THE MODERATOR EFFECT OF THE MULTINATIONALITY FACTOR ON THE RELATIONSHIPS BETWEEN ORGANIZATIONAL STRUCTURE AND MANAGERIAL COMPETENCY

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Abstract:

The purpose of this study is to reveal the relationship between the organizational structure perceptions and the managerial competence perceptions of individuals working as managers in national and multinational companies in Turkey and to investigate whether these perceptions are affected by "the multi-nationality" factor. In this context, the relationship between the estimation variable "Organizational Structure" and the outcome variable "Managerial Competence" is researched; additionally, the effects of both the estimation variable and the organizational and individual demographic variables on the outcome variable are analyzed. The main research question is whether the managers' perception of organizational structure affects the perception of managerial competence. The main research hypothesis is that the perception of organizational structure has a positive effect on the perception of managerial competence. The measurement tools developed by the researcher were applied to entry-, middle- and senior-level managers. The research data were obtained from 330 managers working in national companies and 270 managers working in multinational companies operating in Turkey. The results of this research indicated that there was a statistically significant relationship between the estimation variable and the outcome variable and that the perception of organizational structure affects the perception of managerial competence ($R^2 = 0.530$, $p < 0.05$). It was observed that the organizational structure factor explained 53% of the managerial competence factor. In addition, when organizational demographic variables such as "the number of personnel working in the department" and "the model of organization" and individual demographic variables such as "management level" and "total work experience" are considered as factors in the analyses, it was observed that the R^2 parameter showing a relationship between the estimation variable and the outcome variable has increased to 62%. Other individual and demographic variables did not contribute to the model, and as a result, their effects are concluded to be either equal or constant. The moderator effect of the "multi-nationality" factor was seen to be not statistically significant, and the moderator effect was not found ($R^2 = 0.001$, $p = 0.253 > 0.05$).

Keywords: *Managerial competence, organizational structure, multinational enterprises, national enterprises.*

JEL Codes:

1. Introduction

The literature contains many studies on the concepts of organizational structure and managerial competence. However, scientific studies that directly investigate the relationship between organizational structure and managerial competence are extremely limited. Most studies have investigated the relationship between these concepts and the performance of individuals and companies. In this context, this study takes "organizational structure" factor as the main factor of interest affecting managerial competence and investigates the effect of organizational structure perception on the perception of managerial competence. In addition to this investigation, 6 of 12 organizational demographic variables and 4 of 13 individual demographic variables are believed to affect this relationship and are included in the analysis as control variables. These selected control variables were thought to have the potential to influence the relationship between organizational structure and managerial competence and were determined based not on theory, but on observations and logical considerations.

2. Background

The concept of "organizational structure" has been a topic of discussion ever since the emergence of classical organization theory. According to the classical organizational theory approach, certain principles and methods should be followed to determine organizational structure. In contrast, situational theory claims that internal and external conditions shape the organizational structure.

The concept of "organizational structure" has been the subject of many studies. Researchers such as Harvey (1968), Pugh, Hickson, and Pheysey (1969), Özdevecioğlu (2002) and Keçecioğlu (2008) have investigated the factors that directly affect the organizational structure. In contrast, organizational structures' changes over time have been studied by scholars such as Rajan and Wulf (2006), Kanbur (2008), and Sağsan (2008). Scholars such as Rothwell (1996), Demir and Okan (2009), Teixeira, Koufteros, and Peng (2012), Csaszar (2012) and Yi-Horng (2013) have investigated the relationship between organizational structure and performance. Dikmen (2003), Legerer, Pfeiffer, Schneider and Wagner (2009), İçerli (2010), Örücü, Kılıç, Yıldız and Yıldız (2012), Feizi and Farid (2013), and Gounaris and Tzempelikos (2013) have studied the organizational structure's effect on individuals. Since 2015, researchers such as Gurianova and Mechtcheriakova (2015), Zakrzewska-Bielawska (2016) have investigated the relationship between the organizational structure and strategy; Dicle and Okan (2015), Benavides Espinosa and Merigo Lindhal (2016) have investigated the relationship between organizational structure and organizational learning; and Strese, Meuer, and Flatten (2016), Baia, Feng, Yuea, and Feng (2017) have investigated the relationship between organizational structure and cross-functional cooperation.

Dalton et al. (1980) define organizational structure as the anatomy of the organization. Through this anatomy, enterprises carry out their functions. According to another view, the organizational structure is the body that enterprises use to regulate, coordinate and evaluate their inputs and sources (Caves, 1980). The organizational structure officially regulates the enterprise's business roles and managerial mechanisms to carry out intra-organizational activities and achieve business objectives (Baia et al., 2017). An organization's structure shows how its activities are distributed in line with its main objectives, as shown through schemes called organizational charts, which are visual presentations of the organizational structures. Intra-organizational functions, positions, and the relationships among them are shown on these charts. This enables the definition of tasks, responsibilities, roles, relationships, and communication channels. Using these charts, employees can understand their mission within the organization (Matseshe and Arasa, 2016). Organizations must continuously rediscover themselves if they are to exist in harmony with the environment, adapt to changes and earn more profit. All enterprises create their own organizational structures by considering their operations, environment, technology and other factors (Kral and Kralova, 2016; Agbim, 2013; Çalış and Tokat, 2013).

