with different voice mechanism. As discussed in prior chapter the modern employee voice (MEV) in which platform is provided by organization is termed as organizational oriented. Further to accomplish the second part of the first objective that is, to evaluate the scales used in the field, different scales were searched and selected based on the criteria mentioned in the literature chapter. Hence, 45 studies fulfilling the selection criteria were selected. In these studies 4 scales were identified but all of these scale measure the TEV.

To achieve the second objective, which is "to explore and analyze the employee voice mechanisms in the health sector of Turkey" firstly, the overall facts and figures of health sector were examined, their detailed information can be seen in Appendix 6. The health ministry came up with a vision 2023 for health sector, and are in the middle of the implementation. The health sector vision 2023 was to upgrade and provide the best health services easily and affordable. Therefore the Turkish government in 2008 introduced Health Transformation Program (HTP) that was an initiative to improve the efficiency and quality of the health services. The HTP increased intake of medical and nursing staff at university level and other health professions, raised salaries, performance incentives, new contracting mechanisms for health human resources. This was a good initiative to boost the health sector but to maintain the quality of service and the retention rate of human resource is a challenge for the government.

Facts and figures of health sector shows that the percentage of human resource has been varying between the government, university and private hospitals. Statistics shown in Figure 6 of Appendix 6 illustrates that the "specialist physicians" in the year 2009-10 increased in the government hospitals while decreased in the private and university hospitals. Distribution of "specialist physicians" decreased in government hospitals in the years 2010 to 2013, while in the university and private hospitals the trend increased. In contrast to the previous years, in recent years 2013 to 2015 the number of specialist physicians increased in government hospitals but decreased in university and private

hospitals. Distribution of "general practitioners" before the implementation of the HTP program by the government sharply decreased between the periods of 2002-2009. But after 2009 the percent almost remained the same. Distribution of "general practitioners" in the university hospitals slightly decreased from 0.7 percent in 2010 to 0.6 in 2012 and 0.5 in 2013. The switching of human resource from one type to another type of hospitals indicate that the retention is a challenge faced by the hospital management.

There could be many reasons behind the switching of human resource but as explained in literature majority of the cases is due to dissatisfaction in the job. This dissatisfaction occurs when employee constantly confronts situations which extend over the limits of his/her physical and mental power. Other words like stressors and strains are also used in literature for such situation. The continuous cognitive, emotional or physical efforts that are required by employees are condition of stressors (De Jonge and Dormann, 2006) and the adverse reaction to these stressors lead to strains (Jex et al., 2001). According to Mathieu and Zajac (1990), the organizational commitment level of individual associated with stressors is low. Whereas, Chen and Spector (1992) states that interpersonal aggression, sabotage and hostility is associated to stressors, therefore those individual mostly have intention to leave the organization or actually exit. One fourth on average of the employees of an organization are associated with stress. This argument is supported by a survey conducted by National Institute for Occupational Safety and Health in 1999. They found that 26 to 40 percent of all the surveyed workers admitted their work as stressful. Levi and Lunde-Jensen (1996) reported that 28 percent of the workers experience their work as stressful. Three levels of organizational stressors and strains are mentioned in literature that are; job stressors and strains, social stressors and strains and organizational stressors and strains. One of the best remedies for the dissatisfied (stress and strain) employee is to provide them a voice.

As identified in the conceptual framework that providing employee with a voice is not effective until it is a two-way communication process that is MEV. The MEV as identified in the framework is a process where a platform is provided by the organization,

where employees can raise and suggest solutions to issues they face in organization. On the other hand management is responsible to address these issues within a specific time frame. Another important point that also needs to be addressed for successful implementation of MEV is the awareness of the procedure and process for both employee and management. Because in the result as shown in chapter 3 when employees were asked about the meaning of employee voice more than half (56.7%) did not understand the meaning of employee voice. Out of 43.3% employees who understand the meaning, 17.4% stated that, it's a one-way communication, while the remaining 82.6% replied as a two-way communication process. This statistic also shows that there is lack of proper understanding of the employee voice meaning. In order to benefit from the employee voice mechanism health sector needs to properly implement and educate the employees regarding the MEV process in the hospitals. This could be done through arranging seminars and workshops for employees to understand the process.

Awareness of the employee voice will provide the employees an opportunity to properly benefit from the MEV procedure and process. If the organizational management also responds to the issues it could result in satisfied employees and the retention rate could increase. Based on the literature, beside other factors the MEV has also contributed to the decreasing membership number of union. If MEV is properly implemented and employee perceives that his/her individual voice has the power to solve issue then employee voice processes will gain an advantage over union policies. Due to certain problems raised in union behavior and structure, employees will favor nonunionized voice if MEV is effectively implemented. Having any form of employee voice mechanism will divert employees from labour union, as in the case of the organization under consideration, but having a MEV will be having much bigger impact. Almost 68% of the respondents stated that the organization has provided a platform where they can raise their issues, these included complaint and suggestion box, open door policy, work council and through internet. On the other hand out of 294 employees who admitted that there is labour union only 86 respondents were member of the labour union. The OECD report also states that the memberships of labour unions are decreasing in almost all parts of the world. Other

than the political and economic shifts, the revolution of internet and social media which is also a platform for employees to raise issues contributed to decline of union. Mostly every organization maintains different social media accounts such as; Facebook, Twitter, Instagram and LinkedIn etc. Therefore stated in literature the social media platform has also empowered the employee to communicate issues to a wide range of audience within the organization and also to the outside authorities.

Therefore it could be stated depending on the result of the study, that there is some form of employee voice mechanism in the organization under consideration and also in the Turkish health sector. Most of the hospitals have provided social media platform on their website which is a step in the direction of providing a voice to employee. But on the other hand employees are not fully aware of the procedure and process. Although this hinders the efficient implementation of the employee voice mechanism, there is still a decreasing tendency towards union activity.

The next and the main research question of the thesis was to construct a scale through which the employee voice level of an organization can be measured. Through the validation of a multidimensional measure as noted in chapter 3 three factors naming employee provision of information, platform and manager's response were identified as the three factor of the MEV scale. The conceptual framework of the thesis illustrates that the flow of voice in the modern organization moves through a number of stages. Three of these stages combine to make up the process and also the dimensions of the MEV which were employee provision of information, platform and manager's response. The other stages are reaction to the outcomes of the process stage. In this section the three factors scale is discussed and compared to previous available scales of voice behavior.

The first factor, employee provision of information is important for both the traditional scale and for the new scale. The traditional employee voice (TEV) scale as stated in chapter one represents only the employee provision of information dimension and doesn't consider the other dimensions. The reason is that traditional organization management are mostly authoritative and the organizational structure are centralized in

nature, flow of command would come from top level and inputs from the lower level are not welcomed (Bluestone and Harrison 1988; Dow 1988; Jennings 1959). Organization would not provide any platform for employees and when employees face problems or any issues regarding job they would address the issue through union. Therefore in traditional scales one-way communication is measured and the provision of information is from the employee side. Also TEV is mostly a collective process because it is too risky for employee to raise voice individually (Boswell and Olson-Buchanan, 2004; Olson-Buchanan and Boswell, 2008). In this thesis the four scales of TEV which were most frequently used were examined and it is seen that they are concentrated on measuring the employee provision of information. The content analysis of scales conducted in this thesis shows that Van Dyne and Le Pine's (1998) six items scale is adapted by 82% of the studies including both modern and traditional organization while the remaining three scales of Farrell (1983), Rusbult et al. (1988) and Liang et al., (2012) are implemented by 28% of the studies. There is no problem in utilizing the traditional scale in traditional organization, but implementing these scales in the modern organization could create problem in establishing the true nature of employee voice. The reason is the multidimensional nature of employee voice in modern organizations is when the shift from TEV to MEV is not achieved, it can be seen that all the previous traditional scales only focus on one dimension and do not consider the other dimensions which are part of the modern organization.

The second dimension identified in the result chapter is the platform factor. This dimension is lacking in the traditional scale because the platform for voice behavior in traditional organization was oriented by employees themselves in the form of union (Dundon and Gollan, 2007; Millward et al., 2000). The union was a collective voice mechanism where employees would get together to pressurize management (Freeman, 1976). Therefore in traditional scales there is no concept of organizational oriented platform for voice behavior. On the other hand in MEV the platform is provided by the organization (Dundon and Gollan, 2007; Holland et al., 2009; Wilkinson et al., 2004; Wilkinson and Fay, 2011).Through factor analysis, 3 items were identified for platform factor which addresses the availability of platform from organization side. Addition of

platform factor in voice behavior scale is one of significant findings in this thesis and it measures the availability of platform. In two-way communication a medium through which the message could be sent is an important element of a successful communication. In MEV, platform consists of a number of forms that is team meeting, open door policy, compliant box, suggestion box, joint consultative committees, works councils and social media group etc. Among the three items in platform factor, two of these items as; i) My organization have a systematic and organized procedure to express ideas, recommendations or issues to the management and ii) My organization encourages employee to express their disagreement regarding company issues through proper forum, measure the organizational willingness of providing platform for voice are consistent with literature. Numerous studies discuss that organization in the modern era have assigned a specific department as HR department to address issues of employees (Bryson et al., 2007; Edgar and Geare, 2005). Also the literature states that the modern organization provides different voice mechanism (Bowen and Blackmon, 2003; Farndale et al., 2011). Therefore these two items are expected to measure the availability of systemic and organized procedure provided by organization to understand issues and recommendations from employees. Also the last item 'I rise my voice on lack of proper forum for registering concerns regarding job related issues' measures attitude and reaction of employees toward unavailability of a proper forum. Employees feel psychologically safe when proper forum is provided by the organization for discussion of job related issues (Burris et al., 2008; Detert and Burris, 2007; Walumbwa and Schaubroeck, 2009). If employees demand and rise voice for proper forum it could also be considered that employees understand the meaning of MEV and also are loyal to the organization (Freeman and Medoff 1984; Hirschman, 1970). Therefore, platform factor tries to measure the organizational willingness to provide platform and employees' contribution for demanding the proper forum for registering concerns regarding job related issues.

