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**MARKET DYNAMISM, LEARNING ORIENTATION, FIRM
INNOVATIVENESS AND FIRM PERFORMANCE: A PATH
ANALYSIS**

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Abstract

Market dynamism means continuous uncertainty and rapid changes in the market. Dynamism in today's markets is quite high and in these circumstances, firms have to develop appropriate strategies and increase their performance to sustain their existence. This paper examines the market dynamism, shared vision-open mindedness, commitment to learning, firm innovativeness and firm performance variables relationships. The literature has studies which focus on firm innovativeness, learning orientation and firm performance. However, according to the explored Web of Science and Google Scholar databases the relationship between these variables and market dynamism is rarely studied. Within the scope of study, a survey was conducted with 486 medium and large sized companies managers and white collar employees in Turkish manufacturing sector, in 2015. The obtained data were analyzed by SPSS and AMOS programs. Through a path model, variables direct and indirect impact on market dynamism, learning orientation, firm innovativeness and firm performance. Based on the analysis results, all the hypotheses except H3 and H8 are verified. Path and regression analyses provided two important findings. The first, firm innovativeness has full mediating effect on commitment to learning and firm performance relationship. The second, firm innovativeness has partial mediating effect on shared vision-open mindedness and firm performance relationship.

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Keywords: Market dynamism, commitment to learning, shared vision, firm innovativeness, firm performance, path analysis.



1. Introduction

Firms should have knowledge to predict uncertainties and resilience. The market, competitors, new technologies and applications, customers and many other factors should always be monitored closely and continuous development should be performed. For this reasons, the firms need to be learning oriented. Learning orientation requires producing information, encouraging learning in the direction of common goals drawing a roadmap of how employees can learn and take lessons from mistakes. These attitudes, behaviors and strategies can provide long term high performance to firms (Calantone, Cavusgil, & Zhao, 2002). Companies must also be innovative at the same time, to survive in an environment, where market dynamism is high (Johnson et al., 1997). Knowledge and experience are required to innovate. Commitment to learning motivates companies to learn, shared vision and open-mindedness provide information access and provide to learn lessons from mistakes. These also make it easier for companies to innovate. The literature hosts, numerous studies that focus on learning orientation, firm innovation together with firm performance (Calantone, Cavusgil, & Zhao, 2002; Damanpour, 1991; Day, 1991). On the other hand, the number of studies examining the relationship between these variables and market dynamism is limited.

In this study, market dynamism, learning orientation, firm innovativeness and firm performance variables relationships are examined. In the rest of the paper, literature review and conceptual framework related to our variables are given, hypotheses are developed, and research approach is mentioned. In the last section, the results of the analysis, the contributions, the constraints of the work and suggestions for future studies were explained.

2. Literature Review and Theoretical Framework

2.1. Market Dynamism

Market dynamism means a rapidly changing market structure, customer needs, products and technology requirements. There is perceived instability and rapid changes in the operated market. Market dynamism comes from many factors in the environment (Simerly & Li, 2000). In markets with the existence of market dynamism, companies have to make quick decisions (Li & Simerly, 1998). The level of market dynamism is very important in terms of firm performance (Homburg et al., 1999).

2.2. Learning Orientation

Learning orientation is the tendency to create and use information across the organization (Sinkula, Baker, & Noordewier, 1997). The reason for companies preferation of learning orientation is for increasing competition advantages against competitors. With learning orientation, companies can determine their strategies by obtaining detailed information about market requirements, actions and resources of competitors. With the information gained, they can produce new products and technologies that will bring them ahead of their competitors (Mone, Mckinley, & Barker, 1998; Moorman & Miner, 1998; Hurley & Hult, 1998). Learning orientation can be divide into 3 dimensions, namely shared vision, open mindedness, commitment to learning (Sinkula, Baker, & Noordewier, 1997). In this paper, shared vision and open mindedness factors are combined. For this reason, two factors, commitment to learning and shared vision-open mindedness, are considered to be subdimensions that relate to learning orientation.

