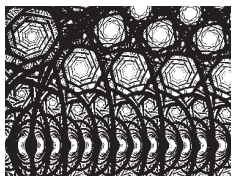


THE EFFECTS OF KNOWLEDGE INTENSIVE ACTIVITIES ON BEING CUSTOMER-ORIENTED: A RESEARCH ANALYSIS IN METALWORKING MANUFACTURING

Bulent AYDIN, Adnan CEYLAN
Gebze Institute of Technology, Istanbul

UDK: 65.012:658.89
Izvorni znanstveni rad

Primljeno: 5. 11. 2008.

In this study, we have constructed an original model and carried out a research analysis in metalworking manufacturing. The main subject of the research model is to investigate the customer orientation depending on the factors of knowledge intensive activities; and the aim is to contribute to businesses as well as academic researchers, about the related subject. The knowledge intensive activities are related with the learning capacity of the organizations and they are: systems orientation, organizational climate for learning orientation, knowledge acquisition and utilization orientation, and information sharing and dissemination orientation. To perform the research analysis in the related sector, we have formed a survey instrument after a detailed investigation of the literature and applied it on a number of 578 employees of the metalworking firms. Based on the results, it has been determined that the constructed model is significant (at the $p<0.001$ level) and at the same time customer orientation has significant correlations with all the knowledge intensive activities (at the $p<0.001$ level). Additionally, the total explained variance of customer orientation depending on the knowledge intensive activities has come out as the value of 0.77.

Keywords: knowledge intensive activities, customer orientation

✉ Bulent Aydin, Assan Galvaniz Fab. Yunus Mah. Cumh. Cad. No: 54 Yunus, Kartal, Istanbul, Turkey.
E-mail: bulentaydin@kibarholding.com

INTRODUCTION

People join various organizations throughout most of their lives. The organizations are strong social tools for arranging relationships between individuals. An organization is an entity where two or more people come together to achieve a goal (or goals) and whose behaviors are managed according to specified rules (Applewhite, 1965). Another definition is that, organizations are goal directed, boundary maintaining, and socially constructed systems of human activity, which focuses attention on the social processes involved in the genesis and persistence of organizations (Aldrich, 1999). When an individual wants to achieve his goals, which require more power than he has, he must cooperate with others. As stated above, we understand that organizations satisfy the individual's needs by interactive and collaborative working.

The complexity of environmental changes forces firms to put more effort in an efficient operational exploration of their development process. This means, that increasing efficiency will play an important role in accelerating the development of the organizations. It is certain that there may be many factors affecting organizational effectiveness and one of them is customer orientation. For G'omeza et al. (2004) being customer oriented plays a key role in a successful business strategy. It is widely known that customer satisfaction is crucial in organizational effectiveness and being customer oriented brings the customer satisfaction. In this paper, we will try to investigate the customer orientation from the perspective of knowledge intensive activities. The aim of this paper is to create a model of knowledge intensive activities to measure the effect on customer orientation.

Knowing that knowledge is power, organizations try to compete in the sector by developing their knowledge intensive activities. In the global business, know-how is gaining more importance, which requires knowledge based activities. R&D (research and development) services, engineering services, technology following services are all related with the knowledge capacity of the organizations. The usage of knowledge intensive activities helps the organizations to develop their creativity. This ensures an important competitive advantage for these organizations.

Organizational learning capacity has a significant impact on the adoption of knowledge intensive innovations capacity (Teo et al., 2006). The knowledge intensive innovations require knowledge based activities. In this context, we will analyze the knowledge intensive activities from the perspective of organizational learning capacity. This provides that, as the

learning capacity of the organizations increases, the amount of knowledge intensive activities will also increase, which may contribute to the organizations. Our study is going to measure whether these knowledge intensive activities will make a contribution to the organizations in being customer oriented in *metalworking manufacturing*.