The next finding for the scale is the third dimension, manager's response. The role of manager to voice behavior in both traditional and modern organization is virtual (Freeman and Medoff, 1984; Kassing, 1997; Wright and Edwards, 1998). In TEV, to

address the voice was not a formal job of manager. Therefore in traditional scales no such items are available that could measure manager's response (Beer, 2009). The manager in traditional organization would address the issues raised by union depending on the context of the voice. As stated in the literature chapter large time of manager would be spending diluting the collective voice rather than addressing the issue. On the other hand in MEV managers are formally responsible to address the voice behavior which was raised through the platform provided by organization. In the conceptual framework also the importance of the manager's response was illustrated. The future reaction of employees to exit, remain silent, or continue using the same process depends on manager's response. The manager's response factor consists of three items that are; i) The manager give response to employees' complaints in adequate time, ii) The response of the management in reaction to my recommendations or comments is unsatisfactory, and iii) The suggestions or recommendations I provide to the manager are truly considered by them. All these items consider whether manager provides response to employees' complaints and suggestions in proper ways, and whether employee is satisfactory with the response. The first two items measure if the response was given in proper time and employees' satisfaction level of the response. This is important because the more the time takes for response, the more the employees are likely to be dissatisfied, and it can result employees behavior such as exit or remain but with decreased efficiency (Hirschman, 1970; Withey and Cooper, 1989). The last item is related to manager's sincerity perceived by employees to suggestions and recommendations provided for the betterment of organization. Vandewalle et al. (1995) and Van Dyne and LePine (1998) in their studies stated about promotive behavior of employees which employees provide innovative suggestions for improvement of organization. Since this behavior is beneficial for organizations, it is important for managers to give satisfactory response to employees, so that it encourages continuous participation of employees in organization procedures. Therefore, manager's response factor with three items is expected to measure both appropriateness of manager's response and employees' satisfaction level toward the response, which are another critical aspects for healthy organization.

Support for a multidimensional MEV scale was provided by a consistent set of results: 1) factor loadings from exploratory factor analysis provided support for three separate factors; 2) the CFA results showed the three-dimensional model to be superior to competing models 3) the model fit index of three dimensions are also good-fit and the invariant analysis show that invariance met the criteria of configural invariance, full metric invariance, partial scalar invariance, full factor covariance invariance and full error variance invariance. Besides the empirical support, as Bollen and Hoyle (1990) states, theoretical significance of "conceptual dimensionality" should not be overlooked. Additional support for empirical result is provided by the conceptual framework of the dimensions and also literature. The shift from collective employee voice to a more individual employee voice (Dundon and Gollan, 2007; Dundon, Wilkinson, Marchington and Ackers, 2004; Holland, Pyman, Cooper, and Teicher, 2009; Wilkinson and Fay, 2011) also demanded a multi-dimensional scale that could measure the two-way communication. Therefore the scale developed in this thesis considers the overall dimensions of employee voice in the modern organization. The dimensions that were missing in the previous scales such as platform and manager's response are constructed in the new scale. Hence, this scale is more applicable and effective than the previous scales in measuring the true employee voice in the modern organization.

4.2. KEY CONTRIBUTIONS

A number of contributions are made in thesis to the exiting literature of organizational behavior. First of all, the thesis critically reviews the changing behavior of employee voice and highlights the shift of employee voice from employee-oriented to organizational-oriented. Types of employee voice were presented and demonstrated that TEV is a one-way communication process while MEV is a two-way communication process. The major reason argued in literature for the shift is the change in attitude of organizations toward their employees and providing them with a more direct voice mechanism. This change in attitude was due to monopolistic approach of unions, dependability of organizations on reliable information sharing and fast growing competitive business environment.

Secondly the five different phases through which employee voice flows in modern organization were demonstrated, divided in two cycles; the first cycle consists of employees who raise their voice for the first time and the second cycle is for employees who have experienced the first cycle. The framework of employee voice demonstrates that employee voice lacking successful employee-employer (two-way) communication will not be valuable for the organization. Although giving employee a voice does not guarantee employee satisfaction, creating a communication cycle between employee and employer is the backbone of successful organizations. The three dimensions assumed from the framework are i) provision of information by employee - including the positive and negative voice behavior, ii) platform predetermined by the management, and iii) manager's response - willingness of management to listen to employees.

The other contribution was demonstrating the different scales used to measure employee voice and highlighting the gaps that exist in the literature regarding the measurement of employee voice. This thesis identified that majority of the studies between 1983 and 2015 are using the six items scale of voice behavior developed by Van Dyne and Le Pine (1998). This scale is single dimensional, measuring only the participation of employees toward voice behavior or the provision of information by employee to management. Considering that there's a shift in the employee voice from TEV to MEV, it was argued that there's a need to develop a scale to measure two-way communication, which is multidimensional in nature. Most important contribution of this thesis was the development of the multidimensional scale to measure employee voice in the modern organization. This scale's focus on the MEV and its multidimensional structure is a first in the field. This new scale has the ability to measure the overall dimensions of the modern two-way employee voice.

These contributions will aid the researchers and academics in exploring and measuring employee voice further. Furthermore, the scale can assist human resource department practices in a positive manner by successfully measuring the level of employee voice in their organization. It will enhance the performance and improve relationship of

employee and employer. Also beyond the theoretical and research implications of the study, there are practical uses of this study. Organizations can improve employee voice mechanism by considering the employee voice framework presented in this study. Management can evaluate employee voice mechanism, based on each phase of the framework. It will be helpful in developing and implementing a true two-way employee voice (MEV), which will positively impact the performance of organization. Hence at large this study makes a significant contribution to organizational behavior and management literature which will help in future research in this area.

4.3. LIMITATION AND FUTURE RESEARCH

As every study is not devoid of limitation the same is the case in this study. A few limitations exist and need to be taken into account, they do offer several suggestions for future research. The main limitation of this study was the fact that it included only one organization as a case study. This can provide richness and details of processes and outcomes within a particular enterprise but may raise the issue of low statistical representativeness (Easton, 2010).It can be problematic in generalizing to other workplaces and firms. Therefore future research should include other firms as target stimuli due to which the scope of scale application would expand to a more diverse consumer.

The second limitation was the sample size, although sample size of 406 respondents was adequate according to many researcher as stated in the methodology chapter. The sample size was split into two for the purpose of CFA, this practice is accordance to the literature of CFA. But two separate sample one each for EFA and CFA is also recommended in literature. Therefore, larger sample size and different sample for EFA and CFA would improve reliability and validity of the newly developed multidimensional scale. Finally future empirical studies regarding employee voice should take into consideration the types of voice mechanism implemented in an organization before adopting any employee voice scales from literature. In scale adaptation decision for research, there’s a gap between scales developed in literature and employee voice

procedures adopted in contemporary organizations. Therefore, carefully choosing measurement tool for employee voice behavior will improve the validity of study.

4.4. CONCLUSION

In this thesis a multidimensional scale for measuring the overall constructs of modern employee voice was developed. Changing behavior of employee voice was critically reviewed and highlighted the shift of employee voice from employee-oriented to organizational-oriented. The reason argued in literature regarding the shift from collective to individual voice is demonstrated.

Furthermore the conceptual framework constructed from literature illustrating the flow of voice through the different phases in the modern organization was presented. Through the framework the different constructs of employee voice process were identified. The process consisted of three dimensions. These constructs later lead to identifying the problem of existing scales to validate the overall dimensions in the modern organization. The expected employee decision from the outcome of the MEV process was illustrated.

Finally, with the shortfall of the previous scales of employee voice identified in the conceptual framework, a multidimensional scale was constructed. The new scale is more valid than the previous scales in measuring voice behavior of contemporary organizations and this scale take into consideration the overall dimensions of the employee voice in modern organization. Hence the new scale developed in this thesis is expected to contribute to future research regarding the understanding of employee voice in modern organization.

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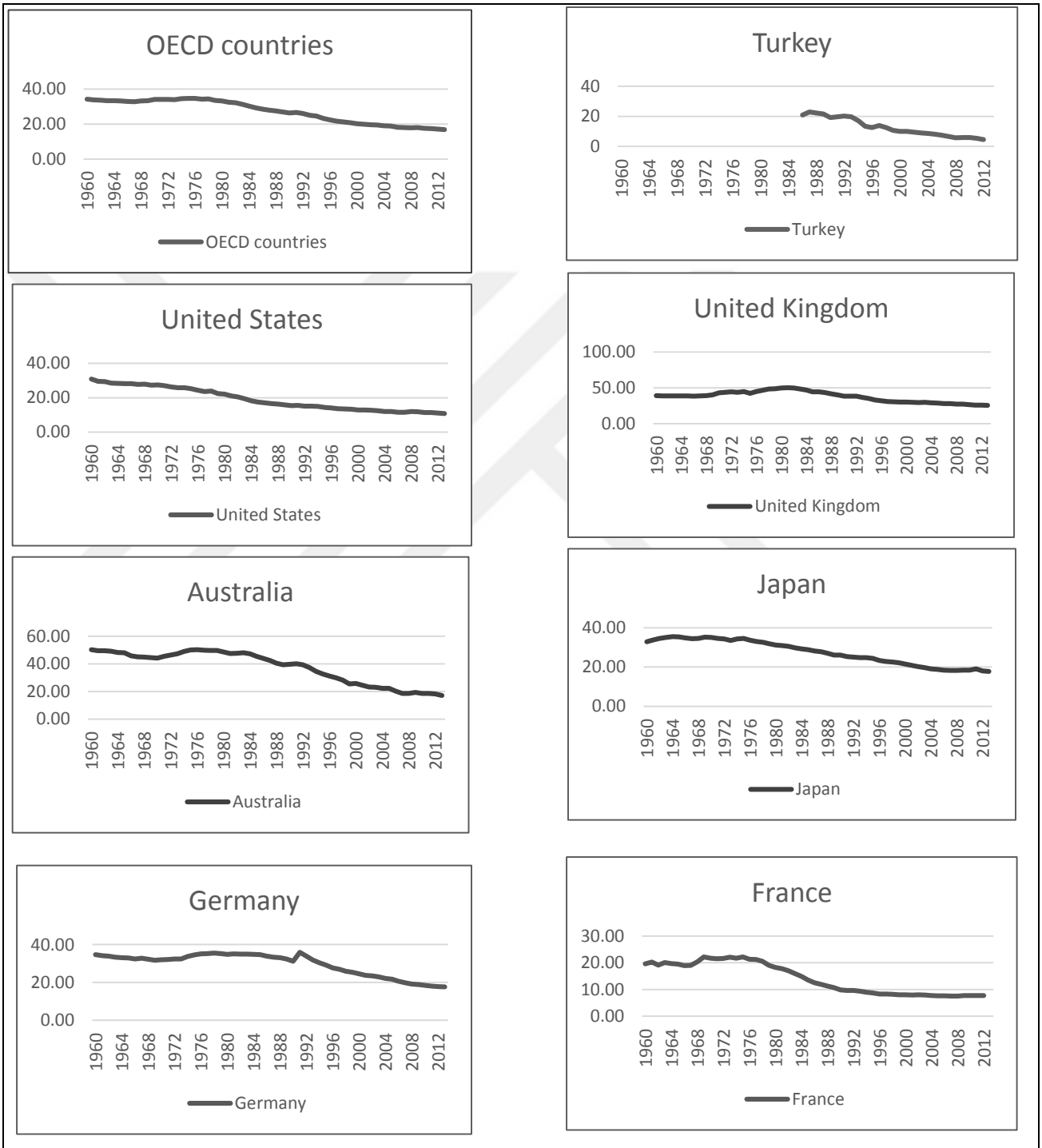
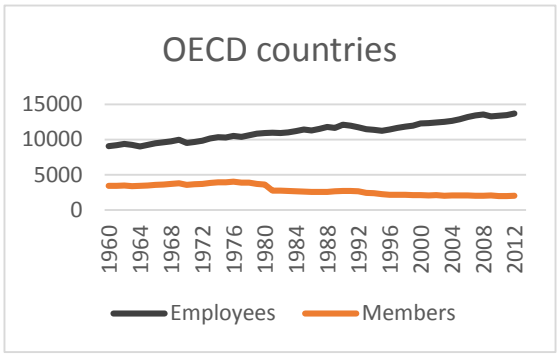
APPENDICES

