

ISRG Journal of Economics, Business & Management (ISRGJEBM)



ISRG PUBLISHERS

Abbreviated Key Title: Isg J Econ Bus Manag

ISSN: 2584-0916 (Online)

Journal homepage: <https://isrgpublishers.com/isrgjebm/>

Volume – II Issue-I (January- February) 2024

Frequency: Bimonthly



The effect of environmental dynamism on strategic orientation and innovation: An empirical study of Jordanian firms.

Nayel Mousa Rababah

College of Business, Jazan University, Jazan, Saudi Arabia

| Received: 03.02.2024 | Accepted: 10.02.2024 | Published: 11.02.2024

*Corresponding author: Nayel Mousa Rababah

College of Business, Jazan University, Jazan, Saudi Arabia, Email: nrababah@jazanu.edu.sa

Abstract

Strategic orientation represents resources and capabilities into firm performance. Further, the relationship between strategic orientation components and innovation performance has been focus of numerous empirical studies over the past decade. The study employs strategic orientation literature to address the issues of strategic orientation. Collected data from 420 executives in 133 firms in Jordan was analyzed using structural equation modeling and hierarchal 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.

Keywords: orientation, market orientation, technology orientation, new product performance, innovation success, dynamism environment.

1. INTRODUCTION

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, Geletkanycz, & Sanders, 2004). 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 (Hambrick & Mason, 1984). 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 & 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, Thomas, Peng, & Benedetto, 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 & Tann, 2007; Rababah, 2017a).

An organization's capacity to change its operations and adapt them to the environmental requirements, has taken center stage in the debate on strategic management (Eisenhardt & 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, Vorhies, Kim, & Heiman, 2016; Narver & Slater, 1990), and the literature has shown that market orientation and technology orientation are associated with improved business outcomes (Gatignon & Xuereb, 1997; Jeong, Pae, & Zhou, 2006; Zahra, 2008).

Additionally, the impact of the environment on outcome has been widely considered (Zahra & Bogner, 1999). 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 & 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.

2. THEORETICAL BACKGROUND & HYPOTHESES DEVELOPMENT

2.1. Theoretical Background

2.1.1. Strategic Orientations

Strategic orientations are the guiding principles that influence an organization's strategic plans and activities (Noble, Sinha & Kumar, 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 & 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 (Hotinha, Lages, & Lages, 2011).

Gatignon & 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, Samaha, & Palmatier, 2014; Yang & Kang 2008).

However, a set of strategic orientation variables is applicable at the business level. Kumar, Jones, Venkatesan, and Leone (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. Further, performance is a function of the internal capabilities of the company but also the behaviour of the external environment, such as the environmental dynamism in which the company operates (Fu et al., 2021). 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, Im, & Slater, 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 & Slater, 1990; Gatignon & Xuereb, 1997), with the moderation of environmental dynamism to enhance the success of innovation performance.

2.1.2. Innovation Performance

Additionally, giving increasing attention is now being directed towards trade liberalization, as well as the increasing competitive pressures in the global marketplace. Innovativeness is one of the main components of the entrepreneurial and strategic orientation of a company (Gomes, Seman, Berndt, & Bogoni, 2022). 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 & Baki, 2011). Damanpour & Gopkrishnan (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 & 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 & 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 (Löfqvist, 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 & product) itself and on it's a firm to create the proper manners for the continuous superior performance of the business (Narver & Slater, 1990). The study has shown that the firm innovativeness is positively related to outcome performance (Calantone, Cavusgil, & Zhao, 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, Ireland, Camp, & Sexton, 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 & Slater, 1990) to produce the available information into valuable new product offerings, create more effectiveness for product innovations and promote outcome of firms.

2.1.3. Environmental Dynamism

The environment-strategy research indicates that environment factors are an important consideration for a firm that is determining its strategy (Tan & Tan, 2005). However, three dimensions are conceptualized in the matter of environment (Dess & Bear, 1984; Miller & Friesen, 1983; Anderson & Tushman, 2001) namely; *municence* 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 & Friesen, 1983) is known as environmental turbulence (e.g. Calantone, Garcia, & Droge, 2003), and/ or environmental uncertainty (Anderson & 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 & 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, Keats, & DeMarie, 1998).

2.2. Hypotheses

2.2.1. Strategic Orientation (Market & Technology) and Innovation 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 & 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 (Gloria & Daniel, 2005), and that future-oriented firm was more innovative success.

