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# Relationship Between Resource Dependency and Environmental Uncertainty: A Field Study

*Kaynak Bağımlılığı ile Çevresel Belirsizlik Arasındaki İlişki: Bir Alan Çalışması*

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## ABSTRACT

**Purpose –** The purpose of the study is to examine the relationship between resource dependence and environmental uncertainty. The study investigates whether there is a relationship between resource dependency and environmental uncertainty in organizations operating in various sectors.
**Methodology** – The sample for the research consists of organizations listed in the ISO 500 list that operate in the TR63 region (N=25). IBM SPSS Statistics 21 was used for data analysis, and non-parametric analysis methods were applied.
**Findings** – The results of the analysis indicate that there is no relationship between resource dependency and environmental uncertainty. It can be concluded that the organizations involved in the study do not use their resource dependency strategies to manage the uncertainty arising from their environment.
**Conclusions -** Although the analysis results show no direct relationship between resource dependency and environmental uncertainty, it can be stated that organizations use resource dependency strategies for purposes such as achieving cost advantages, keeping up with innovations, and enhancing productivity and efficiency.
**Keywords:** Resource Dependence, Environmental Uncertanity, Outsourcing,
**JEL Codes:** M0, M29, M19

## ÖZ

**Amaç -** Çalışmanın amacı, kaynak bağımlılığı ile çevresel belirsizlik arasındaki ilişkinin incelenmesidir. Farklı sektörlerde hizmet veren kurumlara yönelik yapılan çalışmada kaynak bağımlılığı ve çevresel belirsizlik arasında herhangi bir ilişkinin bulunup bulunmadığı incelenecektir.
**Yöntem -** Araştırmanın örneklemini TR63 bölgesinde faaliyet gösteren ISO 500 listesindeki kuruluşlar oluşturmaktadır (N=25). Verilerin analizi için IBM SPSS Statistics 21 kullanılmış ve parametrik olmayan analiz yöntemleri uygulanmıştır.
**Bulgular –** Yapılan analizlerin sonucunda, kaynak bağımlılığı ile çevresel belirsizlik arasında bir ilişkinin olmadığı sonucuna varılmıştır. Çalışmada yer alan kurumların kaynak bağımlılığı stratejilerini çevrelerinden oluşacak belirsizliği yönetmek için kullanmadıkları söylenebilir.
**Sonuç –** Yapılan analizler sonucunda kaynak bağımlılığı ile çevresel belirsizlik arasında doğrudan bir ilişki bulunmamakla birlikte, kuruluşların maliyet avantajı elde etmek, yenilikleri takip etmek, üretkenlik ve verimliliklerini arttırmak gibi stratejiler için kaynak bağımlılığı stratejilerini kullandıkları söylenebilir.
**Anahtar Kelimeler:** Kaynak Bağımlılığı, Çevresel Belirsizlik, Dış Kaynak Kullanımı
**JEL Kodları:** M0, M29, M19

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## 1. INTRODUCTION

Organizations must produce products and services of appropriate quality in order to maintain their competitive advantages and meet the expectations of their customers. With that goal in mind, and to make their activities more effective, they have started outsourcing their activities beyond the basic service areas to external organizations.

Many organizations are not self-supporting in carrying out their activities. For this reason, they need to obtain some of their required resources from their external environment. As resources in organizations' fields of activity become more critical, new efforts to secure access to those resources and strengthen and expand ties with other organizations may involve resource dependence, or obligatory transactions with other organizations to acquire resources (Drees and Heugens, 2013; Hillman,Withers, Collins, 2009).

Davis and Cobb (2010: 42) base the resource dependence theory on the dependence on external firms as a result of organizations not having strategically important resources or not being self-sufficient. In this case, organizations affect the levels of uncertainty that may occur in their environment and try to manage uncertainty by structuring their relationships with other organizations. There are a number of strategies that determine the reason why organizations use external resources. These strategies are; reducing costs, benefiting from the technical, skills and knowledge of suppliers in areas close to their core organization, having technological developments, responding quickly to the expectations of the environment with globalization, keeping up with change and benefiting from the advantages of suppliers who specialize in technology (De Vita and Wang, 2006: 12).

