

# THE DETERMINANTS OF OUTSOURCING SUCCESS: A PRELIMINARY STUDY IN THE AUTOMOTIVE SUBSIDIARY INDUSTRY

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**Abstract-** Outsourcing has been known as a significant strategy for the company management and the importance of outsourcing has been increasing day by day particularly in the competitive global markets. The main aim of this quantitative study was to show the factors that affect outsourcing success. Within this aim, the hypotheses were generated based on the literature, and e-mail survey was implemented to the employees of fully-domestic firm which is one of the biggest automotive subsidiary in Turkey. The sample included 215 white-collar employees of the firm operating in Izmir Atatürk Organized Industrial Zone. The field study was completed in May, 2017. In the findings, all hypotheses were supported. The findings showed that firm's capability and interaction process are the main factors that affect outsourcing success. After showing the findings, the implications for the market practices were discussed.

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**Keywords-** Firm's Capability, Interaction Process, Outsourcing Success.

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## I. INTRODUCTION

Outsourcing, which can be seen as a substantial way in company management, has already been known as a significant strategy to increase profit, reduce cost and lead time, adopt core competency, and increase quality for goods and services. Especially, outsourcing strategy can be particularly essential for new product development. For instance, firms cannot have the expertise for new product development and they obtain support from suppliers that have ability and expertise efficiently. Businesses can reduce risks and meet customer demands with lower costs (Hoffman, 1995). With the use of outsourcing, companies invest less in production facilities and a reduction in production costs can be seen (Bettis, 1992). Firms that use outsourcing may have some long term advantages compared to the firms that integrated production facilities. Also, the firms that use outsourcing may divide its risk into the parts between firms. With the use of different suppliers, firms can change their supplier easily with parallel to market demands and technological advances. With outsourcing process, firms could reduce their investments in manufacturing processes. Stock markets could also gain similar amount of profit with lesser investment as a result of outsourcing (Domberger, 1998). In the process of outsourcing, companies can increase their strategic decision-making flexibility by using different vendors that can be easily changed. (Harris et al., 1998).

However, outsourcing may not add value to the firms every time. This, also creates some risks in cost, timing, quality, and control. According to Teece (1987), the ability of making research and numbers of firms that use outsourcing have been reducing in

time. This causes companies to stay behind new technological advances and new product developments (Kotabe, 1992). Prahalad and Hamel (1990) emphasized the risk of losing production ability know-how and market share because of using outsourced firm. In addition, cost saving with outsourcing process could not be much as expected because of the overseas transaction fees and the economic situation in currency (Markides and Berg, 1998). Dess et al. (1995) also described the difficulty of taking back the production of outsourced products which are valuable in market share. Another disadvantage of outsourcing is the difficulty of managing the external resources of all operations (Tayauova, 2012).

The aim of this study was to find out the determinants of outsourcing success. Within this aim, one company form the automotive industry in Izmir City, Turkey was selected and the research was conducted with the employees of this firm regarding outsourcing success. The outsourcing activities of this firm and the relations with the outsourcing partner firms were investigated in the research. In the first part of the study, literature was reviewed and the methodology of the research was explained. In the second part of the research, the analyses were run and the results were shown. At the last part of the research, some advices and market practices were given for the firms in the industry.

## II. LITERATURE REVIEW

The outsourcing success can be defined as the contribution of outsourcing activities to organizational performance and it can be analyzed from strategic,

technological, and economic perspectives (Han et al., 2008). Grover et al. (1996) showed that extent of outsourcing affects outsourcing success, furthermore service quality of the vendor increases the degree of relations between extent of outsourcing and outsourcing success, and the elements of partnership such as trust, cooperation, and communication mediate the relation between extent of outsourcing and outsourcing success. Lee (2001) showed that organizational capability plays a significant moderator role between knowledge sharing and outsourcing success. In this study, two different variables such as firm's capability and interaction process as the antecedents of outsourcing success were examined.

In the literature, many studies (Bassellier et al., 2003; Mata et al., 1995) used resource based view (RBV) that shows a theoretical structure to explain firm's capability and resources. With reference to the RBV studies related to firm's capability, this study used Han et al. (2008) approach to explain firm's capability effects on outsourcing success. Firm's capability was investigated based on three variables as IT capability, organizational relationship capability, and vendor management capability. IT capability can be separated into two parts as technical and managerial capability. Technical IT capability shows technical knowledge and skills whereas managerial IT capability refers knowledge of IT implementation in order to meet business objectives strategically. Organizational relationship capability coordinates IT and business groups in order to allow the business to

engage effectively in IT issues. Vendor management capability builds sustainable long-term relations with suppliers and creates a win-win situation. The hypotheses regarding firm's capability were developed below.