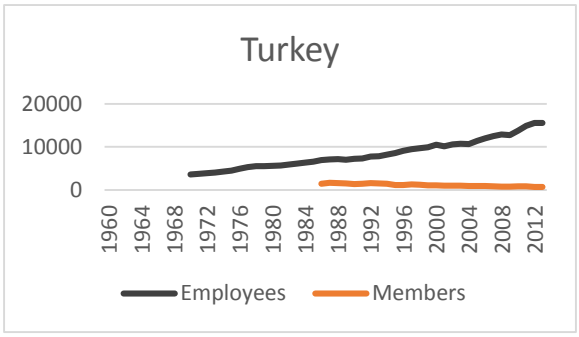
Appendix 1: Statistics of Trade Union Density Provided by the Organization for Economic Co-operation and Development

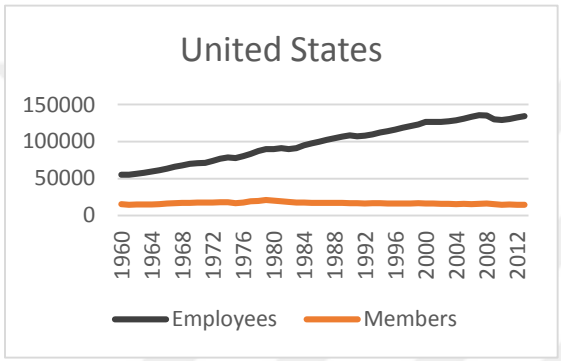


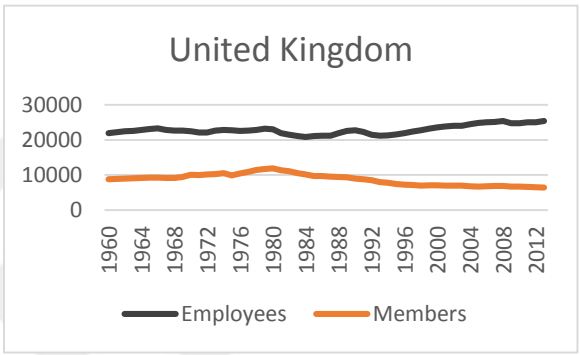
Sources: OECD (2015), OECD Employment and Labour Market Statistics (database).

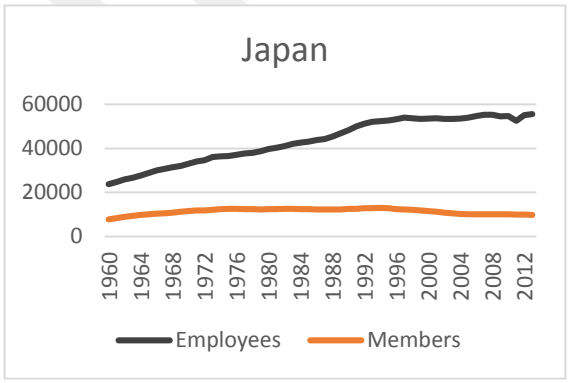
Figure 1: Union density ratio of different countries

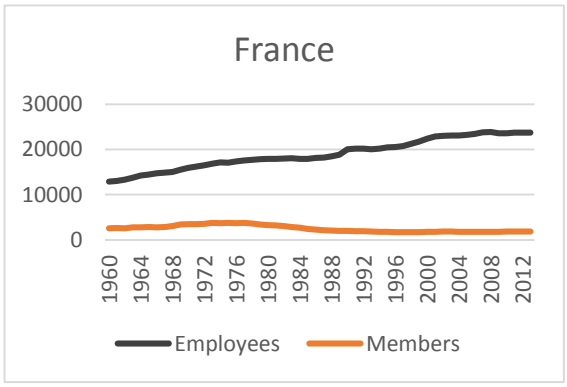












Sources: OECD (2015), "Trade Unions: Union members and employees", OECD Employment and Labour Market Statistics (database).

Figure 2: Union members and employees

Appendix 2: The Initial List of 77 Items

S.No.	Items	Reference
1	If you express your disagreements regarding company issues, you may suffer negative consequences coming from the top management	Maria and Dimitris (2005)
2	I rise my voice/protested on lack of organizational support	Thomas and Daniel (2012)
3	I rise my voice on issues related to unfairness related to treatment of employees differently by management	
4	I believe that my supervisor considers different opinions or disagreements as something useful	Maria and Dimitris (2005)
5	Are you satisfied with the response of the management in reaction to your recommendation or comments	
6	This company encourages me to put the maximum effort in order to be more productive	Maria and Dimitris (2005)
7	Organizational changes are communicated adequately to the employees	Maria and Dimitris (2005)
8	Management show very little concern and fail to notice even if I did the best job possible	Jennifer et al. (2001)
9	Management care about my general satisfaction at work	Jennifer et al. (2001)
10	I rise my voice on lack of organizational support related of taking unfair advantage from employee	
11	I rise my voice when I perceive that manager doesn't have access to required resources	
12	I feel little obligation to challenge or change the status quo	Jerry et al. (2006)
13	I rise my voice on lack of organizational support related to not giving appreciation on achievement	Thomas and Daniel (2012)
14	I have considerable opportunity for independence and freedom in how I do my job	Jerry et al. (2006)
15	I communicate my opinions about work issues to others in my group even if my opinion is different and others in the group disagree with me	Van Dyne and Le Pine's (1998)
16	I have access to the resources that I need to do my job well.	Jerry et al. (2006)
17	I rise my voice/protested when organization breaches expectations	Rousseau (1990)
18	I receive an assignment without adequate resources and materials to execute it	Jerry et al. (2006)

19	I rise my voice on issues related to decision making on inaccurate information by management	
20	I communicate creative suggestions to coworker or management about products and services	Van Dyne and Le Pine's (1998)
21	I often get involved in voice/protest that makes problem for other employee to perform their job smoothly	
22	How often do you inform the management through a proper forum about issues where your opinion might benefit organization	Van Dyne et al. (1994)
23	Have you been given adequate opportunity to communicate your recommendation or ideas	
24	In this organization an employee gets into trouble if he/she acts differently than others	Tierney et al. (1999)
25	My organization clarifies decisions and provides additional information when requested by employees	Niehoff and Moorman (1993)
26	Have you encourage others to use proper forum to register their protest about issues regarding to working environment	
27	Sometimes I postpone important assignments for an unlimited period of time	Leck and Saunders (1992)
28	This organization doesn't care much about people like me, so I am not willing to put in extra effort for it	Leck and Saunders (1992)
29	My job allows me to make a lot of decisions on my own	Beehr (1976)
30	I have enough freedom as to how I do my work	Beehr (1976)
31	My supervisor would come to my defense if I were "attacked" by others	Robert and John (1998)
32	My organization encourages hesitant or quiet co-workers to voice their opinions when they otherwise might not speak up	Robert and Gerald (1995)
33	My supervisor tries to understand what the cause is when I don't perform well	Cheng et al. (2000)
34	My supervisor does not take advantage of me for personal gain	Cheng et al. (2000)
35	My supervisor does not use guanxi (personal relationships) or back-door practices to obtain illicit personal gains	Cheng et al. (2000)
36	My supervisor determines all decisions in the organization whether they are important or not	Cheng et al. (2000)
37	My manager/supervisor consults employees in decisions concerning them	Aycan (2006)

38	There is adequate communication between employees and top managers of this company	Maria and Dimitris (2005)
39	There is a systematic and organized procedure to express your ideas, recommendation or issues to the management in this company	
40	Have you rise your voice/protested regarding job related issues e.g. pay, job autonomy, work load, timings, job security, etc.	Thomas and Daniel (2012)
41	Correcting problems is really not my responsibility	Jerry et al. (2006)
42	I rise my voice on issues related to ill treatment of management	Thomas and Daniel (2012)
43	I rise my voice on issues related to unfairness related to manager decision on base of inaccurate information	
44	I here usually don't speak up for fear of retaliation by others	Kacmar and Carlson (1994)
45	My manager give response to my complaints or recommendations in adequate time	
46	Have you informed the management through a proper forum about issues where your opinion might benefit organization	Van Dyne and Le Pine's (1998)
47	I have significant autonomy in determining how i do my job.	Jerry et al. (2006)
48	Have you rise your voice/protested about supervisor's unfairness	Thomas and Daniel (2012)
49	I express opinions on important issues honestly even if others may disagree	Jennifer et al. (2001)
50	How often do you express your disagreements to your managers concerning issues related to job satisfaction such as salary, working conditions etc.	Thomas and Daniel (2012)
51	Most of the time I have to force myself to go to work	Brayfield and Harold (1951)
52	How easily do you express your disagreements to your managers concerning company issues	
53	When I need additional resources to do my job, I usually get them	Jerry et al. (2006)
54	Have you recommended ideas concerning issues that affect your work group through a proper forum	Van Dyne and Le Pine's (1998)
55	Management of the company encourages employees to express their disagreements regarding company issues through proper forum	Maria and Dimitris (2005)
56	I am constantly on the lookout for new ways to improve my life	Jerry et al. (2006)
57	There is a systematic and organized exchange of knowledge and experiences among employees in this company	Maria and Dimitris (2005)
58	Have you recommended ideas for new projects or changes in procedures through a proper forum	Van Dyne and Le Pine's (1998)

59	Management consider my best interests when they make decisions that affect me	Jennifer et al. (2001)
60	How often do the management of your organization communicate with you about issues and recommendation	
61	Have you been given adequate opportunity to speak about the issues you are facing	
62	The company keeps employees informed regarding its mission, plans and progress	Maria and Dimitris (2005)
63	Have you rise your voice/protested on lack of openness to employee voice	Thomas and Daniel (2012)
64	I rise my voice when organization does not fulfill its promises	
65	The management in this organization puts pressure on employees to engage in extra-role work activities beyond their formal job tasks	Eran (2007)
66	I rise my voice on lack of proper forum for registering concerns regarding job related issues	
67	My immediate supervisor has a strong appreciation of other employees' innovation and creativity	Siegel and Kaemmerer (1978)
68	Do you believe that the suggestions or recommendations you provide to the manager are truly considered by them	
69	This organization is interested in preserving the status quo rather than improving it	Covin and Slevin (1989)
70	I rise my voice/protested on organizational distributive and procedural unfairness	Niehoff and Moorman (1993)
71	I have access to the strategic information I need to do my job	Jerry et al. (2006)
72	There is social pressure in this organization to work extra hours, beyond the formal workload and without any formal rewards	Eran (2007)
73	Have you recommended ideas concerning issues that affect your work group through a proper forum	Van Dyne and Le Pine's (1998)
74	I try to act like peacemakers when other crew members have disagreements	Podsakoff et al. (1997)
75	I always focus on what is wrong with our group situation, rather than the positive side	Philip et al. (1997)
76	My supervisors often criticize employees over minor things	
77	Have you encouraged others in your group to rise their voice/protest regarding issues that affect the group	Van Dyne and Le Pine's (1998)

