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Araştırma Makalesi/Research Article

SOURCES THAT MANAGERS PREFER FOR BUSINESS INFORMATION NEEDS

YÖNETİCİLERİN İŞLETME ENFORMASYON İHTİYAÇLARI İÇİN TERCİH ETTİKLERİ KAYNAKLAR

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Abstract

This study aims to reveal how business managers associate their information needs and the information sources to meet these needs. In order to answer this question, face-to-face interviews were carried out with a total of 327 business managers working in various sectors. Information sources are encoded by using content analysis with personal and non-personal, internal and external dimensions. Results obtained have shown that managers mainly prefer non-personal information sources. Accordingly, business managers who face problems of sustainability and competitiveness seek personal and internal information while those who face problems of growth and innovation seek non-personal and external information. As for the problem profitability, managers refer to non-personal and internal information. The findings aim to contribute to strategic management and environmental scanning literature as well as to implementers. The research results might be guiding for identifying the information needs of managers in a more focused way and meeting this need more efficiently.

Keywords: Organizational perception, information source, information need, strategic management, organization-environment interaction

Öz

Çalışmanın amacı işletme yöneticilerinin enformasyon ihtiyaçları ile bu ihtiyaçlarını giderecekleri enformasyon kaynaklarını nasıl ilişkilendirdiklerini ortaya çıkarmaktır. Bu soruya cevap oluşturmak için çeşitli sektörlerde faaliyet gösteren toplam 327 işletme yöneticisi ile yüz yüze görüşmeler yapılmıştır. Enformasyon kaynakları kişisel ve kişisel olmayan ile içsel ve dışsal boyutlarda içerik analizi kullanılarak kodlanmıştır. Elde edilen sonuçlara göre yöneticilerin kişisel olmayan enformasyon kaynaklarını daha çok tercih ettikleri ortaya çıkmıştır. Buna göre, sürdürülebilirlik ve rekabetçilik sorunları ile karşı karşıya kalan yöneticiler kişisel ve içsel enformasyona, büyüme ve yenilik sorunları ile karşı karşıya kalan yöneticiler ise kişisel olmayan ve dışsal enformasyona yönelmektedirler. Karlılık sorununda ise yöneticiler kişisel olmayan ve içsel enformasyona başvurmaktadırlar. Bulgular stratejik yönetim ve çevre tarama literatürünün yanında uygulayıcılara da katkı sağlamayı hedeflemektedir. Araştırma sonuçları yöneticilerin enformasyon ihtiyaçlarını daha odaklı tanımlama ve bu ihtiyaçlarını daha etkili giderme konusunda yol gösterici olabilecektir.

Anahtar Kelimeler: Örgütsel algı, enformasyon kaynağı, enformasyon ihtiyacı, stratejik yönetim, örgüt-çevre etkileşimi

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GENİŞLETİLMİŞ ÖZET

Çalışmanın Amacı

Çalışmanın amacı işletme yöneticilerinin enformasyon ihtiyaçları ile bu ihtiyaçlarını giderecekleri enformasyon kaynaklarını nasıl ilişkilendirdiklerini ortaya çıkarmaktır. Literatürde enformasyon ihtiyacı ile enformasyon kaynaklarının doğrudan ilişkilendirilmesi yoğun çalışılan bir konu değildir. Böylece bu çalışma ile literatürdeki çalışmalara farkı bir bakış sunmak mümkün olabilecektir.

Yöntem

Araştırma sorusu enformasyon edinimi sırasında yöneticilerin kaynak ve ihtiyaç başlıklarına yükledikleri anlamları takip etmeyi gerektirdiği için nitel araştırma yöntemlerinden fenomonolojik model kullanılmıştır. Araştırma Ankara'da faaliyet gösteren 327 işletme üzerinde yürütülmüş ve bu işletmelerin yöneticileri ile yapılan yüz yüze görüşmeler sonucunda elde edilen veriler analiz edilmiştir. Görüşmeler Ekim 2017 ile Kasım 2018 tarihleri arasında 14 ayda yapılmıştır.

