

# identifying the inadequacies of Performance Management System (PMS)

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## Abstract

The present study was conducted in order to identify the inadequacies of Performance Management System (PMS) and introduce an appropriate model in Bank Mellat of Tehran County. Considering its exploratory nature, this study is classified as a mixed method research and a qualitative survey study, trying to fulfil its objectives. Furthermore, it is also a quantitative study which employs meta-synthesis to identify the components. The researchers identified three components and benefited from the partial least squares to examine the impact of these factors using the PLS software. A five-point Likert scale questionnaire was developed and Cronbach's alpha and Composite Reliability (CR) were utilized to estimate the reliability. Convergent validity and confirmatory factor analysis were applied to measure the validity. The participants were chosen through targeted sampling method and the statistical population of the study involved experts at Tehran County's Bank Mellat. The structural equations (path analysis) was employed to investigate the research hypotheses. The findings indicated that the triple dimensions of Performance Management System include behavioral dimension with a significance level of 38.792, structural dimension (Level of Significance: 34.847) and environmental dimension (Level of Significance: 31.728).

**Keywords:** Performance Management System (PMS), Meta-Synthesis, Partial Least Squares.

## 1. Introduction

The responsibilities of human resources manager, as one of the most significant components in organizational performance, have been highlighted (Maginson, 2006) and assessment of performance is the most fundamental issue in human resources (Boswell and Boudreau, 2002; Jauj and Fritz, 1993). Organizational theorists have emphasized human resource policies which are appropriate for and consistent with the organization's strategy since human resource policies can be improved by relying on the responsibilities arising from the strategic human resource management (Schuler and Jackson, 1987). Obviously, to accomplish efficiency and productivity is a main issue in economics which in addition to achieving economic growth has attracted a large portion of scientists' efforts in this knowledge. Attaining efficiency requires the optimal allocation of production resources and factors, which can be realized by improving the strategic responsibilities of human resource management (Collins and Clark, 2006). Despite the practice of performance management in organizations for several years, there are still significant problems in this area and the expected improvements in performance, accountability, transparency and quality of services have not been observed to a convincing extent yet (Positer, 2013). Although performance is one of the most dominant concepts in the current public management theory and practice, there are still ambiguities and even confusions about the concept, assessment methods and position of management and its performance and administration are still mystifying concepts. Most management scholars believe that the multifaceted nature of organizational performance in public sector's human resources is due to the fact that human resources are expected to pursue a range of objectives, some of which might be in contradiction with each other. As a consequence, government agencies are required to focus their attention on the multiple dimensions of performance (Andrew, 2006). It should be noted that performance denotes the extent to which an organization has managed to achieve its expected objectives and strategies. To accomplish desired performance, resources are of crucial significance, including financial and non-financial resources. In this study, we made attempt to discuss the main research problems, thematic importance, research background, methodology, purpose of study, research hypotheses and data analysis. Finally, the main purpose of this study was to present a comprehensive framework for performance management in Bank Mellat such that it can analyze all the existing processes and provide a proper comprehensive image of the status quo, strengths and weaknesses of the system.

## **2. Theoretical Foundations**

### **2.1. Pathology**

The term "pathology" is derived from two ancient Greek words: "pathos" meaning "agony", "experience" and "feelings" and "logia" which means "study". This term was initially used in medicine to focus on the causes of suffering and death. Recent studies indicated that the term "pathology" is now widely used even in fields beyond medicine (Katina, 2016). Countless business units constantly produce information which could be utilized by the management to assess the performance of organizations. This information may be about the internal operations of units, financial condition of a company as a whole, or suppliers and customers of a company.

Experts believe that development of organization fully depends on improvement of human resources and the main competition is only within the field of human resources, which cannot be imitated; Therefore, having an adept workforce is considered a significant competitive advantage for any organization. In order to increase the number of interested, beneficial and loyal employees, it is necessary to identify the harms of human resources, take measures to eliminate them and benefit from pathology to motivate and satisfy the employees (Esfandiari et al., 2017).

Table 1. Types of Harms and Their Specifications

	<b>Preliminary Harms</b>	<b>Critical Harms</b>	<b>Hazardous Harms</b>
<b>Impacts and Consequences</b>	Short-Term	Midterm	Long-Term
<b>Type Of Harm</b>	They do not harm the objectives, survival and growth of the organization	They harm the growth and objectives of the organization	They harm the objectives, survival and growth of the organization
<b>Inclusion Scope of Harm</b>	Limited	Within a specified range	Extensive and unlimited
<b>Diagnosis of Symptoms</b>	Simple	Not too simple nor too difficult	Difficult
<b>Disruption in Structures</b>	Superficial and small	Considerable	Deep and excessive
<b>Disruption in functions</b>	Slight quantitative and qualitative decline	Significant quantitative and qualitative decline	High quantitative and qualitative decline
<b>Prevalence to the field</b>	They cannot spread to the field.	Their spread to the field is almost minimal	They spread to the field
<b>Priority</b>	Third rank	Second rank	First rank
<b>Encounterment Method</b>	Superficial and justification	Scientific plus research, analysis and recognition of harms	Revolutionary, quick and decisive

Reference: Patric, 2002

## 2.2. Employees performance assessment

Performance assessment systems formally date back to three centuries ago (Taormina, 2009) and have evolved over time according to the needs of organizations. An appropriate performance assessment system, if designed based on the competencies of organization, can lay the foundation of the organization and prove effective in improving employees' performance (Hacan, 2006). Noe et al. (2008) stated that performance is due to personal

characteristics, skills, and the like. According to Figure 2.5, these characteristics are transformed into objective results through employees’ behavior. In fact, employees can function appropriately only if they have the knowledge, skills, abilities, and other characteristics required by an occupation.

Figure 1. Performance Assessment Model in Organizations

Evidence indicates the presence of many organizational problems in institutions and organizations, undoubtedly, reducing the effectiveness, efficiency and productivity of organizations. Investigations (implementation of the seven administrative transformation programs) on the Iranian administrative system showed that productivity in government organizations, despite advanced technology, faced a declining trend. In fact, institutions or organizations have different dimensions such as objectives, structure, human resources, technology and environment each of which should be analyzed in order to be able to identify the organizational problems. Dynamic organizations have learned to respond to modifications, trends, and challenges that arise in a variety of dimensions and contexts. The government, too, must be equipped with dynamic organizations to execute its specific missions and responsibilities in the economic, social, and political spheres. Constant alterations occurring in the environment cause the human resource management of organizations to face different challenges and force them to align their objectives, policies, strategies and procedures with these challenges. Failure to assess the performance of employees leads to issues such as short-term human resources planning, performance-based payments, inadequacies or non-transparency of responsibility descriptions and qualification conditions, screenings which are irrelevant or poorly-related to the occupational responsibilities, dissatisfaction of service recipients or consumers, low productivity and increased waste of resources, and poor motivation of employees. These issues gradually drive the organization far away from its objectives (Bahramzadeh et al., 2015).