H<sub>1</sub>: The firm's capability positively affects interaction process.

H<sub>2</sub>: The firm's capability positively affects outsourcing success.

Many studies in the literature used IMP group's Interaction Model (Metcalf et al., 1992; Mohr and Spekman, 1994; Lee and Kim, 1999). Lee and Kim (1999) categorized partnership quality in eight parts such as communication, information sharing, participation, cooperation, knowledge sharing, joint action, participation, and conflict resolution. In this study, based on the study of Han et al. (2008), only three of them such as information sharing, communication quality, and collaborative participation were used to express the degree of interaction. Information sharing determines which critical information will be shared with the partners. Communication quality shows the specifications of the information shared. Collaborative participation shows the vendor's core business process management and client's managerial problem solving.

H<sub>3</sub>: The firm's interaction process positively affects outsourcing success.

According to hypotheses above, the research model was shown in Figure 1 below.

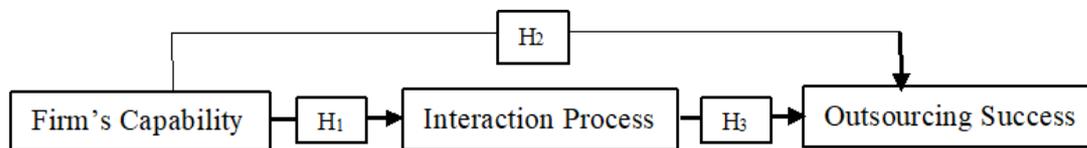


Figure 1. Research Model

### III. Research Methodology

The study was designed for analyzing the effects of firm's capability and interaction process on outsourcing success. A descriptive research design from quantitative methods was used to explain the relationships among firm's capability, interaction process, and outsourcing success.

#### 3.1. Data collection and measures

E-mail survey technique was used for data collection. A questionnaire was developed based on the constructs that have been already used in the previous studies (Lee et al., 1995; Bassellier et al., 2003; Mohr and Speakman, 1994; Lee and Kim, 1999). Three scales such as firm's capability scale, interaction process scale, and outsourcing success scale were adapted from the study of Han et al. (2008). The questionnaire totally contained 37 items.

16 items were used for measuring the firm's capability, 13 items were used for interaction process measurement, and 8 items were used for measuring outsourcing success. All questions were asked based on 5-point Likert scale as (1) strongly disagree and (5) strongly agree.

#### 3.2. Sampling and field study

A fully-domestic company operating in the automotive subsidiary industry in Izmir Atatürk Organized Industrial Zone was selected as a sample of the research by using convenience sampling. The reasons of choosing this firm are: (1) the company has been using outsourcing activities in main functions for 15 years, and also it uses outsourcing activities very frequently, (2) the company is a fully-domestic firm so this enables to understand the approach of fully-domestic firms to outsourcing activities, (3) the company is one of the biggest automotive subsidiary

of Turkey and serves as a global supplier to many automotive companies in Turkey, Europe, and USA. According to the numbers of white-collar employees working in the company, the sample size calculated within 95% confidence level and it was found that 150 participants are enough for the research. However, to increase the reliability of the research totally 215 employees were reached within the scope of the research. The field study was conducted via e-mail survey in May, 2017. The employees were informed before starting the research. The questionnaire was delivered to the company e-mail

addresses of participants and the answers were taken from the same e-mail addresses.

#### IV. DATA ANALYSIS AND RESULTS

The demographic characteristics of participants were shown in Table 1 below. According to Table 1, the sample characteristics consisted of mostly married male between 26-35 years old, university graduated, worked in R&D department, and worked in the company for 1-4 years.