Bulgular

Araştırmada öncelikle yöneticilerin enformasyon ihtiyaçlarına konu olan sorunlar tespit edilmeye çalışılmıştır. Bu amaçla yapılan görüşmelerde yöneticileri enformasyon arayışına yönelten temel sorunlar sürdürülebilirlik, karlılık, rekabetçilik, büyüme ve yenilik olarak tespit edilmiştir. Elde edilen sonuçlara göre yöneticilerin kişisel olmayan enformasyon kaynaklarını daha çok tercih ettikleri ortaya çıkmıştır. Buna göre, sürdürülebilirlik ve rekabetçilik sorunları ile karşı karşıya kalan yöneticiler kişisel ve içsel enformasyona, büyüme ve yenilik sorunları ile karşı karşıya kalan yöneticiler ise kişisel olmayan ve dışsal enformasyona yönelmektedirler. Karlılık sorununda ise yöneticiler kişisel olmayan ve içsel enformasyona başvurmaktadırlar.

Sonuç ve Tartışma

Çalışmada elde edilen bulgular ışığında yöneticilerin yaşadıkları sorunlara bağlı olarak farklı enformasyon kaynaklarını kullandıkları iddia edilebilir. Bu durumda karar vericiler açısından ya da işletmelerin içinde bulundukları şartlar çerçevesinde önem verdikleri sorunlara bağlı bir enformasyon yönetim sisteminin gerekliliği ortaya çıkmaktadır. Bu çalışma ile tüm işletmeler açısından geçerli bir enformasyon yönetim sisteminin olması gerektiği gibi bir savın zaman, mekan ve çevre dinamikleri açısından mümkün olamayacağı ortaya çıkmıştır. Çalışma sonuçları bağlamında yöneticilerin enformasyon kaynaklarını enformasyon ihtiyaçlarını tanımlayan sorunların yapısına uygun kullandıklarını iddia etmek mümkün olmaktadır.

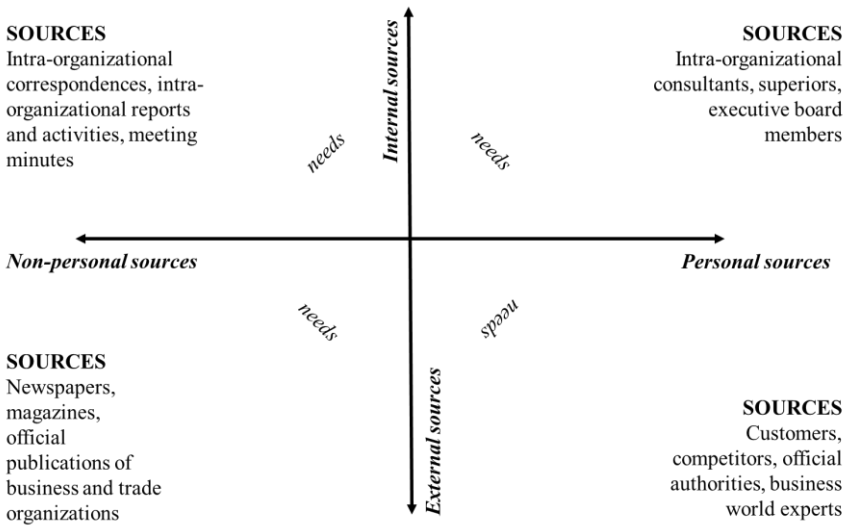
INTRODUCTION

This study investigates how the relationship between information sources and information need form. This area of interest of the study has mainly been analysed under the topics of strategic management and environmental scanning within the organizational studies literature. Since organizations are open social systems that process information, they need a dynamic structure, complex relations, and a continuous interaction with the external environment (Daft & Weick, 1984). This is a requirement for them to maintain their life. In order to meet the aforementioned needs, managers develop sensitivity towards changes in their environment. As a result of this sensitivity, managers scaffold their decision-making mechanism to a process of environmental scanning based on environmental character (complexity, interaction, structure, capacity, etc.) (Kourteli, 2000). The environmental scanning process is constructed the stages of information acquisition, filtration, selection and processing (Hambrick, 1981).