LITERATURE REVIEW

Market Orientation

Marketing is becoming more important for the firms day by day, which helps them to increase their profits. Price, product, promotion and place are the fundamentals of marketing as the answer to meeting the need to convert manufacturers' products into cash (Kotler, 1997). This entails concentrating on the marketing concept. There have been important studies on market orientation. Kohli and Jaworski (1990) point out three groups of activities to define market orientation: generation of market intelligence relating to present and future customers' needs, dissemination of intelligence across departments within the organization and the organizational responsiveness (Bozic, 2006). This basic definition can be explained as: scanning of the environment to gather information about customers and competitors, dissemination of this information to all of the members of the organization for maximum utilization and converting this information as new (value-added) actions to offer to the marketplace. The other well-known authors for the related concept are Narver and Slater (1990) who define market orientation as a one-dimensional construct made up of three behavioral components: customer orientation, competitor orientation and inter functional coordination, and two decision-making criteria: long-term focus and profit focus (Bozic, 2006). These definitions state that market orientation is crucial for the organizations and the essence of market orientation is to focus on the customers, and hence, those organizations which analyze their customer needs better will be more market oriented.

Customer Orientation

In this context, customer orientation (as a part of market orientation) should be analyzed. Kohli and Jaworski (1990) define customer orientation as representing the degree to which customer information is both collected and used by the business unit. For Deshpande et al. (1993), customer orientation is the set of beliefs that puts the customer into the center, while not excluding those of all other stakeholders such as owners,

managers, employees, in order to develop a long-term profitable enterprise. In customer orientation, the firm should cluster its customers and make a classification of them depending on various properties. The more customer-focused organizations will add more value for their customers. This brings us to the conclusion that customer orientation is not a simple concept and that there is not a general marketing principle for it. Even if an organization thinks that it has found its way of marketing for any customer, this may vary (as time passes) depending on the external factors. Especially, as the external environmental changes cause crises and turbulences, the organization may need to revise their customer-centered marketing principle. The organizations need to make earlier studies to foresee these types of problems before the crisis arrives and should investigate for the possible solutions earlier. Therefore, it is important for the organizations to think of their customers within the external environment and to deal with the customer orientation as a systematic process. This means that organizations should see the customer orientation as a continuous process. Consequently, a customer-oriented company has to develop a continuous communication system with its customers and create a customer-focused environment within a company (Hartline et al., 2000).

To provide the continuity of the customer orientation, the organizations should also give importance to the learning activities they have. In dynamic environments, the organizations which have higher learning capacities may better follow and meet their customers' requirements. As the global turbulences affect the customers' needs, the organizations should emphasize on knowledge activities to predict their customers' behaviors. The last global crisis, which started in 2008, has shown that, dealing more with knowledge intensive activities decreases ambiguity and this directly affects better predictability of customer needs and behaviors.

Organizational learning

Organizational learning has become popular in organizational literature in recent years (Wang et al., 2007). Lifelong learning makes a major contribution to not only the organization itself but also to the economic development of the related country. For Cyert and March (1963), organizational learning has been viewed as a process, by which organizations as collectives learn through interaction with their environments. Huber (1991), Slater and Narver (1995) say that organizational learning is a complex process that refers to the development of new knowledge and it has the potential to change the members' behav-

ior (Škerlavaj et al., 2007). Changing behavior, in a positive manner, means approaching perfection. Therefore, organizational learning will strengthen the organization to achieve improved results because it ensures adapting to change, growing through innovation, having result-oriented employees.

Organizational learning capacity

The consumer demands change rapidly and the organizations' strategies must be flexible to these changes by improving the innovation capacity of the organization. The innovation capacity of an organization is dependent on the learning capacity of that organization. Organizational learning creates knowledge and the members share this knowledge with the whole organization to improve efficiency. The knowledge-intensive organizations tend to build their capacity to attain knowledge easily. These organizations have highly educated employees and have some main features such as non-standardization, creativity or complex problem-solving capabilities (Sveiby, 1992).

