

Strategic Orientation and New Product Performance (Innovation Success): The Moderating Role of Environmental Dynamism

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Abstract: The study employs the upper-echelons perspective and strategic orientation literature to address the issues of strategic orientation. Collected data from 351 executives in 124 firms in Jordan was analyzed using structural equation modeling and hierarchical regression. Strategic orientation assessed as predictors of new product performance as was the proposed moderator, perceived environmental dynamism. The study finds that both of market orientation and technology orientation have significant effects on new product performance/innovation success. Further, environmental dynamism had also showed a significant impact on strategic orientation (market orientation and technology orientation) and a new product performance and at higher levels, a significant moderating effect. The empirical analyses yield results consistent with these arguments. Implications for research and practice are correspondingly discussed.

Key words: Strategic orientation, market orientation, technology orientation, new product performance, innovation success, dynamism environment

INTRODUCTION

Porter (1985) argued that the performance of firms is depending on the choice of industry and that different industries attract different levels of performance. Upper-echelons perspective has also been interested in the effects of TMT on firm strategic and performance outcomes (Carpenter *et al.*, 2004; Hambrick and Mason, 1984). Upper-echelons perspective proposes that the values, cognitive bases and breadth of perspective of top executives will lead a firm's directions and determine its strategic and ultimate effectiveness (Carpenter *et al.*, 2004). While the performance of a firm concerned with business level strategies and strategic orientations which determined by compete effectively in each of firm chosen product market segments (Venkatraman, 1989).

Conversely, strategic orientation proposes that an organization is a reflection of its strategic leaders and many studies have revealed the significant impact that strategic orientations have on a firm's outcome performance (Narver and Slater, 1990). However, many scholars have empirical studies on how firms can achieve competitive advantages firm development. One of the most important factors that ultimately contribute towards the success of new product development is firm's strategic orientation (Mu *et al.*, 2017).

Further, Finkelstein (1992) proposed that various sources of executive power may be especially, important in relation to organizational outcomes when a firm is confronted with a high degree of uncertainty from its

environment. A firm must be innovative to survive in a volatile environment. Firms with greater capacity to innovate will be more successful in responding to their environments. Researchers and practitioners are seeking to investigate how innovations can be disseminated among different adopting units why some organizations are more innovative than others (Hashem and Tann, 2007; Rababah, 2017a).

An organization's capacity is to change its operations and adapt them to the environmental requirements has taken center stage in the debate on strategic management (Eisenhardt and Martin, 2000; Winter, 2003). It is also difficult for firms to maintain and/or grow their market position due to stronger competition. Previous literature largely studied the possible relationships between strategy orientation and firm performance. Strategic orientations are commonly recognized as valuable resources that facilitate the achievement of competitive advantage and greater firm performance (Day, 1990, 1994). Early research on strategic orientation has given attention to special areas to be pursued which designed to guide management, marketing and entrepreneurship (Hakala, 2011).

Consequently, the main focus of strategic orientation literature is to find answers to why some firms outperform others in terms of superior firm performance. Different studies have over the years introduced several strategic orientations that are said to contribute to firm's outcomes. Strategic orientation provides firms with market-sensing and customer-linking capabilities that lead to superior

business performance (Day, 1994) and competitor orientation is critical for the long-term survival of the firm and innovative success (Hakala, 2011). This study chooses a number of variables describing strategic orientation firm performance including market orientation and technology orientation. The selection based on a review of literature on similar research (Im *et al.*, 2016; Narver and Slater, 1990) and the literature has shown that market orientation and technology orientation are associated with improved business outcomes (Gatignon and Xuereb, 1997; Jeong *et al.*, 2006; Zahra, 2008).

Additionally, the impact of the environment on outcome has been widely considered (Zahra and Bogner, 2000). In highly dynamic environment, TMTs firm such as a requirement to continuously modifying their decision to introduce quality decision and to maintain firm outcome (Lin and Rababah, 2014). Eisenhardt (1989) found that when the environment is dynamic, decision makers feel more uncertain because they might seek information more comprehensively to reduce the sense of the speed and uncertainty. Therefore, the purpose of the present study is to examine systematically the effects of strategic orientation on new product performance (innovation success) under environments perceived to be dynamism.

The study aims to combine the views on strategic orientation from different streams of literature and develop a framework that integrates with both market and technology orientations. However, it is important that management understands the need to implement strategic orientation and environment dynamism, through the creation of new technologies, products and services which have been proposed as important factors in determining performance of firms and/or innovation success.