Table 2. Performance Assessment Objectives

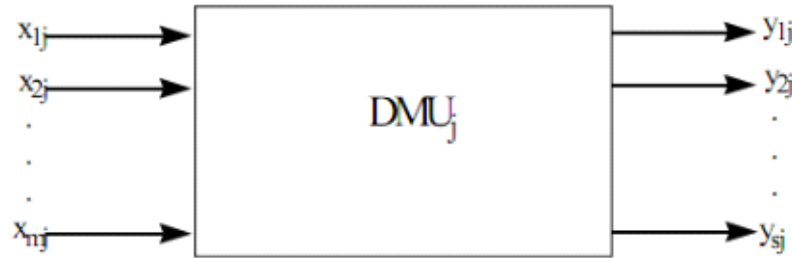
Administrative-Executive Objectives	Developmental Objectives
<ul style="list-style-type: none"> <li>- Making decisions on reward and compensation for services</li> <li>- Documenting decisions related to employees</li> <li>- Specifying the promotion of candidates</li> <li>- Specifying responsibilities and duties</li> </ul>	<ul style="list-style-type: none"> <li>- Providing feedback on performance</li> <li>- Identifying individuals’ strengths and weaknesses</li> <li>- Recognizing the performance of individuals</li> <li>- Collaborating to identify the</li> </ul>

<ul style="list-style-type: none"> <li>- Identifying poor performance</li> <li>- Deciding on expulsion or retention</li> <li>- Validation of the criteria for selection</li> <li>- Assessing the educational programs</li> <li>- Complying with legal regulations</li> <li>- Personnel planning</li> </ul>	<ul style="list-style-type: none"> <li>- Assessing the objectives fulfillment ratio</li> <li>- Identifying the individual educational needs</li> <li>- Identifying organizational training needs</li> <li>- Enhancing the power structure</li> <li>- Improving communication</li> <li>- Provide a platform for managers to assist employees</li> </ul>
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### 2.3. Performance Assessment Models

#### 2.3.1. Data Envelopment Analysis (DEA) Model

Data envelopment analysis method is a non-parametric approach to measure performance. This is a model for planning the efficiency assessment of Decision Making Units (DMUs) that have several inputs and outputs. Farrell introduced the DEA method in 1957. In this method, performance of activities in the organization’s units is evaluated. Farrell defined technical efficiency as a combination of production factors that are determined by efficiency performance and are utilized to produce the maximum output without waste. Charnes, Cooper and Rhodes (1978) promoted and finalized the DEA (Farantos, 2015). Nonparametric evaluation of efficiency developed the DEA method via a new method. Scholars adopted this approach, in a variety of contexts, as a convenient way to model the operational process which led to some developments. For example, Zhu (2003) proposed a model of DEA that is applied to assess performance and its criteria. Pournader (2015) developed the DEA model to evaluate the quality of outsourcing performance in the service supply chain. The inputs, outputs and intermediate products such as production and purchase of facilities, market speed, security, etc. should be examined to use this model in production (Malik et al., 2018). DEA is also used in evaluating the level of efficiency, despite the existence of multiple input and output entities. Measuring the efficiency of companies’ performance quality strongly requires comparing this performance with the competitors; hence, companies develop their business based on a performance improvement plan (Malik et al., 2018). Despite its relative efficiency, this method also has possibility of errors (not having access to the required data and uncertainty about it, and lack of cues and guidance leads to removal of unit from the model) (Farantos, 2015).



**Figure 2. Data Envelopment Analysis (DEA) Model**

### 2.3.2. Kanji's Excellence Model

This model was initially proposed by Dr. Kanji (1996) for excellence. Kanji's Excellence Model (Kanji's Modified Pyramid Model) allows multi-dimensional focus on different indices intended by the organization's stakeholders. This is a value-oriented model and enjoys a long-term structure and dynamic nature. Kanji's excellence model is comprehensive and systematic and it is similar to the Balanced Scorecard Models, the Malcolm Baldrige National Quality Award and the Organizational Excellence Model. The structure of kanji's system of excellence is interrelated with critical success factors. These factors are consistent with key performance processes. In Kanji's Excellence Model, two separate structures are developed including Kanji's Excellence Model and Kanji's Excellence Scorecard. Kanji Excellence Model measures performance of organization from the perspective of internal stakeholders and Kanji Excellence Scorecard assesses the organization's performance from the viewpoint of external stakeholders. Having measured performance from the perspective of these two groups and merging the obtained scores, we can estimate the organizational performance excellence, which indicates the overall result of organization's excellence in the management of all critical success factors. In fact, organizational performance indicator is obtained from the simple average of scores of performance excellence A and performance excellence B (Bahrami, 2013, 86):

Since the Kanji's Excellence Scorecard is potentially applied to analyze different stakeholders; It is like having  $n$  different scores for price B (customers, suppliers, etc.). In this case, score B is obtained from the average of available scores:

$$B =$$

Consequently, the proposed performance assessment system in Kanji's Excellence Model involves two parts. The first part deals with leadership of the organization, meaning that, in Kanji's Excellence Model, leaders are the major drivers of quality improvement and business excellence, whose attitudes and behaviors should lead to customer satisfaction, process management, employee-based management, and continuous improvement of employees'

performance (promoting the culture of constant upgrading). The second part of Kanji’s model of excellence consists of an excellence scorecard corresponding to the components involved in evaluation of different external stakeholders (such as customers, raw material suppliers, government). In this part, organizational values are regarded as the center of gravity of organizational excellence and the factor for achieving stakeholder satisfaction. Effective management of critical success factors leads to the definition of excellence index of superior performance in this part. Both parts of Kanji’s model of excellence must be considered simultaneously to create a unified image of organization’s performance. The components of Kanji’s Excellence Model are depicted in Figure 2.16 (Terris and Aron, 2004).