The organizations should mind their learning capacity, which is related with how they can learn more. Enhancing the learning capacity for new learning areas (which will be necessary for future requirements) may contribute to the competitiveness of the organizations. It is now widely accepted that in order to survive in the global business, organizations need to develop their productive learning capacity (Millward, 2006). The learning capacity uses the available knowledge within the organization to continually renew the knowledge, and this capacity determines organizational improvement and, hence, its competitiveness (Prieto & Revilla, 2003). In renewing knowledge, the organizations try to learn from either inside or outside the organization. This requires an environment conducive to learning. 'Learning capacity in organizations is often characterized by two essential dimensions (Dierickx and Cool, 1989; Steward, 1997; Bontis, 1999; Decarolis and Deeds, 1999; Vera and Crossan, 2000): a static dimension, based on the structures that hold the stocks of knowledge – tacit or explicit – which are internal to the organization, a dynamic dimension, based on knowledge flows – representative of learning processes – that embody knowledge streams into the organization which make knowledge stocks evolution possible, which are the input of numerous knowledge flows such as knowledge generation, accumulation, distribution and utilization, which may be assimilated and developed into stocks of knowledge' (Prieto & Revilla, 2003, p:3). Increasing the stock of knowledge helps to stay ready in case of unknown and sudden circumstances. In this manner, organizational learning

capacity provides proactive learning. In adaptive learning, the organization may solve the problems that have already occurred, but in proactive learning, the organization learns for the potential problems that have the probability to occur. That is, proactive learning is a reason for being 'leader' in the sector and organizational learning capacity has a role in providing this proactive learning.

Knowledge intensive activities

The organizations need knowledge intensive activities to compete in the sector and providing this requires a good organizational learning capacity. Knowledge intensive activities can be analyzed in the following four components: systems orientation, organizational climate for learning orientation, knowledge acquisition and utilization orientation, and information sharing and dissemination orientation (Teo et al., 2006). The systems orientation develops a way of looking at the outside and creating a new methodology if needed. Systems orientation makes the person a systems thinker and enables identifying the problems and solving them faster. Kandemir and Hult (2004) define the systems orientation as: it is the broad picture of organizational systems managed by the top management and comprised of innovation, manufacturing, marketing, and distribution, where the systems thinking is required. For Senge (1990) and Stalk (1988) systems thinking is understanding the systems and interrelations between the subsystems and it encourages the organizations to focus their strategic efforts on one system (Kandemir & Hult, 2004).

The other component 'organizational climate for learning orientation' analyzes how the organization members' learning is affected by the conditions inside or outside the organization. Changing the conditions to improve the learning activities will facilitate the organization's members to acquire new skills. Schein (1985) and Mikkelsen and Gronhaug (1999) think that, an organization's climate is thought to be a direct behavioral manifestation of organizational culture, which is a deeper and less consciously held set of cognitions and affective attachments (Janz & Prasarnphanich, 2003). According to Moss-Kanter (1983), Slater and Narver (1995), a climate conducive to learning is expected to influence the rate of organizational learning and, ultimately, organizational performance (Janz & Prasarnphanich, 2003). The environment sometimes facilitates and sometimes hinders the learning. The learning climate is related with whether the environment is surrounded with opportunities for learning.

The following component 'knowledge acquisition and utilization orientation' represents the extent to which an orga-

nization is skilled in obtaining knowledge; making that knowledge a part of the organization that is necessary for improvement and innovation (Choo, 1998). New knowledge should be created for the improvement, and the more important knowledge should be separated from the non-important ones in order to determine the priorities for the organization. Knowledge utilization states that the acquired knowledge creates new capabilities and innovations and helps to embody this knowledge to become the organization's routines, processes and mindsets (Wikstrom & Normann, 1994).