Finally, the purpose of this study is to contribute to literature on a conceptual model of effect of strategic orientation (market orientation and technology orientation) on new product performance and to provide empirical evidence of the importance of new product performance in achieving a high quality perform as well as innovation success. An additional issue has been is that previous research on strategic orientation and market orientation was mostly conducted in western countries. The study advances the generalizability of the upper echelons theory and strategic orientation by responding to the recent call upon doing research in the Arab Middle East. However, examinations of these issues are valuable because it can offer insights that complete the studies that have focused on firms in Western societies.

Theoretical background and hypothesis development

Theoretical background

Strategic orientations: Strategic orientations are the guiding principles that influence an organization's strategic plans and activities (Noble *et al.*, 2002; Sen, 2014). However, individual strategic orientations have long been studied as important drivers of business performance. Three major strategic orientations can be identified from the list of factors which determine the success or failure of new products: the firm's consumer orientation, competitive orientation-often covered jointly under the label of market orientation and the firm's technological orientation (Gatignon and Xuereb, 1997).

Jeong *et al.* (2006) argued that customer orientation and technological orientation are significant strategic orientations to the success of new product orientation. This study tries to show the possibility of strategic orientation (market orientation and technological orientation) to development capability and new products of firm's performance through the engagement of innovation. Market orientation is important to the activities of firm and its impact on business performance (Zahra, 2008). Market orientation and technology orientation are equally important for exploratory innovation which in turn leads to great performance (Hortinha *et al.*, 2011).

Gatignon and Xuereb (1997) defined strategic orientation as the strategic directions that are planned, organized and which are implemented by the firm to endorse proper measures for the continuous performance and success of new product development. Also, based on a critical review of the research literature, Venkatraman (1989) identified six important dimensions of strategic orientation; these are aggressiveness, analysis, defensiveness, futurity, proactiveness and riskiness. Further, market-based resources such as strategic orientation are often complementary suggesting that they may interact and produce synergistic effects on performance (Kozlenkova *et al.*, 2014; Yang and Kang, 2008). However, a set of strategic orientation variables is applicable at the business level. Kumar *et al.* (2011) reported that firms are focusing exclusively on a single strategic orientation tend to have poor performance in the long run. The study proposes that a firm's strategic orientation has a significant impact on the characteristics of new product innovations. Market orientation and technology orientation are important to manufacturing firm even in their tendency to new products and are able to creating innovation activities (Kim *et al.*, 2013). Therefore, the study primarily is focusing on the multiple

combination of strategic orientation that includes market orientation and technology orientation (Im *et al.*, 2016; Narver and Slater, 1990; Gatignon and Xuereb, 1997) with the moderation of environmental dynamism to enhance the success of new product performance.

New product performance (innovation success):

Additionally, giving increasing attention is now being directed towards trade liberalization, as well as the increasing competitive pressures in the global marketplace. Innovation acts as vital agents of change by developing new products and services, implementing more efficient production methods and creating new business models and industries (Rababah, 2017a). Scholars have defined innovation in many different perspectives. At the same time, innovation can be classified into process innovation and product innovation (Ar and Baki, 2011). Damanpour and Gopalakrishnan (2001) view innovation adoption as an organization's means to adapt to the environment or change in the environment. Firm's innovation is defined as the adoption of an idea or behaviour, pertaining to a product, service, device, system, policy or programme that is new to the adopting organization (Damanpour and Evan, 1984).

Further, innovativeness reflects the tendency of a firm to engage in and support, new ideas and creative processes which may result in new products, services or processes (Lumpkin and Dess, 1996). Therefore, innovation is the acceptance of any idea or conduct related to a product, service, system, device, policy or program that is new to the adopting organization. In the same vein, the company may does not involve new technology in product innovation but uses already known technology in new ways in new products (Lofqvist, 2017). Overall, to develop new process and new product require specialized skills, new knowledge, processes, problem solving mechanisms, creation of value for the customers and strategic orientation to associate with firm performance.

The benefits of the firm should be directly observed by the role of the innovation (process and product) itself and on it's a firm to create the proper manners for the continuous superior performance of the business (Narver and Slater, 1990). The study has shown that the firm innovativeness is positively related to outcome performance (Calantone *et al.*, 2002). Early and fast enterprises introduction of innovation can bring the highest returns because they are first to introduce new goods or service in the market (Hitt *et al.*, 2001). Conversely, a firm's strategic orientation reflects the strategic guidelines implemented by a firm. Therefore, the strategic orientation of the firm has a critical role to play

in the outcome performance of a new product. The components of strategic orientation also aim to focus on the fulfillment of needs and wants of targeted customers through market orientation and technology (Narver and Slater, 1990) to produce the available information into valuable new product offerings, create more effectiveness for product innovations and promote outcome of firms.