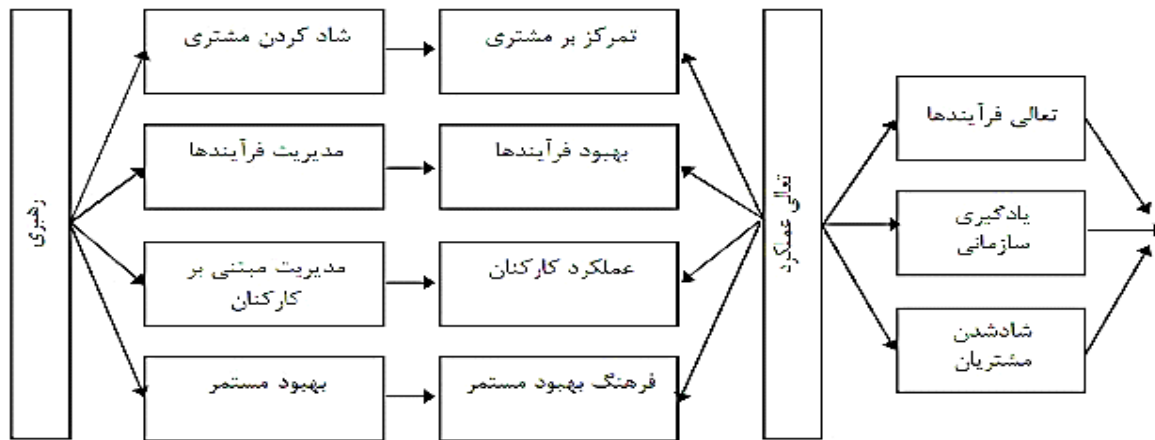


Figure 3. Components of Kanji’s Excellence Model

### 2.3.3. Self-Assessment Models (Excellence Models)

Self-assessment models have become quite popular in the last decade. Compared to system design models, these models can be utilized more rapidly and lead to promising results. This advantage might be attributed to the fact that these models do not require design and deployment of complex performance assessment systems and they are highly flexible (considering the rapid changes in internal and external conditions of organization). A set of criteria and guidelines are presented for evaluation of the organization in these models (Ehsani Fard and Ehsani Fard, 2013, 10). However, self-assessment scores and results are employed in comparative studies or for award purposes in many organizations. The final product of self-assessment, in any case, is identification of opportunities and areas for improvement and the

scores and points are regarded as a merely secondary product (Ebrahimi et al., 2017, 150). If self-assessment is executed properly, a realistic image of the status quo of the organization will be provided and subsequently implementation of corrective measures and improvement plans will lead to growth and excellence of the organization. Therefore, choosing names such as “Excellence Models” or “Quality Awards” for self-assessment models seems appropriate and justifiable. Popular Models of Excellence include the DEMING Quality Award, the Malcolm Baldrige Quality Award, the European Foundation for Quality Management (EFQM), the Canadian Model of Excellence, the Australian Quality Award, the Kanji’s Model of Excellence and Malaysian Prime Minister Quality Award (Ghorbani et al., 2008, 93).

#### **2.3.4. Sink and Tuttle Model (1989)**

Performance of any organization arises from complex relationships between seven indicators of performance which include the following:

- Effectiveness: it involves “performing the right things at the right time and with the right quality”. In practice, effectiveness is introduced by the ratio of actual outputs to expected outputs.
- Efficiency: it simply means “performing things correctly”. It is defined by the ratio of expected consumption of resource to actual consumption.
- Quality: it has a broad implication; in order to make this concept more tangible, it is examined and measured from six different aspects.
- Productivity: it is commonly defined as the ratio of output to input.
- Quality of work life: the improvement this item greatly contributes to performance of the organization.
- Innovation: it is one of the important components in improving performance.
- Profitability: it is the ultimate goal of any organization (Amiri, 2006, 124).

#### **Strengths and Weaknesses**

Although there have been many modifications in industry since the introduction of this model, these seven indicators are still very important in the organization’s performance. However, this model has some limitations. For instance, “flexibility”, which is a requirement of the recent decade’s market, is neglected in this model. Another limitation is the inattention to the organization’s customers (Karimi, 2006, 22).



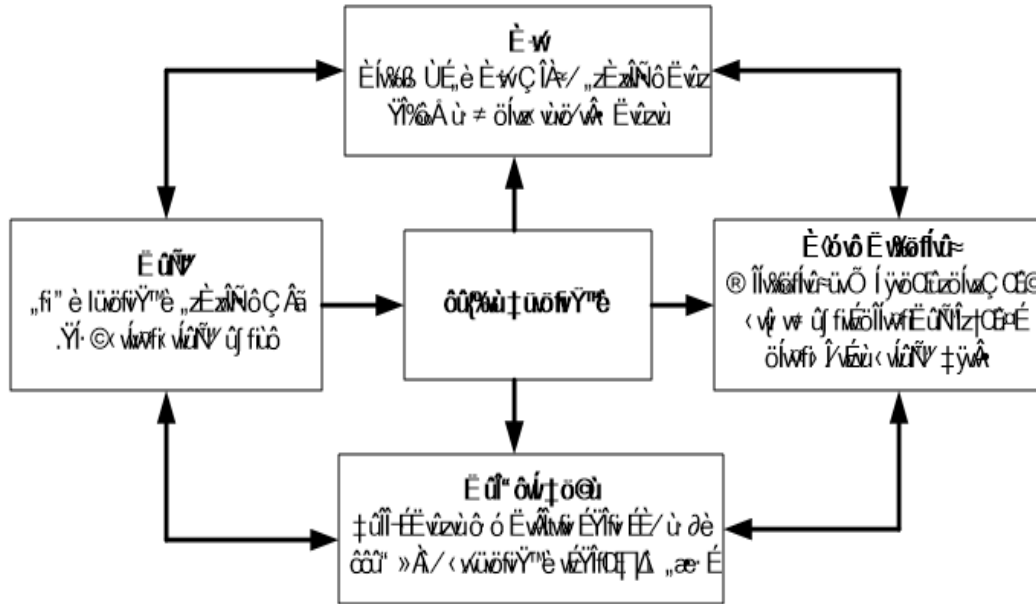


Figure 4: Flexibility of Last Decade's Markets

#### 2.4. Indicators of Organization's Performance

Many studies have been conducted on designing and specifying performance evaluation criteria. The most important points about performance assessment indicators are consistency of the indicators with the organizational goals, compliance with organization's strategies, credibility over time, and provision of prompt and accurate feedback. Organizations have developed many systems for evaluating financial performance but the industries have been triggered by changes in non-financial areas such as quality or customer satisfaction since the 1980s. In the past, organizations may have realized the importance of non-financial criteria but were unable to merge them with performance reports related to senior levels because the transparency of this criterion is less than financial criteria and the senior manager is less adept at using them (Robert et al., 2001, 26). In their study, Prito and El Narula (2006) divided the performance of institute into financial and non-financial parts. The main purpose was to evaluate the relationship between learning ability in organizations empirically and evaluate the performance of the company financially and non-financially. Their findings indicated a positive relationship between learning ability and non-financial and financial performance. Different models, in order to measure the performance and according to type of responsibilities of the organization, provided different indicators, a summary of which is given in Table 3.