Within this perspective, this study focuses on information acquisition within the environmental scanning process. Within this framework, we tried to answer the question of how managers, during information acquisition, establish a relation between their information needs and information sources. Under this question, we investigated the needs of managers' information needs and which information sources they prefer to use regarding these needs. And also, we tried to understand how they associate needs with sources.

It is not often observed within the literature that information needs and information sources are directly associated with each other. Broadly, two different viewpoints have emerged in researches with respect to the grouping of information sources. The first viewpoint is grouping information sources as intra-organizational and extra-organizational (Kobrin, Basek, Blank, & La Palombara, 1980; Lester & Waters, 1989; Maier, Rainer, & Snyder, 1997; Snyder, 1981), while the second is the one that groups information sources as personal and non-personal (Aguilar, 1967; Du Toit, 2016; O'Connell & Zimmerman, 1979). Studies carried out in the areas where these two viewpoints intersect focus on establish a relation between information needs and scanning type (Daft & Weick, 1984). In this study, information sources were expressed on these two axes (Figure 1), and managers' information needs were investigated in the areas between the two axes. This approach will make it possible to offer a different viewpoint on the studies within the literature.

Figure 1. Viewpoint of the Research



Since the research question requires tracking the meanings that managers attribute to the topics of source and need during information acquisition, the phenomenological model – one of the qualitative research methods – was used. The research was carried out on 327 enterprises operating in Ankara, and the data obtained from face-to-face interviews with the managers of these enterprises have been analysed. It took 14 months to collect all data. The findings aim to contribute to strategic management and environmental scanning literature as well as to implementers. The research results might be guiding for identifying the information needs of managers in a more focused way and meeting this need more efficiently.

In line with this purpose, the following sections feature a review of previous studies in the literature, discussion on the method and findings of the study, and the results obtained.

1. LITERATURE

The subject of the research was investigated predominantly within the environmental scanning literature. In the environmental scanning literature, information acquisition has been regarded as the provision of information needed from different sources into the organization. According to Steyn and Puth, environmental scanning comprises the phases of scanning, interpretation and learning as part of the interpretation process within the organization (Steyn & Puth, 2000, pp. 165-167). According to Choo (2002), environmental scanning is the process of acquiring and using information about the events, trends and relationships in the external environment of the organization for helping the management in making the organization's future activity plan. Because for organizations, being sensitive to, and being able to see environmental changes is a success criterion (Choi & Yi, 2018; Lui, Shih, Liau, & Lai, 2009). Today, environmental scanning is also seen as a means of shaping the organization's future (Tonn, 2008). The reason why the organization scans the environment is the need to change its affairs, internal structure, function or certain aspects of its environment (Maier, 1992, p. 66).

Leading among the first authors, Ansoff emphasised that acquiring information about the future of organizations. Ansoff (1965) regarded environment as an important concept of strategy, defined its different forms, and described information acquisition as management responsibility. Aguilar (1967) also acknowledged that environmental scanning is a management responsibility and defined personal and non-personal sources required for acquiring information in this process. According to Aguilar, personal information sources are those such as customers, competitors, executive board members and juniors; while non-personal information sources are newspapers, government publications, media, intra-organizational reports or electronic information services. Aguilar (1967) claimed that personal information sources are more important than non-personal information sources. He also emphasised in his pioneering study that the most important personal sources are juniors and customers, and that the most important non-personal source is publications.

Likewise, Hambrick (1981) defined environmental scanning as the first step of the chain of continuous perception and actions leading the organization to adapt to the environment, and interpreted events and trends in the organization's environments as the managerial activity of learning. Because composing interpretations about the environment is the basic requirement of individuals and institutions, and thus certain