2.2.1. Commitment to Learning

Commitment to learning indicates how a firm is providing and encouraging learning. (Sackmann, 1991). Companies with that have high degree of learning orientation, motivate employees to learn (Calantone, Cavusgil, & Zhao, 2002). Commitment to learning can be defined as a long-term strategic orientation (Calantone, Cavusgil, & Zhao, 2002).

2.2.2. Shared Vision and Open Mindedness

Shared vision is about focusing on learning throughout the organization. Without organizational focus, employees are not quite motivated to learn (Tobin, 1993; Galer, Graham & Van der Heijden, 1992). Even without the common vision, even if employees are willing to learn, learning may not be successful. This is because shared vision guides the employees about what and how they will learn (Verona, 1999). Shared vision guides organization members during the learning process. It gives a general purpose and shows the right direction to achieve this purpose.

There are differences between departments in the firms. Each department use different ways to get information and interpret this information differently due to differences between departments. While the main focus of a person in the marketing department is sales, the main focus of someone in the research department can be technical features (Brown & Eisenhardt, 1995). Shared vision provides a common focus for departments. It increases the flow of information between departments, and it coordinates communication and practises.

Open-mindedness is the critical look of the organization. Today, rapidly changing market conditions require open mindedness. Organizations can not go beyond what they know if they are not open to questioning and confrontation (Senge 1992, 1990; Porac & Thomas, 1990). Through open mindedness, companies are open for new ideas, lessons from experience and also they look positively to new developments and practises (Verona, 1999; Sinkula, 1994).

2.3. Firm Innovativeness

Firm innovativeness is the capability of successfully implementing or developing new products and processes (Hult, Snow, & Kandemir, 2003). It means the acceptance of new ideas as part of the company's organizational culture (Hurley & Hult, 1998). The number of distinctive products, services, investments in R&D activities are the most frequently used criteria to measure firm innovation. In an environment of economic turmoil, companies have to be innovative to survive (Johnson, Meyer, Berkowitz, Ethington, & Miller, 1997).

2.4. Firm Performance

The firm performance is an indication of how far a firm has reached the targets that identified as a result of the operations. It shows the success level of the firm. There are different perspectives on how to measure firm performance in the literature. (Venkatraman & Ramanujam, 1986). For the measurement of firm performance many criterions can be used like; perceived organizational and market performance (Delaney & Huselid, 1996), changes in sales, share in market and profitability (Lumpkin & Dess, 1996), export increases together with profitability (Zahra & Garvis, 2000). Our study focuses on overall performance values. Company performance was analyzed using average revenue from sales, company's

market share, average net profit, net income from main activities, total success level, amount of distinctive products put on the market and quantity of successful new products.

3. Proposed Hypotheses

Firms that operate in a market where there is constant uncertainty and rapid changes must be dynamic in order to sustain their existence. To have this dynamism, they must constantly improve themselves and learn new knowledge and practices. Shared vision together with open mindedness enable employees to put a critical eye on the firm by increasing their motivation to learn. In this way they take lessons from mistakes. Dynamic markets encourages firms to shared vision and open mindedness, commitment to learning.

It is more possible for a firm that with a higher commitment to learning to have a higher innovation capability (Damanpour, 1991). In such a company, competitors are closely monitored, their strengths and weaknesses are analysed and lessons derived from their successes and failures (Gatignon & Xvreb, 1997). These improve the firms innovativeness. Tsai and Chen (2010) indicates that, commitment to learning fosters production of knowledge together with dissemination and transformation of existing knowledge, forming an innovative culture. Calantone, Cavusgil, & Zhao, (2002) found in their study that, commitment to learning improves firm innovativeness and firm performance.

There are numerous studies which investigate the impact of commitment to learning on organization innovativeness. The main view in the literature is towards a positive relationship (Lee & Tsai, 2005; Calantone, Cavusgil, & Zhao, 2002; Chaveerug & Ussahawanitchakit, 2008; Chiou & Chen, 2012). Firm innovativeness aims to take risks and opportunities (Eren, 1997). It allows the firm to act fast and gain advantages (Kessler & Chakrabarti, 1996; Garg, Walters & Priem, 2003). Innovativeness provides the firm high performance (Tuominen, Rajala, & Möller, 2004).