Further, Mavondo, Chimhanzi, and Stewart, (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 & Slater, 1990), and information is utilized, as well as its nature and when it is collected (acquired) may affect the innovation success (Kero & 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 & Meulenber, 2004). Overall market orientation is significantly related to innovation degree and innovation performance in both EU and US insurance markets (Lado & Maydeu-Olivares, 2001). Market orientation has a significant and a positive impact on product innovativeness (Nasution, Mavondo, Matanda, & Ndubisi, 2011).

H1a: Market orientation is positively related to innovation performance

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 & 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, Yim, & Tse, 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 Nart, & Bingöl, 2015). Technology orientation refers to a firm's performance to introduce or utilize new technologies, products or innovations (Gatignon & 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 & 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.

H1b: Technology orientation is positively related to innovation performance.

H1c: Strategic orientation (market orientation & technology orientation) is positively related innovation performance.

2.2.2. 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 & 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. Innovativeness is one of the main components of company strategic orientation (Ruba, Westhuizen, & Chiloane-Tsoka, 2021). Priem, Rasheed, and Kotulic, (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 & 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, Zhou, & Yim, 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, 2001).

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 & Meron˜o-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 hypotheses:

Hypothesis 2a: The degree of environmental dynamism is positively moderate the relationship between market orientation and innovation performance.

Hypothesis 2b: The degree of environmental dynamism is positively moderate the relationship between technology orientation and innovation performance.

3. RESEARCH DESIGN AND METHODOLOGY

3.1. 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 & Mason, 1984).

Research sample is drawn from Jordan. Jordan has a fairly dynamic-market-oriented economy (Lin & 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 (s.d.=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 (S.D. 6.85), and had 18.50 (S.D. 10.50) years of experience in their firm's industry. Further, 80% of the sample was male and 97.2% are married.

3.2. Measurements of Variables.

3.2.1. 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 & Xuereb, 1997; Narver & Slater, 1990).

Market orientation: The five-item, seven-point Likert-type scale was adapted from (Gatignon & Xuereb, 1997; Narver & Slater, 1990) ($\alpha=.80$). The CFA results showed that the values of the fit indices were largely acceptable ($\chi^2 = 8.44$, $df = 3$; NNFI= .97, CFI= .97, SRMR = .03, RMSEA = .04). Respondents were asked to indicate the extent to which the strategic orientation of market over past three years (2014-2016) consists of three dimensions including customer orientation, orientation competitors, and interfunction coordination (Narver & Slater, 1990; Putri, Suryana, Tuhpawana, & Hasan, 2016).

Technology orientation: Gatignon & Xuereb's (1997) 12-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 .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= .99, CFI= .99, SRMR= .04, RMSEA=.01).

3.2.2. Dependent Variable.

Innovation performance: A five-item, seven-point Likert-type scale (1 = strongly disagree, 7 = strongly agree) was adapted from Gatignon & Xuereb (1997), new product performance ($\alpha=.79$). 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=.98, CFI=.98, SRMR=.04, RMSEA=.03). The factor loadings were all significant ($p < .001$).

3.2.3. 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) ($\alpha = .87$). 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 & 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=.99, CFI=.99, SRMR=.04, RMSEA=.02). The factor loadings were all significant ($p < .01$).

3.2.4. Control Variables.

Control Variables: To decrease the likelihood of spurious results, several control variables are added to the model (Lin & 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 & Barwise, 2002).

3.3. 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 & Rababah, 2014) implemented in AMOS 16.0 is performed to evaluate the models and test the hypotheses. 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 hypotheses. 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 & Bentler, 1999). Further, to test the moderating hypotheses, the study uses hierarchical regression

analysis (Lin & Rababah, 2014). Several models are estimated to test the moderating hypotheses.

4. RESEARCH ANALYSIS AND RESULTS

4.1. Structural Models, Hypotheses Testing and Results.

Table 4.1 presents the means, standard deviations and correlations for the variables examined in the study. To determine whether the strategies orientation (market & 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 ($\chi^2= 354.1$, $df=134$, $p<.001$; $CFI=.92$, $NNFI=.90$, $RMSEA=.04$ and $SRMR=.05$), and significant relationship between technology orientation and new product performance ($\chi^2= 303.9$, $df=146$, $p<.001$; $CFI=.90$, $NNFI=.90$, $RMSEA=.04$ and $SRMR=.03$). The results showed that both of (market & technology) models suggested that separately model indeed fit index model.

Table 4.2 presents the value of fit indices for the structural models. As shown in Table 4.2 both of strategies orientation (market & technology) are significantly correlated with new product performance ($p<.01$). Taken together, the researcher obtained the Model 4 as the final model including (market orientation & technology orientation) ($\chi^2= 582.7$, $df=227$, $p<.001$; $CFI=.90$, $NNFI=.91$, $RMSEA=.06$ and $SRMR=.05$). The result showed that

both market and technology model suggested that the model indeed fit index.