Table 3: Models and Variables Related to Organizational Performance

Reference: Prito and El Narula (2006)

Title of Model	Year	Variables related to Performance
Lopez et al	2005	Creativity and innovation; financial results; economic
Atohen-Gima	2002	Return on investment; efficiency; sales growth;

		profitability
Nelson and Cald	2002	Financial performance; non-financial performance
Performance Charter (CBP)	2002	User satisfaction; strategies; processes; capabilities; beneficiaries' assistant
Medori and Steeple	2000	Quality; cost; flexibility; time; timely delivery; the future growth
Business Process Framework	1996	Products; services; financial results
Garvin Model	1993	Quality; cost; timely delivery; flexibility; services
BSC Model	1992	Financial aspect; customer aspect; aspect of internal processes; growth and learning aspects
Performance Pyramid	1991	Efficiency; flexibility; customer satisfaction; waste of resources; production period; timely delivery; quality
Outcome and determinants model	1991	financial performance; competitiveness; quality; utilization of resources; flexibility; innovation
Mack Neer	1990	Financial performance; market performance (non-financial)
Sink and Tuttle	1989	Effectiveness; performance; quality; efficiency; quality of working life; profitability; innovation
Dess & Robinson Model	1984	Productivity quality; profitability; market share; return on investment; overall performance

## 5. Bank Mellat

### 2.5.1. Bank Mellat Iran

Bank Mellat is an Iranian financial services and banking company that currently has 1900 branches throughout Iran. In the fiscal year 2016, Bank Mellat, with an income of 28,000 billion Tomans, was ranked second after Bank Melli Iran in the list of the largest Iranian banks. This bank was ranked first as the largest private companies in the list of top 100 Iranian companies in 2017, published by the Industrial Management Organization. After the revolution and following the nationalization of all banks in the country by the Revolutionary Council, Bank Mellat was established with the merger of Pars, Omran, Farhangian, Dariush, Tehran, Tejarat Khareji, Etebarat Ta'avoni and Tozi, Beinol Melal Iran, Bank Iran, Arab and Bime Iran in 1979 with an initial capital of approximately 33 billion rials. Currently, the Social Security Investment Company (SHASTA) with 15%, the State Pension Fund with 5% and the Armed Forces Social Security Organization with 5% of the bank's shares are its main owners. Bank Mellat is headquartered in Tehran and a part of its shares are traded on the Tehran Stock Exchange (Industrial Management Organization).

### 2.5.2. Bank Mellat History

According to approval of General Assembly of Banks dated 20/12/1979, Bank Mellat was established with the merger of ten commercial banks in 21/07/1980 with an initial capital of 33.5 billion Rials and was registered in Tehran Companies Registration Office with number 38077 and started its executive operations since then. According to the Extraordinary General Assembly of Banks (dated 05/04/2008) and approval of Cabinet of Ministers (No. 68985 / T 37925, dated 23/05/2007), the legal entity of Bank Mellat turned into a public company. In 2008, the total assets of Bank Mellat were announced to be 131 thousand billion Rials. After changing the implementation of policies of Article 44 of the Constitution in 2005, this bank was the first state-owned bank to be prepared for privatization, and on 18/02/2009, 5% of its shares were listed on the Tehran Stock Exchange. 2.5% of this amount was sold and its only buyer was Mellat Bank Staff Future Company (owned by Bank Mellat Employees Retirement Fund), which is a subsidiary of this bank. Bank Mellat is currently one of the largest banks in Iran. The most important strategies of this bank involve the development of information and communication technology, customer relationship management, improving quality of services, developing human resources and improving performance indicators. To achieve these strategies, objectives such as growth and productivity of the bank, profitability and providing appropriate services to customers, recognizing the needs and categorization of customers and profit-related processes, strategy-oriented training, new banking technology and alignment of personal, sectoral and organizational objectives have been outlined (Wikipedia.Org).

### **2.5.3. Bank Mellat Brand**

Bank Mellat was recognized as one of the top 100 brands in Iran in 2013, at the 10<sup>th</sup> National Festival of Iranian Industry Champions (Wikipedia.Org).

### **2.5.4. International Network of Bank Mellat**

Bank Mellat currently has four branches in Turkey (Istanbul, Izmir, Ankara) and South Korea (Seoul) and two subsidiary banks of Mellat Bank in the Republic of Armenia and the International Bank of Persia in London. In addition, 26.30% of the shares of the Commercial Bank of Iran and Europe, located in Hamburg, belong to Bank Mellat (Ahmadi, 2015).

## **3. A review of the related literature**

Regarding the analysis of employees' performance and utilization of its information in designing organizational training, Clark (2019) states that reverse planning tools can establish a significant relationship between organizational strategies and learning to replicate better performance. According to the findings of their study, Figure 2-27 illustrates a model which can depict the functional gap between the individual's current performance and the desired standard. Furthermore, their findings indicated that a very small percentage of improvement programs, which has been identified as necessary by the performance management system, employed a human resource development approach and were training-oriented. In order for employees to turn into valuable resources for the organization, Clark argues in their research, the employees' performance management system must establish an effective relationship with the needs and

expectations of the organization’s stakeholders so that they become aware of the expectations from

themselves and set their improvement plans and efforts accordingly.

Questions and Examples

Needs analysis

Patrick Evaluation Model

Figure 6. Clark’s Performance Management Model

While reviewing and presenting a comprehensive model for government agencies’ performance assessment, David and Chang (2018) proposed a model based on Kaplan and Norton theory. According to them, a model is appropriate for a comprehensive assessment of organizations when it simultaneously measures all the financial and non-financial dimensions. Consequently, the researchers focused on presenting a comprehensive model which was ultimately limited to four sections including customers, internal processes, growth and learning, and financial criteria (Figure 7).