According to these views, a number of hypotheses are stated;

H1: Market dynamism has a significant and positive relationship with commitment to learning.

H2: Market dynamism has a significant and positive relationship with shared vision-open mindedness.

H3: Market dynamism has a significant and positive relationship with firm innovativeness.

H4: Commitment to learning has a significant and positive relationship with shared vision-open mindedness.

H5: Commitment to learning has a significant and positive relationship with firm innovativeness.

H6: Shared vision-open mindedness has a significant and positive relationship with firm innovativeness.

H7: Shared vision-open mindedness has a significant and positive relationship with firm performance.

H8: Commitment to learning has a significant and positive relationship with firm performance.

H9: Firm innovativeness has a significant and positive relationship with firm performance.

4. Research Method

4.1. Research Goal

In this section of the study, the purpose is to investigate market dynamism, shared vision-open mindedness, commitment to learning, firm innovativeness and firm performance relationships.

4.2. Sample and Data Collection

In the study, surveys made in manufacturing sector in Turkey with 486 managers and white collar employees in 2015. The average age of the companies that attended the survey are 20-30 years old and they have over 500 employees. Majority of the surveys were face to face, while some of the respondents are reached through e-mail. In total, 500 surveys were conducted and 486 of them provided reliable data. These 486 data were analyzed using SPSS software and AMOS path analysis. Regression analysis is made for possible mediating effects between variables.

4.3. Analyses and Results

In order to measure the 5 variables in the proposed model a survey that consists of 25 questions is used. Market dynamism has 4 questions and adapted from Miller and Droge's, study in 1986. Learning orientation and has 9 questions. The first 4 questions are used for measuring commitment to learning, while the other 5 questions are for shared vision and open mindedness. The questions are taken from Calantone, Cavusgil and Zhao's study in 2002. Firm innovativeness includes 5 questions and used Calantone, Cavusgil and Zhao's study in 2002. Firm performance has 7 questions and adapted from Pelham and Wilson's study in 1995. During the analysis, 2 questions did not show factor separation and eliminated (2 from firm innovativeness). Based on the analysis results, the variables separated into 5 factors. Factor loadings are shown in the Table 1 and Cronbach's Alpha values are given in Table 2.

Table 01. Results of Factor Analysis

	Market Dynamism	Commitment to Learning	Shared Vision and Open-Mindedness	Firm Innovativeness	Firm Performance
The preferences and tastes of our customers change rapidly in our sector	0,768				
There is a rapid change in the technology of products, service and production processes in our sector	0,757				
The fashion of the products changes very quickly in our sector	0,748				
Our biggest competitors often change market activities	0,690				
The key values of this organization include learning as a key to development		0,825			
Learning should be seen as a key value in order to guarantee that the organization can survive.		0,769			
Managers agree that our organization's ability to learn new knowledge and skills is the key to our competitive advantage.		0,766			
Learning of employees is considered as not an expense but an investment		0,760			
Employees see themselves as company partners in the planning of the organization's orientation.			0,735		
All employees depend on the goals of this organization			0,706		
There is collective consensus on our organizational vision in all stages, functions and sections			0,704		

Staff is aware that the way of detecting the market must be constantly questioned			0,693		
We do not hesitate to think critically about the common estimates we have made about our customers.			0,668		
People are not punished because new ideas and applications do not work				0,860	
Innovation (new ideas and practices) is encouraged				0,808	
Innovation is easily seen in project management				0,784	
Average growth rate of our sales					0,831
Our market share					0,770
Our average net profit					0,766
Net income from our core business					0,739
Our overall success level					0,698
The number of new products we offer					0,639
The number of successful new products we offer					0,618

Table 02. Cronbach Alpha Values

Concepts	Number of Items	Scale Format	Cronbach Alpha	% of Variance	Cumulative %
Market Dynamism	4	LRF	0,734	9,872	9,872
Commitment to Learning	4	LRF	0,895	13,810	23,682
Shared Vision and Open-Mindedness	6	LRF	0,841	13,339	37,021
Firm Innovativeness	3	LRF	0,907	14,436	51,457