Pfeffer and Salancik (1978) stated that the reason why the environment is used as an important factor for organizations is that it has the power to create uncertainty and explained the concept of uncertainty under the resource dependence theory. He describes uncertainty as the inability to accurately predict and foresee the situations that organizations will face in the future. He defines environmental uncertainty as unexpected situations arising from the environment of organizations and states that it affects the distribution of power and control, institutional policies, structures, decisions, activities and the structures resulting from these activities.

Organizations' uncertainties in their environments are evaluated under various factors. Paulraj and Chen (2007) categorized the uncertainties faced by organizations into three types: supply uncertainty, demand uncertainty, and technological uncertainty, highlighting the importance of resource dependency strategies in mitigating these uncertainties. The impact of managing these uncertainties is significantly influenced by the alliances, resource sharing, and effective management of these strategies that organizations establish with their external environment.

This study aims to examine the relationship between organizations' resource dependency strategies and environmental uncertainty. It thought that the resource dependency strategies employed by organizations may have the potential to reduce uncertainty in their environments. Organizations may be able to mitigate the effects of environmental uncertainty and manage it more effectively through alliances, coalitions, and resource-sharing strategies developed with their external environment. Accordingly, a negative relationship between resource dependency and environmental uncertainty is proposed. In the theoretical section of the study, information is provided on resource dependency theory, environmental uncertainty, and the relationship between resource dependency and environmental uncertainty. In the methodology section, data obtained from the participating organizations were analyzed using SPSS 22, and the results were evaluated. It has been observed that existing literature on the relationship between resource dependency and environmental uncertainty primarily focuses on organizations within the same sector, with limited studies addressing sectoral differences. Therefore, this study is expected to fill this gap and contribute to the field.

## 1. THEORETICAL FRAMEWORK

### 1.1. Resource Dependence

The use of resource dependence theory in management, as developed by Pfeffer and Salancik (1978), dates back to the late 1950s and early 1960s. This theory was initially referred to as the contingency approach or conditional dependence. It is now called resource dependence theory, based on the use of external resources by organizations with examinations of the resulting uncertainty (Thompson, 1967). Organizations' dependence on their environments increases in their efforts to obtain the resources they need in highly competitive environments. In a pivotal work titled *The External Control of Organizations*, Pfeffer and Salancik (1978) evaluated the ways in which organizations are limited by their environments, the degree of dependence on the resources required by their activities, and the uncertainty created by situations of interdependence within the theory of resource dependence.

Many organizations are not self-supporting in carrying out their activities. Therefore, they need to obtain some of the resources they need from the external environment. Resources can be defined as any concrete or tangible assets that support an organization's strength or ward off weakness. As the resources of organizations become more critical, the heightened efforts to secure access to those resources and to maintain or expand ties with other organizations that can provide the resources in question are described as resource dependence (Pfeffer and Salancik, 1978: 17; Wernerfelt, 1984: 175).

The theory of resource dependence is widely applied in the strategic management of organizations. The main proposition of this theory is that organizational survival depends on the ability to obtain critical resources from the external environment. Organizations are dependent on the other organizations in their environments in obtaining the resources that are important to them, and this dependence is usually mutual (Casciaro and Piskorski, 2005: 170; Hillman and Dalziel, 2009: 385; Dress and Heugens, 2016: 1678).

Üsdiken (2010: 83) describes resource dependency theory as a strategy that seeks to explain the actions and purposes of organizations in response to the challenges and threats arising from their external environment, in order to ensure the uninterrupted continuation of their activities. He asserts that the core premise of the theory is built upon the definition and explanation of the organization, its environment, and the relationships between the organization and its environment.

De Vita and Wang (2006: 15) attributed organizations' decisions to outsource to four main factors. First, outsourcing the activities that fall outside of an organization's main field of activity may permit the reduction of costs. Second, organizations may also prefer to use outsourcing for activities more closely related to their main fields of activity; in this case, they aim to benefit from the technical expertise, skills, and knowledge of the suppliers in their environment. Third, organizations may decide to outsource to benefit from the advantages of suppliers who specialize in a particular field, which will allow them to keep up with changes and respond more quickly to customer expectations with constant developments in technology and globalization. Fourth, organizations might outsource with the aim of developing their core competencies, as using external resources in some areas may allow them to gain competitive advantages by focusing more heavily on the activities that add the most value.