Environmental dynamism: The environment-strategy research indicates that environment factors are an important consideration for a firm that is determining its strategy (Tan and Tan, 2005). However, three dimensions are conceptualized in the matter of environment (Dess and Bear, 1984; Miller and Friesen, 1983; Anderson and Tushman, 2001) namely; munificence refers to the capacity depends on the nature and the distribution of resources in environments; dynamism which is characterized by unpredictable rate of change and innovation in the industry (Miller and Friesen, 1983) is known as environmental turbulence (e.g., Calantone *et al.*, 2003) and/ or environmental uncertainty (Anderson and Tushman, 2001) and the final environmental dimension is complexity, reflects the degree to which environment restricted such as homogeneity-heterogeneity in production and marketing orientations.

Environmental dynamism reflects the degree of the environmental conditions stability-instability and turbulence; it describes the rate and unpredictability of change in a firm's external environment (Dess and Beard, 1984). A dynamic environment is defined as absence of pattern and unpredictable measures of the environment stability-instability which increases uncertainty for both individuals and firms operating. The role of environmental dynamism in influencing the new product/innovation success effect of strategic orientation is considered in the study. Therefore, this study adopts environmental dynamism, moderating the strategic orientation-new product performance relationship.

Conversely, executives of a firm build their decision on the environmental circumstances, therefore, to make the decision which is expected to be overflow quality performance. The notion here is that the environment is artificiality challenges, top managers in firm have considered a broader range of alternatives and information sources which are necessary for strategic orientation as well as the integrity of these considerations for greater perform outcome. Top executives are using their capabilities to shape and operate highly dynamic environment and to recognize the internal resources and capabilities to the external environment to improve performance (Hitt *et al.*, 1998).

Hypothesis

Strategic orientation (market and technology) and new product performance

Market orientation: However, it is important that marketing function is to be associated with strategically orientated firm as one of the tasks of marketing departments (Moorman and Rust, 1999) focusing on the market, identifying new opportunities, sources of innovation and to track market changes and consumer behavior to help create new products and services. Some researchers argued that changing markets gives rise to fresh ideas and innovative solutions and that market orientation is one of the major factors distinguishing between successful and unsuccessful innovations (Ge and Ding, 2005) and that future-oriented firm was more innovative success.

Further, Mavondo *et al.* (2005) found that market orientation affects different types of innovation performance. Market orientation is concerned with all the activities involved with gathering and understanding information about the customers and competitors in the target market (Narver and Slater, 1990) and information is utilized, as well as its nature and when it is collected (acquired) may affect the innovation success (Kero and Sogbossi, 2017). Market orientation components positively affect innovation consequences (Grinstein, 2008). Customer market intelligence influences product innovation positively or negatively, depending on whether the innovativeness of the owner in the new product domain is weak or strong (Verhees and Meulenber, 2004). Overall market orientation is significantly related to innovation degree and innovation performance in both EU and US insurance markets (Lado and Maydeu-Olivares, 2001). Market orientation has a significant and a positive impact on product innovativeness (Nasution *et al.*, 2011).

- H_{1a} : market orientation is positively related to new product performance (innovation success)

Technology orientation: Technology orientations essentially approach the dilemma of adaptation from the internal corner and link closely with the resource-based view of the firm for development of unique resource combinations that result in new technologies achievement of competitive advantage and outcome performance (Gatignon and Xuereb, 1997). Further, technology orientation is closely related terms of innovation and new product (Grinstein, 2008). A technology-oriented firm is proactive in acquiring and integrating new and sophisticated technologies in the new product development process (Zhou *et al.*, 2005).

Quintana-Garcia and Benavides-Velasco (2008) found that technological diversity is positively related to exploratory and exploitative innovation competences. Technology oriented enterprises aim creativity and inventively to find new techniques, technologies and methods that orientate the company's activities and strategies (Tutar *et al.*, 2015). Technology orientation refers to a firm's performance to introduce or utilize new technologies, products or innovations (Gatignon and Xuereb, 1997). Technology oriented companies also relatively have a higher advantage in creating new resources that will enable competitive advantage (Tutar *et al.*, 2015).