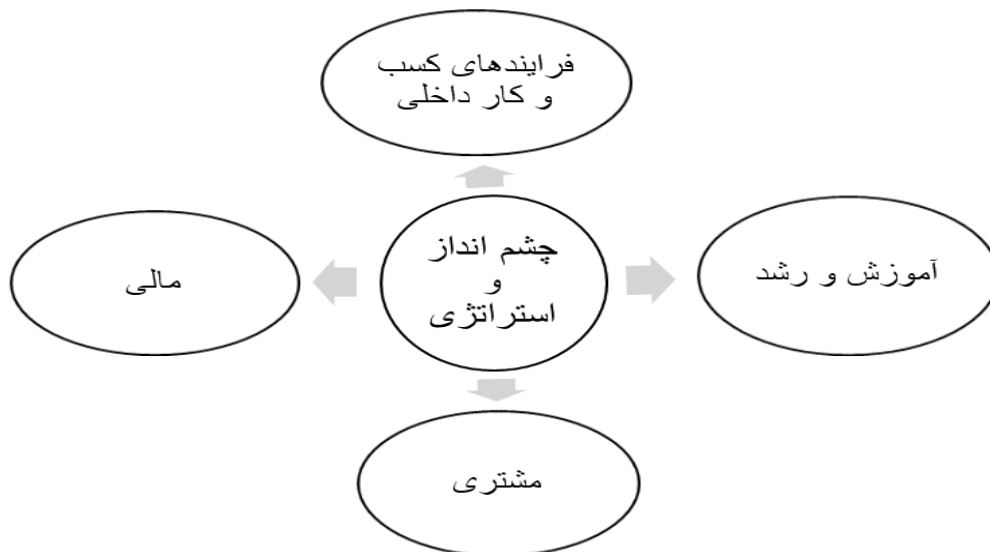


Figure 7: Assessment of organizations by simultaneously measuring financial and non-financial dimensions

Talavera et al. (2018) conducted a study entitled “An Investigation into the Interaction of Age Differences and Personal Values of Managers in Banks’ Performance of 97 Chinese Banks, from 2009 to 2013”. The issue of performance assessment in organization is so important that management experts believe that “what cannot be measured cannot be managed”. Taking into account this issue, bank managers nowadays need to measure and evaluate the performance of

branches in order to plan and manage branch affairs so that they can compare their branches together and be aware of their strengths and weaknesses. Since banks involve a huge structure and are usually responsible for circulation of funds of governments or very large, even global, organizations, even one-percent upgrade in improvement programs can significantly help service provision. In this study, the researchers indicated that heterogeneity among managers' views on risks, prudence, and wealth leads to intra-group conflicts (among the board members) in the decision-making process. Situations of this kind hinder the effective functioning of board of directors and, ultimately, undermines profitability and performance of the bank. The findings of this study are strong due to the alternative measures and banking performance. In another study entitled "Modeling the Performance Management System in China's Public Sectors", Wang et al. (2017) stated that public service organizations have undergone many changes due to pressures for modification inflicted by the economy globalization. These changes have stimulated organizations to use performance management, employees' participation and, in particular, employees' performance assessment. The new management highlights the fields of accountability, efficiency, and multiple performance indicators, as well as conflicting roles and performance outputs of government agencies. Properly understanding this issue, they made an attempt to provide a model for performance assessment in China's public sector (Figure 2.30).

#### Figure 8: Modeling Performance Management System in Public Sectors

Alavi et al. (2008) studied the effect of employees' performance assessment on performance improvement in the university. They found that semantic technologies provide supervision over employees in all stages of outsourcing. Information technology has found its place in communication standards used to lead business management tools. Supervision in human resource management makes it possible to integratedly assess employees' performance and training outputs and also evaluate the employees' competency. A study carried out by Meshbaki and Khadem (2011) entitled "Pathology of Performance Assessment, the Staff of Human Resources Deputyship". The concluded that performance assessment could not validate management decisions and it did not have a significant role in identifying environmental factors affecting the efficiency of NAJA staff. The findings of Bahramzadeh et al. (2015), in a study entitled "Pathology of Human Resources Management in Headquarters of Mazandaran University of Medical Sciences Based on the Three Ramifications Model", indicated that structural, behavioral and contextual factors are effective in explaining human resource management harms. According to this study, the priority of harms related to these factors in human resource management is different. The ranking of variables proved that behavioral factors are ranked first, structural factors second and the environmental factors are ranked third, i.e., behavioral factors had the most significant role and environmental factors played the least significant role in human resource management harms. Therefore, the behavioral factors should be emphasized. "Pathology of Human Resources of Imam Khomeini Hospital Complex Based on the Three Ramifications Model" is the title of a study performed by Rahmani et al.

(2017). They concluded that human resource managers should consider all the effective factors (particularly factors such as organizational culture, job motivation and satisfaction, employees training, job security and customer orientation) in recognizing organizational harms according to their importance and role in providing desirable services. Human resources can improve employees' performance. This factor leads to such results in this way: distribution of welfare facilities, in-service training for employees, establishing an appropriate mechanism for periodic job satisfaction measurements and taking appropriate measures in this field, creating an intimate atmosphere in the workplace and promoting an atmosphere of trust among colleagues. Esfandiari et al. (2017) investigated organizational pathology in the headquarters of Shiraz University of Medical Sciences based on the three ramification model and found that behavioral factors had the greatest impact on creating harms. They concluded that the university should improve its programs and policies in creating appropriate organizational culture, job motivation and satisfaction, effective leadership, providing opportunities for staff training and prosperity, and creating job security. Obviously, solving some of these issues is beyond the authority of executive apparatus and subsequently the role of macro institutions in the country gain further significance in this regard.

#### **4. Research Methodology**

Data analysis is a part of scientific research method process and one of the main foundations of any study that controls and guides all research activities until reaching the desired outcome. In most studies relying on data collected from the study subject, data analysis is one of the main and most significant components of research. In the present study, inferential and descriptive statistical topics and descriptive statistics including frequency and mean tables were utilized to analyze the questionnaire. At the inferential level, we benefited from meta-combined method for qualitative analysis and structural equation modeling, including confirmatory factor analysis (CFA), path analysis, and analysis of variance (ANOVA). MAXQDA Software Package, SPSS version 21 and SMART-PLS Software Package Version 2.50 were used for data analysis.

##### **4.1. Descriptive Statistics**

Descriptive statistics and tables related to demographic characteristics of the studied sample are presented in this section. It is beneficial to identify the sample's demographic characteristics because it helps to determine the general characteristics of the study population and its common features for other researchers; moreover, it can be also used to generalize the results to other populations or to design future research questions for other populations.