Thus, this theory was designed to reveal the dependence of organizations on other organizations due to the fact that organizations may not possess all of the strategically important resources they need or cannot be self-sufficient. Resource dependence theory refers to the effects of dependencies on external organizations and the ways in which organizations design and apply strategies in this regard. This lack of necessary resources affects the uncertainty levels of organizations and they attempt to address that problem by carefully structuring and managing their relationships with other organizations (Pfeffer and Salancik, 2003; Davis and Cobb, 2010: 42; Singh, Power, and Chuong, 2011: 52; Dress and Heugens, 2013: 1666).

According to resource dependence theory, organizations are open systems that rely on external resources obtained through transactions with other organizations. Uncertainty becomes a management problem when organizational access to critical resources in the external environment is restricted or unreliable. In order to avoid such situations, organizations need to be proactive and dedicated, make changes in their internal

processes, and alter their organizational environment to ensure that they are able to deal with uncertainty (Singh, Power and Choung, 2011: 50; Tashman, 2021).

According to Pfeffer and Salancik (1978), the problems experienced by organizations are not only due to their dependence on their environment, but also due to the unreliability of the environment from which they obtain critical resources. The environment from which critical resources are obtained by organizations may change, with various other organizations entering or leaving the market, making the supply of resources decrease. In other words, environmental change can make critical resources scarce and create uncertainty for organizations.

In a subsequent work, Pfeffer and Salancik (2003) stated three factors that determine uncertainty in resource dependence theory. The first of these is resource intensity, which reflects the degree of need for external resources in order for organizations to survive and continue their activities. The second is the level of uncertainty in finding resources, and the third is resource connections, which indicate the interdependence of organizations. Organizations try to restructure themselves with different tactics to reduce the uncertainty and dependence in the flow of the resources they need. Some of the tactics that are used may be one-sided.

Organizations may develop alternative sources of supply to reduce the interest in a resource that is particularly valuable in the operating environment, or they may try to overcome the uncertainty by forming coalitions (Casciaro and Piskorski, 2005: 168). Organizations also use outsourcing to deal with resource dependence, viewing it as a tool to ensure success in competitive environments. (Rodriguez and Robaina, 2006: 52; Carey, Subramaniam, and Ching 2006: 14).

### 1.2. Environmental Uncertainty

From an organizational perspective, Johnson (1995) defined the "environment" as all factors that affect the activities of organizations. It includes the relationships of organizations with other organizations, their dependence, and uncertainty, and it has a dynamic structure that is continually changing. The environments of organizations can be divided into two dimensions as internal environments and external environments. The dimension referred to as the internal environment or the close environment is defined as the environment that consists of variables within the boundaries of the organization, which are completely under the control of the organization, sustain its main activities, create a profile that reflects information about the capabilities and resources of the organization, and are directly taken into account in physical, social, and strategic decision-making (Maier and Zenovia, 2012: 21).

The dimension referred to as the external environment or the general environment is the broader environment that develops outside the boundaries of the organization, which is not a part of the organization's system but has the power to affect its activities via external forces shaped by industry conditions and other actors including competitors, suppliers, governments, and customers (Pfeffer, 2019: 63; Zavialova, Magopets and Bobkov, 2023: 17).

Pfeffer and Salancik (1978) stated that the importance of the environment as a factor to be considered for organizations lies in the fact that it has the power to create uncertainty, and they explained the concept of uncertainty within the context of the theory of resource dependence. They defined uncertainty as the inability to accurately predict the situations that organizations will face in the future. Environmental uncertainty is defined as comprising the unexpected situations arising from the environment of an organization. Environmental uncertainty affects the distribution of power and control within organizations and their organizational policies, decisions, activities, and structures that emerge as a result of these unpredictable activities.