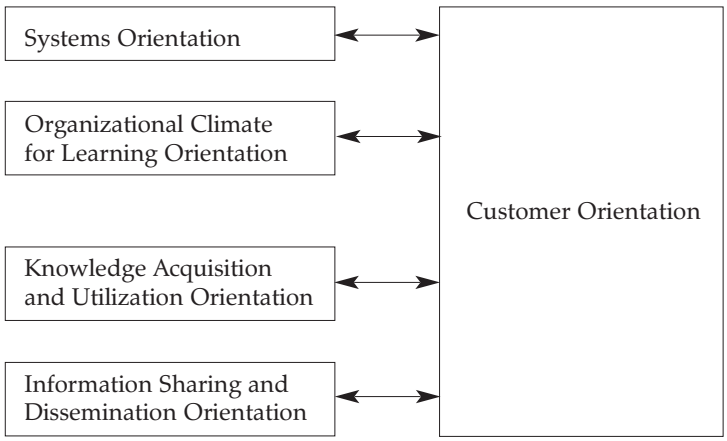
As a last component, information sharing and dissemination orientation provides reaching the information easily within the organization. Every organization wants to increase the information they have and one of the ways to do this is utilizing from the sharing and dissemination method. Information sharing helps the colleagues to hear about all the new gained knowledge, so the members of the organizations will meet the needs of the organization better. This component also enables better use of information channels with the other organizations. This will be another way to increase the stock of the organization's knowledge. In the future, some organizations from different markets will form collaborative networks in which knowledge is created and shared for business purposes; this will create multi-firm network organizations to pursue strategies of continuous innovation and will grow across as well as within industries (Miles & Snow, 2007). Therefore, we may consider the sharing and dissemination orientation from a wide perspective and see it as a part of the big picture analysis. Additionally, according to Schein (1992), without sharing and dissemination, knowledge would reside only in specific individuals or groups and, this will not create synergy and contribute to organizational learning, which is very important for the organizations to increase their core competencies and competitiveness.

After all, we may state the differences between the knowledge intensive activities as: the organizational learning climate should be an antecedent period to being a systems thinker; in addition, the members should first acquire the knowledge and know how to utilize it, before sharing and disseminating the information.

THE RESEARCH MODEL AND HYPOTHESES

Related to our subject, we have constructed a relationship between the concepts, and created a model. According to the model, being customer oriented is affected by knowledge intensive activities. The model for this research (depending on these factors) may be seen in Figure 1.

➲ FIGURE 1
The constructed model



According to our model, we have constructed six hypotheses to test:

Hypothesis 1: There is significant correlation between systems orientation and customer orientation (in the framework of researched area).

Hypothesis 2: There is significant correlation between organizational climate for learning orientation and customer orientation (in the framework of researched area).

Hypothesis 3: There is significant correlation between knowledge acquisition and utilization orientation and customer orientation (in the framework of researched area).

Hypothesis 4: There is significant correlation between information sharing and dissemination orientation and customer orientation (in the framework of researched area).

METHODOLOGY

The research plan has been stated as: analyzing literature for survey questions, constructing the best fitting survey from the alternatives, reaching the participants and informing them of the survey, gathering, refining, measuring and analyzing the data.

Scales

Two different scales were used to gather data. The first type of questions were used to discover the descriptive statistics. These questions surveyed the gender, age, working department, status and education. The second type of questions (30 items) were about the dimensions of "customer orientation" (9 items) and knowledge intensive activities (21 items). In the second type of questions, the respondents chose Likert response categories, ranging from 1 to 5, where (1) is strongly disagree and (5) is strongly agree.

'Knowledge intensive activities' value has been calculated as the average sum of four sub dimensions of the related variable. To perform our research, we searched for the related scales in the literature. The scales were obtained after a detailed investigation of the literature. The survey items of knowledge intensive activities were obtained from Teo et al. (2006) and the customer orientation survey items were obtained from Deshpande et al. (1993).

Sample and data collection

We drew our sample from the employees of metalworking firms in Turkey. After specifying the sample, we formed the survey instrument and searched for the potential participants to send the questionnaire to. More than 1000 contacts were made or attempted. Some of them were ineligible, some of them refused to participate in the survey, some of them did not respond although they accepted to participate. A total of more than 600 surveys returned, however, about 60 of them had excessive missing values and were excluded from the analysis. Finally, the valid responses reached to 578.