Appendix 3: The List of Final 36 Items

S.No.	Items	Reference
1	I rise my voice on issues related to unfairness related to treatment of employees differently by management	
2	My organization have a systematic and organized procedure to express ideas, recommendations or issues to the management	
3	I rise my voice on issue related to unfairness of level of pay	Thomas and Daniel (2012)
4	I rise my voice on issues related to decision making on inaccurate information by management	Niehoff and Moorman (1993)
5	I rise my voice on issues related to ill treatment of management	Thomas and Daniel (2012)
6	I rise my voice on issues related to unfairness related to manager decision on base of inaccurate information	
7	I encourage others to use proper forum to register their voice about issues regarding to working environment	
8	I rise my voice on issues related to unfairness related to work schedule	Thomas and Daniel (2012)
9	The manager does not give response to employee's recommendations in adequate time	
10	I often inform the management through a platform provided by organization about issues where my opinion might benefit organization	Van Dyne and Le Pine's (1998)
11	I rise my voice on lack of organizational support related to not giving appreciation on achievement	Thomas and Daniel (2012)
12	I rise my voice about supervisor's unfairness	Thomas and Daniel (2012)
13	I rise my voice although I perceive that manager doesn't have access to required resources	
14	I often express my disagreements to my managers concerning issues related to job satisfaction such as salary and working conditions	Thomas and Daniel (2012)
15	I encourage others in my group to rise their voice regarding issues that affect the group performance	Van Dyne and Le Pine's (1998)
16	I can easily express my disagreements to the management concerning company issues	Maria and Dimitris (2005)
17	I communicated my opinions about work issues to others in group even if my opinion is different and others in the group disagree with me	Van Dyne and Le Pine's (1998), Jennifer et al. (2001)

18	I recommend ideas concerning issues that affect my work group through a proper forum	Van Dyne and Le Pine's (1998)
19	My organization encourages employees to express their disagreements regarding company issues through proper forum	Maria and Dimitris (2005)
20	I communicate creative suggestions to management about products and services	Van Dyne and Le Pine's (1998)
21	I communicate creative suggestions to coworkers about products and services	Van Dyne and Le Pine's (1998)
22	The response of the management in reaction to my recommendation or comments is unsatisfactory	
23	I recommend ideas for new projects or changes in procedures through a proper forum-	Van Dyne and Le Pine's (1998)
24	The manager give response to employees' complaints in adequate time	
25	I rise my voice on lack of organizational support related of taking unfair advantage from employee	
26	The management of my organization often communicates with employees about issues and recommendation	
27	I have been given adequate opportunity to speak about the issues I face in the organization	
28	I rise my voice on lack of organizational support e.g. not caring about well-being of employees	Thomas and Daniel (2012)
29	I rise my voice on lack of openness to employee voice	Thomas and Daniel (2012)
30	I rise my voice when organization does not fulfill its promises	
31	I rise my voice on issues related to unfairness related to job security	
32	I often get involved in such type of voice behavior that creates difficulties for other employees to perform their job	
33	I rise my voice on lack of proper forum for registering concerns regarding job related issues	
34	I rise my voice on issues related to unfairness related to work load	
35	I have been given adequate opportunity to communicate my recommendation or ideas with the management	
36	The suggestions or recommendations I provide to the manager are truly considered by them	Jennifer et al. (2001)

Appendix 4: English Version of the Questionnaire

QUESTIONNAIRE

Dear Sir/Madam,

This questionnaire is part of a PhD study to develop a reliable and valid scale that measures the level of employee voice in an organization. This research aims to be beneficial for employees and organizations by means of examining the existence and different dimensions of employee voice.

The information of the respondent will be confidential and the data will be only used for research purpose. I would greatly appreciate your participation and the time you devote to make this study successful.

Thank you in advance for your cooperation.

Samina Begum
PhD Candidate
Dokuz Eylul University, Izmir, Turkey
Email: samina.begum@ogr.deu.edu.tr

Section A

Personal Information		
a.	Gender	Male ☐ Female ☐
b.	Age	
c.	Nationality	
d.	Organization name	
d.	Tenure in Current Organization	
e.	Job Position	
f.	Education	Undergraduate ☐ Graduate ☐ PhD ☐ Other ☐

Section B

Understanding of Employee voice

1. Do you understand the meaning of Employee Voice?
    a. Yes
    b. No
2. If your answer is 'yes', what is your concept regarding the employee voice
    a. One way communication (sender raise voice but lacking platform and receiver feedback)
    b. Two way communication (All three element present , Sender, platform and receiver feedback)
3. Does your organization have labor unions?
    a. Yes
    b. No
4. Are you a part of the Union?
    a. Yes
    b. No
5. Have your organization provided you with a platform or proper forum (Complaint box, Suggestion box, Open door policy, Works Council, Team meeting) for registering your voice?
    a. Yes
    b. No

    If you answer is **"yes"** then please mark the platform/forum provided by your organization through which you can formally register your issues or recommendations.

    a. Complaint box
    b. Suggestion box
    c. Open door policy: (where the door of manager is always open for individuals employees to discuss issues or recommendation)
    d. Works Council: (employee forum/committee for the purposes of sharing information and consulting with management on organizational matters)
    e. Team meeting
    f. Other

    _____
    _____
    _____

Section C

Please mark under the numbers consistent with your opinion for the following statement.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

		1	2	3	4	5
1.	I rise my voice on issues related to unfairness related to treatment of employees differently by management					
2.	My organization have a systematic and organized procedure to express ideas, recommendations or issues to the management					
3.	I rise my voice on issues related to unfairness of level of pay					
4.	I rise my voice on issues related to decision making on inaccurate information by management					
5.	I rise my voice on issues related to ill treatment of management					
6.	I rise my voice on issues related to unfairness related to manager decision on base of inaccurate information					
7.	I encourage others to use proper forum to register their voice about issues regarding to working environment					
8.	I rise my voice on issues related to unfairness related to work schedule					
9.	The manager does not give response to employee's recommendations in adequate time (R)					
10.	I often inform the management through a platform provided by organization about issues where my opinion might benefit organization.					
11.	I rise my voice on lack of organizational support related to not giving appreciation on achievement					
12.	I rise my voice about supervisor's unfairness					
13.	I rise my voice although I perceive that manager doesn't have access to required resources					
14.	I often express my disagreements to my managers concerning issues related to job satisfaction such as salary and working conditions					
15.	I encourage others in my group to rise their voice regarding issues that affect the group performance					
16.	I can easily express my disagreements to the management concerning company issues					
17.	I communicate my opinions about work issues to others in group even if my opinion is different and others in the group disagree with me					
18.	I recommend ideas concerning issues that affect my work group through a proper forum					

19.	My organization encourages employee to express their disagreements regarding company issues through proper forum					
20.	I communicate creative suggestions to management about products and services					
21.	I communicate creative suggestions to coworkers about product and services					
22.	The response of the management in reaction to my recommendation or comments is unsatisfactory (R)					
23.	I recommend ideas for new projects or changes in procedures through a proper forum					
24.	The manager give response to employees' complaints in adequate time					
25.	I rise my voice on lack of organizational support related of taking unfair advantage from employee					
26.	The management of my organization often communicate with employee about issues and recommendation					
27.	I have been given adequate opportunity to speak about the issues I face in the organization					
28.	I rise my voice on lack of organizational support e.g. not caring about well-being of employees					
29.	I rise my voice on lack of openness to management					
30.	I rise my voice when organization does not fulfill its promises					
31.	I rise my voice on issues related to unfairness related to job security					
32.	I often get involved in such type of voice behavior that creates difficulties for other employee to perform their job					
33.	I rise my voice on lack of proper forum for registering concerns regarding job related issues					
34.	I rise my voice on issues related to unfairness related to work load					
35.	I have been given adequate opportunity to communicate my recommendations or ideas with the management					
36.	The suggestions or recommendations I provide to the manager are truly considered by them					

Appendix 5: Turkish Version of the Questionnaire

ANKET

Sayın Çalışan,

Bu anket çalışanların işyerindeki sesini ölçme ve değerlendirmeye yönelik bir ölçek geliştirmek üzere düzenlenmektedir. Bu sayede çalışanların sesi kavramı ve boyutlarının daha iyi anlaşılması hedeflenmektedir.

Çalışma konuyla ilgili bir doktora tezi için yapıldığından bütün verilen cevaplar gizli tutulacak ve verilen bilgi yalnızca araştırma amacıyla kullanılacaktır. Çalışmaya değerli zamanınızı ayırıp bize değerli görüşlerinizi sunarsanız minnettar kalırız.

Yardımlarınız için teşekkür ederiz.

Samina Begum
Doktora Öğrencisi
Dokuz Eylül Üniversitesi İşletme Doktora Programı
E-posta: samina.begum@ogr.deu.edu.tr

<u>Birinci Bölüm</u>

a.	Cinsiyet	Erkek ☐ Kadın ☐
b.	Yaş	
c.	Kurum ismi	
d.	Görevi	
e.	Mevcut pozisyonunda çalışma süresi?	
f.	Eğitim	Lisans ☐ Yüksek Lisans ☐ Doktora ☐ Diğer _____

İkinci Bölüm

6. Çalışan Sesi kavramını biliyor musunuz?
    a. Evet
    b. Hayır

    Eğer cevabınız evet ise size göre çalışan sesi nasıl bir iletişim sağlar?
    - Tek yönlü iletişim (kişi sesini yükseltir ama bunu ifade edecek platform bulamaz)
    - Karşılıklı İletişim(Kişinin sesi uygun platformlarda ifade edilir ve karşı tarafta buna yönelik görüşlerini iletir)
7. İçinde bulunduğunuz kurumda sendika var mı?
    a. Evet
    b. Hayır
8. Sendikaya üye misiniz?
    a. Evet
    b. Hayır
9. Kurumunuz size çalışan sesinizi ifade edebileceğiniz bir platform ya da bir forum (şikayet kutusu, öneri kutusu, çalışan konseyi, takım toplantıları gibi) sağlıyor mu?
    a. Evet
    b. Hayır

    Eğer cevabınız evet size kurumunuz size görüş ve tavsiyelerinizi ifade edebilmek için ne gibi platformlar ya da forumlar sağlıyor?

    g. Şikayet kutusu
    h. Öneri kutusu
    i. Açık kapı politikası (Yönetimin kapısı çalışanların görüş ve tavsiyelerine her zaman açıktır)
    j. Çalışan Konseyi (Kuruma ilişkin konularda yönetime görüş sunan ve bilgi paylaşan forum/komite)
    k. Takım çalışması
    l. Diğer

    _____
    _____
    _____

Üçüncü Bölüm

Aşağıdaki ifadelere ilişkin görüşünüzü uygun bulduğunuz kutucuğa işaretleyiniz.