According to Ugbomhe and Dirisu (2011), the organizational structure has various effects on the behavior of an enterprise's workforce. These effects vary between enterprises and employees. The organizational structure is intended to facilitate the realization of the enterprise's goals and objectives. It also forms the basis of organizational culture and affects employees' behavior, performance, motivation, and cooperation. An effective organizational structure adapts to possible changes and needs in the environment and always helps the enterprise achieve superior results from its resource utilization and human capital. The organizational structure enables employees to use their talents productively, encourages them to be creative and creates benefits for the entire organization.

Although studies show that organizational structure influences employee performance, there are no research findings on organizational structure's exclusive effect on managerial competence. For this reason, this research seeks to understand the relationship between these two concepts.

The concept of "managerial competence" has been examined by many disciplines other than management, including politics, education, and psychology. It was handled by many researchers in the literature (Katz, 1955; McClelland, 1973; Mintzberg, 1973; Selznick, 1975; Bandura, 1989; Hogan and Warrenfeltz, 2003; Drucker, 2009). The concept has emerged with McClelland's (1973) argument that it was necessary to develop competence assessments as an

alternative to traditional intelligence testing in evaluating performance. The concept became well known through the study conducted by Boyatzis (1982).

The essence of the work is based on task fulfillment. Individuals contribute their contributions to the achievement of organizational goals. Actions must be initiated to achieve those goals (Boyatzis, 1982). To become an effective leader, the manager should know how to use information, how to operationalize assigned missions, and how to realize assigned missions. This capability is briefly called competency (Rothstein and Burke, 2010). According to Erondu (2002), competency is the sum of the knowledge, skills, values, attitudes, and experiences obtained by the individual throughout life; according to Bayraktar (2002) and Özutku and Algur (2012), it is a compound of personality, motivation, impulse, qualification, skill, role and knowledge accumulation. A competent person can transfer knowledge and skills from one area to another. To be a competent manager is to have the desire and willingness to demonstrate effective behavior (Rajadhyaksha, 2005). Singh and Paul (2016) indicate that employees' performances may differ according to their methods of doing the tasks. Boyatzis (1982) defines competence as the bundle of characteristic traits that equip the individual to provide superior performance. According to McClelland (1973), competence makes the difference in achieving performance. Martina, Hana, and Jiri (2012) see managerial competencies as the key to successful organizational performance through the appropriate behavior and effective management style of the manager. Managerial competency also creates a competitive advantage for organizations.

The changing social, economic and technological environment also transforms the difficulties and missions encountered in the management of the organization. The new business lines and tasks that accompany technological advances require a high level of training and competence (Raisiene, 2014; Boahin, Eggink, Hofman, 2014). Therefore, managers should constantly develop and maintain their managerial competencies, attitudes, and behaviors. In the new world, complexity, uncertainty, and risk is increasing, and organizations' management styles are changing rapidly. The managers are confronted with complex situations and problems from low to high levels. Although cases with low degrees of complexity, which are very routine and predictable, can be managed with standard guidelines, cases with high levels of complexity, which are difficult to predict, cannot be managed using standard guidelines, and their analysis and emotional management are difficult (Widhiastuti, 2012). The managers of the twenty-first century must be masters of change who can effectively use human capital and resources to be successful (Nekoranec, 2013). Along with the changes that have taken place, managerial competence has become an important factor to an enterprise's success.

Many researchers have addressed the concept of managerial competence. Boyatzis (1982), Mumford et al. (2000), and Cengiz and Hısım (2012) investigated the relationship between managerial competence and performance. Pillay (2008), Saylı and Ağca (2009), Potgieter, Basson, and Coetzee (2011), Wickramasinghe and De Zoyza (2011), and Arditi, Gluch and Holmdahl (2013) have examined the relationship between managerial competence and individual competence. In contrast, Erich, Rubin, and Morgeson (2009), Ramezani et al. (2011), and Saxena and Bendale (2013) have emphasized the relationship between managerial competence and managerial roles. Mumford, Campion and Morgeson (2007), Çetinkaya (2009) and Ünal (2013) have examined the relationship between managerial competence and managerial level; Çetinkaya and Özutku (2012), Königova, Urbancova and Fejfar (2012), Özutku and Algur (2012), and Chen and Chang (2011) have investigated the relationship between managerial competence and human resource management. As of 2015, studies of managerial competence have addressed the relationship between managerial competence and crisis management (Tomasika, Strohmandlb and Cechc, 2015; Andreoua, Karasamani, Louca and Ehrlich, 2017) and the relationship between managerial competence and organizational performance (Hawi, Alkhodary and Hashem, 2015, Osei and Ackah, 2015).