Environmental uncertainty can cause major problems for both the managers and employees of organizations. Structural and political changes in economic and social systems or technological advances may affect product life cycles. Market dynamics, technological advances, economic volatility, health and safety crises, social and cultural shifts, environmental and natural factors, globalization and international competition and political, legal changes factors that can increase environmental uncertainty (Fynes, Buirca

and Marshall, 2004: 182; Liao and Gartner, 2005: 25; Chen, Sharma and Zhan, vd., 2019: 88; Haarhaus and Liening, 2020: 1034).

Uncertainty arising from an organization's environment reduces the ability of that organization to control the flow of resources and creates compliance problems for decision-makers. In resource dependence theory, organizations faced with external uncertainty create trading environments as a strategic measure and establish inter-organizational relations against uncertainty (Paulraj and Chen, 2007: 35; Pfeffer and Salancik, 1978). Paulraj and Chen (2007: 15) examined the uncertainties arising from the external environment of organizations in three dimensions as supply uncertainty, demand uncertainty, and technological uncertainty. In order to reduce the uncertainty in these dimensions, organizations attempt to evaluate strategies for addressing resource dependence in areas such as strategic purchasing, long-term relationship orientation, commitment in the supply chain, and inter-organizational communication.

Supply uncertainty, which is considered among the uncertainty dimensions experienced by organizations, refers to the unpredictability or variability in the availability, timing or quantity of goods, materials or services that a business needs from its suppliers. Supply uncertainty can be caused by factors such as supply reliability, production delays, and financial instability When organizations experience supply uncertainty, it causes increases in purchasing functions, long-term cooperation investments with a limited number of suppliers, the dependence on external organizations, and transaction costs (Begen, Pun and Yan, 2016: 7; Griffin and Grote, 2020: 12).

Organizations are faced with fluctuations in demand and significant uncertainties, and this is referred to as demand uncertainty. In organizations facing demand uncertainty, non-ideal customer service, the need for increased inventory capacity, and increased inventory costs cause instability in organization operations and supply chains. In situations of increasing uncertainty, organizations can reduce the demand uncertainty that may occur by acting together with other organizations around them. In other words, organizations with increasing demand uncertainty need more close supply relationships (Liao, Deng, Shen, 2019, 23; Darvishmotevali, Altinay and Köseoğlu, 2020: 1043).

Uncertainties arising from the constant development of technology in the environment of an organization is called technological uncertainty. Technological uncertainty is a situation that organizations do not want to face. This uncertainty may also be defined as the question of whether the existing technology will fulfill the specific requirements that the organization needs to satisfy (Truman, 2000: 213; Bustinza, Vendrell, Herrero,vd., 2020: 1378).

Organizations must constantly update their level of innovation to adapt to changing environmental conditions. In order to cope with the uncertainty arising from technology, it is necessary to keep technological processes up to date and eliminate any gaps in the information about technological developments. Uncertainty in this field of activity can also create limitations in the existing capabilities of organizations. In order to alleviate this uncertainty and develop alternatives, deficiencies in information and technology should be identified and eliminated via collaborations with external organizations, and technological partnerships and coalitions should be formed (Peterson, Handfield and Ragatz, 2003: 287).

Pfeffer and Salancik (1978) have identified the primary function of resource dependency as the formation of a coalition aimed at enabling organizations to manage the uncertainties in their environment and ensure their survival. Consequently, they emphasize the existence of a reciprocal interaction between resource dependency and environmental uncertainty.

### 1.3. Relationship Between Resource Dependence and Environmental Uncertainty

The relationship between resource dependency strategies employed by organizations and environmental uncertainty is emphasized as a significant factor in coalition strategies and performance enhancement. Organizations use mergers, joint ventures, and policy actions related to resource dependency strategies to reduce and manage the uncertainty arising in their environment. Resource dependency theory is noted to have a considerable impact on how firms manage environmental uncertainty. It is highlighted that securing valuable resources and managing environmental uncertainty through relationships with other firms are

crucial. Additionally, the formation of inter-firm alliances and the effective management of internal resource conditions and external resource needs can also regulate environmental uncertainty. This strategy, primarily aimed at enhancing organizational performance and regulating dependence on external resources, is also an important factor in managing potential uncertainties in the environment (Dias and Magriço, 2011; Paulraj and Chen, 2007; Bendickson,Gur and Taylor 2018: 257; Çeltekligil, 2020: 137).