Consistent with expectations, market orientation was positively associated with a new product performance ($\beta= .15$, $p<.001$), technology orientation was positively associated with new product performance ($\beta= .17$, $p<.001$), and both -together- of market orientation and technology orientation were positively associated with a new product performance ($\beta= .16$, $p<.001$), ($\beta= .18$, $p<.001$) respectively.

Finally, as shown in Table 4.3, hypotheses 2a and 2b, 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 ($\beta= .11$, $t = 2.35$, $p < .01$) and technology orientation ($\beta= .36$, $t = 8.19$, $p < .01$).

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 Figures 4.1 and 4.2 respectively, plotting the interactions terms were supporting the clarification.

Table 4.1 Means, Standard Deviations, and Correlations

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1. TMT age	1.31	.33										
2. TMT education heterogeneity	.52	.31	.004									
3. Firm size	2.43	.48	.100	.125*								
4. Firm age	1.16	.57	.054	.195**	.109*							
5. Firm slack	4.88	1.32	-.046	.047	-.002	.043						
6. Environmental munificence	4.90	1.10	-.023	-.009	.024	.026	.127*					
7. Market orientation	4.48	1.34	.084	-.076	-.063	.125*	-.171**	.062				
8. Technology orientation	5.47	1.44	.071	-.031	.130*	.001	.026	.179**	.048			
9. Environmental dynamism	5.23	1.35	.087	.010	.063	.012	.251**	.347**	.202**	.410**		
10. Innovation performance	4.96	1.31	.044	-.065	-.056	.126*	.128*	.371**	.228**	.319**	.319**	

Note: N = 420, ** $p<.01$, * $p<.05$

Table 4.2 Structural Models- fit index model

Models	χ^2	df	NNFI	CFI	SRMR	RMSEA
1. Null structural model	2474.4***	276				
2. Market orientation → Innovation	354.1***	134	.92	.90	.03	.04
3. Technology orientation → Innovation	303.9***	146	.90	.90	.03	.04
4. Market & Technology → Innovation	582.7***	227	.90	.91	.05	.06

Note: *** $p<.001$

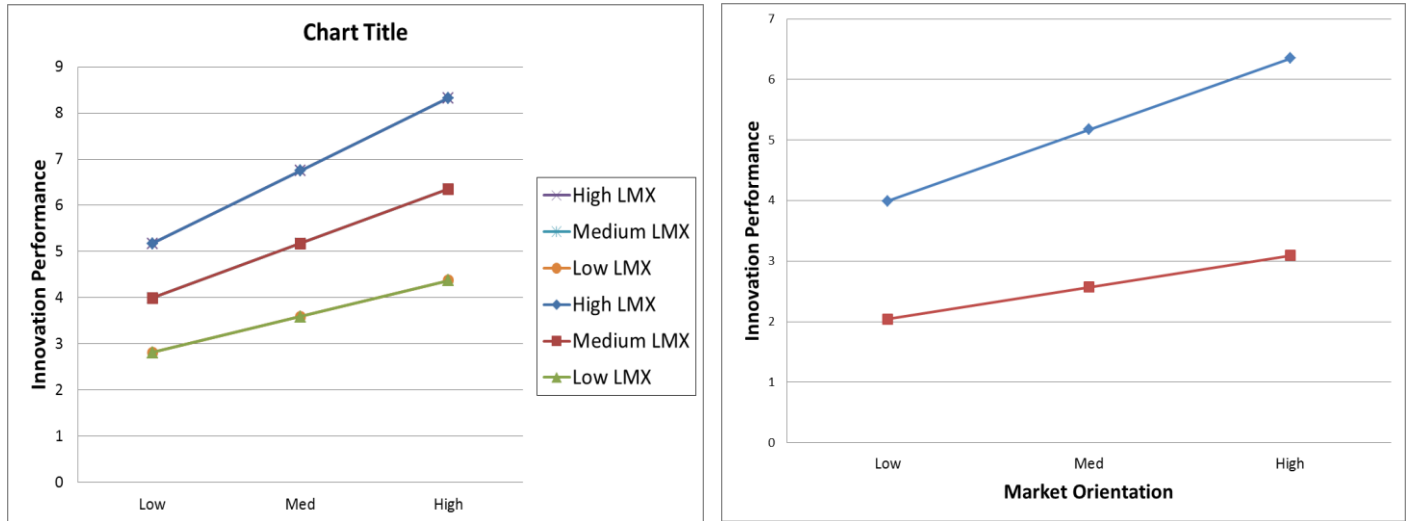
Table 4.3 Results of Regression Analysis (Dependent Variable Innovation Performance)