Notes: LRF - Likert Response Format (Five point: 1=strongly disagree to 5=strongly agree)

Table 03. Correlations, means and standard deviations of all variables

	Mean	Std. Deviations	1	2	3	4	5
Market Dynamism	3,5864	0,80830	1				
Commitment to Learning	3,8837	0,82071	120**	1			
Shared Vision and Open- Mindedness	3,6502	0,72592	189**	670**	1		
Firm Innovativeness	3,7922	0,93746	100**	452**	525**	1	
Firm Performance	3,6869	0,67951	154**	268**	363**	456**	1

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

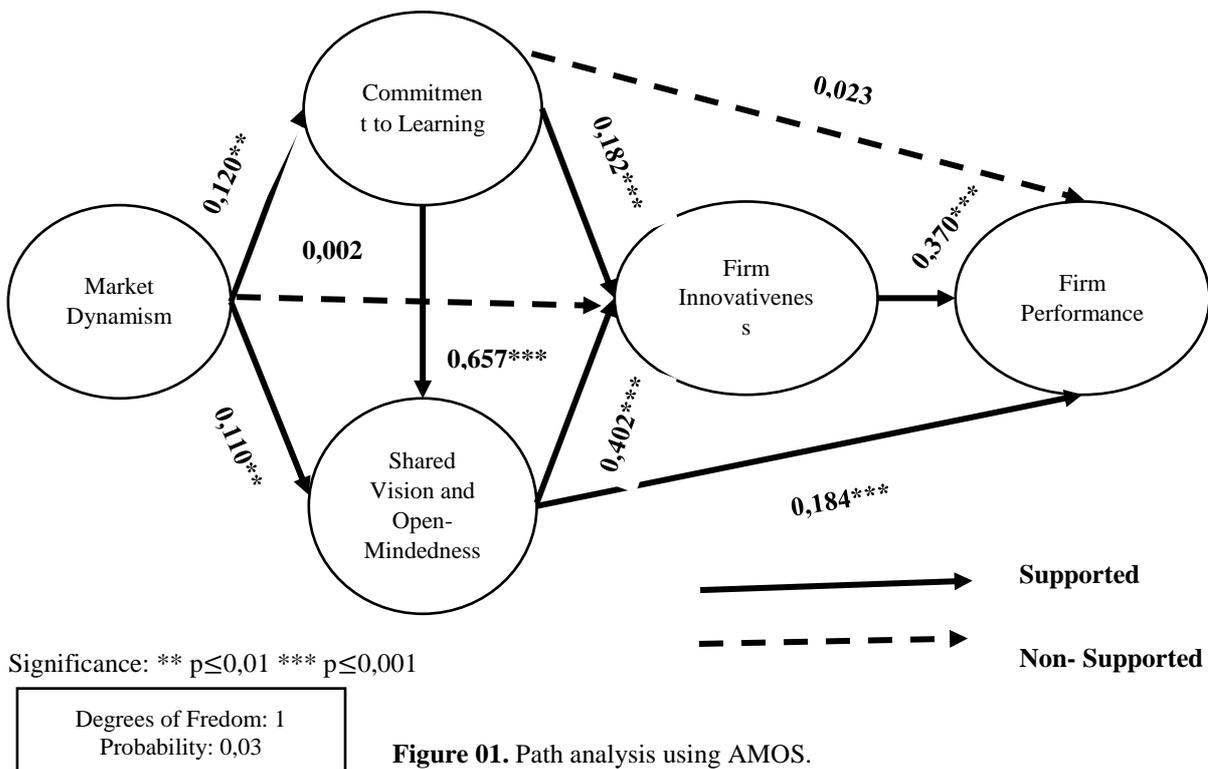
Decomposing effects are provided by AMOS path analysis into direct and indirect effect and for subtracting non causal effects. (Joreskog & Sorbom, 1989). It enables to reach results that cannot be calculated by regression analysis. Path analysis provide a more holistic view of the relationships between variables. Fit index determines whether the theoretical structure to be tested is confirmed by the data set (Bentler & Yuan, 1999; Pedhazur, 1997). Chi-Square (χ^2/sd) value is below 5 (4,702) showing an acceptable model fit. RMSEA value shows model-data fit at acceptable levels. Each of the AGFI, GFI, NFI, RFI, TLI and CFI values are found in excellent fit index range. Model fit index ranges together with the found values are given in Table 4.