###### **4.1.1. Gender Variable**

According to the information provided in Table 4.1, male customers, with a frequency of 102 individuals accounting to 54.95%, had the highest frequency and female customers, with a frequency of 80 individuals (45.05%), had the lowest frequency.

Table 4. Descriptive statistics of gender

	Frequency	Percentage
Men	102	54.95
Women	80	45.05
Total	182	100

Diagram 1. Descriptive statistics of gender

#### 4.1.2. Education Variable

Table 4.2. indicates that ninety persons accounting to 49.45% of the participants held master's degree which had the highest frequency and only nine persons (0.04%) had Ph.D. degree accounting to the lowest frequency.

Table 5. Frequency Distribution of Education Variable

	Frequency	Percentage
Bachelor's Degree	83	45.60%
Master's Degree	90	49.45%
Ph.D.	9	50.0%
Total	182	100

Diagram 2. Frequency Distribution of Education Variables

#### 4.1.3. Age Variable

According to Table 4.3, 51.65% (94 persons) of the participants belonged to the age group thirty to forty years (this group had the highest frequency). On the other hand, 27 participants (14.83%) were more than 50 years which was the least frequent age group.

Table 6. Frequency Distribution of Age Variables

	Frequency	Percentage
30-40 years	94	51.65%
40-50 years	61	33.52%
More than 50	27	14.83%
Total	182	100

Diagram 3. Frequency Distribution of Age Variables

#### 4.1.4. Service Record Variable

Table 4.4. shows that 57.14% of customers have 15 to 25 years of service experience (the most frequent group), and customers with less than 15 years of service record, involving 35 persons (19.23%) were the least frequent group in terms of service record.

Table 7- Descriptive Statistics of Service Record

	Frequency	Percentage
Less than 15 years	35	19.23%
15-25 years	104	57.14%
More than 25 years	43	23.62%
Total	182	100

Diagram 4. Descriptive Statistics of Customer Service Record



#### 4.1.5. Descriptive statistics of research variables

Table 8 illustrates the mean and standard deviation of each research item. These statistics are presented only to know the mean and type of answering.

Table 8. Descriptive statistics of research variables

	Minimum	Maximum	Mean	Standard Deviation
Structural Dimension	1.71	4.14	3.1468	0.507
Behavioral Dimension	1.78	4.44	3.2357	0.556
Social Dimension	1.50	4.50	3.1886	0.537
Performance Management System	1.82	4.20	3.1904	0.430

#### 4.2. Testing research hypotheses

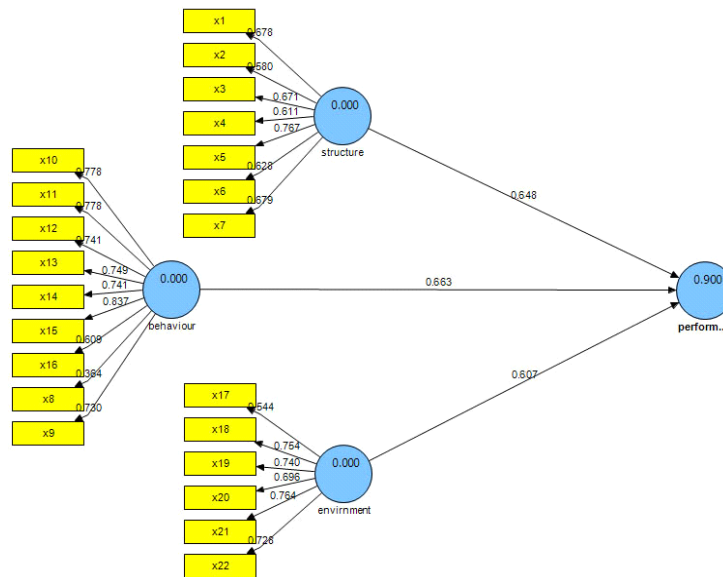
Structural equation modeling through PLS method has two stages including measurement model test and structural model test. The measurement model test deals with checking the reliability (internal consistency) and diagnostic validity of the model. Fornell and Larcker (1981) proposed three criteria for examining internal consistency of structures: 1. Reliability of each observed item or variables; 2. Composite reliability (CR) of each structure; 3. Average variance extracted (AVE). To examine the composite reliability of each structure, Chin (1998) proposes the Dillon-Goldstein coefficient. Since PLS, unlike multiple OLS regression, uses case factor scores to analyze and estimate the paths, it is necessary to consider the factor load of each observed variable in calculating the reliability index. However, Cronbach's alpha coefficient balances items' weight and shows the reliability less than what it is. Therefore, the Dillon-Goldstein coefficient is more appropriate for this method of analysis. Acceptable values for this index must be greater than 0.7. The third indicator is equal to examining the reliability test and the average extracted variance. Fornell and Larcker (1981) recommend AVE values of 0.5 and more, which means that the intended structure explains variance of its markers by about 50% or more. Chin (1998) recommends two criteria for examining the diagnostic validity or divergent validity of structures: First, the items or markers of the structure must have the highest factor load on their structure; i.e., they should have the least cross loading on other structures. Geffen and Ashtrab (2005) suggest that the factor load of each item on its own structure should be at least 0.1 more than the factor load of the same item on other structures.

The second criterion is that the square root AVE of the structure should be greater than the correlation of that structure with other structures. This indicates that the correlation of that structure with its markers is more than its correlation with other structures. In addition to these criteria, Tenenhaus et al. (2005) suggested another criterion for assessing the quality or goodness of fit of a measurement model, which includes the CV-Communality index. Positive values of this index indicate the appropriate quality of measurement instruments and negative values also indicate the low quality of instruments in measuring the latent variable.