Further, performance should be explained differently, according to the firm's relative entry order as well as the firm's strategic orientations (Durand and Coeurderoy, 2001). Researchers have examined the structural and contextual strategic orientations that contribute to a firm's innovation and outcome performance (Zhang and Duan, 2010; Nasution *et al.*, 2011). Strategic orientations are likely increase new product development and facilitate new business creation. Overall, an organization must understand what factors of environment correlate of a firm's strategic orientation in order to improve its outcome performance and may identify the indirect impact through the moderator of the environmental dynamism. As a result, the influence that strategic orientation may have on new product performance/innovation success which helps an organization's ability to adapt to changing environmental circumstances is key predictor of performance outcomes and survival:

- H_{1b} : technology orientation is positively related to new product performance (innovation success)
- H_{1c} : strategic orientation (market orientation and technology orientation) is positively related to new product performance (innovation success)

A dynamism environment and its influences: Therefore, environmental dynamism has been importance, according to the degree of instability/turbulence of such key operating concerns as market and/or industry conditions as well as becoming more general such as technological and economic forces (Dess and Beard, 1984). The study suggests that the adapted dynamism environment is a managerial choice of strategic orientation that is linked to the new product performance/innovation outcome of a firm. As a result, the significant effect of environmental dynamism suggested that it was important to improve strategic orientation and outcome of the firms. Priem *et al.* (1995) found that environmental dynamism can moderate the strategic decision process and firm performance. Therefore, when the environment is dynamic, strategic

orientation of top managers needs to be reached efficiently to diverse perspectives of their strategic decisions (Hambrick and Mason, 1984).

Further, top managers evaluated the extent to which the environment, external to an organization was risky and predictable. Iansity (1995) suggests that emergent levels of environmental dynamism lead to more uncertainty in product development. Specifically, in dynamic environments, innovation is an appropriate strategy. Innovative leaders can respond flexibly to changes in the market. This implies that firms will dynamically enhance the ability to respond and can generate strategic orientation and superior performance. Conversely, business firms under turbulent environments need to continuously renew product/service, so as to respond to environmental change (Zahra, 2008). Some studies suggest that a technology orientation is effective for technologically turbulent, uncertain environments in particular (Gao *et al.*, 2007). On the other words, firms of a high technology orientation gain better business performance when technology changes rapidly because they are able to advance technologies and developing new processes, products and services (Huber, 1991).

Further, the need that the firms have for being market oriented may depend on the environmental conditions under which they operate. Miller and Friesen (1983) found that an effective innovation strategy is dependent on specific environmental conditions. Under such conditions, dynamic and unpredictable environments, the cognitive speed and capacity of decision makers tend to be accelerated. However, market orientation is important to manufacturing firm given their tendency to new products and innovation activities (Kim *et al.*, 2013) with the moderation of environmental dynamism to enhance the success of new product performance. Under uncertain market conditions, technology orientation improves the innovativeness of the company (Soto-Acosta and Merono-Cerdan, 2008). Therefore, under the dynamic environmental conditions and market conditions surrounded by destructive competition are important to adopt a technology-oriented approach in production technologies and methods (Tutar *et al.*, 2015). These argument lead to the following hypothesis:

- H_{2a}: the degree of environmental dynamism is positively moderate the relationship between market orientation and new product performance
- H_{2b}: the degree of environmental dynamism is positively moderate the relationship between technology orientation and new product performance

MATERIALS AND METHODS

Research design and sample selection: Upper-echelons perspective also proposes that the values, cognitive bases and breadth of perspective of top executives will lead a firm's directions and determine its strategic and ultimate effectiveness (Carpenter *et al.*, 2004). At the same time, TMT attitude is an important determinant of a cultural shift towards strategic orientation. This study considers strategic orientations at an individual level rather than an organizational level and investigates cognitive models of managers (TMTs). TMT is a group of executives, identified by a firm's CEO who decides the strategic directions and actions of the firm (Hambrick and Mason, 1984).

Research sample is drawn from Jordan. Jordan has a fairly dynamic-market-oriented economy (Lin and Rababah, 2014). Although, organizational and environmental factors are complex and have unstable influences, TMT attitude is an important determinant of a cultural shift towards market orientation but it occurs under conditions of high external risk and uncertainty. Jordanian society is easier than other Arab countries due to the fact that Jordan is relatively liberal (Rababah, 2017b). Moreover, giving the lack of clarity and/or agreement on the practices of business, managers in Jordan attempt to manage the company and emphasize the culture more as a dynamic process. For the Jordan sample, an average firm age is 16.77 years (SD = 13.80). About 40% are in the industrial sector, 10% in the banking and financial services sector, 43% in the services sector and 7% are in the insurance sector. A large portion of sample firms are totally private sector 75.5%. The averages at TMT age is 47.22 years (SD 6.85) and had 18.50 (SD 10.50) years of experience in their firm's industry. Further, 80% of the sample was male and 97.2% are married.

Measurements of variables

Independent variables: Scholars have considered that both market orientation and technology orientation have positive influence on new product performance. Multiple items scales were adapted based on items previously in survey research studies (Gatignon and Xuereb, 1997; Narver and Slater, 1990).