Variables		Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Control	TMT age	.056	.040	.025	-.005	-.014	-.012
	TMT educational heterogeneity	-.082	-.065	-.062	-.055	-.078*	-.045
	Firm size	-.074	-.058	-.135***	-.125**	-.118**	-.113**
	Firm age	.134***	.103**	.140***	.124***	.103**	.125**
	Firm slack	.083*	.120**	.079*	.045	.035	.020
	Environmental munificence	.359***	.342***	.274***	.195***	.189***	.186***
Independent	Market orientation		.202***		.124**	.123***	.101**
	Technology orientation			.481***	.383***	.289***	.362***
Moderating Interaction	Environmental dynamism				.265***	.186***	.248***
	Market orientation x Dynamism					.246***	
	Technology orientation x Dynamism						.120***
R		.415	.459	.626	.685	.711	.693
R Square		.172	.210	.392	.469	.505	.480
Adjusted R²		.158	.194	.379	.455	.491	.465
F		11.94***	13.04***	31.52***	33.42***	34.74***	31.39***

n = 420; * p ≤ .05, ** p ≤ .01, *** p ≤ .001

Figure 4.1

Moderating Role of Environmental Dynamism

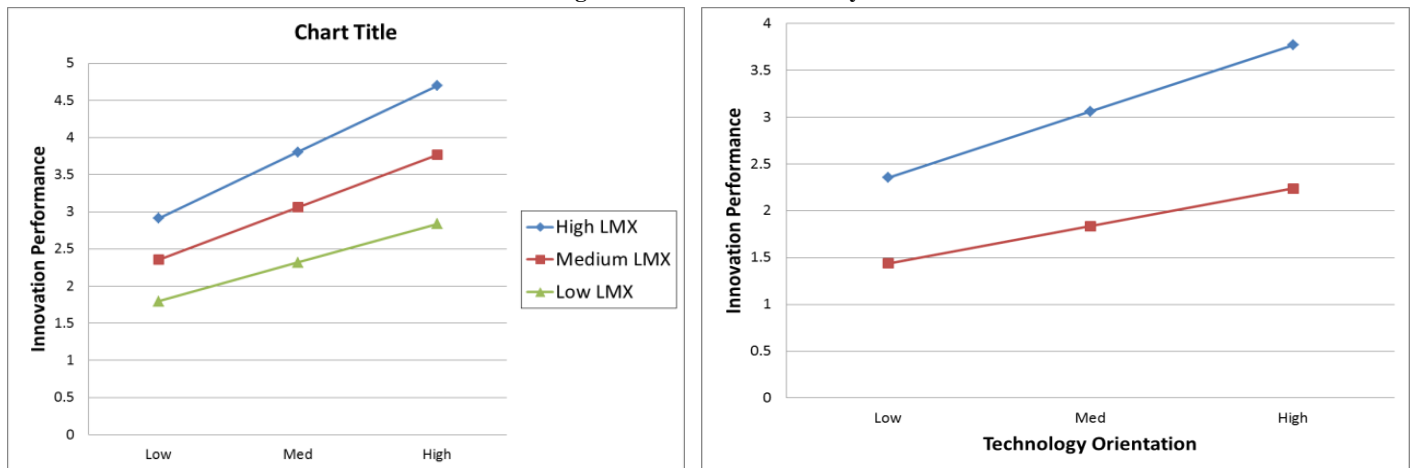


(a) Continuous Moderator

(b) Categorical Moderator

Figure 4.2

Moderating Role of Environmental Dynamism



(a) Continuous Moderator

(b) Categorical Moderator

5. DISCUSSION, CONCLUSIONS AND FUTURE RESEARCH

5.1. Research Discussion.

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 (Martinez-Costa & Martinez-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, Jayachandran, & Bearden (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 & Narver (1994) and Han, Kim, & Srivastava (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 &

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.

5.2. Research 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, Lin & Michel, 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 & Rababah, 2014; Rababah, 2017b), firms need to be experimented with new technologies in order to survive in the market. Managers should encourage project managers to take risks to foster the new product performance of high-technology firms (Zacharias, Stock, & Im, 2017). Innovation also raises the need for a high level of access to strategic resources, including finance, technology and human resources (Ferrerias-Méndez, Iopis, & Alegre, 2022). A firm that wishes to develop an innovation superior to the competitive must have a strong technological orientation.

5.3. 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, MacKenzie, Lee, & Podsakoff, 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 & 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.