Boyd (1990: 428) in his study noted that large, high-performing firms that form alliances are more likely to encounter environmental uncertainty. Based on data from a study involving 147 companies, he concluded that resource dependency strategies are highly effective for large organizations in managing the environmental uncertainty they face, particularly regarding their boards of directors, performance, and alliances.

Dias and Magriço (2011: 761) conducted a study to investigate the relationship between resource dependency and perceived environmental uncertainty among firms. Their results indicated that as the perceived environmental uncertainty increases, the resource sharing, alliances, and control with external organizations decrease. The study highlights that as perceived environmental uncertainty risk decreases, resource sharing, alliances, and control over internal resources among organizations increase, suggesting a negative relationship between perceived environmental uncertainty and resource dependency strategies.

Delke (2015) treated resource dependency theory as a strategy used to reduce environmental uncertainty in organizational settings. His study evaluated the reduction of resource dependency strategies as a factor mitigating environmental uncertainty. He argued that decreasing organizational dependence on external environments is a factor that also reduces the risk of environmental uncertainty. Additionally, he suggested that reducing resource dependency improves supply management and decision-making.

Tashman and Rivera (2016: 1513) explored adaptation and mitigation factors related to environmental uncertainty through the management of resource dependency strategies. The results of their study indicated that while resource dependency strategies are effective in adapting to environmental uncertainty, they are not sufficiently effective in reducing the potential uncertainty.

Ganbold and Matsui (2017: 43) examined the impact of environmental uncertainty on supply chain integration from the perspective of resource dependency. The study, which involved firms in the manufacturing sector, found that resource dependency strategies positively affect the sub-dimensions of environmental uncertainty, including supply uncertainty, demand uncertainty, and technological uncertainty. The study suggested that an increase in resource dependency strategies among the firms also indicates an increase in the environmental uncertainty they face.

Bendickson, Gur and Taylor(2018: 259) investigated environmental uncertainty and firm performance through the lens of resource dependency theory. Their findings indicated that resource dependency strategies used by organizations mitigate the effects of environmental uncertainty. He also emphasized that in addition to reducing environmental uncertainty, these strategies enhance firm performance.

## 2. RESEARCH METHOD

### 2.1. Determination of the Study Sample

Studies aimed at determining the relationship between resource dependency and environmental uncertainty have typically been conducted in healthcare institutions or organizations within a single sector. Therefore, this study has been conducted on organizations from different sectors within the TR63 region and are listed in the ISO 500, in order to consider sectoral differences. The TR63 region includes three cities: Kahramanmaraş, Osmaniye, and Hatay, and there are 25 companies in this region listed in the ISO 500. The surveys used in the study were digitized and administered online between November 2022 and January 2023.

### 2.2. Scales Used in the Research

The Resource Dependence Scale used in this study was developed by Cai and Zang (2008). The original scale consisted of one dimension and seven items. The reliability coefficient of the original scale was found to be 0.85**.** The Environmental Uncertainty Scale was developed by Paulraj and Chen (2007). It consists of three dimensions and 13 items. The reliability coefficient of the original scale was 0.85. A 5-point Likert scale was used in both measures, ranging from "1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree".

### 2.3. Research Model and Hypotheses

The aim of this study is to examine the relationship between resource dependence and environmental uncertainty. According to the literature, resource dependence is considered a strategy employed by organizations to reduce uncertainty that may arise in their environment (Davis and Cobb, 2010: 35; Zhang, Wei, et al., 2020: 1215). A correlational survey model has been used in this study. The correlational survey model is a research model that aims to determine the existence and/or degree of change between two or more variables (Karasar, 2005). In this regard, the hypotheses of the study have been formulated as follows:

$H_1$: There is a negative relationship between organizations' resource dependence and environmental uncertainty.
$H_{1a}$: There is a negative relationship between resource dependence and supply uncertainty
$H_{1b}$: There is a negative relationship between resource dependence and demand uncertainty
$H_{1c}$: There is a negative relationship between resource dependence and technological uncertainty