Table 04. Model Fit Values

Model Fit	Model Fit Value in Our Model	Excellent Model Fit Index	Acceptable Model Fit Index
Chi- Square (χ^2/df)	4,702	$0 \leq \chi^2/df \leq 2$	$2 \leq \chi^2/df \leq 5$
RMSEA	0,087	$,00 \leq RMSEA \leq ,05$	$,05 \leq RMSEA \leq ,08$
AGFI	0,942	$,90 \leq AGFI \leq 1,00$	$,85 \leq AGFI \leq ,90$
GFI	0,996	$,95 \leq GFI \leq 1,00$	$,90 \leq GFI \leq ,95$
NFI	0,992	$,95 \leq NFI \leq 1,00$	$,90 \leq NFI \leq ,95$
RFI	0,923	$,95 \leq RFI \leq 1,00$	$,90 \leq RFI \leq ,95$
TLI	0,938	$,90 \leq TLI \leq ,95$	-
CFI	0,994	$,95 \leq CFI \leq 1,00$	$,90 \leq CFI \leq ,95$

Chi- Square (Meyers et al., 2006; Ayyıldız & Cengiz, 2006), AGFI (Schermelleh-Engel & Moosbrugger, 2003), GFI, CFI, NFI, RFI (Bentler, 1980; Baumgartner & Homburg, 1996; Marsh, Hau, Artelt, Baumert & Peschar, 2006; Bentler & Bonett, 1980), RMSEA (Browne & Cudeck, 1993), TLI (Bora & Arabacı, 2009).

According to path analysis market dynamism has significant and positive direct relationship with learning orientation dimensions that are commitment to learning and shared vision-open mindedness. A positive and significant direct relationship is found between commitment to learning and shared vision-open mindedness. Market dynamism doesn't have direct relationship with firm innovativeness. Both commitment to learning and shared vision open-mindedness have positive and significant direct relationship between firm innovativeness. Moreover, a positive and significant direct relationship is found between shared vision-open mindedness and firm performance. Commitment to learning doesn't have direct relationship with firm performance. Another positive and significant direct relationship is found between firm innovativeness and firm performance. The latest form of the model, according to path analysis is given below;



The updated model according to the results of the path analysis shows 3 mediating variable relationship. These are;

1. Learning orientation has the mediating effect on the relationship between market dynamism and firm innovativeness
2. Firm innovativeness has the mediating effect on the relationship between commitment to learning and firm performance
3. Firm innovativeness has the mediating effect on the relationship between share vision-open mindedness and firm performance.

In order to verify the existence of these mediating effects, regression analyses were made. The first mediating effect is not found in the regression analysis (between market dynamism and firm innovativeness) ($\beta=.100$ $p=.027$). For this reason, learning orientation has no mediating effect on the relationship between market dynamism and firm innovativeness.

Table 05. Regression Analysis 1

Regression Model	Independent Variables	Dependent Variables	Standardized B	Sig.	Adjusted R2	F Value	Model Sig.
1	Market Dynamism	Commitment to Learning	.120**	.008	.012	7,057	.008
2	Market Dynamism	Shared Vision and Open-Mindedness	.189***	.000	.034	17,934	.000
3	Commitment to Learning	Firm Innovativeness	.452***	.000	.203	124,446	.000
4	Shared Vision and Open-Mindedness	Firm Innovativeness	.525***	.000	.274	184,143	.000
5	Market Dynamism	Firm Innovativeness	.100*	.027	.008	4,905	.027

Significance: * $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$

The regression analysis results for the second mediator shows that, a positive and meaningful relationship exists between commitment to learning and firm innovativeness with 20,3% ($\beta=.452$ $p=.000$). A positive and meaningful relationship is found between firm innovativeness and firm performance with 20.6% ($\beta=.456$ $p=.000$). A positive and meaningful relationship is also found between commitment to learning and firm performance with 70% ($\beta=.268$ $p=.000$). Lastly, commitment to learning and firm innovativeness investigated together in regression analysis for their relation with firm performance. In this analysis, commitment to learning effect is not visible. ($\beta=.268$ $p=.087$). In this case, firm innovativeness has full mediating effect on commitment to learning and firm performance relationship.