personal processes need to be followed in information acquisition (Hambrick, 1981, pp. 42-46). With this point of view, personal competences required for information acquisition are stressed. According to Hambrick (1981), the overall amount of scanning carried out by managers with high researching qualities equals to the overall amount of scanning carried out by managers with high defending qualities. However, researching managers scan the entrepreneurial sector more, while defending managers scan the engineering sector more. The amount of administrative and regulatory scanning makes no difference between both groups of managers. O'Connell and Zimmerman (1979) contributed to studies in this field by finding that, if the organization's environment is restricted to international environment, the most important source in environmental scanning is central office management and employees, that is, personal. Smeltzer, Fann, and Nikolaisen (1988) also supported the same finding and ascertained that family members and customers are the most prevalent personal sources, while magazines are the most prevalent non-personal sources. Du Toit (2016) found in his study in which he questioned managers' approach toward this issue that only 27% of organizations have a formal environmental scanning system. According to the study in question, personal sources such as customers, salespeople and suppliers are the most significant information sources, while non-personal sources such as annual reports, market research reports, newspapers and trade magazines are secondary information sources.

It would not be wrong to say that the investigation of whether information sources are internal or not started with Kobrin et al. (1980). They stated that, in foreign social and political environments, internal information sources (subsidiaries, regional managers and headquarters personnel) are more important than external information sources (banks, official institutions etc.). Lester and Waters (1989) found that online information services – one of the external information sources – are shown considerable interest and in some cases used substantially; however, the use of published sources is instantaneous and has low effect. According to Culnan (1983), managers' perception of source accessibility and complexity perception of the task environment play a predominant role in determining the information source usage. Culnan's finding (p. 203) indicates that these two variables have a positive effect on the information source usage. According to the same study (p. 204), in large organizations, staff employees use more external information sources than line employees.

In a series of studies pioneered by Daft and Weick (1984), information acquisition is defined as a process involving both viewing and searching Choo (1999). Researches carried out in the light of this viewpoint focus on four types of organizational scanning. These are undirected viewing, conditioned viewing, informal search, and formal search (Daft & Weick, 1984, p. 289). According to Daft and Weick (p. 291), if the organization deems the environment unanalysable, the sources it uses during scanning are external and non-personal. And if the organization defines the environment as analysable, its scanning efforts tend to be internal and personal. According to this study (Daft & Weick, 1984), whether the organization's behaviour towards the environment is active or passive has no impact in terms of data sources it will need.

2. METHOD

In the light of this literature we follow the information that collected and use in specific areas of problems. Within the scope of this concept, by focusing on managers' perceptions and attitudes towards

information, we investigated which needs enterprises determine and how they satisfy these needs. For this investigation, phenomenological model – one of the qualitative research methods – was used as the most effective means. In accordance with Creswell (2014), our research model was composed of five phases. In the first phase, we "horizontalized" the data. In this phase, we tried to understand what participants say in terms of the concept of information. We tried to define and understand basic subjects regarding the concept within these statements. In the second phase, we grouped the related subjects as meaning units on the basis of the concept of information. In the third phase, we made "word-for-word" quotations of the textual explanations. Then in the fourth phase, we created the structural definitions. And in the fifth and last phase, we defined the essence of the phenomenon by making textual and structural analyses. In this phase, we set forth common elements repeated in each participant.

2.1. Sample, Data Collection and Analysis

We sought the relation between information sources and needs within the business experiences of decision-makers. To this end, successful people who have at least ten years of experience in the business world and manage profitable enterprises were selected. We made one-to-one interviews with a total of 327 business managers in Ankara. The interviews were carried out in 14 months, from October 2017 to November 2018. The interviews with the participants lasted 20 minutes on average.

In the interviews with managers, we tried to understand what kind of information they need in business management, and their sources. To this end, we asked them about the problems they have, and investigated what kind of information they need to eliminate these problems. The interviews were conducted by five people using common questions and recorded.

For analysis, we used the method of "coding based on concepts" extracted from the data (Strauss & Corbin, 1990). This coding method is used, as in this study, for researches carried out on subjects that have no certain theoretical reference. Since there is not a theoretical structure to guide in the analysis of the collected data, the structure is created by the researcher by subjecting the collected data to an inductive analysis (Strauss & Corbin, 1990). In the study, codes were produced directly from the data through inductive analysis, and within this framework, three coders created 1803 codes. We used a software program called NVivo which is designed to analyze qualitative data.