Market orientation: The five-item, seven-point Likert-type scale was adapted from (Gatignon and Xuereb, 1997; Narver and Slater, 1990) ($\alpha = 0.80$). The CFA results showed that the values of the fit indices were largely acceptable ($\chi^2 = 8.44$, $df = 3$; NNFI = 0.97, CFI = 0.97, SRMR = 0.03, RMSEA = 0.04). Respondents were asked to indicate the extent to which the strategic orientation of

market over past 3 years (2014-2016) consists of three dimensions including customer orientation, orientation competitors and interfunction coordination (Narver and Slater, 1990; Putri *et al.*, 2016).

Technology orientation: Gatignon and Xuereb (1997) twelve-item, Seven-point Likert-type (1 = strongly disagree; 7 = strongly agree) scale was applied to measure technology orientation. The Cronbach’s α value for the overall scale was 0.78. Sample items include: “Our firm uses sophisticated technologies in its new product development”, “Our new products are always at the state of the art of the technology” and “Our firm is very proactive in the development of new technologies”. The CFA results showed that the model fitted the data well ($\chi^2 = 4.5$, $df = 5$; NNFI = 0.99, CFI = 0.99, SRMR = 0.04, RMSEA = 0.01).

Dependent variable

New product performance: A five-item, seven-point Likert-type scale (1 = strongly disagree, 7 = strongly agree) was adapted from Gatignon and Xuereb (1997), new product performance ($\alpha = 0.79$). Respondents were asked to indicate the extent to which their new product performance such as “The growth of this new product’s market share is superior to the market share growth of its main competitors”, “With this new product, we have increased our market share in this category”. The CFA results showed that the model fitted the data well ($\chi^2 = 4.2$, $df = 5$; NNFI = 0.98, CFI = 0.98, SRMR = 0.04, RMSEA = 0.03). The factor loadings were all significant ($p < 0.001$).

Moderating variable

Environmental dynamism: Environmental dynamism is measured with a 4-item scale (1 = strongly disagree; 7 = strongly agree) developed by Miller and Friesen (1983) ($\alpha = 0.87$). These items reflect the degree of the un/predictability of industry and consumer demand in external environmental relates to firm outcome performance. Also, such a measure of dynamism reflects the need for frequent development of new products and for frequent technological advances that give rise to the new products (Wang and Li, 2008). Respondents were

asked to rate the extent to which the variables had changed over the past 3 years (2014-2016). The CFA results showed that the model fitted the data well ($\chi^2 = 4.2$, $df = 5$; NNFI = 0.99, CFI = 0.99, SRMR = 0.04, RMSEA = 0.02). The factor loadings were all significant ($p < 0.01$).

Control variables

Control variables: To decrease the likelihood of spurious results, several control variables are added to the model (Lin and Rababah, 2014). The study controlled for variables that may affect new product performance including respondents-level information (i.e., average age, education, heterogeneity), industry-level variables (i.e., environmental munificence), firm-level characteristics (i.e., size, age and organizational slack) (Papadakis and Barwise, 2002).

Statistical analysis: Structural Equation Modeling (SEM) can closely examine the relationships between observed indicators and latent variables while simultaneously controlling for measurement errors. A two-step structural equation modeling approach (Lin and Rababah, 2014) implemented in AMOS 16.0 is performed to evaluate the models and test the hypothesis. The first step is to fit a Confirmatory Factor Analysis (CFA) to check for convergent and discriminate validity, to confirm the full measurement model and then test a series of structural models to test the hypothesis. To assess model fit, the Chi-square χ^2 test was used and four additional fit indices including Comparative Fit Index (CFI), Non-Normed Fit Index (NNFI), Root-Mean-Square Error of Approximation (RMSEA) and Standardized Root-Mean-square Residual (SRMR) were applied to assess model fit (Hu and Bentler, 1999). Further, to test the moderating hypothesis, the study uses hierarchical regression analysis (Lin and Rababah, 2014). Several models are estimated to test the moderating hypothesis.