#### 4.2.1. Measurement Model Test

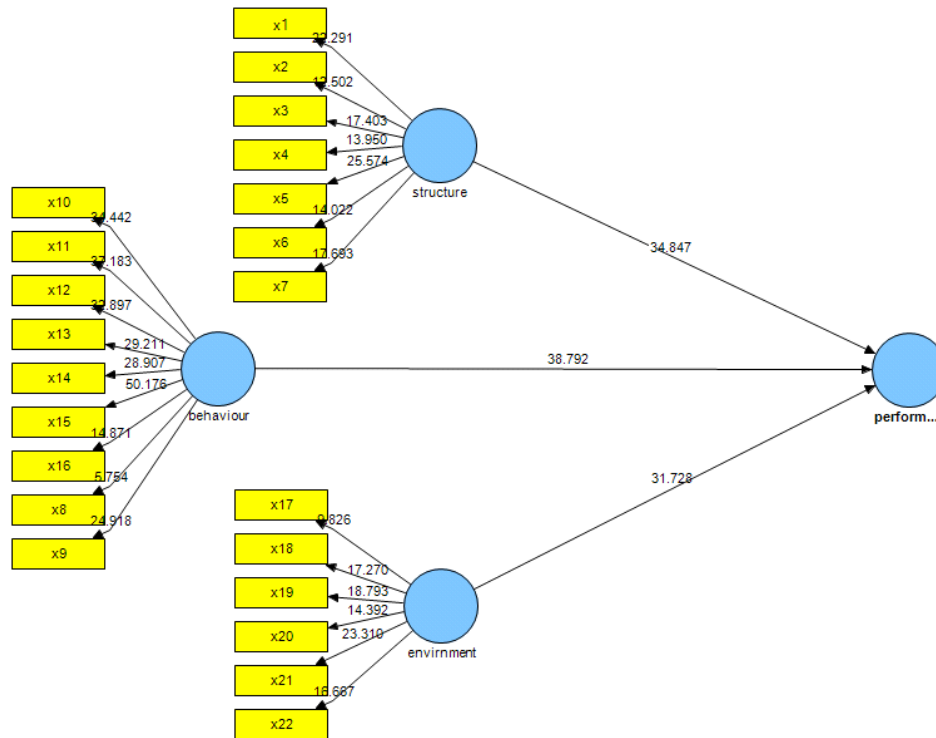
Investigating the reliability of research structures

The standard values table of each item or indicator in the software output, which examines the factor loads associated with each item, are used initially to assess the reliability. The software output results are also shown in Model 1.



Model 1. Research model of research variables in path coefficient (standard) mode

The significance of factor loads is examined to assess the second criterion of items' reliability. The results of this model are reported t-statistics related to the significance of factor loads; values greater than 1.96 at alpha level 0.05 and more are significant.



Model 2. Research model of research variables in different significant level mode

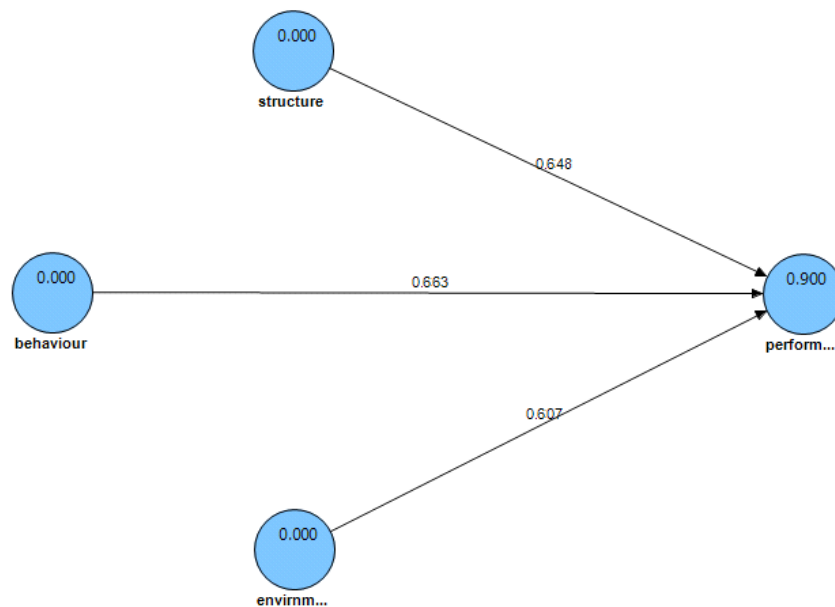
The composite reliability and the average extracted variance (AVE) of each item are illustrated in Table 10. According to this table, the numbers below the composite reliability (CR) column are considered as Dillon-Goldstein coefficients and values greater than 0.7 are acceptable for this criterion. The average values of extracted variance (AVE) in the table above should be greater than 0.5 as shown in the table above.

Table 10: General Results of Research Structures

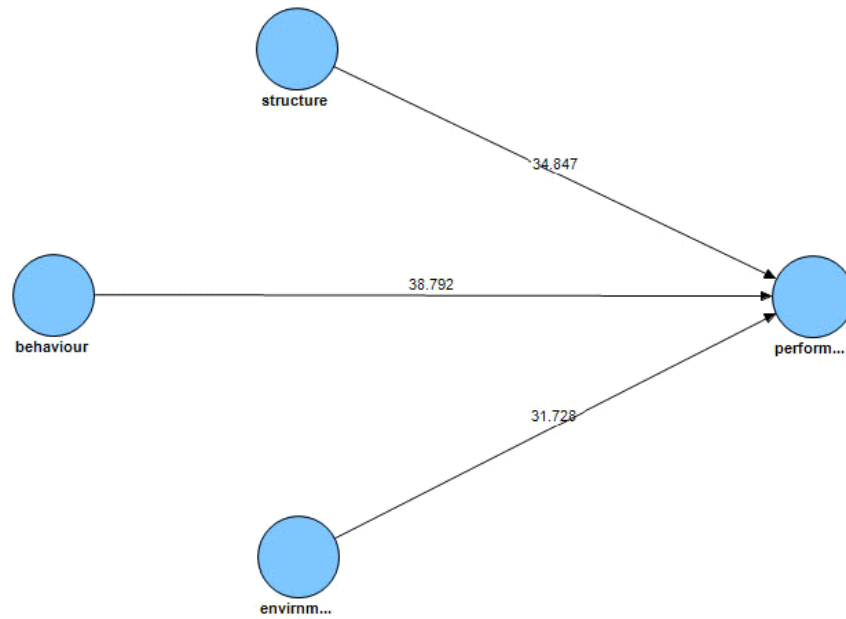
Research variables	AVE	Composite Reliability	Alpha's Cronbach	R <sup>2</sup>
Structural dimension	0.561	0.967	0.789	-
Behavioral dimension	0.549	0.83	0.91	-
Social dimension	0.548	0.85	0.87	-
Performance Management System	0.56	0.851	0.83	0.900

#### 4.2.2. Structural model test

Having examined the measurement model, we analyze and test the structural model. Testing the structural model or research hypotheses include path coefficients (Beta), path coefficient significance, and  $R^2$  values. As indicated in Model 4.3, numbers on the path are explained as the path coefficients and numbers inside the latent variables as variance. The coefficient of determination ( $R^2$ ) of endogenous latent variables is the necessary criterion for measuring the structural model. Chin (1998) describes the  $R^2$  values 0.67, 0.33 and 0.19 in the PLS path model as significant, moderate and weak, respectively. If the constructs of a particular internal model explain endogenous latent variables with only one or two exogenous latent variables, the average  $R^2$  (0.33) is acceptable. However, if the latent endogenous variables are dependent on several exogenous variables, the value of  $R^2$  should be at least at significance level (0.67).