We performed the reproducibility test in order to control the reliability of the study (Krippendorff, 2004, pp. 214-216). This method steps in if more than one person take part in the analysis of the data set. Differently from other methods (stability and accuracy), this method is used more when there is more than one coder. We preferred this method in our research due to the fact that there is not a standard template for coding and a temporal concern as well as the fact that there is more than one coder. According to this method, there should be coherence and consistency among the individuals who analyse the same data in terms of the analysis of the data. In the study, we found the α value showing coherence among codes made by the coders to be 0.783. Accordingly, we concluded that the results are valid (Krippendorff, 2004, p. 230-232).

3. FINDINGS

In the study, we primarily tried to ascertain the problems related to the information needs of managers. In the interviews carried out with this purpose, we investigated the basic problems leading them to search for information. These problems are listed below according to their frequency (Table1).

Table 1. Primary Problem Areas for Managers

Problem	# frequency	% percentage
Sustainability	75	26
Profitability	63	22
Competitiveness	57	20
Growth	55	19
Innovation	37	13
Total	287	100

This list defines the information needs of managers. At this point, basic literature review is presented regarding the concepts comprising the list:

The concept of **institutional sustainability** was mainly introduced by the United Nation's World Commission on Environment and Development – also known as the Brundtland Commission. The commission defined sustainability as "development that ensures that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p. 43), which was widely accepted by business managers, politicians and NGOs (Dyllick & Hockerts, 2002). For institutions, sustainability has been regarded as a necessity for achieving organizational goals effectively as well as for enhancing social and human welfare simultaneously (Sharma & Ruud, 2003). Institutional sustainability studies focus on the adoption of the concept by companies in general (Azzone & Bertelè, 1994; Dunphy, 2003; Hunt & Auster, 1990). After this approach, which considers the internal structure of the organization mainly as a "black box" (Howard-Grenville, 2006), sustainability criteria such company loyalty, workplace satisfaction and employee turnover rate started to be discussed (Wilkinson, Hill, & Gollan, 2001). These studies define intra-organizational factors such as senior management support, human relations management, environmental training, empowerment of employees, team work and reward systems as important elements for maintaining institutional sustainability (Daily & Huang, 2001; Wilkinson, Hill, & Gollan, 2001).

In the literature, **profitability** is rather defined through concrete criteria. For example, Terpstra and Rozell (1994) investigated whether organizations that have strategic goals and use them are more profitable than organizations that do not use them. According to them, there is a positive relation between strategic goal usage and profitability. In another study (1997), the same authors demonstrated that, although information sources related to academic research are used much less than sources related to implementer information, academic sources are significantly associated with organizational profitability.

Competitiveness is interpreted in the literature mainly as function of intra-organizational competences. Cox and Blake (1991) define these competences as cost, source diversity, marketing, creativity, problem solving and system flexibility. Those who have these competences are claimed to have a high-level competitive characteristic. When considered in terms of the source-based approach, the human capital of the organization may improve competitiveness by creating value if it contributes at low costs and

provides customers with better service or product features (Ulrich & Lake, 1991). When considered in terms of the economy-based approach, the transaction cost theory shows that organizations gain competitive advantage when they have accurate sources that cannot be copied by their competitors (Williamson, 1975). And in the strategy-based approach, Porter (1998a) emphasise that competitiveness can be developed in three ways: by improving the efficiency of organizations, by improving the direction and speed of innovations, and by improving the growth of new institutions and organizations. According to Porter (1998b, p. 77), competitive advantage in a global economy lies in local factors that competitors cannot access: knowledge and relationships. Malecki (2004) achieved the same result by investigating Porter's findings on regional and urban competitiveness. According to him, local factors in which knowledge is created, technology is shared and knowledge exchange exists enhance competitiveness. Flanagan, Jewell, Ericsson, and Henriksson (2005) revealed, in their study on competitiveness in the construction sector in England, Sweden and Finland, that risk management skills, innovative building techniques, usage of information technologies and openness to change are the sources of competitive advantages. Berman, Down, and Hill (2002) found in their study that tacit knowledge is one of the factors that underlie sustainable competitive advantage.