Table 06. Regression Analysis 2

Regression Model	Independent Variables	Dependent Variables	Standardized B	Sig.	Adjusted R2	F Value	Model Sig.
1	Commitment to Learning	Firm Innovativeness	.452***	.000	.203	124,446	.000
2	Firm Innovativeness	Firm Performance	.456***	.000	.206	127,115	.000
3	Commitment to Learning	Firm Performance	.268***	.000	.070	37,456	.000
4	Commitment to Learning	Firm Performance	.078	.087	.021	65,283	.000
	Firm Innovativeness		.421***	.000			

Significance: * $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$

Regression analysis for the third mediator shows that there is positive and meaningful relationship between shared vision-open mindedness and firm innovativeness with %27,4 ($\beta=,525$ $p=,000$). There is positive and meaningful relationship between firm innovativeness and firm performance with %20,6 ($\beta=,456$ $p=,000$). A positive and meaningful relationship is visible between shared vision-open mindedness and firm performance with %13 ($\beta=,363$ $p=,000$). Shared vision-open mindedness and firm innovativeness were analysed together through regression to investigate their impact on firm performance. The results showed that shared vision-open mindedness impact reduces ($\beta=,171$ $p=,000$). It can be stated that, firm innovativeness shows partial mediating effect on the relationship between shared vision-open mindedness and firm performance.

Table 07. Regression Analysis 3

Regression Model	Independent Variables	Dependent Variables	Standardized B	Sig.	Adjusted R2	F Value	Model Sig.
1	Shared Vision and Open- Mindedness	Firm Innovativeness	.525***	.000	.274	184,143	.000
2	Firm Innovativeness	Firm Performance	.456***	.000	.206	127,115	.000
3	Shared Vision and Open- Mindedness	Firm Performance	.363***	.000	.130	73,502	.000
4	Shared Vision and Open- Mindedness	Firm Performance	.171***	.000	.226	71,777	.000
	Firm Innovativeness		.366***	.000			

Significance: * $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$

5. Conclusion and Discussions

This paper investigated the relationships between market dynamism, commitment to learning, shared vision-open mindedness, firm innovativeness together with firm performance variables. Market dynamism and other variables included in our analysis relationships were not thoroughly investigated in the explored literature databases (searched through Web of Science and Google Scholar),

The analysis results proved all the hypotheses except H3 and H8. Path analysis and regression analysis highlighted two important findings. The first, firm innovativeness has full mediating effect on commitment to learning and firm performance relationship. The second, firm innovativeness has partial mediating effect on shared vision-open mindedness and firm performance relationship.

The study included surveys conducted with 486 manager and white collar employees from Turkish manufacturing industry in 2015. The findings cover this sample. In order to improve the generalization of the findings in Turkey and other countries, different sectors and companies with different sizes can be investigated. The findings can be compared with of this study to reach generalized views.

References

- Ayyıldız, H., & Cengiz, E. (2006). Pazarlama Modellerinin Testinde Kullanılabilecek Yapısal Eşitlik Modeli (Yem) Üzerine Kavramsal Bir İnceleme. *Süleyman Demirel Üni. İİBF Dergisi*, 11(1), 63-84.
- Baumgartner, H., & Homburg, C. (1996). Applications of Structural Equation Modeling in Marketing and Consumer Research: A Review. *International Journal of Research in Marketing*, 13(2), 139-161.