## 3.FINDINGS

### 3.1. Analysis of Data Normality

It was determined whether the data met the conditions for a normal distribution using the Kolmogorov-Smirnov test. The Kolmogorov-Smirnov test is a method used for normal distribution analysis of small sample sizes. Therefore, the Kolmogorov-Smirnov test was utilized to analyze the normal distribution. Additionally, it is known that the Shapiro-Wilk test values are statistically stronger for small sample sizes, where $n < 30$ (Pallant, 2017; Pituch and Stevens, 2015). (Pallant,2017; Pituch and Stevens, 2015). As a result of this analysis and as shown in Table 1, the data obtained with the Resource Dependence Scale were found to not be normally distributed ($p < 0.05$) (Pallant, 2017; Gamgam and Altunkaynak, 2017: 412; Liang, Fu, and Wang, 2019: 425; Watkins, 2020: 457). The normality values of the scales used in this study are given in Table 1.

**Table 1.** Analysis of Data Normality

| | Kolmogorov-Smirnov | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
| **Group** | **Statistics** | **df** | **P** | **Statistics** | **df** | **p** |
| Resource Dependence | 0.134 | 23 | 0.200 | 0.907 | 23 | 0.036 |
| Environmental Uncertainty | 0.155 | 23 | 0.157 | 0.968 | 23 | 0.637 |

Significance assumed at $p < 0.05$.

### 3.2. Reliability and Validity Analysis of the Scales

It is generally said that the Cronbach alpha coefficients obtained from the reliability and validity analyses performed for scales used as research tools should be equal to or greater than 0.70. According to another point of view, it is acceptable for this coefficient to be above 0.50 (Green and Salkind, 2010).

The findings from the reliability analysis of the scales used in this study and their dimensions are given in Table 2.

**Table 2.** Reliability Analysis of Scales

| | Number of Questions | Cronbach's Alpha |
|---|---|---|
| **RESOURCE DEPENDENCE** | 7 | **0.90** |
| **ENVIRONMENTAL UNCERTAINTY** | 13 | **0.83** |
| Supply Uncertainty Dimension | 4 | 0.70 |
| Demand Uncertainty Dimension | 5 | 0.77 |
| Technological Uncertainty Dimension | 4 | 0.81 |

The values obtained as a result of Cronbach alpha analysis for the Resource Dependence Scale and Environmental Uncertainty Scale were found to be greater than 0.70 ($\alpha = 0.90$ and $\alpha = 0.83$ respectively). Accordingly, it was concluded that both scales used in this study were reliable.

### 3.3. Frequency Analysis of the Sample

Frequency analysis was also applied to the data obtained in this study. In frequency analysis, the period of activity, the area of activity, and the provinces in which the organizations were located were analyzed.

**Table 3.** Frequency Analysis of Data

| Age of the Organization | Frequency | Valid Percent |
|---|---|---|
| 1-10 Years | 1 | 4,0 |
| 11-20 Years | 4 | 16.0 |
| >20 years | 20 | 80,0 |
| Total | 25 | 100.0 |
| **Sector of Companies** | | |
| Metal Industry | 2 | 8,0 |
| Weaving Industry | 8 | 32,0 |
| Iron and Steel Industry | 10 | 40,0 |
| Others | 5 | 20,0 |
| Total | 25 | 100,0 |
| **Province in Which the Organization Operates** | | |
| Osmaniye | 2 | 8.0 |
| Hatay | 10 | 40.0 |
| Kahramanmaraş | 13 | 52.0 |
| Total | 25 | 100.0 |

According to the findings of frequency analysis 20 (80%) of the participating organizations had been in operation for periods of more than 20 years, while 4 (16%) had been operating for 11-20 years, 1 (4%) had been operating for 1-10 years.

Considering the sectors in which the organizations operated, the highest rate was observed for the iron and steel sector, in which 10 (40%) of the participating organizations operated. The sector with the second highest rate of activity was the weaving industry (32%). Other participating organizations' rate was 5 (%20). Considering the locations of the participating organizations, 13 organizations were based in Kahramanmaraş (52%), while 10 operated in Hatay (40%) and 2 in Osmaniye (8%).