In the organizational structure literature, studies focus on factors such as organizational and individual performance, organizational learning, organizational strategy and level of cross-functional cooperation, but not the relationship between organizational structure and managerial competence. However, the observations show that especially in highly institutionalized multinational companies, the characteristics of organizational structure, among other factors, have a greater effect on managers' competence. Such views and opinions are among the topics that are often mentioned by many company managers. Although managers' competence is affected by factors such as level of

experience, knowledge of a foreign language, the departments in which they work and the number of subordinates they manage, it may be more affected by the organizational structure factor, although this factor is a general framework that affects the mentioned organizational demographic variables. The organizational structure is the whole of an organization's characteristics: in institutionalized, stabilized and balanced structures, these characteristics have more influence on competencies than does a single individual or organizational demographic variable. Although this theory has not been thoroughly examined in the literature, the relationship between the "organizational structure – managerial competence" factors is a logical, consistent and expected relationship. The exploratory and descriptive character of this research is important when examining the extent of the influence of the independent variable of organizational structure on the dependent managerial competency, along with other individual and organizational demographic variables.

3. The Methodology and Model

The study involves cross-sectional area research that is both exploratory and descriptive. It was carried out to examine the relationships between organizational structure and managerial competence under the effect of individual and organizational demographic variables. Two scales were developed to reveal the concepts of organizational structure and managerial competence. Participants' responses to the measurement tools were assessed, and the relationships between structure and competence were tested with hypotheses. Simple and hierarchical regression analysis methods were applied to test the hypotheses.

3.1   Population, Sample and Research Application

The research covers managers working in companies operating in different sectors of Turkey that are registered with the International Investors Association (YASED) and the Istanbul Chamber of Commerce (ITO). In this framework, the research has two main populations. The theoretical populations are defined as managers from the first 1000-member companies included on a list of member companies obtained from the ITO in June 2015, along with managers from 203 companies registered with the YASED. Following our review of the ITO list, 419 national companies were shortlisted by removing the branch companies and the companies overlapping with the YASED member list. No sectoral restrictions have been made, and the listed companies are included in the sampling group through random selection. The reason for the selection of these companies from YASED and ITO is that they have improved management and organizational systems and it is more likely that comprehensive information will be acquired from companies with a substantial number of employees. Based on the assumption that there are at least 8 managers at different levels in each selected company to respond to the questionnaire, the practical research population was determined as 3,352 managers from national companies and 1,624 managers from multinational companies.

In the study, two separate sample sizes are determined from the two main populations. The number of the sample population is calculated at a 95% confidence interval, with an error margin of 5%, based on the assumption that the basic characteristics sought to be measured was distributed 50%-50% in the population. 315 managers from the population of the national company managers and 311 managers from the population of multinational company managers are chosen as the size of the samples. The likelihood of non-return of the questionnaires is taken as 5% and therefore, it was planned to reach out to 362 national and 327 multinational business managers. At the end of the research, survey data were obtained from 350 national and 310 multinational company managers. After data cleansing, data from 330 national and 270 multinational company managers were included in the final analysis. Compared to the first-determined sample sizes, the return rate of the questionnaires was 95% for the national company managers and 96% of the multinational company managers.

The measurements in the study were obtained through the participants' self-reports. The power analysis of the sample size was performed over 600 cases at a 0.95 significance level, and a score of 0.93 was obtained (OSSE an

Online Sample Size Estimator, 2017). This value suggests that the sample volume is sufficient and the power of effect is high.

3.2   Measurement Instruments

The measurement tools consist of demographic questions and two perception scales. The demographic questions were organized into two sections as follows: individual demographic questions and organizational demographic questions. The individual demographic questionnaire has 13 questions, and the organizational demographic questionnaire has 12 questions. Six of the organizational demographic questions (number of employees in the organization, number of employees in the department, sales value, hierarchical structure, organizational model, technology) and 4 of the individual demographic questions (age, management level, work experience, management experience) are defined as "control variables" and examined to determine whether they have an effect (even an indirect one) on the organizational structure – managerial competency relationship. Another goal of the examination is to avoid the "neglected variable deviation" phenomenon and examine the model together with more comprehensive and possible effects.

The first measurement tool is the "Organizational Structure Perception Scale". This scale was developed by the researcher and included 2 dimensions and 14 items after the reliability, validity and dimensionality analyses. These dimensions are called as "Specialization" and "Strategic Clarity". There are 7 items in the dimension of Specialization and 7 items in the dimension of Strategic Clarity. In the regression analysis, the general composite median scores and factorial composite mean scores were used.

The second measurement tool is the "Managerial Competence Perception Scale". This scale was also developed by the researcher; it included 3 dimensions and 22 items after the reliability, validity and dimensionality analysis. These dimensions are known as the "Strategic Thinking", "Relationship Management" and "Software Usage" competences. There are 10 items in the Relationship Management dimension, 9 items in the Strategic Thinking dimension, and 3 items in the Software Usage dimension. In the regression analysis, the general composite median scores and factorial composite mean scores were used.