Model 3. Structural model in standard values mode



Model 4. Structural model in significance-level-values mode

Table 11. Summary of Research Hypotheses Analysis Results

Independent Variables	Dependent Variables	Standard Values	Significance Level	Result
Structural dimension	Performance Management System Model	0.648	34.847	Confirmed
Behavioral dimension		0.663	38.792	Confirmed
Environmental dimension		0.607	31.728	Confirmed

### 3.2.4. Model goodness of fit test

We use the global quality criterion proposed by Amato et al. (2004) to choose the best model:

$$GOF = \sqrt{\overline{communality} \times \overline{R^2}}$$

$\overline{communality}$  measures the community average of each variable and quality of the external model.  $\overline{R^2}$  is the mean  $R^2$  for each exogenous latent variable.  $R^2$  measures the quality of the internal model and is calculated for each endogenous variable according to the latent variable that describes it. A goodness of fit with a value of more than 0.36 of better model quality indicates that this model is explained well through partial least squares.

Table 12: Model Goodness of Fit Estimation

	Communality	R <sup>2</sup>
Structural Dimension	0.561	-
Behavioral Dimension	0.549	-
Social Dimension	0.548	-
Performance Management System	0.56	0.900
GOF = 0.706		

The proposed model of this study:

## 5. Results and suggestions

### 5.1. Results

According to the conducted interviews and the extracted codes of the company's social responsibility and its impact on the organization's performance, the main and secondary themes of the research were inferred as follows:

**The sub-themes of behavioral index:** lack of employees' knowledge and awareness regarding performance management, lack of appropriate organizational culture at the organization level, lack of managers' commitment to performance management, low work quality in the organization, lack of review and revision of performance of employees, managers and organization, lack of employees' motivation and job satisfaction, lack of proper in-service training, lack of job security among employees and finally employees' lack of knowledge about the work standards.

**Sub-themes of the structural index:** inadequacy of recruitment and promotion system in the organization, lack of necessary resources to implement the performance management system, vagueness of the organization's mission and strategy, inappropriate job promotion in the organization, lack of link between salary and reward system and performance management, absence of optimal use of information technology and communication in the organization and inadequate performance assessment system.

**Sub-themes of the environmental index:** absence of proper customer relationship management (CRM) system, lack of comprehensive rules related to performance management, lack of efficient use from the customers' point of view, inattention to the organization's social responsibility, poor communication with the outside environment and inattention to values and beliefs of the clients.

### **Descriptive demographic statistics**

Gender variable: Male customers, with a frequency of 102 individuals accounting to 54.95%, had the highest frequency and female customers, with a frequency of 80 individuals (45.05%), had the lowest frequency.

Education variable: 90 persons accounting to 49.45% of the participants held master's degree which had the highest frequency and only 29 persons (0.15.93%) had Ph.D. degree accounting to the lowest frequency.

Age variable: 78.02% (142 persons) of the participants belonged to the age group forty to fifty years (this group had the highest frequency). On the other hand, 40 participants (28.16%) were more between 50 to sixty years which was the least frequent age group.

Service record variable: 46.15% of customers with 10 to 20 years of service have the highest frequency and 24.72% of them (45 persons) with more than 20 years of service have the lowest frequency.

According to the results of quantitative section of the study, the research hypotheses are confirmed as follows:

- Behavioral dimension is effective in performance management system of Tehran's Bank Mellat.

The results of path analysis using partial least squares in PLS software showed that the standard values is 0.663 and significance level was 38.792; therefore, this hypothesis is confirmed.

- The structural dimension is effective in performance management system of Tehran's Bank Mellat.

The path analysis results by utilizing partial least squares in PLS software indicated that the standard values are 0.648 and the significance level is 34.847 leading to the confirmation of this hypothesis.

- The environmental dimension has an effect on the performance management system of Tehran's Bank Mellat.

The path analysis results using partial least squares in PLS software indicated that the standard values are equal to 0.607 and the significance level is 31.728. This hypothesis is accordingly confirmed.

## **5.2. Recommendations**

According to the findings of this study, a list of practical recommendations is presented:

### **5.2.1. Practical suggestions**

1. Behavioral dimension plays an important role in the performance management system of Tehran's Bank Mellat.

The managers of Tehran's Bank Mellat are recommended to:

- Enhance the employees' knowledge and awareness regarding performance management
- Promote proper organizational culture at organizational level and at all operational, intermediate and advanced levels.
- Remind managers of their commitment to performance management.
- Enhance the work quality of the bank.
- Constantly review and supervise the employees' performance.
- Measure the intrinsic motivation and job satisfaction at all levels of the organization.
- Hold appropriate specialized in-service training to accelerate banking affairs and increase the satisfaction of bank clients.
- Enhance the job security of employees and their knowledge regarding work standards.



- The structural dimension is effective in performance management system of Tehran's Bank Mellat.

It is recommended to:

- Enhance the recruitment and promotion system in Bank Mellat.
  - Utilize more effective strategies to implement the performance management system in Bank Mellat.
  - Clearly investigate the organization's mission and strategy in Bank Mellat and the extent of fulfilling the intended objectives.
  - Not apply inappropriate job promotions in the bank.
  - Establish a link between the salary and reward system and performance management.
  - Optimally use information and communication technology in the organization and performance assessment system.
- 
- The environmental dimension has an effect on the performance management system of Tehran's Bank Mellat.

It is recommended to:

- Establish an appropriate customer relationship management system.
- Establish comprehensive rules regarding performance management.
- Apply suitable interest according to client's point of view.
- Appropriately consider the social responsibility of the organization.
- Promote optimal communication with environment outside the organization and paying attention to values and beliefs of clients.

#### 5.2.2. Future recommendations

- Conducting similar studies to analyze further dimensions using qualitative research methods, such as Grounded Theory.
- This study merely emphasized the pathology of performance management system in Bank Mellat. Therefore, it is recommended to conduct such research in other organizations and companies and examine their similarities, differences, and limitations;
- Conducting similar study in other cities or provinces and comparing their results with the findings of the present study.

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