- Bentler, P.M. (1980). Multivariate Analysis with Latent Variables: Causal Modeling. *Annual Review of Psychology*, 31, 419-456.
- Bentler, P.M., & Bonett, D.G. (1980). Significance Tests and Goodness of Fit in The Analysis of Covariance Structures. *Psychological Bulletin*, 88, 588-606.
- Bentler, P. M., & Yuan, K. H. (1999). Structural Equation Modelling with Small Samples: Test Statistics. *Multivariate Behavioral Research*, 34, 181-197.
- Brown, S.L., & Eisenhardt, K.M. (1995). Product Development: Past Research, Present Findings and Future Directions. *Acad Manage Review*, 20 (2), 343-378.
- Browne, M.W., & Cudeck, R. (1993). Alternative Ways of Assessing Model Fit. In: Bollen, K.A., & Long, J.S. (Eds.), *Testing Structural Equation Models*, 136-162, Beverly Hills, CA: Sage.
- Bora, E., & Arabaci, L.A. (2009). Effect of Age and Gender On Schizotypal Personality Traits in The Normal Population. *Psychiatry and Clinical Neurosciences*, 63, 663-669.
- Calantone, R. J., Cavusgil, S.T., & Zhao, Y. (2002). Learning Orientation, Firm Innovation Capability and Firm Performance. *Industrial Marketing Management*, 31(6), 515-24.
- Chaveerug, A., & Ussahawanitchakit, P. (2008). Learning Orientation, Innovation Capability, and Organizational Performance in Audit Firms: Moderating Effects of Organization. *Review of Business Research*, 8(2), 92-102.
- Chiou, C.C., & Chen, Y.C. (2012). Relations Among Learning Orientation, Innovation Capital and Firm Performance: An Empirical Study in Taiwan's IT/Electronic Industry, *International Journal of Management*, 29(3), 321-331.
- Damanpour, F. (1991). Organizational Innovation: A Meta-Analysis of Effects of Determinants and Moderators. *Academy Management Journal*, 34(3), 555-90.
- Day, G.S. (1991). Learning About Markets. Marketing Science Institute Report Number 91-117. *Marketing Science Institute*, Cambridge, MA.
- Delaney, J.T., & Huselid, M.A. (1996). The Impact of Human Resource Management Practices On Perceptions of Organizational Performance. *Academy of Management Journal*, 39, 949-969.
- Galer, G., & Kees van der H. (1992). The Learning Organization: How Planners Create Organizational Learning. *Marketing Intelligence and Planning*, 10(6), 5-12.
- Garg, V.K., Walters, B.A., & Priem, R.L. (2003). Chief Executive Scanning Emphases, Environmental Dynamism and Manufacturing Firm Performance. *Strategic Management Journal*, 24(8), 725-744.
- Gatignon, H., & Xuereb, J.M. (1997). Strategic orientation of the firm and new firm performance. *Journal of Marketing Research*, 34, 77-90.
- Homburg, C., Krohmer, H., & Workman, J.P. (1999). Strategic Consensus and Performance: The Role of Strategy Type and Market-Related Dynamism. *Strategic Management Journal*, 20, 339-357.
- Hult, G.T., Snow, C.C., & Kandemir, D. (2003). The Role of Entrepreneurship in Building Cultural Competitiveness in Different Organizational Types. *Journal of Management*, 39(3), 401-426.
- Hurley, R.F., & Hult, G.T.M. (1998). Innovation, Market Orientation, and Organizational Learning: An Integration and Empirical Examination. *Journal of Marketing*, 62, 42-54.
- Johnson, J.D., Meyer, M.E., Berkowitz, J.M., Ethington, C.T., & Miller, V.D. (1997). Testing Two Contrasting Structural Models of Innovativeness In A Contractual Network. *Hum Commun Res.*, 24(2), 320-348.
- Joreskog, K.G., & Sorbom, D. (1989). LISREL 7 User's Reference Guide, Scientific Software , Inc., Chicago, IL.
- Kjessler, E.H., & Chakrabarti, A.K. (1996). Innovation Speed: A Conceptual Model Of Context, Antecedents, And Outcomes. *Academy of Management Review*, 21, 1143-1191.
- Lee, T.S., & Tsai, H.J. (2005). The Effects Of Business Operation Mode On Market Orientation, Learning Orientation And Innovativeness. *Industrial Management & Data Systems*, 105(3), 325-348.
- Li, M., & Simerly, R.L. (1998). The Moderating Effect Of Environmental Dynamism On The Ownership And Performance Relationship. *Strategic Management Journal*, 19(2), 169-179.
- Lumpkin, G.T., & Dess, G.G. (1996). Enriching the Entrepreneurial Orientation Construct-A Reply to Entrepreneurial Orientation or Pioneer Advantage. *The Academy of Management Review*, 21(3), 605-607.