To develop the first measurement tool, the Organizational Structure Perception Scale (OSPS), a comprehensive literature review was performed. This review benefited from studies by Mintzberg (1979), Özdevecioğlu (2002), Legerer, Pfeiffer, Schneider and Wagner (2009), Csaszar (2012), Teixeira, Koufontes and Peng (2012), Örücü, Kılıç, Yıldız, and Yıldız (2012) and Yi-Horng (2013). The OSPC is a Likert-type 5-level measurement tool. The labels and levels used in the OSPC are as follows: Not at all true = 1; Not true = 2; Undecided = 3; True = 4; Very True = 5.

The second measurement tool, the Managerial Competence Perception Scale (MCPS), was chosen as the outcome (dependent) variable. The MCPS benefited from Katz (1955), McCelland (1973), Mintzberg (1973), Boyatzis (1982), Mintzberg (1990), Mumford, Zaccaro, Harding, Jacobs and Fleishman (2000), Boyatzis and Oosten (2003), Mumford, Campion and Morgeson (2007), Erich, Rubin and Morgeson (2009), Çetinkaya (2009), and Özutku and Algur (2012). The MCPS is a Likert-type 5-level measurement tool. The labels and levels used in the MCPS are as follows: Never = 1; Rarely = 2; Fairly = 3; Often = 4; Always = 5.

3.3   Research Model and Hypothesis

The study aims to address the relationship between the estimator variable "Organizational Structure Perception" and the outcome variable "Managerial Competence Perception" and to investigate the effect and variation created by the organization structure perception of managers together with the organizational and demographic variables.

In the first stage, Organizational Structure Perception is defined as the estimator variable and Managerial Competence Perception is defined as the outcome variable. Their relationship is tested using a simple regression analysis (see Figure 1). In this framework, the hypothesis is determined as follows: *"Organizational structure perception positively affects the perception of managerial competence".*

In the second stage, the "multi-nationality" factor, which is included among the demographic variables but not among the control variables, is considered the moderator variable, and its effect on the relationship between the organizational structure perception and the managerial competence perception was investigated. The moderator effect of the multi-nationality factor was tested by multiple regression analysis (see Figure 1). In this context, the hypothesis was *"The moderator variable multi-nationality factor affects the relationship between organizational structure perception and managerial competence perception".*
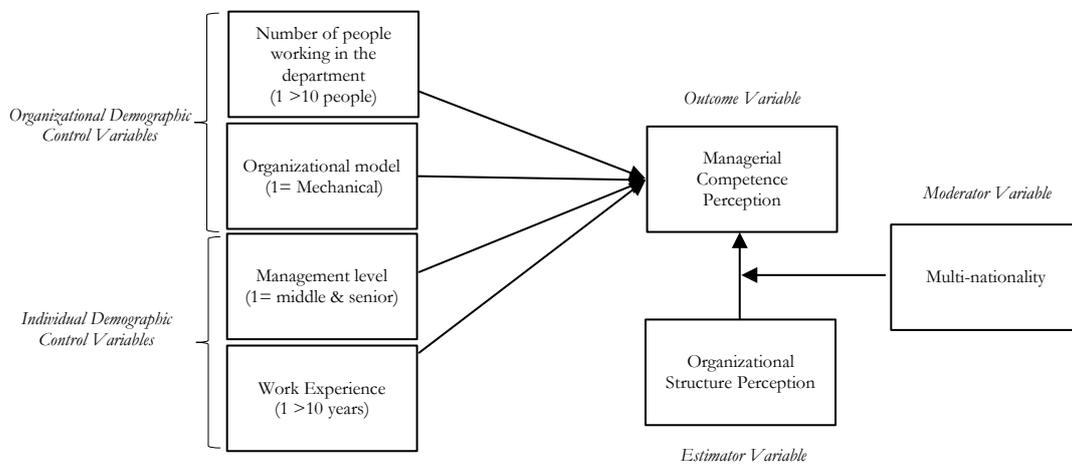

Figure 1. *Research Model*

Note: 2 of the organizational demographic variables out of 6 and 2 of the individual demographic variables out of 4, which have relationship with the dependent variable, are taken into the final model. The control variables which are found to have no relationship after the regression analysis are not shown in the model.

The third stage involved the investigation of whether the chosen demographic control variables, along with the organizational structure perception variable that is the main variable of interest, have additional effects on the dependent variable. In this context, 10 (6 organizational demographics, 4 individual demographic) variables are transformed into dummy variables, and the hierarchical regression analysis method is applied (see Figure 1). The relationships are analyzed by creating two separate blocks for organizational demographic variables and individual demographic variables. The hypothesis for the first block is defined as follows: *"The independent organizational demographic control variables and independent organizational structure perception variable jointly affect the managerial competence perception".* For the second block, the research hypothesis was defined as follows: *"The independent individual demographic control variables and independent organizational structure perception variable jointly affect the managerial competence perception".*

4. Findings
The findings of the research are given in the following subheadings: organizational and individual demographic descriptive statistics of participants, the dimensionality, reliability, and validity of the scales, and hypothesis testing results.