Growth is treated as a vital element for firms to maintain their existence (Geroski, 1995; Okwo, Ezenwakwelu, Igwe, & Imhanrenialena, 2019; Sutton, 1997). The basic variables of growth were investigated in many studies within the literature (Agarwal & Audretsch, 2001; Baldwin & Rafiquzzaman, 1995; Boeri & Cramer, 1992; Davidsson & Delmar, 1997; Joseph & Wilson, 2018; Jovanovic, 1982; Lucas, 1978). These studies basically focused on two perspectives. The first one argued that growth should be expressed using multiple indicators, which is led by Davidsson and Delmar (1997), while the second one argued that growth should be defined through a single indicator (such as market value, number employees, sales, revenues, production or added value) (Hoy, McDougall, & Dsouza, 1992; Weinzimmer, Nystrom, & Freeman, 1998). Besides these discussions, whether growth originates from environmental factors (Davidsson & Delmar, 2006; Dess & Beard, 1984) or factors specific to the organization (Baum & Locke, 2004) created another area. In the light of these discussions, it is seen that information sources regarding growth are discussed rather within the framework of non-personal sources.

Innovation may be defined as new method in organizational processes, management process and technique development, information processing and implementation of them (Gopalakrishnan & Damanpour, 2000, p. 15). According to Kumar and Swaminathan (2003, p. 795), organizational innovation requires information usage. Hult, Hurley, and Knight (2004, p. 429) claim that information used in innovation enhances the control and competence of the management over processes. Thus, the efficiency and effectiveness of the organization improves (Aiello, Mannarino, & Pupo, 2019; Kijek & Kijek, 2019; Rajapathirana & Hui, 2018).

These areas of problem refer to the areas of need for acquiring information as well. Managers feel the need for information basically in these areas. After this phase, the answers given by managers regarding information sources were coded in two dimensions. The first dimension is personal or non-personal information sources, while the second dimension is internal or external sources. The codes created in these dimensions are shown in Table 2.

Table 2. Information Sources

		A: Personal		B: Non-Personal		Total
		#	%	#	%	
1: External	#	309	0.36	540	0.64	849
	%	0.43		0.50		
2: Internal	#	415	0.44	539	0.56	954
	%	0.57		0.50		
Total		724		1079		1803

Accordingly, managers prefer non-personal information sources more than personal sources (64%-36%), and internal sources more than external sources (57%-43%). The preference rate of non-personal sources in external information sources (64%) is higher than the preference of non-personal sources in internal sources (56%). While personal information sources are preferred more in internal sources, no differentiation was made on the preference of internal or external sources in terms of non-personal sources.

In the study, we also investigated within the framework of which problems these sources are determined. To this end, we analysed the problems managers experienced. During the grouping, 12% of problems related to personal information sources, and 16% of problems related to non-personal information sources could not be coded. The information managers need in five problem areas are summarized in Table 3.

Table 3. Information Sources-Problems

		Sustainability		Profitability		Competitiveness		Growth		Innovation		TOTAL
		#	%	#	%	#	%	#	%	#	%	
1: External	#	113	0.16	81	0.12	102	0.15	255	0.37	139	0.20	690
	%	0.14		0.14		0.15		0.42		0.33		
2: Internal	#	300	0.35	212	0.24	232	0.27	53	0.06	69	0.08	866
	%	0.37		0.36		0.34		0.09		0.17		
3: Personal	#	221	0.35	93	0.15	199	0.31	74	0.12	53	0.08	640
	%	0.27		0.16		0.30		0.12		0.13		
4: Non-Personal	#	187	0.21	198	0.22	140	0.15	231	0.25	154	0.17	910
	%	0.23		0.34		0.21		0.38		0.37		
TOTAL		821		584		673		613		415		3106

Accordingly; external information sources are used the most for growth problems (37%), and following that, for solving innovation problems (20%). External information sources are used the least for solving profitability problems (12%).