We approached the participants by surveying the metal firms via internet as well as phoning the Metal Federation in Istanbul to learn about the metal firms in the sample area. The selected firms all have a manufacturing process and they are all profit organizations. Approximately, firms with more than 20 employees have been selected. We didn't ask only specific employees to participate in the study. We accepted each member of the related organizations. However, after collecting the data, we have classified the respondents as white collar, blue collar, university educated and etc. Approximately, between 25 and 40 employees – from 20 different firms – have joined the study. We have asked examinees from every organizational level to participate in the study. The participants joined the research by clicking the link of the survey on the internet, which was developed by a web programmer. In addition, we also sent the questionnaire to the participants via electronic mail. On some occasions, we telephoned the firms to inform them about the survey and asked them to join it. The data were collected within about eight months, from autumn 2007 to summer 2008.

ANALYSES AND RESULTS

Results of the descriptive statistics

The first analysis gives the basic features of the data by means of descriptive statistics to provide simple summaries about respondents. The result of descriptive statistics may be seen in Table 1.

➲ TABLE 1
Descriptive statistics

	#	%
Age		
19-25	116	20
26-35	272	47
36-45	141	24
46 and above	49	8
Total	578	100
Years of Work		
0-10	314	54
11-20	183	32
21 and above	81	14
Total	578	100
Working for current employer		
0-10	410	71
11-20	138	24
21 and above	30	5
Total	578	100
Department		
Production	322	56
Accounting	31	5
Personnel	6	1
Sales	56	10
Other	163	28
Total	578	100
Education Level		
Primary School	44	8
High School	387	67
2-year University Graduate	39	7
4-year University Graduate	88	15
Master of Science	20	3
Total	578	100

Results of the reliability analysis

The second applied analysis was the reliability analysis. Cronbach's alpha values are shown in Table 2. Since the factor analysis in the next section shows that knowledge acquisition and utilization orientation & information sharing and dissemination orientation has gone to the same factor, we calculated a common Cronbach's alpha value for this factor.

➲ TABLE 2
Cronbach's alpha values

	α
Systems Orientation	0.956
Organizational Climate for Learning Orientation	0.988
Knowledge Acquisition and Utilization Orientation & Information Sharing and Dissemination Orientation	0.994
Customer Orientation	0.994

For Vavra (1999), a scale is reliable if its Cronbach's alpha value is equal or above the value of 0.70 (Ozdogan & Tuzun, 2007). Since Cronbach's alpha values of our scales are above 0.70, we have proved that the scales we used for our research are all reliable.

Results of the factor analysis

The third analysis is the factor analysis in order to specify a set of observed variables in terms of a small number of factors. However, before the factor analysis, we should apply the "Kaiser-Meyer-Olkin (KMO) test" and "Bartlett's Test of Sphericity" to confirm the adequacy for factor analysis (Semerci, 2004). In order to conclude whether the amount of data is sufficient to measure our research and adequate for the factor analysis, we have performed these two tests. Consequently, the results of Bartlett's test of our research are significant (at the level of $p<0.001$) for both of the variables and, the measures of Kaiser-Meyer-Olkin tests are: 0.967 for knowledge intensive activities items, 0.931 for customer orientation items. Kaiser-Meyer-Olkin test result is adequate above the value of 0.50 and the result is to be considered better as this value approaches 1 (Aydin, 2007). Therefore, results of these tests indicate that our scale is sufficient to measure the variables.

Next, for the results of the factor analysis of the 'knowledge intensive activities' (for which we used the Varimax extraction method), we have found three factors. Systems orientation has gone to one factor, organizational climate for learning orientation has gone to another factor, – knowledge acquisition and utilization orientation and information sharing and dissemination orientation – has gone to the third factor. This denotes that, knowledge acquisition and utilization orientation, and information sharing and dissemination orientation have the same meaning for the respondents. The factor analysis also helped us find the value of the cumulative explained variance of these three factors, which has come out as 0.938.

In our research, the dependent variable 'customer orientation' has been measured as one-dimensional and, as expected, we have had only one factor for this variable. In addition, the explained variance of customer orientation items has come out as 0.957.