4.1   Descriptive Statistics

According to the individual demographic variables, 86% of the research participants are individuals aged 30 years and above. Forty-two percent are upper-level managers, 31% are mid-level managers, and 27% are entry-level managers. Seventy percent of managers have 11 years or more work experience, and 31% have 10 years or more managerial experience.

According to the organizational demographic variables, 71% of the companies have 251 or more employees, and 62% of the companies have an annual sales value of 501 million TL or more. In 70% of the companies in which the managers are in charge, the departments have 11 or more employees. According to the managers' perception, 60% of the companies have a vertical hierarchical structure and 40% have a horizontal hierarchical structure; 28% of the companies have an organic structure and 72% have a mechanical structure. Fifty-seven percent of the companies have a very advanced level of technology. In summary, the companies in the research population have an institutionalized structure, and the vast majority of their managers are experienced people.

4.2   Analyses of Dimensionality, Reliability, and Validity

To determine the factorial structure of the developed scales, a pilot study was conducted as a first step. Next, using the main research results, exploratory factor analyses were conducted to determine the dimensionality and the factors. In the dimensionality analyses, the factorial structures of the scales are analyzed with the "Factor 10.3" statistical program. Variables that have a value of 0.40 and above were included in the final scales. However, some of the variables with a value of 0.40 and above were removed from the scales and omitted from the analysis because their overlapping values with other variables were found to be less than 0.20.

The validity analyses were carried out in three stages as face, content and construct validity. In the analysis of the data, IBM SPSS 22.0, FACTOR 10.3 software and AMOS 23.0 (a module of IBM SPSS software) were used. To determine the scope of "face validity", a group of five experts was selected. Those experts were asked to read all the variables for both scales. All experts had favorable views and face validity was found. "Content validity" was realized at two levels. At the first level, the dimensions and factors were determined by investigating the literature, and we checked whether the indicators and the items were sufficient to represent the conceptual area. Each dimension is represented by at least five and at most thirteen items. In the second stage, the relatedness and understandability level of the dimensions and items are reviewed by a panel group consisting of 5 people with Ph.D. degrees. For both scales, Lawshe's (1975) Content Validity Ratio (CVR) was found to be equal to 1, demonstrating that the scales have content validity.

The "construct validity" analyses were carried out in three steps as follows: nomological validity, the validity analyses made using the method of explanatory factor analysis (EFA) and the confirmatory factor analysis (CFA). The first step of the construct validity analysis was performed using the nomological validity analysis method. In the literature, scholars take three approaches to describing nomological validity.

The first approach is that conceptual constructs and their dimensions should be related to and compliant with the theory. In this framework, a compressive literature search was done and the conceptual structures' dimensions and indicators were defined. By looking at studies related to the concept of Managerial Competency Perception, 3 dimensions were identified and are referred to as Technical, Human and Conceptual, whereas 42 items are defined for inclusion in the nomological network. By looking at studies related to the concept of Organizational Structure Perception, 7 dimensions were identified and referred to as Centralization, Division of Labor and Specialization, Organizational Culture, Determination of the Objectives, Departmentalization, Strategic Clarity, Openness of Communication Channels, whereas 35 items are defined to be included for inclusion in the nomological network. These dimensions and items all comply with the theory. However, after analysis, the number of factors in the OSPS

decreased to two and the number of factors in the MCPS was determined to be three. In addition, the names of the dimensions have changed. This has led to some deviation from the theory regarding nomological validity. The new factorial structures fit the collected survey data but have moved away from the nomological definition of the theory, at least to an extent.

The second approach considers that the relationships between the conceptual structures included in the model should have been previously included in the theory and tested in empirical research. However, no empirical research was found to directly examine the relationship between organizational structure and managerial competence in theory. Therefore, the organizational structure – managerial competence relationship does not have theory-based nomological support. In this framework, nomological validity was based solely on the collected research data.

According to the third approach, although there are no prior empirical data, the research should be based on the actual empirical data. For that reason, a specific relationship or correlation between the two conceptual structures must be found. Nomological validity occurs when the correlation coefficient between conceptual structures is greater than zero. Because the correlation coefficient between OSPS and MCPS is $r = 0,771$ and $p = 0.00 < 0.05$ according to the results of Pearson correlation analysis, it was determined that the model has nomological validity.

The second step of the construct validity analysis was performed using the explanatory factor analysis (EFA) method. In the literature, the first EFA results are used as a proof of the construct validity, and then the confirmatory factor analysis (CFA) is generally applied (DiIorio, 2005).

In the first scale, OSPS, the EFA result is 0.972 in the Kaiser-Meyer-Olkin (KMO) test, whereas the Bartlett scoring test result was found to be significant 13307.4 (*df* 595; $p = 0.00$). Therefore, the data are considered suitable for factor deducting. With respect to the eigenvalues, the scale has three factors, and the "common variation rate[1]" of these factors is 74 percent. The factors are renamed Organizational Culture, Specialization, and Strategic Clarity. In all three factors, the factor loads of the items are above 0.40.