RESULTS AND DISCUSSION

Structural models, hypothesis testing and results:

Table 1 presents the means, standard deviations and

Table 1: Means, standard deviations and correlations

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10
TMT age	1.31	0.33										
TMT education heterogeneity	0.52	0.31	0.004									
Firm size	2.43	0.48	0.100	0.125*								
Firm age	1.16	0.57	0.054	0.195**	0.109*							
Firm slack	4.88	1.32	-0.046	0.047	-0.002	0.043						
Environmental munificence	4.90	1.10	-0.023	-0.009	0.024	0.026	0.127*					
Market orientation	4.48	1.34	0.084	-0.076	-0.063	0.125*	-0.171**	0.062				
Technology orientation	5.47	1.44	0.071	-0.031	0.130*	0.001	0.026	0.179**	0.048			
Environmental dynamism	5.23	1.35	0.087	0.010	0.063	0.012	0.251**	0.347**	0.202**	0.410**		
New product performance	4.96	1.31	0.044	-0.065	-0.056	0.126*	0.128*	0.371**	0.228**	0.319**	0.319**	

N = 351, **p < 0.01, *p < 0.05

Table 2: Structural models-fit index model

Models	χ^2	df	NNFI	CFI	SRMR	RMSEA
Null structural model	2474.4***	276				
Market orientation-New product	354.1***	134	0.92	0.90	0.03	0.04
Technology orientation-New product	303.9***	146	0.90	0.90	0.03	0.04
Market and technology-New product	582.7***	227	0.90	0.91	0.05	0.06

***p<0.001

Table 3: Results of regression analysis (dependent variable new product performance)

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Control						
TMT age	0.056	0.040	0.025	-0.005	-0.014	-0.012
TMT educational heterogeneity	-0.082	-0.065	-0.062	-0.055	-0.078*	-0.045
Firm size	-0.074	-0.058	-0.135***	-0.125**	-0.118**	-0.113**
Firm age	0.134***	0.103**	0.140***	0.124***	0.103**	0.125***
Firm slack	0.083*	0.120**	0.079*	0.045	0.035	0.020
Environmental munificence	0.359***	0.342***	0.274***	0.195***	0.189***	0.186***
Independent						
Market orientation		0.202***		0.124**	0.123***	0.101**
Technology orientation			0.481***	0.383***	0.289***	0.362***
Moderating						
Environmental dynamism				0.265***	0.186***	0.248***
Interaction						
Market orientation X dynamism					0.246***	
Technology orientation X dynamism						0.120***
R	0.415	0.459	0.626	0.685	0.711	0.693
R ²	0.172	0.210	0.392	0.469	0.505	0.480
Adjusted R ²	0.158	0.194	0.379	0.455	0.491	0.465
F	11.94***	13.04***	31.52***	33.42***	34.74***	31.39***

n=351; *p<0.05, **p<0.01, ***p<0.001

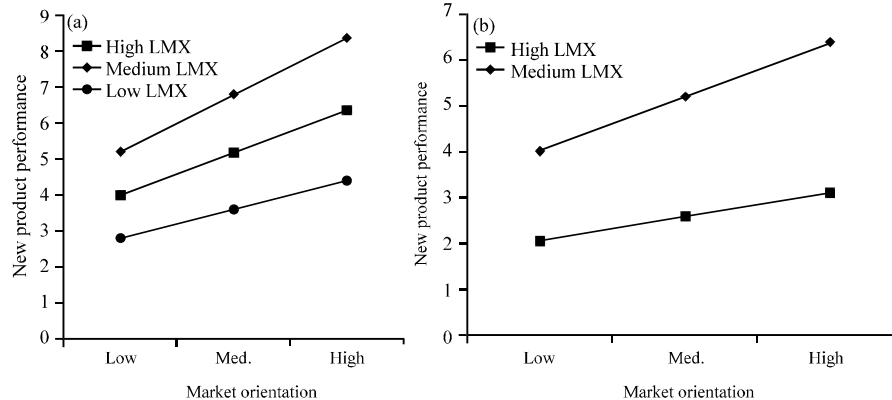


Fig. 1: Moderating role of environmental dynamism; a) Continuous moderator and b) Categorical moderator

correlations for the variables examined in the study. To determine whether the strategies orientation (market and technology) individually presented a direct relationship with a new product performance, two rival models were tested separately, adding to the hypothesized fully model. Significant relationship between market orientation and new product performance ($\chi^2 = 354.1$, $df = 134$, $p < 0.001$; $CFI = 0.92$, $NNFI = 0.90$, $RMSEA = 0.04$ and $SRMR = 0.05$) and significant relationship between technology orientation and new product performance ($\chi^2 = 303.9$, $df = 146$, $p < 0.001$; $CFI = 0.90$, $NNFI = 0.90$, $RMSEA = 0.04$ and $SRMR = 0.03$). The results showed that both of (market and technology) models suggested that separately model indeed fit index model.