Results of the correlation analysis

After proving that the scales were reliable and sufficient for measuring our data, we did the correlation analysis. The results of the correlation analysis of our research variables may be seen in Table 1. As seen in Table 3, all the knowledge inten-

sive activities items have a significant correlation with customer orientation ($p<0.001$), which means that each hypothesis is supported.

TABLE 3
Correlation analysis

		Customer Orientation
Systems Orientation	Pearson Correlation	-0.355*
Organizational Climate for Learning Orientation	Pearson Correlation	0.801*
Knowledge Acquisition and Utilization Orientation & Information Sharing and Dissemination Orientation	Pearson Correlation	-0.596**

**Correlation is significant at the 0.01 level (2-tailed); *Correlation is significant at the 0.05 level (2-tailed).

Results of the regression analysis

As the other statistical tool, we applied regression analysis to determine whether the constructed model was significant or not. Regression analysis is one of the important analyses of our research as it informs us what percentage of the customer orientation can be explained by the knowledge intensive activities items.

Since the research questions have the capacity of measuring the variables, we could investigate the significance of the model. Consequently, regression analysis informed us that our model was significant (at the level of $p<0.001$, see Table 4).

The knowledge intensive activities items can explain 79% of the total variance of customer orientation. This is the R square value that may be seen in Table 4.

In addition, the coefficients may also be seen in Table 4, which informs about the relations between the variables.

TABLE 4
Regression analysis

	Dependent Variable: Customer Orientation	
Independent Variable	Beta	Sig.
(Constant)		0.000
Systems Orientation	-0.382	0.000
Organizational Climate for Learning Orientation	0.594	0.000
Knowledge Acquisition and Utilization Orientation & Information Sharing and Dissemination Orientation	-0.297	0.000
R square	0.788	
Standardized R square	0.787	
Significance	0.000	

DISCUSSION AND CONCLUSION

The study is an original one as it adopts a different point of view on customer orientation from the standpoint of knowledge intensive activities in metalworking manufacturing. We have selected this sector for several reasons. The metal sector

has great significance in the global economy. The experts in this sector create their strategy maps by following the global market conditions. Therefore, our study gains international importance. Besides the global view, we selected this sector for some other reasons. From social work perspective, there is a significant number of employees in the metal industry across the world, which means this subject will concern a great number of people. In addition, investing in this sector requires a great amount of capital goods, which may discourage the investors. Therefore, the investors will gain a different point of view in decision-making in investing in this sector. Lastly, there are few researches related with the development of this sector (depending on the factors stated in our model). Hence, the organizations will gain an extensive vision of possible growth in the sector.

The results of this study have original implications, for businesses as well as academic researchers, that being customer-oriented is significantly correlated with knowledge intensive activities in metal industry. In addition, we may consider that the total explained variance (0.79) of the customer orientation is above a good level; however, it should be better to discuss and find out other factors to join the model and increase the concerned value.

Additionally, the coefficients in regression analysis signify important results. Systems orientation has a negative relationship with customer orientation. This means that adapting to a new system may result in avoiding customer orientation. The *orientation* of acquiring new knowledge and sharing it may also postpone customer orientation. Therefore, the managers should expeditiously apply the new knowledge to their organizations and try to shorten the orientation process. Conversely, organizational learning climate has a positive relationship with customer orientation. This entails that, learning opportunities should be sought out by the managers. Also, obstacles for learning activities should be avoided in order to be more customer oriented.

We believe that the results of this study may be useful for metalworking firms as well as other globally acting organizations in planning their strategic maps and increasing their effectiveness. For instance, the manufacturing companies may utilize the results of this study. However, it may not be right to suggest the results of this study for the service sector or non-profit organizations. The know-how concept is gaining more importance day by day and the researchers should make investigations about the effects of it on different areas. Therefore, as another discussion area, we suggest that researchers study other international business areas to compare the results and reach a detailed and sensible conclusion.

REFERENCES

Aldrich, H. (1999), *Organizations Evolving*. London: Sage Publications.