Table 1. Demographic characteristics of the participants

Gender	Frequency	Percent	Marital status	Frequency	Percent
Female	92	42,8	Married	114	53,0
Male	123	57,2	Single	101	47,0
Total	215	100,0	Total	215	100,0
Education	Frequency	Percent	Age	Frequency	Percent
Middle school	1	0,5	18-25	15	7,1
High school	26	12,1	26-35	122	56,6
Undergraduate	113	52,6	36-45	61	28,3
Graduate	75	34,9	45 and over	17	8,0
Total	215	100,0	Total	215	100,0
Department work in the company	Frequency	Percent	Duration work in the company	Frequency	Percent
R&D	55	25,6	Less than 6 months	9	4,2
Accounting and Finance	27	12,5	7-11 months	21	9,8
Logistics	25	11,6	1-4 years	81	37,7
Marketing	17	7,9	5-9 years	73	34,0
Purchasing	12	5,6	More than 10 years	31	14,4
Quality	10	4,7	Total	215	100,0
Export-import	24	11,2			
Other	45	20,9			
Total	215	100,0			

Exploratory factor analysis (EFA) was implemented to the scales. According to the results in Table 2, a single dimension was emerged from each scale. For firm's capability scale, a single dimension was emerged and named as Firm's Capability. This dimension explained 56.50 % of the total variance with 16 items. KMO value was 0,954; Bartlett's test (df=120) was 0,000; reliability level was 0,948. KMO value shows to have reached enough sample size and must be approximately 1 (Kaiser, 1958). Bartlett's test shows the existence of relationships among the items. Cronbach's alpha shows the reliability level and must be more than 0.70 (Cronbach, 1951). For interaction process scale, one dimension was emerged and named as Interaction Process. This dimension explained 58.057 % of the total variance with 13 items. KMO value was 0,951; Bartlett's test was (df=78) 0,000; reliability level was 0,939. For the last scale, one dimension was emerged and named as Outsourcing Success. This dimension explained 61.591 % of the total variance with 8 items. KMO value was 0,923; Bartlett's test was (df=28) 0,000; reliability was 0,911. All scales' KMO values, Bartlett's tests results and Cronbach's alpha values were at the acceptable levels. Besides this, all scales' discriminant validity values were at the acceptable levels since AVE values were higher than 0,565 and CR values were higher than 0,928. The threshold for AVE is 0,50 and CR is 0,70 (Fornell and Larcker, 1981).

**Table 2. Exploratory factor analysis results**

<b>Firm's Capability</b>	<b>Loading</b>
VC4. We have systematic processes to manage outsourcing contracts with companies.	.794
MC2. We have ability to leverage outsourcing as a strategic core competence.	.777
TC1. We have our scheme for outsourcing standardization.	.773
MC1. We have ability to integrate functional requirement.	.772
TC2. We have ability to integrate outsourcing activities.	.771
RC2. Our management and outsourcing department communicate well each other.	.762
MC4. We have ability to continuously update outsourcing strategy according to the change of business environment.	.755
VC2. We have ability to evaluate the performance of outsourcing companies.	.749
RC3. Outsourcing department and end-users communicate well each other.	.749
RC1. Our management reflects opinions from outsourcing department in making decisions.	.748
TC3. We understand the trend of outsourcing.	.743
VC5. We have systematic processes to control outsourcing companies.	.737
VC3. We have management processes for outsourcing projects.	.731
RC4. Outsourcing department and business departments trust each other.	.721
MC3. We have the blueprint of outsourcing strategy in accordance with business strategy.	.721
VC1. We have formalized processes to select outsourcing companies.	.720
KMO=0,954; Bartlett's=0,000(df=120); Cronbach's=0,948; Percentage of Variance=56,500; AVE=0,565; CR=0,954	
<b>Interaction Process</b>	<b>F*</b>
CP1. We and our outsourcing companies make decisions for business objective and direction together.	.790
CP3. We and our outsourcing companies are willing to comply with each other's request.	.783
CQ4. The communication between us and our outsourcing companies is credible.	.781
CP5. We and our outsourcing companies are generally cooperative in conducting business.	.779
IS1. We and our outsourcing companies share each other's own information.	.776
CP2. We and our outsourcing companies solve most problems together.	.768
IS3. Information provided by us help our outsourcing companies' business executions.	.766
CP4. We and our outsourcing companies are interested in each other's problems.	.764
IS4. We and our outsourcing companies share information regarding business environment and technical change that affect each other's business.	.761
CQ3. The communication between us and our outsourcing companies is complete.	.747
CQ1. The communication between us and our outsourcing companies is timely.	.746
IS2. We and our outsourcing companies share business knowledge of core business processes.	.724
CQ2. The communication between us and our outsourcing companies is accurate.	.716
KMO=0,951; Bartlett's=0,000(df=78); Cronbach's=0,939; Percentage of Variance=58,057; AVE=0,580; CR=0,947	
<b>Outsourcing Success</b>	<b>F*</b>
OS8. We have increased access to key information technologies.	.814
OS7. We have reduced the risk of technological obsolescence.	.813
OS6. We have increased control of outsourcing expenses.	.806
OS5. We have enhanced economies of scale in technological resources.	.791
OS4. We have enhanced economies of scale in human resources.	.775
OS2. We have enhanced our outsourcing competence.	.766
OS3. We have increased access to skilled personnel.	.760
OS1. We have been able to refocus on core business.	.750
KMO=0,923; Bartlett's=0,000(df=28); Cronbach's=0,911; Percentage of Variance=61,591; AVE=0,616; CR=0,928	