Table 2 and 3 presents the value of fit indices for the structural models. As shown in Table 2 both of strategies orientation (market and technology) are significantly correlated with new product performance ($p < 0.01$). Taken together, the researcher obtained the model 4 as the final model including (market orientation and technology orientation) ($\chi^2 = 582.7$, $df = 227$ $p < 0.001$; $CFI = 0.90$, $NNFI = 0.91$, $RMSEA = 0.06$ and $SRMR = 0.05$). The result showed that both market and technology model suggested that the model indeed fit index (Fig. 1). Consistent with expectations, market orientation was positively associated with a new product performance ($\beta = 0.15$, $p < 0.001$), technology orientation was positively associated with new product performance ($\beta = 0.17$,

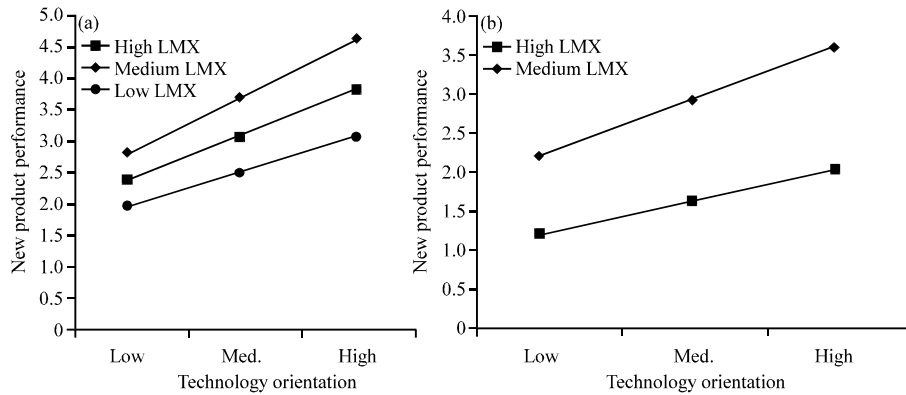


Fig. 2: Moderating role of environmental dynamism; a) Continuous moderator and b) Categorical moderator

$p < 0.001$) and both-together-of market orientation and technology orientation were positively associated with a new product performance ($\beta = 0.16, p < 0.001$), ($\beta = 0.18, p < 0.001$), respectively. Finally, as shown in Table 3, hypothesis 2a and b which predicted environmental dynamism would positively moderate the relationship between strategic orientation (for market and technology separately) and new product performance were supported by market orientation ($\beta = 0.11, t = 2.35, p < 0.01$) and technology orientation ($\beta = 0.36, t = 8.19, p < 0.01$).

Further, to estimate the level effect of environmental dynamism explained by the interactions, the researcher conducted hierarchical regression analyses by creating two simple regressions of strategic orientation on new product performance, the change can be estimated when the interaction term was entered (Rababah, 2017b). As the moderating effects shown for market orientation x environmental dynamism and technology orientation x environmental dynamism Fig. 1 and 2, respectively, plotting the interactions terms were supporting the clarification.

CONCLUSION

This study examines the relationships among strategic orientation, both of market orientation and technology orientation and the new product performance which addresses the upper echelons perspective. The results have already supported the theoretically derived causal model and key hypothesized relationships. Specifically, strategic orientation, both of market orientation and technology orientation indeed can directly enhance new product performance and advance innovation success. Further, dynamism environments positively moderate the relationship between market orientation and the new product performance and

between technology orientation and new product performance. The findings of this study show that strategic orientations (both of market orientation and technology orientation) have significant and positive correlation with new product performance. Therefore, early and fast firm's introduction of strategic orientation can bring the highest returns because they are first to introduce new goods or service which can extend in technological and marketing innovations. The findings of this study indicate that a successful strategic orientation has consequences that eventually lead to outcome performance and the strategy of firm should focus on more direct outcomes of strategic orientation such as product innovations to introduce new goods or service, market share in this category and better return on investment which in turn promote outcome of firms and innovation success.

In a competitive environment, product and service innovation is necessary to surpass competitors in the degree to which the needs of customers are satisfied (Mart'nez and Lorente, 2008). Since, companies are facing a turbulent and rapidly changing environment, innovation has become a strategic tool for management (Rababah, 2017a). Therefore, strategic orientation is an option for responding to the new challenges of an environment subjected to change and uncertainty to create new product which presents the characteristics necessary for successful innovation. Strategic orientation such as market oriented firms is better able to create and implement new product and process ideas than their competitors (Kirca *et al.* (2005), resulting in a continuous creation of superior value for customers by offering new products and services better than the products and services of competitors. On the other words, the result of this study revealed that satisfaction of customer needs should be a major focus of the development of new products.