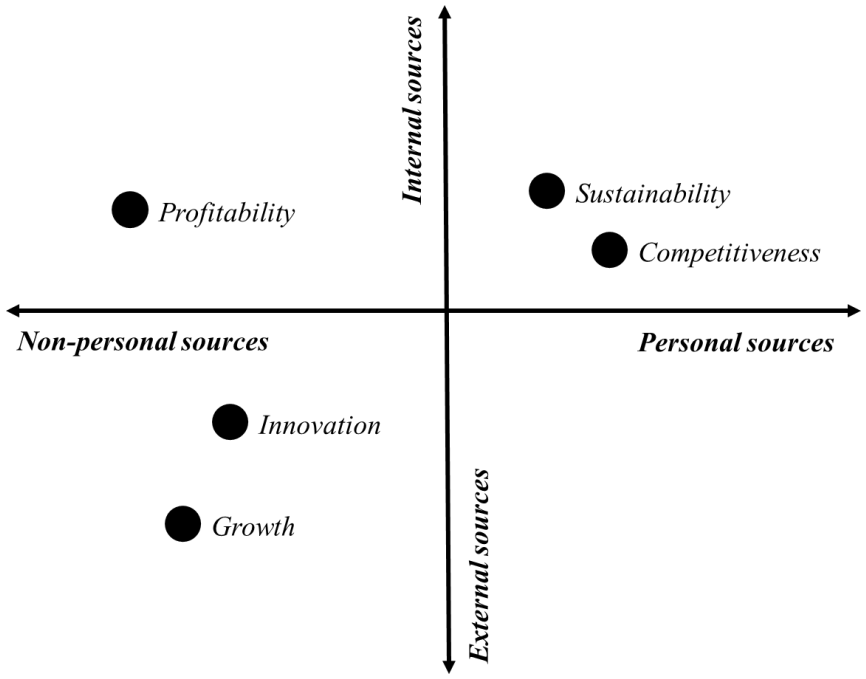
Internal information sources are used the most for solving sustainability problems (35%). Another area of usage of internal information sources is competitiveness (27%). Internal information source is referred to the least for solving growth problems (6%).

Personal information sources are preferred the most for sustainability problem (35%), and following that, for competitiveness problem (31%). The problem for which personal information sources are preferred the least is defined as innovation with 8%.

Non-personal information source is seen to be preferred the most for growth problem (25%). The second biggest area for which non-personal information source is preferred was found to be profitability problem with 22%. Competitiveness was defined by managers who participated in the study to be the area that non-personal information source was used the least (15%).

As for the information sources preferred the most in terms of problems; what stands out is internal (37%) and personal sources (27%) in sustainability, internal (36%) and non-personal sources (34%) in profitability, internal (34%) and personal sources (30%) in competitiveness, external (42%) and non-personal sources (38%) in growth, external (33%) and non-personal sources (37%) in innovation. The relation between problem areas and information sources based on the findings obtained is presented in Figure 2.

Figure 2. Information Sources-Problems



CONCLUSION

In this study, it is revealed how managers relate their information needs and information resources to meet these needs. Thus, it was possible to present a different perspective to the studies in the literature. First of all, the problems that are subject to the information needs of the managers have been identified. In the interviews conducted within this framework, the main problems that led managers to search for information were identified as sustainability, profitability, competitiveness, growth and innovation.

According to the findings, it is seen that the managers prefer non-personal information sources more. Accordingly, managers faced with sustainability and competitiveness problems tend to personal and internal information, and managers faced with growth and innovation problems tend to non-personal and external information. In the profitability problem, managers resort to non-personal and internal information.

The first remarkable conclusion in the study is that business managers prefer non-personal information sources more. This is close to the attitude of British managers (Barron, Hultén, & Vanyushyn, 2015). We agree with Daft and Weick (1984) on the reasons of this result; environmental perception of the business

managers participating in the study may have an impact on source preference. In this case, it might be claimed that managers need non-personal information more because of the cultural context or environmental perception. However, the fact that no distinct preference could be revealed regarding non-personal information sources as internal or external can be interpreted that managers feed non-personal information sources with both internal and external sources.