1	2	3	4	5
Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum

		1	2	3	4	5
37.	Çalışanlara adil bir şekilde davranılmasına ilişkin bir durum olduğunda sesimi yükseltirim					
38.	Kurumumda sorunları veya tavsiyeleri yönetime sunmak, görüşleri ifade etmek için sistematik ve organize edilmiş bir prosedür vardır.					
39.	Ücret ve maaşlarda adaletsizlik olduğunda sesimi yükseltirim					
40.	Yönetim tarafından sorunlarla ilgili karar vermek için yanlış (tam doğru olmayan) bilgi verildiğinde sesimi yükseltirim.					
41.	Yönetimin kötü muamelesi ile ilgili konularda sesimi yükseltirim					
42.	Yönetici kararları yanlış bilgi sonucu bir haksızlığa yol açıyorsa sesimi yükseltirim					
43.	Çalışma ortamına yönelik sorunlara ilgili olarak seslerini uygun bir forum aracılığıyla ifade etmeleri için diğerlerini teşvik ederim					
44.	Çalışma programlarındaki haksızlığa karşı sesimi yükseltirim					
45.	Yönetici çalışanların tavsiyelerine zamanında cevap vermemektedir.					
46.	Kurumun yararına olan konular hakkındaki görüşlerimi kurumun sunduğu platform aracılığıyla gereken sıklıkta yönetime sunabilirim.					
47.	Örgütsel desteğin eksik kalıp başarıların takdir edilmediği durumlarda sesimi yükseltirim					
48.	Yönetici haksızlığa yaptığında sesimi yükseltirim					
49.	Yöneticinin gerekli kaynaklara ulaşamadığını bildiğim durumlarda da sesimi yükseltirim					
50.	Maaş ve işyeri koşullarına dair katılmadığım noktaları sıklıkla yönetime ifade ederim					
51.	Çalıştığım gruptaki arkadaşlarımı grup performansına ilişkin konularda seslerini yükseltmeye teşvik ederim					
52.	Kuruma ilişkin konularda katılmadığım noktaları yönetime kolayca ifade edebilirim					
53.	Çalışma arkadaşlarımın benimle farklı görüşlerde olduğu ve bana katılmadığı durumlarda da işe ilişkin görüşlerimi onlara ifade ederim					

54.	Çalışma grubumu etkileyen durumlara ilişkin görüşlerimi uygun bir forum aracılığıyla öneririm.					
55.	Kurumum çalışanlarını kuruma yönelik görüş ayrılıklarını veya anlaşmazlıklarını uygun bir forumda ifade edebilmeleri için teşvik eder					
56.	Ürün ve hizmetlere ilişkin yaratıcı önerilerimi yönetimle paylaşırım					
57.	Ürün ve hizmetlere yönelik yaratıcı önerilerimi çalışma arkadaşlarımla paylaşırım					
58.	Yönetimin tavsiye veya yorumlarıma ilişkin verdiği tepkiler tatmin edici değildir.					
59.	Yeni projeler ya da prosedürlerde yapılması gereken değişikliklere yönelik görüşlerimi yönetimle paylaşırım.					
60.	Yöneticiler çalışan şikayetlerine zamanında cevap vermektedir					
61.	Kurumum çalışanına adaletsiz uygulamalarda bulunduğunda kurumum bunu düzeltmeye yönelik çabalarda bulunulmazsa sesimi yükseltirim					
62.	Kurumumun yönetimi sorunlar ve tavsiyelere ilişkin durumlarda sıklıkla çalışanlarla iletişime geçer.					
63.	Kurumumda karşılaştığım sorunlar üzerine konuşabilmek için yeterli imkanlara sahibim					
64.	Kurum desteğinin yeterli olmadığı durumlarda sesimi yükseltirim (Örneğin çalışanların iyiliğine dikkat edilmediği durumlar gibi)					
65.	Yönetimin şeffaflıktan kaçındığı durumlarda sesimi yükseltirim					
66.	Kurumum verdiği sözleri tutmadığı zaman sesimi yükseltirim					
67.	İş güvenliğine ilişkin adaletsizliklere sesimi yükseltirim					
68.	İşyerimde sesimi ifade ettiğim davranışlarım diğer çalışanların işlerini yerine getirmelerinde sorun yaratabilmektedir					
69.	İşe yönelik konularda kaygıların ifade edebileceği yeterli bir forum olmadığında sesimi yükseltirim					
70.	İş yüküne dair adaletsizlik durumlarında sesimi yükseltirim					
71.	Tavsiye ve önerilerimi yönetime iletebilmek için yeterli imkana sahibim					
72.	Yönetime sunduğum tavsiye veya öneriler yönetim tarafından ciddi olarak değerlendirilir					

Appendix 6: Statistics of Turkish Health Sector

The data of medical doctors and paramedical staffs in three major sectors of health industry which are government, private, and university hospitals are provided below. According to data of 2015 of Ministry of Health, there are 141,259 doctors serving for the health industry in Turkey. Out of them, 77,622 are specialists, 41,794 are general practitioners and 21,843 are physician assistants. There are 152,803 nurses, 145,943 health officers, 53,084 midwives, 24,834 dentists, 27,530 pharmacists in the country. The number of doctors per 1,000 people, although there are some changes in the west and east of the country, is around 1.5.

Figure 1 shows the number of health care professionals by years in all types of hospital of Turkey. It shows that the number of all healthcare professionals has been increasing since 2002 except general practitioners and medical residents whose number has increased yet slightly decreased recently. Figure 2 and Figure 3 show variation and shifting of human resources between government hospitals and university and private hospitals. When examined the trend, number of all types of healthcare professionals in government hospitals has been increasing since 2002 except general practitioners and medical residents. In private and university hospitals number of overall healthcare professionals has increased after 2002 yet experienced slight decrease and began increasing again recently. Looking into total number of physicians, government hospitals show continuous increase in numbers since 2002 whereas that of private and university hospitals had slight decreased between 2009 and 2010. Movement of nurses shows the similar pattern as the ones in government constantly increases while the ones in private and university hospitals experienced slight ups and downs.

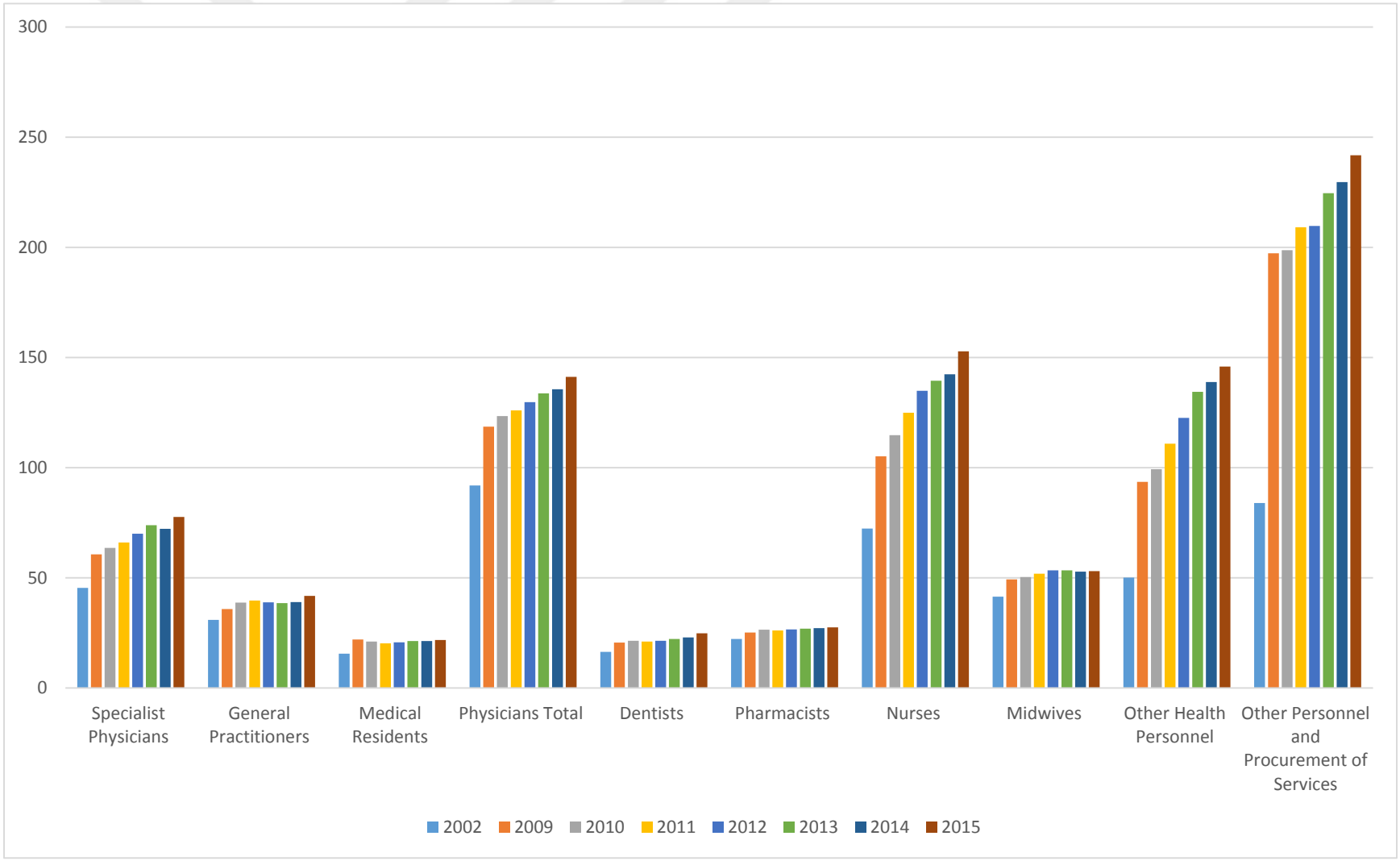


Figure 1: The Number of Health Care Professionals by Years in All the Types of Hospital of Turkey