In the second scale, MCPS, the EFA result is 0.971 in the KMO test, and the Bartlett scoring test result is found to be significant at 12361.7 (*df* 595; $p = 0.00$). The data are considered suitable for factor deducting. With respect to the eigenvalues, the scale has three factors, and the "common variation rate" of these factors is 69 percent. The factors are renamed Strategic Thinking, Relationship Management, and Software Usage competences. In all three factors, the factor loads of the items are above 0.40.

In the third and final stage of construct validity, the confirmatory factor analysis (CFA) method was applied. This stage is for the validation of the factors identified by the EFA in the previous stage. According to Brown (2015), the CFA is used to verify the factorial structure of the test tool in the scale development process. In this way, the dimensions and relationships among the dimensions are examined. The CFA structural validity analyses were conducted at three levels. At the first level, testing was done using the goodness of fit analysis; at the second level, convergent validity was investigated; and at the third level, discriminant validity was investigated.

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[1] In the analysis, instead of basic components analysis method, the common factor analysis method is used. Therefore, instead of "explained total variance" value, "common variation ratio" value is used.

Table 1. Goodness of Fit Statistics of the CFA Model of OSPS and MCPS

Goodness of Fit Scales	Suggested Value	MCPS Calculated Value	OSPS Calculated Value
Chi -square/Degrees of freedom $(\chi2/df)$	≤5,00	4,164	2,928
CFI *(Comparative Fit Index)*	≥0,90	0,900	0,968
AGFI *(Adjusted Goodness of Fit Index)*	≥0,80	0,852	0,933
GFI *(Goodness of Fit Index)*	≥0,85	0,879	0,952
RMSEA *(Root Mean Square Residual)*	≤0,10	0,073	0,057

The goodness of fit statistics are interpreted in the context of the value ranges indicated in the explanations of Table 1 and the cut-off criteria for fit indexes values suggested by Hu and Bentler (1999). The Chi-square/Degrees of Freedom = $\chi2/df \le 5$ criterion is valid for both the scales. The values of CFI are found to be above or at 0.90, which is the general acceptance value for both the scales. The values of AGFI are found to be above or at 0.80, which is known as the threshold value. The AGFI value of the OSPS is higher than that of the MCPS. When assessed with respect to the values of GFI, OSPS is above 0.95, whereas MCPS is below 0.95 but above 0.85. Researchers consider the GFI fit index acceptable when the index value is greater than or equal to 0.85 (Von Krogh and Roos, 1999, Qi, Shen and Dou, 2013). The RMSEA values are below 0.10 for both scales and meet the criteria. The goodness of fit statistics show that there is a good model - data fit in both OSPS and MCPS.

Convergent validity is performed using two methods. In the first method, Average Variance Extracted (AVE) values are interpreted. In the second method, composite reliability (CR) values are checked (see Table 2, Table 3).

For MCPS, all the standard factor loads of variables are over 0.50. AVE values are 0.529 for Strategic Thinking, 0.42 for Relationship Management, and 0.411 for the Software Usage competences. Normally, the AVE values should be above 0.50. However, if the AVE is below 0.50, some researchers indicate that validity still can be present if the CR value is above 0.50 (Safiih and Azreen, 2016, Huang, Wang, Wu and Wang, 2013). For this reason, the CR value was checked, because the AVE value appeared to be below 0.50 in two dimensions. The CR value for Strategic Thinking was 0.997, whereas it is 0.998 for Relationship Management Competence and 0.989 for Software Usage competences. As a result, all the values are above 0.70, which is accepted as the benchmark value.

For OSPS, all the standard factor loads of variables are also above 0.50. However, the factor load of the variable numbered OY11ök, which belongs to the Organizational Culture dimension, is found to be 0.10, which was below 0.50. The AVE values are 0.389 for Organizational Culture, 0.536 for Specialization and 0.566 for Strategic Clarity. Normally, the AVE values should be above 0.50. The AVE values for the Specialization and Strategic Clarity dimensions are above 0.50, but the value was below 0.50 for the Organizational Culture dimension. For this reason, the Organizational Culture dimension was removed from the scale. Although the CR value of this dimension was as high as 0.94, it is seen more important that it does not meet the value requirement of AVE. It was determined to be more appropriate to continue the research with the other two dimensions, Specialization and Strategic Clarity.

To achieve discriminant validity, the AVE value of a factor must be greater than the correlation of this factor with other factors (Fornell and Larcker, 1981). According to the researchers, the AVE values of the scale's variables should be above 0.50, and the CR value should be above 0.70. In the analysis for MCPS and OSPS, all the correlation coefficients are found to be higher than the AVE values. It is important to note that the dimensions of neither the OSPS nor the MCPS have discriminant validity. However, some authors claim that Fornell and Larcker's (1981) assessment criteria are problematic in determining discriminant validity. Therefore, not obtaining the expected values is considered within the frame of this view (Henseler, Ringle and Sarstedt, 2015).