Applewhite, P. B. (1965), *Organizational Behavior. International Series in Industrial Engineering and Management Science*. Engelwood Cliff, New Jersey: Prentice Hall.

Aydin, B. (2007), *Faktor Analizi Yardimiyla Performans Olcutlerinin Boyutlarinin Ortaya Konulmasi*. The 8th Econometrics and Statistics Congress of Turkey, May, 2007, University of Inonu Malatya Turkey.

Bozic, L. (2006), The Effects of Market Orientation on Product Innovation. *Economic Trends and Economic Policy*, 107: 46-65.

Choo, C. W. (1998), *The Knowing Organization: How Organizations Use Information to Construct Meaning, Create Knowledge and Make Decisions*. New York: Oxford University Press.

Cyert, R. M. and March, J. G. (1963), *A Behavioral Theory of The Firm*. NJ: Prentice-Hall, Englewood Cliffs.

Deshpande, R., Farley, J. U. and Webster, F. E. (1993), Corporate Culture, Customer Orientation, in Japanese Firms: A Quadrad Analysis. *Journal of Marketing*, 57: 23-27.

G'omeza, M. I., McLaughlinb, E. W. and Wittinkc, D. R. (2004), Customer Satisfaction and Retail Sales Performance: An Empirical Investigation. *Journal of Retailing*, 80 (1): 265-278.

Hartline, M. D., Maxham, J. G. and McKee, D. O. (2000), Corridors of Influence in the Dissemination of Customer-Oriented Strategy to Customer Contact Service Employees. *Journal of Marketing*, 64: 35-50.

Janz, B. D. and Prasarnphanich, P. (2003), Understanding the Antecedents of Effective Knowledge Management: The Importance of a Knowledge-Centered Culture. *Decision Sciences*, 34 (2): 351-384.

Kandemir, D. and Hult, G. T. (2004), A Conceptualization of An Organizational Learning Culture in International Joint Ventures. *Industrial Marketing Management*, 34 (5): 430-439.

Kohli, A. and Jaworski, B. J. (1990), Market-Orientation: The Construct, Research Propositions, and Managerial Implications. *Journal of Marketing*, 54 (1-1): 90-113.

Kotler, P. (1997), *Marketing Management: Analysis, Planning, Implementation and Control* (9th ed.), New Jersey: Prentice Hall.

Miles, R. and Snow, C. (2007), Organization Theory and Supply Chain Management: An Evolving Research Perspective. *Journal of Operations Management* 25: 459-463.

Millward, P. (2006), *Organisational Learning Facilitated by the Analysis of Student Achievement Information*. Faculty of Education, The University Of Auckland. New Zealand. Doctorate degree thesis.

Ozdogan, F. B. and Tuzun, I. (2007), Ogrencilerin Universitelerine Duyduklari Guven Uzerine Bir Arastirma. *Kastamonu Egitim Dergisi*, 15 (2): 639-650.

Prieto, I. and Revilla, E. (2003), *How Learning Capacity Influences On Performance: An Empirical Evidence*. IE Working Paper, retrieved May 14th, 2008, from http://latienda.ie.edu/working_papers_economia/WP03-06.pdf

Schein, E. H. (1992), *Organizational Culture and Leadership*. San Francisco: Jossey-Bass Publishers.

Semerci, C. (2004), Ilkogretim Turkce ve Matematik Ders Kitaplarini Genel Degerlendirme Olcegi. *Cumhuriyet Universitesi Sosyal Bilimler Dergisi*, 28 (1): 49-54.

Sveiby, K. E. (1992), *The Knowledge Company: Strategy Formulation in Knowledge-Intensive Industries.* International Review of Strategic Management, 3. New York: John Wiley & Sons.

Škerlavaj, M., Štemberger, M. I., Škrinjar, R. and Dimovski, V. (2007), Organizational Learning Culture – The Missing Link between Business Process Change and Organizational Performance. *International Journal of Production Economics*, 106 (2): 346-367.