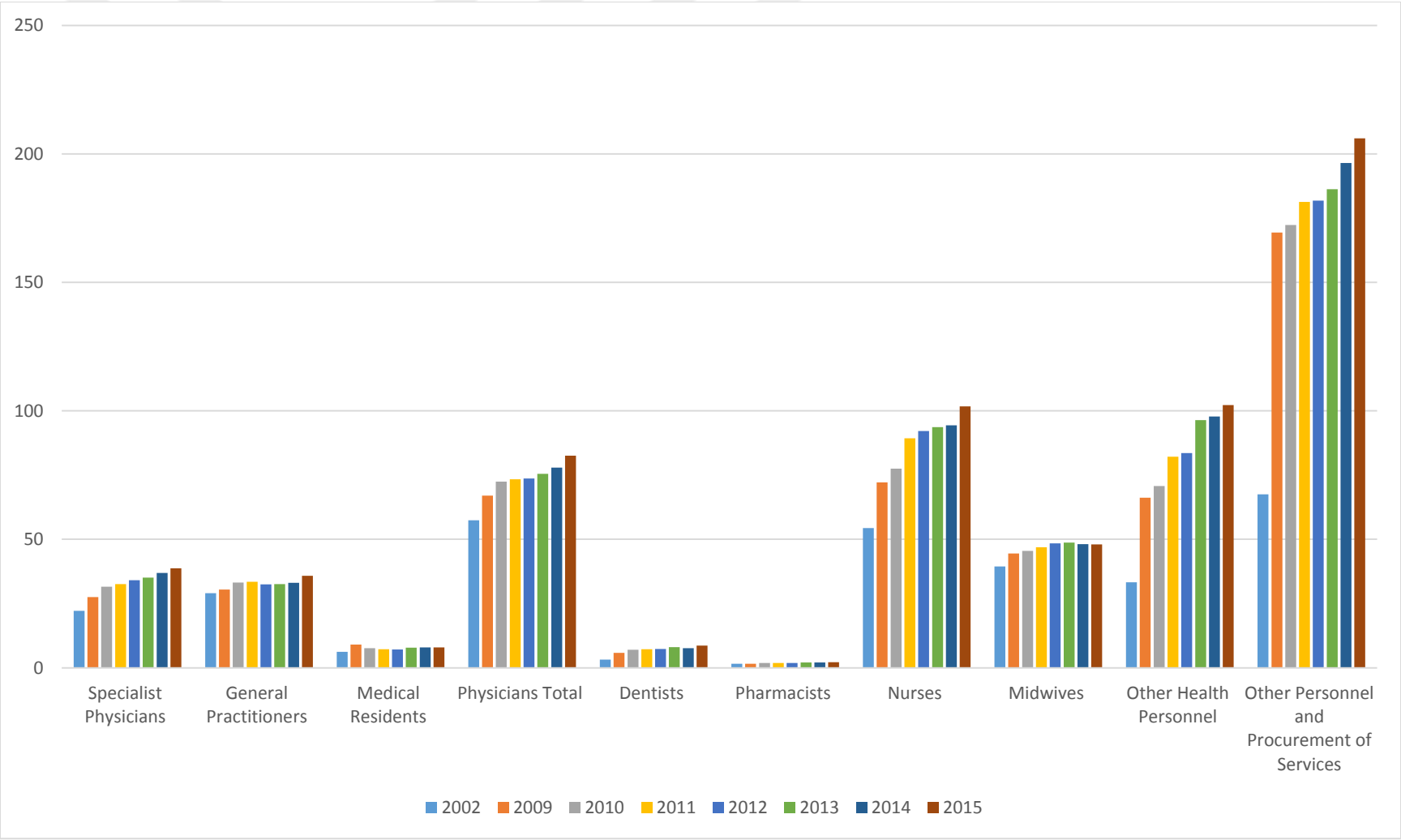


Figure 2: The Number of Health Care Professionals in Government Hospitals

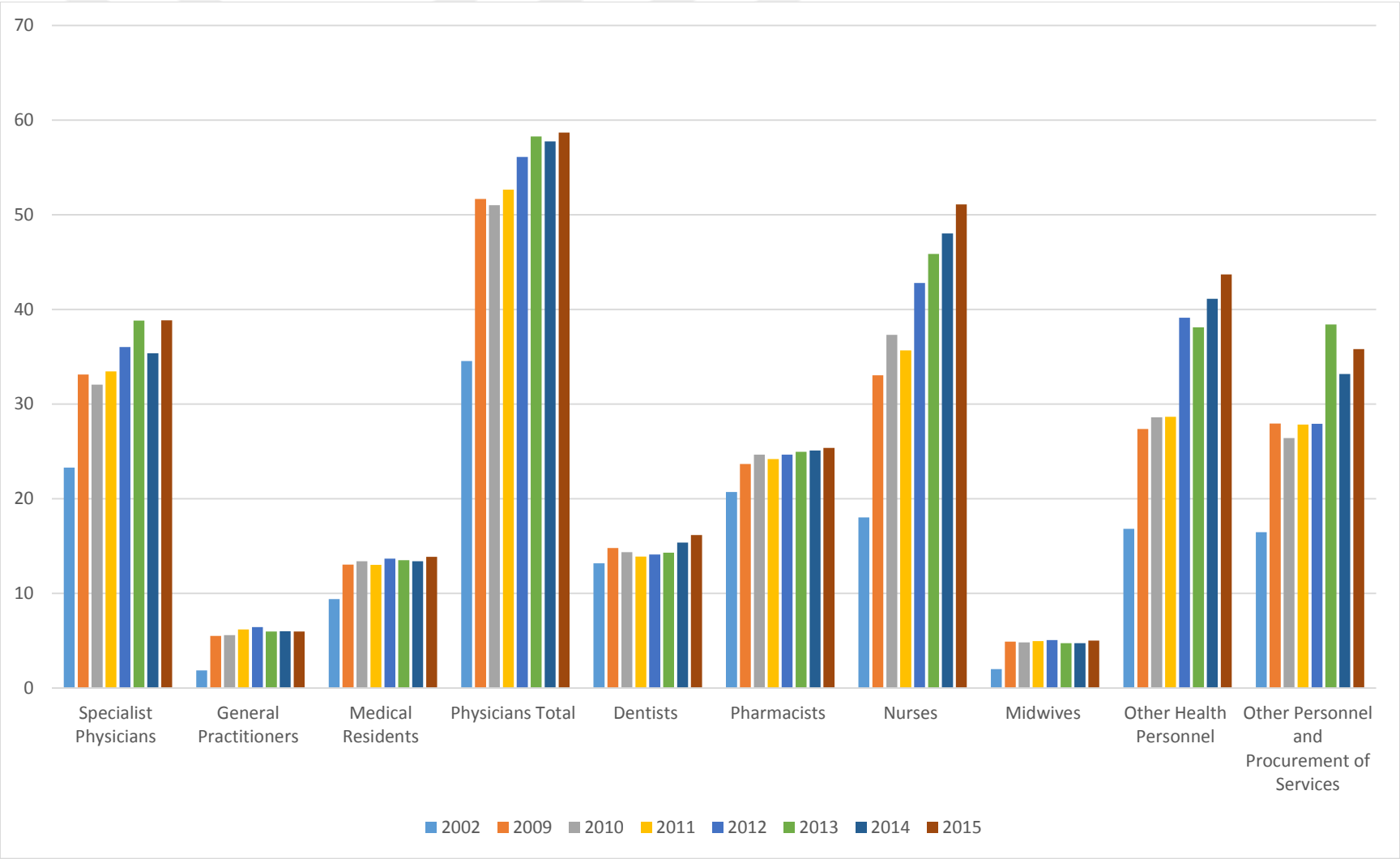


Figure 3: The Number of Health Care Staff in Private and University Hospitals

The distribution percentage graphs of total physicians, general practitioners and specialist physicians in the government, university and private hospitals are presented in Figure 4, 5, and 6 respectively. As for the percent of total physicians in Figure 4, there's general decreasing trend in government hospitals since 2002 whereas that in private has slightly increased and in university hospitals the percentage has also decreased. The figure shows that from 2013 onward to 2015 the percentage of total physicians are decreasing in the university hospitals. Almost the same trend is observed in Figure 5 for general practitioners. But in Figure 6 for the distribution of specialist physicians, the trend shows that there was general decrease in the university hospitals, and increase in government and private hospitals. In the year 2009-10 the percentage increased in the government hospitals while decreased in the private and university hospitals. From 2011 to 2013 in government hospitals the percentage decreased while in the private and university hospitals the percentage increased. While in the past two years an increase in the percent in the government hospitals and decrease in the university and private hospital is seen.