Accordingly, the dynamism of the environment varies greatly across industries and firms; however, as the results of this study indicate, firms operating under high degrees of environmental dynamism may not survive in the market place and will certainly not be able to achieve superior performance without a high level of strategic orientation. Slater and Narver (1994) and Han *et al.* (1998) argue that strategic orientation/market orientation is likely to affect business performance, creates effects such as innovation and product development, high-quality products and satisfied customers. Further, firm's strategic orientations have been performed to establish a contingent model of performance analysis (Durand and Coeurderoy, 2001). The study is empirically supports this criticism and strongly supports the proposed the effect of the strategic orientation on producing new product performance and supports moderating role of environmental dynamism between them.

IMPLICATIONS

The study has numerous implications including bridging strategic orientation and identifying factors for predicting new product performance as well as innovation success of a firm. The implications of this research are unfolded along these multi-lines:

Strategic orientation literature: A firm performance is dependent on the choice of strategy of industry and that different industries attract different levels of performance (Porter, 1985). Therefore, strategic orientation is commonly used to describe a number of different strategies such as market orientation and technology orientation. At the same time, each of these orientations suggests a different mechanism for adaptation and develops new product performance.

Environmental factors: When organizations operate in a highly dynamic and uncertain environment with changing customer preferences, the firm cannot focus solely on stable processes but must continuously innovated. It is thus, necessary to create environment for new product which could be used to set up devices for outcome performance of firms. Although, organizational and environmental factors are complex and have unstable influences, top managers of firm are an important determinant of a strategy shift towards market orientation but it occurs under the conditions of high external risk and dynamism. Therefore, the private sector of Jordan will adopt differentiated organizational strategies suitable for rapid decision making in today's business environment.

Appropriate strategies: Under different environmental conditions, the most appropriate strategies can be selected and/or formulated when the strategy is harmonious with environment requirements (Rababah, 2017b). In other words, firms can respond flexibly to changes in the environment which it becomes an even more significant factor in top team socio-behavioral integration (Chen *et al.*, 2010) and those dynamic teams can generate strategic orientation, more actions and through these strategies, better outcome performance and innovation success.

Competitive advantage: The strategic orientation-market and technology-objective is to create sustained competitive advantage. Firms must continually adapt to the changing environment and the new market opportunities to exploit, develop and create differentiated products and services that are more innovative than those of competitors. More, differences in strategic orientation of an organization lead to different results of innovation. Companies have different strategies with regard to how they create value for customers; attain competitive advantage over rivals and innovation success.

Organizational culture: Strategic orientations (market orientation and technology orientation) provide clarity and focus on collective action and decision making. A company can become institutionalized when people value the organization more than what they provide. However, strategic orientation as an adaptive mechanism is a set of rules that is designed and learned to accomplish a specific outcome which are relatively and changing organizational culture. The culture hand-in-hand with strategy orientations and most firm leaders understand how culture can help them achieve change and new product performance/innovation success.

Technology of firm: The results provide evidence for best practices of firms. However, they give technological advances in the dynamic environment like Jordan (Lin and Rababah, 2014; Rababah, 2017b), firms need to be experimented with new technologies in order to survive in the market. Managers also should encourage project managers to take risks to foster the new product performance of high-technology firms (Zacharias *et al.*, 2017). A firm that wishes to develop an innovation superior to the competitive must have a strong technological orientation (Gatignon and Xuereb, 1997).

LIMITATIONS

Research limitations and future directions: For the strategic orientation in this study, hypothesis was tested generally. This limits the extent to which each of strategic orientations separately are effected and the extent to which any conclusion regarding the relative importance of each of strategic orientations test and build a large and strong network of relationships with a performance of a firm. The possible influence of common method variance (Podsakoff *et al.*, 2003) related to self-report data. In order to mitigate this problem, the survey targeted executives who are familiar with the topic to complete the questionnaire. Future research can benefit from using objective measures for some of the variables that could be independently verified.

This study highlights several possibilities for future empirical research. First, the researcher selected the industries where a high proportion of firms are single business firms. This selection aimed at reducing the indirect effect of diversification on organizational performance. Secondly, the data was collected from a single level source that is the top executives (TMT) of a firm. Future research should be triangulated by incorporating multilevel sources such as workers and other stakeholders and combine both qualitative and quantitative approach to obtain a more robust data set and results.

Thirdly, this study examines the relationship between strategic orientation (market and technology) and new product performance. Future studies may try capturing other variables of strategic orientation and new variable like socio-cognitive of top executive and decision quality to assess strategic orientations constructs which could provide more interesting and rich insights. To sum up, the study has established that strategic orientation (market and technology) has a positive and significant effect on the new product performance. Under environment dynamism, firms also need to use the strategic orientation they utilize to attain competitive advantage, great outcome performance and innovation success.

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