Teo, H., Wang, X., Wei, K., Sia, C. and Lee, M. (2006), Organizational Learning Capacity and Attitude toward Complex Technological Innovations: An Empirical Study. *Journal of the American Society for Information Science and Technology*, 57 (2): 264-279.

Wang, X., Yang, B. and McLean, G. N. (2007), Influence of Demographic Factors and Ownership Type upon Organizational Learning Culture in Chinese Enterprises. *International Journal of Training and Development*, 11 (3): 154-165.

Wikstrom, S. and Normann, R. (1994), *Knowledge and Value: A New Perspective on Corporate Transformation*. London: Routledge.

Utjecaj znanjem intenziviranih aktivnosti na orijentaciju prema kupcu: istraživanje o metalurškoj proizvodnji

Bulent AYDIN, Adnan CEYLAN
Gebze institut za tehnologiju, Istanbul

U ovoj smo studiji izradili originalni model i proveli istraživanje o metalurškoj proizvodnji. Osnovni cilj istraživačkoga modela jest istražiti orijentaciju prema kupcima koja ovisi o faktorima znanjem intenziviranih aktivnosti te tako pomoći poduzećima i znanstvenicima zainteresiranima za ovu temu. Znanjem intenzivirane aktivnosti, koje su povezane s kapacitetom učenja organizacija jesu: sistemska orijentacija, klima u organizaciji koja potiče na učenje, orijentacija na stjecanje i upotrebu znanja te orijentacija na suuporabu i distribuciju podataka. U svrhu istraživanja odabranoga sektora, konstruiran je instrument na temelju detaljnoga proučavanja literature i primijenjen je na 578 zaposlenika metalurških tvrtki. Utvrđeno je na temelju ishoda da je konstruirani model značajan (na razini $p < 0,001$), a da je istodobno orijentacija na kupca značajno korelirana sa svim znanjem intenziviranim aktivnostima (na razini $p < 0,001$). Nadalje, ukupno objašnjena varijanca orijentacije prema kupcu koja ovisi o znanjem intenziviranim aktivnostima iznosi 0,77.

Ključne riječi: znanjem intenzivirane aktivnosti, orijentacija prema kupcu

DRUŠ. ISTRAŽ. ZAGREB
GOD. 19 (2010),
BR. 4-5 (108-109),
STR. 821-836

AYDIN, B., CEYLAN, A.:
THE EFFECTS OF...

Kenntnisintensive Aktivitäten und ihr Einfluss auf die Kundenorientierung: Eine Untersuchung zur metallurgischen Produktion

Bulent AYDIN, Adnan CEYLAN
Gebze-Institut für Technologie, Istanbul

Die Verfasser dieser Studie führten nach einem eigens erarbeiteten Modell eine Untersuchung im Bereich der metallurgischen Produktion durch. Das Hauptinteresse galt der mit Faktoren kenntnisintensiver Aktivitäten in Zusammenhang stehenden Kundenorientierung von Produzenten. Die Verfasser wenden sich mit ihrer Untersuchung vornehmlich an interessierte Unternehmer und Forscher. Kenntnisintensive Aktivitäten, die dank der Lernfähigkeit von Organisationen umgesetzt werden, sind: Systemorientierung, ein Lernprozesse begünstigendes Arbeitsklima, Ausrichtung auf Kenntniserwerb und -umsetzung sowie Daten-Sharing und -distribution. Ausgehend von fundierten fachliterarischen Kenntnissen haben die Autoren einen Fragebogen erarbeitet und ihn in einer Umfrage unter 578 Arbeitern von Metallurgie-unternehmen eingesetzt. Der Fragebogen erwies sich als relevant ($p < 0,001$). Insbesondere aber zeigte sich, dass die Kundenorientierung von Produzenten wesentlich mit kenntnisintensiven Aktivitäten korreliert ($p < 0,001$). Ferner konnte ermittelt werden, dass die durch kenntnisintensive Aktivitäten bedingte allgemeine Varianz der Kundenorientierung 0,77 beträgt.

Schlüsselbegriffe: Kenntnisintensive Aktivitäten, Kundenorientierung