After EFA, simple linear regression analysis was used for hypothesis tests. As a result of significance F change tests shown in Table 3 below, all hypotheses were supported. Firm's capability had a significant positive effect on interaction process and outsourcing success. Also, interaction process had a significant positive effect on outsourcing success. According to the adjusted R<sup>2</sup> tests; firm's capability could explain 73,9 % of total variance in interaction process and 68,9% of total variance in outsourcing success. Also, interaction process could explain 62,9 % of total variance in outsourcing success.

**Table 3. Regression analysis results**

	<b>St. Beta</b>	<b>SE</b>	<b>t</b>	<b>p</b>
y=Firm's Capability x=Interaction Process	0,860	0,035	24,622	0,000
R <sup>2</sup> = 0,740; Adjusted R <sup>2</sup> = 0,739; F=606,234; df=1; p=0,000				
y= Firm's Capability x=Outsourcing Success	0,831	0,038	21,806	0,000
R <sup>2</sup> = 0,691; Adjusted R <sup>2</sup> = 0,689; F=475,519; df=1; p=0,000				
y=Interaction Process x=Outsourcing Success	0,794	0,042	19,075	0,000
R <sup>2</sup> = 0,631; Adjusted R <sup>2</sup> = 0,629; F=363,847; df=1; p=0,000				

## CONCLUSION

Increasing global competition leads firms to use outsourcing activities. Outsourcing can be identified as a significant strategic tool in terms of ensuring competitive advantage. In this sense, in order to reach successful outsourcing, it is necessary to determine the relevant factors that form outsourcing success, and firms should develop their strategies accordingly. The research examined the determinants of outsourcing success and found out that firm's capability and interaction process are the important determinants of outsourcing success. It was found out in the research that firm's capability directly and indirectly affect outsourcing success. It was obtained that firm's capability positively affect both interaction process and outsourcing success. Besides this, it was revealed that interaction process affect outsourcing success directly.

In the literature, the dimensions of firm's capability were separated into four parts as technical outsourcing capability, managerial outsourcing capability, organizational relationship capability, and vendor management capability. However, in this study, firm's capability loaded to only one dimension which consisted of all these four parts. And, likewise, interaction process were divided into three parts in the literature. But, in this study, only one dimension of interaction process contained communication quality, information sharing, and collaborative participation was revealed. The effects of sub-dimensions did not analyze in the research. Only the effects of firm's capability and interaction process on outsourcing success were analyzed. Since firm's capability affected interaction process and outsourcing success separately, firms should increase the ability of technical, managerial, organizational, and vendor management capabilities. Moreover, since interaction process had positive effects on outsourcing success, firms should increase the ability of communication quality, information sharing, and collaborative participation. Paying attention to these variables while performing outsourcing activities were found as important for the companies, particularly, in the automotive industry. Gaining competitive advantage and increasing the outsourcing activities to maintain a sustainable superiority would be appropriate for the automotive industry, which is an industry where competition is intensively experienced.

As well as firm's capability and interaction process, there have been many other determinants that affect outsourcing success such as organizational commitment, job satisfaction, trust, and customer satisfaction. In this study, such determinants were not included to the research. It was revealed in the literature that outsourcing success was also affected by trust and commitment (Han et al., 2008). In this study, only firm's capability and interaction process

variables were taken as the main factors and their effects on outsourcing success were tested. Also, the study was only implemented in one company which takes place in automotive industry. Different companies from the same industry may include to the research in further studies.

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