### 3.4. Spearman Correlation Analysis of Variables

Spearman correlation analysis was also performed in this study. Correlation analysis is a method used to test the relationship between two variables. Accordingly, correlation analysis was utilized to determine the relationship between the variables of resource dependence and environmental uncertainty included in the study. The value to be considered in Spearman correlation analysis is the p-value, which is expected to be less than 0.05 in the event of a significant relationship between variables ($p < 0.05$). A p-value above 0.05 indicates that there is no relationship between the variables of interest (Corder and Foreman, 2009; Carver and Nash, 2012: 250). (Corder and Foreman, 2009; Carver and Nash, 2012: 250).

**Table 4.** Correlation Analysis of Variables

| Spearman Correlation Analysis | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| **Resource Dependence** | r | 1 | | | | |
| | p | | | | | |
| | Total | 25 | | | | |
| **Environmental Uncertainty** | r | .099 | 1 | | | |
| | p | .637 | | | | |
| | Total | 25 | 25 | | | |
| **Supply Uncertainty** | r | -.070 | .705** | 1 | | |
| | p | .740 | .001 | | | |
| | Total | 25 | 25 | 25 | | |
| **Demand Uncertainty** | r | .246 | .788** | .268 ** | 1 | |
| | p | .236 | .001 | .078 | | |
| | Total | 25 | 25 | 25 | 25 | |
| **Technological Uncertainty** | r | .011 | .811 ** | .443 ** | .454 ** | 1 |
| | p | .958 | .001 | .002 | .007 | |
| | Total | 25 | 25 | 25 | 25 | 25 |

**1: Resource Dependence, 2: Environmental Uncertainty, 3: Supply Uncertainty, 4: Demand Uncertainty, 5: Technological Uncertainty**

Significance assumed at $p < 0.05$.

According to the data obtained as a result of spearman correlation analysis, there is no relationship between resource dependence and environmental uncertainty ($p > 0.05$, r= 099, p = .637). In addition, no relationship was found between resource dependence and the variables of supply uncertainty ($p < 0.05$ p = ,740), demand uncertainty (p = ,236) and technological uncertainty (p = ,958), which constitute the sub-dimensions of environmental uncertainty. Accordingly, it can be said that the resource dependence strategies used by the organizations in the study are not related to environmental uncertainty.

On the other hand, relationships between the Environmental Uncertainty Scale and the dimensions of the scale were observed. The changes that may occur in the uncertainty arising from the environments of the organizations participating in this study are determined by the dimensions of supply uncertainty ($p = 0.001$, $r = 0.705$), demand uncertainty ($p = 0.001$, $r = 0.788$), and technological uncertainty ($p = 0.001$, $r = 0.811$). In this context, it was observed that the relationship between environmental uncertainty and technological uncertainty was higher than the relationships for other dimensions.

Studies in the literature indicate that resource dependence is used as a strategy to reduce and manage environmental uncertainty and that there is a relationship between these two variables (Davis and Cobb, 2010: 35; Zhang, Wei, et al., 2020: 1215). However, it has been observed that organizations' use of outsourcing and resource dependence strategy is not related to environmental uncertainty. Even if it is known that this strategy has a role in regulating environmental uncertainty, it is also known that it is used by organizations to gain cost advantage and competitive advantage, to improve performance, and to monitor environmental and organizational change (Christmann, 2000: 670; Raskovic and Brencic, 2003; Fink, Edelman, Hatten, et al., 2006: 502; Newbert and Tornikoski, 2013: 257). In this direction, as a result of the analysis of the institutions participating in the study, it can be said that even if resource dependence is not related to environmental uncertainty, this strategy is used for different purposes.