On the other hand, when personal information source has to be used, it does matter whether the information source is internal or external; in this case, internal information sources become more important. This, to a certain extent, may be explained with cultural context. Accordingly, when personal information sources are used, managers might prefer sources that are socially closer to themselves.

In the study, we also analysed which information sources managers used for which problems. Within this query we found that the managers prefer internal and personal sources more for the problems of sustainability and competitiveness. On the other hand, managers adopt an exactly opposite attitude when it comes to the problems of innovation and growth and prefer external and non-personal sources. Determination of this distinction is a significant finding for the study.

The attitude of meeting the information need from sustainability problems from internal and personal sources was found to be in line with the general trend in the literature. Findings of Daily and Huang (2001) and Wilkinson, Hill, and Gollan (2001) support this finding in our research. Business managers try to acquire the information regarding sustainability problems particularly from their internal environment. The main reason for this might be the association of sustainability with intra-organizational values.

In the study, the attitude of meeting the information need from competitiveness problems from internal and personal sources was also found to be in line with the general trend in the literature. If competitiveness is competences (cost, source diversity, marketing, creativity, problem solving, and system flexibility) for organizations, information sources to be used by managers are expected to be internal sources. Besides this, Ulrich and Lake (1991) argument that when the human capital of the organization contributes at low costs competitiveness can be improved was also confirmed in our study. Since managers who participated in our study also represent this point of view, they mostly prefer personal sources for problems about competitiveness.

The study's finding regarding growth problems has been partially handled in the literature. Academics who argue that growth should be expressed using multiple indicators show that variables of growth (market value, number of employees, sales, revenues, production or added value) point to both organizational and non-organizational indicators. In addition, certain studies such as that of Baum and Locke (2004) argued that growth depends on variables specific to the organization. Yet, in our study, managers' main preference in information needs for growth problems was found to be non-organizational and non-personal sources. Then, our study's stance regarding growth is that, similar to Dess and Beard (1984) and Davidsson and Delmar (2006), growth is a function of environmental factors. Nevertheless, the study's finding that non-personal information sources are used for growth problems is in line with the general opinion in the literature.

It is seen that the study's findings about the concept of innovation stand further away from the general point of view in the literature, which was explained in the previous section. Then, the finding of our study

that mainly non-organizational and non-personal sources are used for solving innovation problems does not in general reflect the views in the literature. One reason of this must be the possibility that problems regarding innovation are affected by local factors such as culture or market dynamics. Another dimension might be the fact that managers take a psychological attitude towards innovation problems. These two issues should both be taken into consideration in future studies.

Besides all these evaluations, another situation is observed in the problem of profitability. It is seen that, unlike other problem areas, when managers have the profitability problem, they try to meet their information needs from non-personal and internal information sources. This situation corresponds with the findings in the literature. At this point profitability problems can be defined as the subject of approaches based on intra-organizational sources like strategy. Besides, profitability problems are tried to be analysed within the framework of concepts that involve objective criteria.

In conclusion, it can be claimed in the light of the findings obtained in our study that managers use different information sources depending on the problems they experience. In that case, a necessity arises for an information management system dependent on the problems that decision-makers or organizations attach importance to within the framework of the conditions surrounding them. It was revealed through this study that an argument that there should be an information management system valid for all organizations is not possible in terms of time, place and environment. In the light of the findings of the study, it is possible to claim that managers use information sources in accordance with the structure of problems that define their information needs.

In the study, we made long and repetitive interviews and constantly investigated the evaluations of managers. If the implementations of managers had also been observed during these investigations, which would have been able to increase the profoundness of the findings. The fact that the implementations of managers could not be observed in the 14 months during which the data were collected and processed can be regarded as a restriction for the study findings.

The findings obtained in the study provide significant insights on future studies. Firstly, the impact of cultural context on environmental perception should be explained in a more detailed manner. This will make it possible to reveal the cultural restrictions in the information preferences of managers. Secondly, this study emphasises the necessity of a future research on why non-organizational personal sources were not assessed. Understanding why non-organizational personal sources -mainly customer – are preferred for problems that managers attach importance to will a significant gap for the literature.

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