Table 2. CR, Correlation Coefficient and AVE values for MCPS

Goodness of fit scales	Number of Items	CR	AVE	Correlation Coefficients		
				Strategic Thinking	Relationship Management	Software Usage
Strategic Thinking	9	0,997	0,529			
Relationship Management	10	0,998	0,422	0,820		
Software Usage	3	0,989	0,411	0,820	0,790	

Table 3. CR, Correlation Coefficient and AVE values for OSPS

Goodness of fit scales	Number of Items	CR	AVE	Correlation Coefficients	
				Specialization	Strategic Clarity
Specialization	7	0,880	0,536		
Strategic Clarity	7	0,894	0,566	0,890	

After the validity analysis, the MCPS was composed of 3 dimensions and included 22 items, whereas the OSPS was composed of 2 dimensions and included 14 items.

The reliability analyses of the scales were carried out at four levels: (1) Checking correlations among items, (2) Investigating the split-half reliability (3) Cronbach's alpha reliability and (4) McDonald's omega reliability calculations.

For the first scale, OSPS, the correlation values among the 14 items vary between 0.34 and 0.78. The average of the item correlation values is 0.40. Therefore, the relationship among the items in the scale is within the expected values.

For the second scale, MCPS, the correlation values among the 22 items vary between 0.40 and 0.78. The average of the item correlation values is 0.41 and is within the expected range of 0.20-0.40.

When examining the split-half reliability, to obtain the reliability of the entire test, the Spearman-Brown correction formula was used. OSPS had a value of 0.94 and MCPS had a value of 0.95. As a result, both scales have values that are above the expected threshold value of 0.80.

For Cronbach's alpha and McDonald's omega reliability, the relevant values of the scales should be at least $a \geq 0.70$. The reliability analyses are done by using the Factor 10.3 and SPSS 22.0 statistical programs, and similar results were obtained with small differences after analyses. The reliability of all the scales and all their dimensions are found to be higher than the expected level ($a \geq 0.70$) (see Table 4).

Table 4. Reliability Analysis Results

Scales and Dimensions	Number of Items	N	SPSS 22.0 Cronbach's Alpha	Factor 10.3 Cronbach's Alpha	Factor 10.3 McDonald's Omega
MCPS	22	600	0.97	0.95	0.97
Strategic Thinking	9	600	0.91	0.92	0.94
Relationship Management	10	600	0.94	0.94	0.94
Software Usage	3	600	0.70	0.71	0.81
OSPS	14	600	0.96	0.96	0.96
Specialization	7	600	0.88	0.92	0.92
Strategic Clarity	7	600	0.89	0.94	0.94

4.3   Hypothesis Testing Results

The main hypothesis was first tested in the overall sample, then in the two subgroups (national company managers – multinational company managers) separately. In addition, the difference in managerial competence perception scores between the two groups of multinational and national company managers is analyzed using the *t-test*. In the fourth stage, the moderator effect is examined and in the fifth step, the effect of control variables on the model is examined.

In the first stage, the overall sample was analyzed with linear regression analysis. According to the analysis, the estimation variable Organizational Structure Perception Scale scores explain 53% of the variance in the dependent variable Managerial Competence Perception Scale scores ($R^2 = 0.530$, $F (1, 598) = 671.722$, $p = 0.00 < 0.05$). Thus, the null hypothesis of the main hypothesis was rejected, and it was understood that organizational structure is an effective factor in determining managerial competence.

In the second stage, the main hypothesis was tested in different subgroups. In the linear regression analysis made for the managers of the national enterprises, it was found that the OSPS estimator variable explains 56% of the variance of MCPS ($R^2 = 0.564$; $F (1,339) = 434.241$; $p = 0.00 < 0.05$). Thus, it is found for the first group that the Organizational Structure Perception factor explains the Managerial Competence Perception at a significant level. In the linear regression analysis made for the second subgroup, the managers of multinational enterprises, it was found that the OSPS estimator variable explains 56% of the variance of MCPS ($R^2 = 0.556$; $F (1,259) = 323.971$; $p = 0.00 < 0.05$). It is also found in the second group that the Organizational Structure Perception factor explains Managerial Competence Perception at a significant level.

In the third stage, we investigated whether there was any difference in the MCPS scores with respect to national and multinational company managers' perceptions. According to the results of two independent sample t-tests, a statistically significant difference is found between the managerial competence scores of the national company managers (*Mean* = 4.61, *Sd.* = 0.47; *Se.* = 0.0253) and the managerial competence scores of the multinational company managers (*Mean* = 4.46; *Sd.* = 0.42; *Se.* = 0.0258), and the null hypothesis is rejected [$t (598) = 4.25$; $p = 0.00 < 0.05$]. When the arithmetic mean values are considered, it is seen that contrary to expectations, the competence scores of the national business managers are somewhat higher. This difference, however, is not significant enough to distinguish the groups from each other in real life.

In the fourth stage, the moderator effect is examined. To do so, we aimed to conduct a multiple regression analysis based on Barrett and Kenny's (1986) model and to use Hayes' (2017) PROCESS model, but the analysis did not pass to the PROCESS stage because the test result was not significant. According to the results, the Regression Analysis Model-1 is $F (2, 597) = 512.730$; $p = 0.00 < 0.05$ and the Regression Analysis Model-2 is $F (3, 596) = 342.435$; $p = 0.00 < 0.05$, making both the models statistically significant. However, when the R^2 variation values are considered, the variation in the second model was 0.001 and was found to be very small and not statistically significant ($p = 0.253 > 0.05$). For this reason, the moderator effect was not detected.