## CONCLUSION

Resource dependency theory is defined as a strategy that considers organizations as open systems and tries to explain the activity process of organizations with the interaction with their environment. The organizational environment is a very effective factor in the theory, which deals with the process of obtaining resources from external firms and dependence on external firms, which are not sufficient for the organizations themselves. In organizations that are accepted as open systems, the environment is considered as a factor that affects and is affected by the activity process of the organization. It is known that an uncertainty in the environment, which is very important for organizations, will negatively affect the operational process of the organization. Studies in the literature indicate that the resource dependence strategies of organizations affect the course of environmental uncertainty. In this study, it is aimed to investigate the relationship between resource dependence strategies of organizations and environmental uncertainty.

It is hypothesized that there is a negative relationship between resource dependency and environmental uncertainty. It is believed that strategies such as resource sharing, alliances, and partnerships with the external environment are effective factors in reducing, adapting to, and managing environmental uncertainty. The literature also reveals studies that support this hypothesis (Delke,2015; Tashman and Rivera,2016). In the theoretical framework of the study; resource dependency theory, environmental uncertainty are discussed. The population of the study consists of companies in the TR63 Region, which are among Turkey's 500 largest companies (ISO 500) published by the Istanbul Chamber of Industry in 2021. The questionnaire used in the study was transferred to an electronic format and administered by sending it to the email addresses of the organizations. The data obtained from the organizations were analyzed using SPSS 22, including normality, reliability, and spearman correlation analyses.

Spearman correlation analysis was used to evaluate the hypothesis $H_1$: "There is a negative relationship between resource dependence and environmental uncertainty." As a result of the analysis, it was observed that there is no relationship between resource dependence and environmental uncertainty. According to this result, $H_1$ hypothesis is rejected. It can be said that the resource dependence strategies used by the organizations in the study are not a strategy used to reduce or manage resource dependence. Hillman, Cannela, and Paetzolt (2000:26), Berman,Philips and Wicks (2005: 6) stated that resource dependence strategy is not only a strategy related to environmental uncertainty for organizations, but also stakeholder relations, corporate governance, firm performance and stakeholder performance should be evaluated. However, in line with the studies conducted in the field, it is argued that resource dependence is a strategy that regulates the relations of organizations with the environment, adapts, reduces and manages the uncertainty in their environment (Davis and Cobb, 2010: 35; Zhang, Wei, et al., 2020: 1215).

The sub-hypotheses of the study are as follows, "$H_{1a}$: There is a negative relationship between resource dependence and supply uncertainty. $H_{1b}$: There is a negative relationship between resource dependence and demand uncertainty. $H_{1c}$: There is a negative relationship between resource dependence and technological uncertainty." As a result of the correlation analysis conducted between the hypotheses, it was seen that there was no relationship and hypotheses $H_{1a}$, $H_{1b}$ and $H_{1c}$ were not accepted. In line with these results, it can be said that the resource dependence strategies used by the organizations participating in the study are not related to the sub-dimensions of environmental uncertainty. It is thought that these organizations use different strategies in addition to resource dependence in their efforts to manage, reduce and adapt the environmental uncertainties they face. However, there are studies indicating that organizations that use resource dependence as a factor in reducing and managing environmental uncertainty should also consider the sub-dimensions of environmental uncertainty, namely supply, demand, and environmental uncertainty, and apply the resource dependence strategies used according to these factors (Ganbold and Matsui, 2017: 46).

In the literature, research on resource dependency has predominantly focused on areas such as competitive advantage, organizational performance, and cost advantage. Studies that examine the relationship between resource dependency and environmental uncertainty have typically explored the mediating role and have been limited to a single sector. The scarcity of research in this domain has been observed and it is expected to contribute that this study will make a meaningful contribution to the field. Additionally, the study's

application to organization operating across different sectors is expected to facilitate the identification of sectoral differences. Nevertheless, the study's scope is limited by its focus on organizations within the TR63 region that are listed in the ISO 500. It is thought that future studies in this field will yield effective results if they are conducted in different sectors, with large samples and with different analysis methods.

***Ethics Statement:*** *Permission for this study was obtained from the Ethics Committee of Kahramanmaraş Sütçü İmam University with the decision number 3 at the meeting dated 19/01/2023 and numbered 2023/3 of the relevant board. In case of detection of a contrary situation, the Journal of Social Economic Research has no responsibility and all responsibility belongs to the author (s) of the study.*

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