- Marsh, H.W., Hau, K.T., Artelt, C., Baumert, J., & Peschar, J.L. (2006). OECD's Brief Self-Report Measure Of Educational Psychology's Most Useful Affective Constructs: Cross-Cultural, Psychometric Comparisons Across 25 Countries. *International Journal of Testing*, 6(4), 311-360.
- Meyers, L.S., Gamst, G., & Guarino, A.J. (2006). Applied Multivariate Research. *Design and Interpretation*. Sage Publishing.
- Miller, D., & Cornelia, D. (1986). Psychological and Traditional Determinants of Structure. *Administrative Science Quarterly*, 31, 539-560.
- Mone, M.A., McKinley, W., & Barker, V.L. (1998). Organizational Decline And Innovation: A Contingency Framework. *Acad Manage Review*, 23(1), 115-132.
- Moorman, C., & Miner, A.S. (1998). Organizational Improvisation And Organizational Memory. *Acad Manage Review*, 23(4), 698-723.
- Pedhazur, E. J. (1997). Multiple Regression in Behavioral Research. *Fort Worth, TX*: Harcourt Brace.
- Pelham, A., & Wilson, D. (1995). Does Market Orientation Matter for Small Firms? *Marketing Science Institute*, Cambridge, MA.
- Porac, J.E., & Howard, T. (1990). Taxonomic Mental Models in Competitor Definition. *Academy of Management Review*, 15(2), 224-240.
- Sackmann, S. A. (1991). Cultural Knowledge in Organizations. *Newbury Park, CA*: Sage.
- Schermelleh-Engel, K., & Moosbrugger, H. (2003). Evaluating The Fit Of Structural Equation Models: Tests Of Significance And Descriptive Goodness-Of-Fit Measures. *Methods of Psychological Research Online*, 8(2), 23-74
- Senge, P.M. (1990). The Fifth Discipline: The Art and Practice Of The Learning Organization. New York: Doubleday.
- Senge, P.M. (1992), Mental Models. *Planning Review*, 20, 4-10.
- Simerly, R., & Li, M. (2000). Environmental Dynamism, Capital Structure, and Performance: A Theoretical Integration and an Empirical Test. *Strategic Management Journal*, 21, 31-49.
- Sinkula, J.M., Baker, W.E., & Noordewier, T. (1997). A Framework Formarket-Based Organizational Learning: Linking Values, Knowledge, And Behaviour. *Journal of the Academy of Marketing Science*, 25(4), 305-318.
- Sinkula, J.M. (1994). Market Information Processing and Organizational Learning. *Journal of Marketing*, 58, 35-45.
- Tobin, D.R. (1993). Re-Educating The Corporation: Foundations For The Learning Organization. *Essex Junction, VT*: Oliver Wright.
- Tsai, C. T., & Chen, K. F. (2010). When Transformational Leadership And Learning Orientation Impact Innovation Behavior: The Importance Of Ambidextrous Organization. Paper presented at the International Conference on Business and Information.
- Tuominen, M., Rajala, A., & Möller, K. (2004). How Does Adaptability Drive Firm Performance. *Journal of Business Research*, 57, 495-506.
- Venkatraman, N., & Ramanujan, V. (1986). Measurement Of Business Performance In Strategy Research: A Comparison Of Approaches. *Academy of Management Review*, 11(4), 801-814.
- Verona G. A. (1999). Resource-Based View Of Product Development. *Acad Manage Review*, 24(1), 132-142.
- Zahra, S.A., & Garvis, D.M. (2000). International Corporate Entrepreneurship And Firm Performance: The Moderating Effect Of International Environmental Hostility. *Journal Of Business Venturing*, 15(5-6), 469-492.