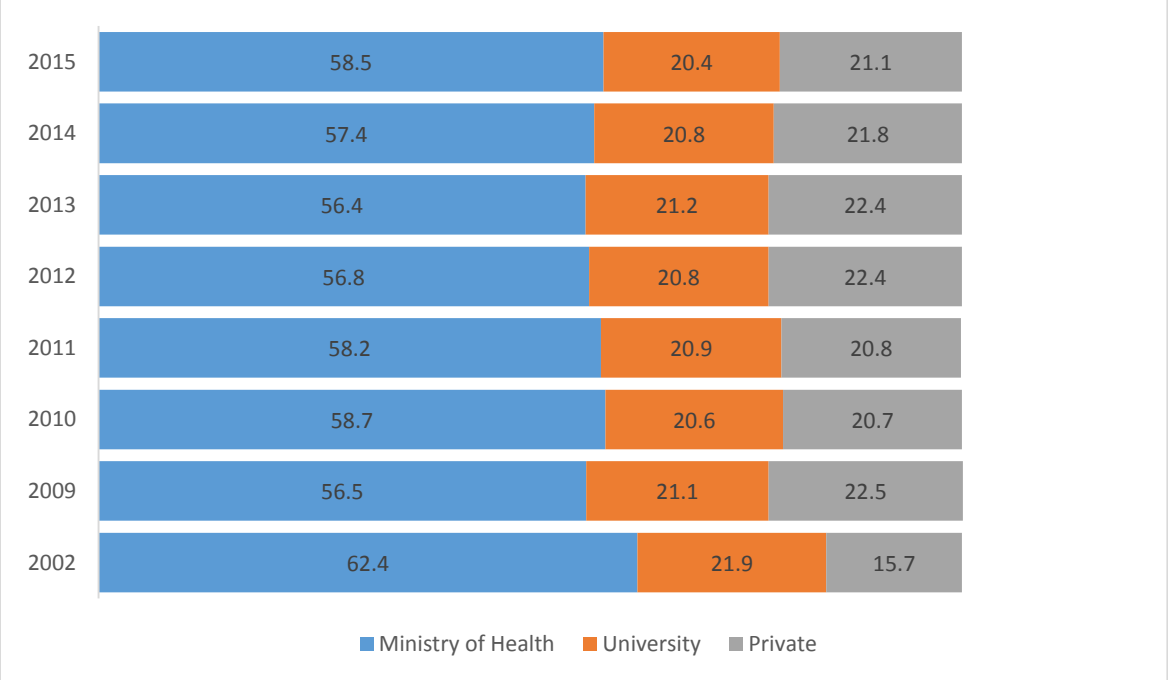


Figure 4: Distribution of Total Physicians by Years and Sectors, (%), Turkey

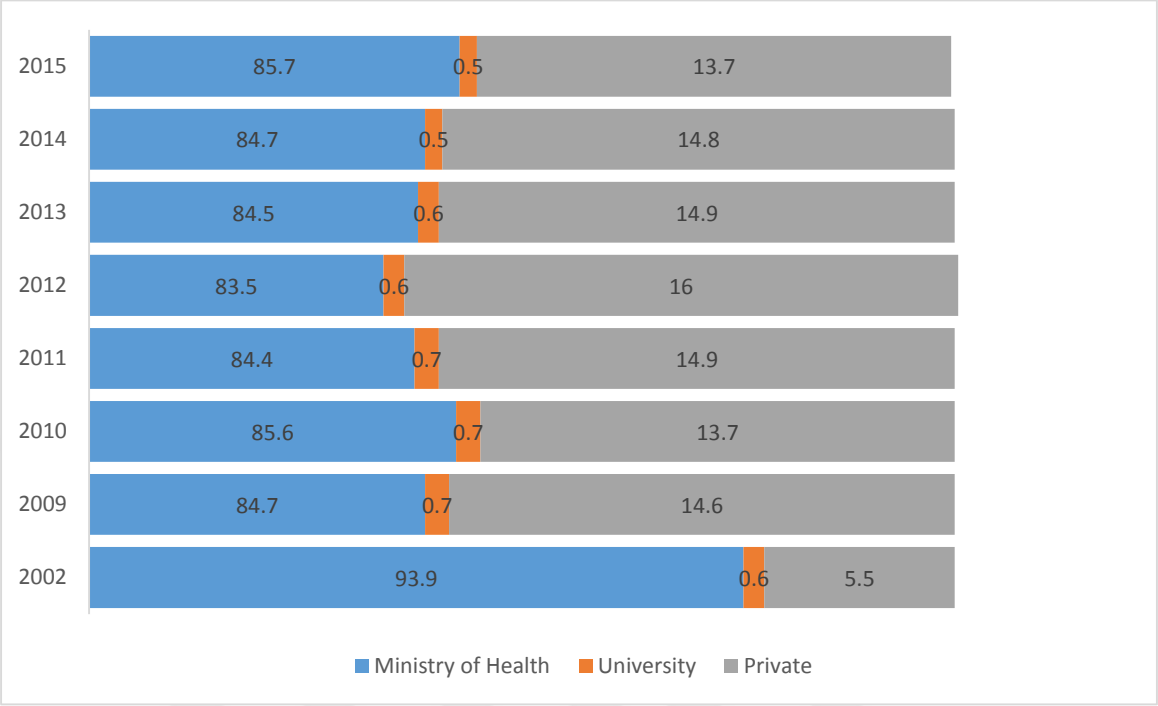


Figure 5: Distribution of General Practitioners by Years and Sectors. (%). Turkey

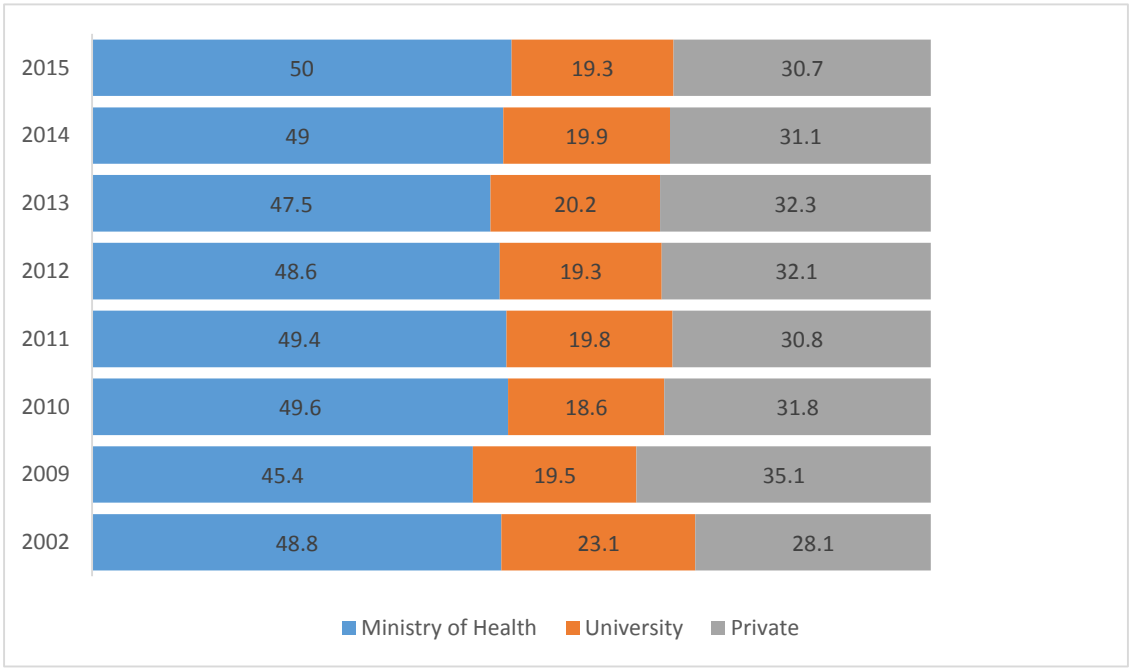


Figure 6: Distribution of Specialist Physicians by Years and Sectors. (%). Turkey

There is also mix variation in the distribution of the nurses and midwives which is displayed in Figure 7. The figure shows that the nurses and midwives in the government hospitals increased in the period of 2009 to 2011 after which a decrease is observed. In the university hospitals the percentage of nurses and midwives has increased from 2010 to 2014 but in the last year (2015) their percentage slightly declined. On the other hand from 2011 onward the number of nurses and midwives has increased in private hospitals. This shows that nurses and midwives are more attractive to private and university hospitals rather than government hospital.

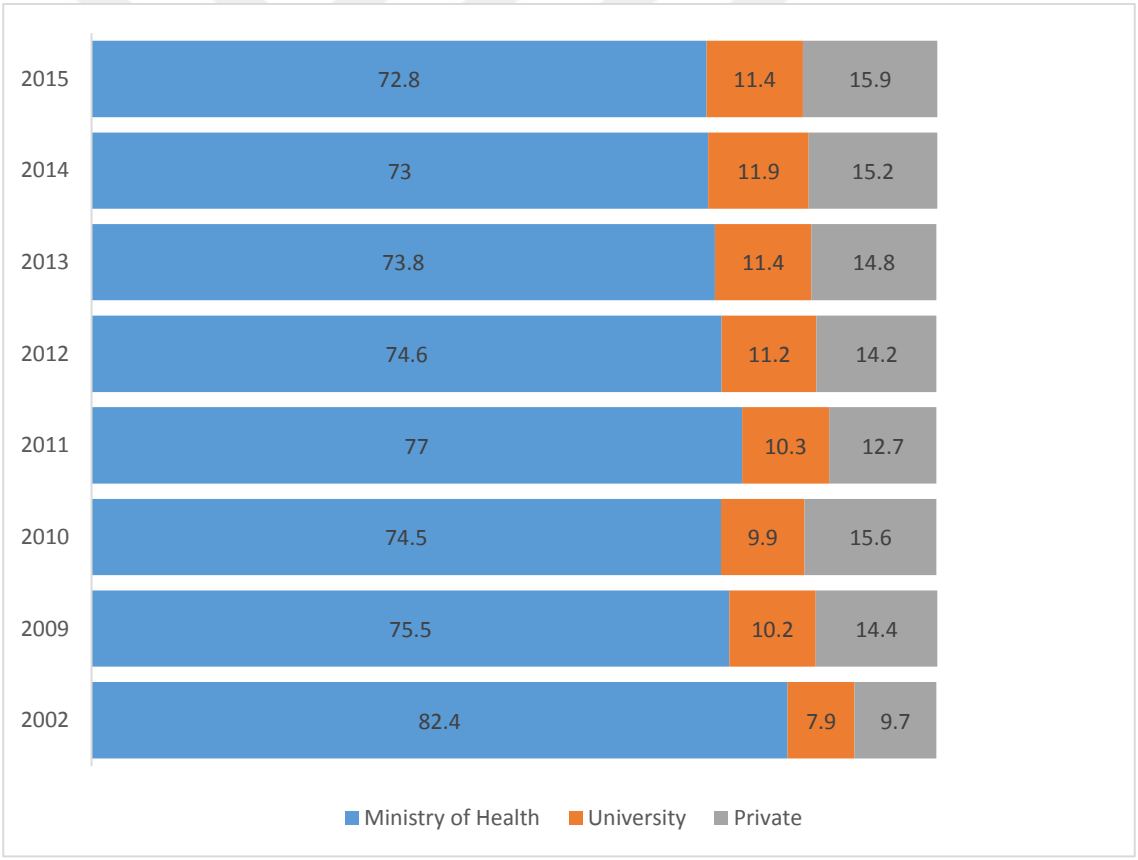
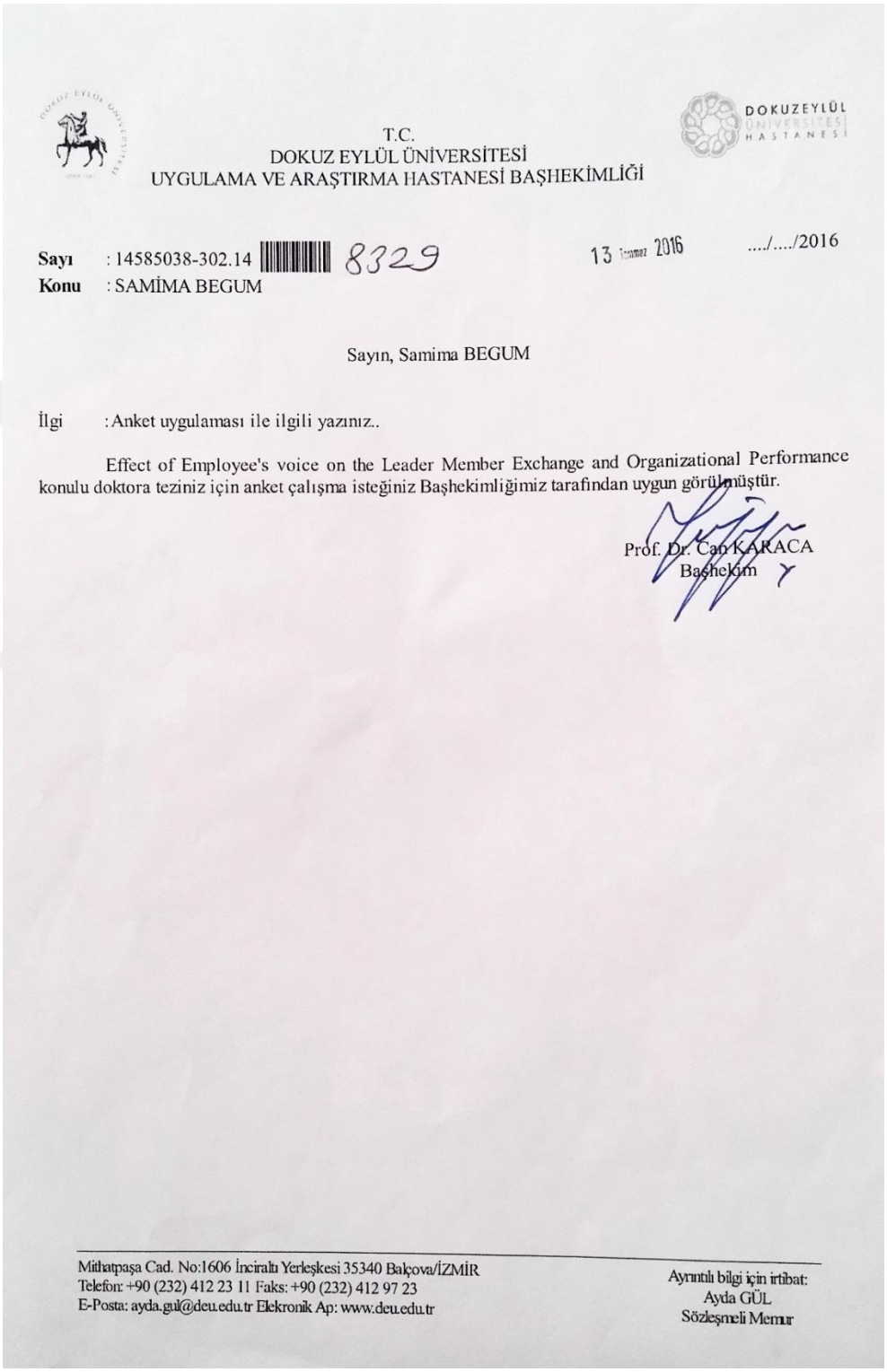