In the fifth step, the effect of "control variables" on the model is examined. It is found that the organizational demographic variables "number of employees in the department" and the "organizational model" and the individual demographic variables "level of management" and "work experience" make a significant contribution to the model, whereas the other remaining demographic variables did not make any contribution and were removed from the measurement model. It is seen that only 4 of the 10 selected control variables contributed to the model. According to the results, although the R^2 value of the main hypothesis was 53%, the individual demographic variables contributed to the model at a rate of 5%, and the R^2 value increased to 58%. When 2 organizational demographic variables were added to the model as control variables, an additional 1% contribution appeared and the variance of the dependent variable increased to 59%. Finally, 4 control variables were included in the model, and the explained ratio of the variance by the entire model increased to 62%. With respect to this result, it can be said that the organizational structure perception of mid- and senior-level managers with more than 10 years of work experience, who are working in departments including more than 10 people and whose companies have a mechanical organization model[2] affected their competency perception scores at a rate of 62%. Finally, the simple organizational structure – managerial competence model became more meaningful with the contribution of the additional 4 demographic variables to the relationship.

5. Conclusion

This study aimed to investigate the relationship between managers' organizational structure perception and managerial competence perception and to determine whether the multi-nationality factor, which was noted by the observations, is more effective in determining managerial competence when interacting with the organizational structure factor. The analysis showed a statistically significant relationship between the organizational structure perception and the managerial competence perception of managers, but the multi-nationality factor did not have an important effect or make a contribution to this relationship. The relationships between organizational structure perception and managerial competence perception appeared statistically significant for both of the study's selected main populations. It was predicted before the research that the structure - competence relationships in multinational and national enterprises would be significant, but it was estimated that this relationship would be higher regarding R^2 value in multinational enterprises. However, it was found after the research that this difference was not significant in multinational and national enterprises (organizational structure – managerial competence relationship in the multinational enterprises had $R^2 = 0.556$; the national enterprises had $R^2 = 0.564$).

One of the issues that should be considered in research of this nature is that there should not be any "neglected variable bias". For this purpose, 10 demographic control variables were included in the model, and the analyses found that 6 of them do not affect the organizational structure perception – managerial competence perception relationships. Since the ANOVA results of the remaining 4 demographic control variables were found to be

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[2] In the dummy variable practice, the 1 and 0 coded arrangements are as follows: 1 = work experience of 11 years and above, 0 = work experience below 11 years; 1 = middle- and senior-level managers, 0 = first level managers; 1 = 11 and more employees in the department, 0 = less than 11 employees in the department; 1 = mechanical organization model, 0 = organic organization model.

significant, they were assessed in the model. These demographic variables are as follows: "the number of employees working in the department", "organizational model", "management level" and "work experience". The demographic control variables' total contribution to the model is 9%. With the simple linear regression analysis, the effect of organizational structure perception on managerial competence perception is found to be 53%, and when including the demographic control variables, this effect increases to 62%. As a result, future researchers analyzing the relationships between the organizational structure perception and managerial competence will be able to perform a more meaningful analysis if they include the mentioned demographic variables in their models. The following practical conclusions can be drawn from this research. First, managers' competence perception, or in indirect terms, their competence level, increases with the level of an enterprise's institutionalization. Second, managers' competence perception (or competence level) increases in large departments, in mechanic organizations, at middle- and senior-level management levels and with more work experience. However, these findings are not the main determining factor. The main determining factor is organizational structure perception. Two factors also gained importance in the organizational structure perception. These are Strategic Clarity and Specialization. What must be understood from Strategic Clarity is that the company should have an open strategy that is shared with and embraced by all employees and is sensitive to the environmental transformation. What must be understood from Specialization is that employees who specialize in certain stages of the company act in an integrated manner and thereby contribute to organizational effectiveness and efficiency. Specialization and Strategic Clarity are the most important factors affecting managers' competence perceptions.

6. Recommendations for Future Research

The relationship between organizational structure perception and managerial competence perception must be closely investigated when evaluating organizations and managers' ability to adapt to changes in their environments, to compete with rivals and to achieve success in business. This research is based on perceptions, and in future research on this subject, it would be proper to work with concrete data figuring the organizational structure. The precision and sensitivity degrees of the results would increase in future research if more enterprises were included, additional independent variables such as organizational performance and personality test were included in the measurement as the main effect variables, and the "marker variable" were applied for the validity and reliability analyses. Another phenomenon is the emergence of the ceiling effect in such studies since managers respond under the influence of the "social desirability bias". To some extent, this research has been affected by that bias. Future researchers can reduce both the ceiling effect and the likelihood of the emergence of common method variance by applying the independent variable organizational structure perception scale and the dependent variable managerial competence perception scale to different sample populations.

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