Figure 7: Distribution of Nurses and Midwives by Years and Sectors. (%). Turkey

The chart shows that mostly the employees from university hospitals form all level that is doctors and paramedical staff have decreased in recent years. This indicates that there is some problem that the employees of the university hospitals are transferring job to other hospitals. In literature it is stated that employees should be provided with voice so that they can discuss their issues. These opportunity of voice will positively contribute to the retention rate. Although organizations provide platform for employees to raise their voice negative manger's response dilute the success rate. In the study the university hospitals are under consideration because as indicated in the charts the retention rate is low and employees are decreasing especially in recent years. Therefore it provides an opportunity to investigate into the decline of employees from the employee voice aspect.

Appendix 7: Permission Letter from Head of the DEU Hospital



T.C.
DOKUZ EYLÜL ÜNİVERSİTESİ
UYGULAMA VE ARAŞTIRMA HASTANESİ BAŞHEKİMLİĞİ

DOKUZEYLÜL ÜNİVERSİTESİ HASTANESİ

Sayı : 14585038-302.14 8329 13 Temmuz 2016 ..../..../2016
Konu : SAMİMA BEGUM

Sayın, Samima BEGUM

İlgi : Anket uygulaması ile ilgili yazınız..

Effect of Employee's voice on the Leader Member Exchange and Organizational Performance konulu doktora teziniz için anket çalışma isteğiniz Başhekimliğimiz tarafından uygun görülmüştür.

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Ayda GÜL
Sözleşmeli Memur

Appendix 8: Correlation Matrix of 36 Items

	SQ_1	SQ_2	SQ_3	SQ_4	SQ_5	SQ_6	SQ_7
SQ_1	1						
SQ_2	.003	1					
SQ_3	-.068	.096	1				
SQ_4	-.024	.318**	.484**	1			
SQ_5	-.073	.280**	.512**	.671**	1		
SQ_6	-.110*	.298**	.424**	.586**	.705**	1	
SQ_7	-.153**	.281**	.363**	.411**	.532**	.496**	1
SQ_8	-.117*	.362**	.444**	.636**	.621**	.604**	.567**
SQ_9	.197**	.208**	-.087	.088	.037	.041	.194**
SQ_10	.295**	.075	.056	.037	-.019	.021	-.007
SQ_11	-.017	.310**	.244**	.335**	.428**	.430**	.471**
SQ_12	-.056	.401**	.281**	.517**	.540**	.627**	.478**
SQ_13	.005	.245**	.324**	.352**	.237**	.360**	.243**
SQ_14	.161**	.287**	.341**	.357**	.287**	.312**	.244**
SQ_15	-.071	.342**	.203**	.397**	.423**	.415**	.458**
SQ_16	.402**	.095	.216**	.140**	.149**	.191**	.043
SQ_17	.072	.217**	.094	.074	.047	.055	.044
SQ_18	.129**	.215**	.042	.129**	.031	.088	.261**
SQ_19	.000	.523**	.105*	.363**	.277**	.256**	.339**
SQ_20	.526**	-.046	-.092	-.177**	-.251**	-.191**	-.294**
SQ_21	.095	.469**	.106*	.351**	.308**	.350**	.231**
SQ_22	.333**	.033	.054	-.061	-.101*	-.033	-.093
SQ_23	-.362**	.204**	-.007	.123*	.148**	.202**	.258**
SQ_24	.408**	-.001	.062	.019	.003	.052	-.094
SQ_25	.041	.470**	.310**	.423**	.410**	.411**	.413**
SQ_26	.041	.539**	.131**	.273**	.231**	.318**	.263**
SQ_27	-.140**	.556**	.048	.244**	.173**	.241**	.285**
SQ_28	.561**	-.125*	-.050	-.165**	-.164**	-.128**	-.230**
SQ_29	-.387**	.076	.161**	.263**	.242**	.264**	.344**
SQ_30	.614**	-.004	-.148**	-.171**	-.135**	-.129**	-.165**
SQ_31	-.030	.200**	.395**	.385**	.249**	.254**	.155**
SQ_32	.195**	-.098*	.017	-.171**	-.193**	-.140**	-.179**
SQ_33	-.010	.524**	.173**	.466**	.321**	.329**	.381**
SQ_34	.424**	.021	-.137**	-.129**	-.271**	-.255**	-.273**
SQ_35	.514**	.061	-.124*	-.043	-.034	-.040	-.147**
SQ_36	.300**	.043	.132**	.102*	.064	.145**	-.004

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

SQ_8	SQ_9	SQ_10	SQ_11	SQ_12	SQ_13	SQ_14	SQ_15	SQ_16	SQ_17
1									
.027	1								
-.033	.205**	1							
.395**	.238**	.129**	1						
.601**	.260**	.078	.503**	1					
.245**	.116*	.084	.304**	.365**	1				
.294**	.114*	.266**	.400**	.307**	.332**	1			
.345**	.265**	.128**	.472**	.444**	.227**	.269**	1		
.067	.067	.323**	.092	.139**	.220**	.314**	.090	1	
-.026	.195**	.134**	.181**	.171**	.187**	.175**	.117*	.193**	1
.066	.512**	.208**	.229**	.190**	.166**	.272**	.258**	.126*	.409**
.386**	.290**	.118*	.470**	.443**	.174**	.358**	.391**	.029	.157**
-.205**	.233**	.290**	-.052	-.115*	-.026	.036	-.109*	.294**	.104*
.367**	.212**	.238**	.408**	.446**	.178**	.289**	.406**	.146**	.134**
-.034	.079	.265**	.006	-.079	-.082	.181**	.006	.333**	.184**
.238**	.023	-.139**	.285**	.236**	.134**	.059	.150**	-.167**	-.026
.014	.107*	.275**	.026	-.003	-.032	.200**	.075	.414**	.225**
.428**	.214**	.185**	.454**	.543**	.356**	.360**	.423**	.179**	.171**
.363**	.161**	.096	.318**	.470**	.183**	.250**	.245**	.108*	.105*
.309**	.202**	.053	.381**	.380**	.263**	.256**	.233**	.044	.125*
-.234**	.034	.260**	-.061	-.172**	-.018	.100*	-.208**	.359**	.122*
.274**	-.101*	-.182**	.097	.211**	.128**	-.024	.228**	-.195**	-.137**
-.233**	.113*	.365**	-.079	-.147**	-.122*	.099*	-.070	.297**	.053
.299**	-.069	.138**	.180**	.165**	.106*	.176**	.185**	.161**	.187**
-.112*	-.025	.105*	-.037	-.092	.065	.041	-.177**	.218**	.140**
.404**	.294**	.180**	.413**	.515**	.199**	.361**	.463**	.096	.152**
-.217**	.226**	.378**	-.009	-.179**	-.028	.080	-.151**	.284**	.184**
-.090	.016	.184**	-.101*	-.109*	-.105*	.107*	.021	.275**	.077
.118*	.016	.296**	.080	.064	.048	.270**	.031	.330**	.266**

SQ_18	SQ_19	SQ_20	SQ_21	SQ_22	SQ_23	SQ_24	SQ_25	SQ_26	SQ_27
1									
.268**	1								
.134**	-.015	1							
.263**	.632**	.102*	1						
.275**	.058	.352**	.216**	1					
.060	.240**	-.357**	.182**	-.186**	1				
.260**	.017	.394**	.182**	.788**	-.227**	1			
.244**	.600**	.061	.636**	.167**	.187**	.184**	1		
.178**	.492**	.108*	.457**	.156**	.143**	.187**	.475**	1	
.236**	.523**	-.081	.456**	.038	.257**	-.045	.435**	.361**	1
.017	-.147**	.477**	.056	.347**	-.374**	.429**	-.056	-.037	-.106*
-.046	.084	-.495**	.002	-.238**	.339**	-.270**	.036	-.007	.176**
.089	.001	.487**	.135**	.339**	-.374**	.332**	-.019	-.040	-.076
.044	.215**	.031	.249**	.158**	-.020	.126*	.222**	.177**	.176**
.060	-.029	.216**	.003	.214**	.084	.212**	.069	.007	.086
.334**	.764**	-.024	.589**	.070	.176**	.041	.576**	.555**	.462**
.223**	.065	.418**	.076	.225**	-.232**	.209**	.015	-.034	.024
.084	-.009	.377**	.174**	.456**	-.402**	.488**	-.004	.052	-.074
.221**	-.031	.275**	.165**	.563**	-.082	.683**	.155**	.124*	-.033

SQ_28	SQ_29	SQ_30	SQ_31	SQ_32	SQ_33	SQ_34	SQ_35	SQ_36
1								
-.381**	1							
.540**	-.381**	1						
-.005	.049	.010	1					
.313**	-.132**	.192**	.065	1				
-.141**	.165**	-.030	.238**	-.169**	1			
.375**	-.491**	.450**	.088	.234**	-.006	1		
.526**	-.347**	.644**	.112*	.145**	-.048	.310**	1	
.334**	-.186**	.294**	.107*	.262**	-.034	.215**	.421**	1

Appendix 9: Final Items of Employee Voice Scale

a. Employee Provision of Information

v) I rise my voice on issues related to unfairness related to treatment of employees differently by management.

vi) I rise my voice when organization does not fulfill its promises.

vii) I rise my voice on lack of organizational support e.g. not caring about well-being of employees.

viii) I communicate creative suggestions to management about product and services.

b. Platform

iv) My organization encourages employee to express their disagreements regarding company issues through proper forum.

v) I rise my voice on lack of proper forum for registering concerns regarding job related issues.

vi) My organization have a systematic and organized procedure to express ideas, recommendations or issues to the management.

c. Manager's Response

iv) The manager give response to employees' complaints in adequate time.

v) The response of the management in reaction to my recommendation or comments is unsatisfactory.

vi) The suggestions or recommendations I provide to the manager are truly considered by them.