REFERENCES

1. Anderson, P., & Tushman, M. L. (2001). Organizational environments and industry exit: The effects of uncertainty, munificence and complexity. *Industrial and Corporate Change*, 10(3), 675-711.
2. Ar, I. M., & Baki, B. (2011). Antecedents and performance impacts of product versus process innovation: Empirical evidence from SMEs located in Turkish science and technology parks. *European Journal of Innovation Management*, 14(2), 172-206.
3. Calantone, R. J., Cavusgil, S.T., & Zhao, Y., (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial Marketing Management*, 31(6), 515-524.
4. Calantone, R., Garcia, R., & Droge, C. (2003). The effects of environmental turbulence on new product development strategy planning. *Journal of Product Innovation Management*, 20(2), 90-103.
5. Carpenter, M. A., Geletkanycz, M. A., & Sanders, W. G. (2004). Upper echelons revisited: Antecedents, elements, and consequences of top management team composition. *Journal of Management*, 30(6), 749-778.
6. Chen, M. J., Lin, H. C., & Michel, J. G. (2010). Navigating in a hypercompetitive environment: The roles of action aggressiveness and TMT integration. *Strategic Management Journal*, 31(13), 1410-1430.
7. Damanpour, F. & Even, W. M. (1984). Organizational innovation and performance: The problem of organizational lag. *Administrative Science Quarterly*, 29(3), 392-409.
8. Damanpour, F., & Gopalakrishnan, S. (2001). The dynamics of the adoption of product and process innovations in organizations. *Journal of Management Studies*, 38(1), 45-65.
9. Day, G. S. (1990). Market-driven strategy: Processes for creating value. The Free Press: New York, NY.
10. Day, G. S. (1994). The capabilities of market-driven organizations. *Journal of Marketing*, 58(4), 37-52.
11. Dess, G. G., & Beard, D. W. (1984). Dimensions of organizational task environments. *Administrative Science Quarterly*, 29(1), 52-73.
12. Durand, R. & Coeurderoy, R. (2001). Age, order of entry, strategic orientation, and organizational performance. *Journal of Business Venturing*, 16(5), 471-494.
13. Eisenhardt, K. M. & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 21(10/11), 1105-1121.
14. Eisenhardt, K. M. (1989). Making fast strategic decision in high-velocity environment. *Academy of Management Journal*, 32(3), 543-576.
15. Ferrerias-Méndez, J. L., Iopis, O., & Alegre, J. (2022). Speeding up new product development through entrepreneurial orientation in SMEs: The moderating role of ambidexterity. *Industrial Marketing Management*, 102: 240-251.
16. Finkelstein, S. (1992). Power in top management teams: Dimensions, measurement, and validation. *Academy of Management Journal*, 35(3), 505-538.
17. Fu, Q., Sial, M. S., Arshad, M. Z., Comite, U., Thu, P. A., & Popp, J. (2021). The inter-relationship between innovation capability and SME performance: The moderating role of the external environment. *Sustainability*, 13(16) 9132.
18. Gao, G. Y., Zhou, K. Z. & Yim, C. K. B. (2007). On what should firms focus in transitional economies? A study of the contingent value of strategic orientations in China. *International Journal of Research in Marketing* 24(1), 3-15.
19. Gatignon, H., & Xuereb, J.-M. (1997). Strategic orientation of the firm and new product performance. *Journal of marketing research*, 34(1), 77-90.

20. Gloria, L. & Daniel, Z. (2005). Market orientation, competitive strategy and firm performance: An empirical study of Chinese firms. *Journal of Global Marketing*, 18(3/4), 115-142.
21. Gomes, G., Seman, L., Berndt, A., & Bogoni, N. (2022). The role of entrepreneurial orientation, organizational learning capability and service innovation in organizational performance. *Revista de Gestão*, 29(1), 39-54.
22. Grinstein, A. (2008). The effect of market orientation and its components on innovation consequences: A meta-analysis. *Journal of the Academy of Marketing Science*, 36(2), 166-173.
23. Hakala H. (2011). Strategic orientations in management literature: Three approaches to understanding the interaction between market, technology, entrepreneurial, and learning orientations. *International Journal of Management Reviews*, 13(2), 199-217.
24. Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9(2), 193-206.
25. Han, J. K., Kim, N., & Srivastava, R. K. (1998). Market orientation and organizational performance: Is innovation a missing link? *Journal of Marketing*, 62(4), 30-45.
26. Hashem, G. & Tann, J. (2007). The adoption of ISO 9000 Standards within the Egyptian context: A diffusion of innovation approach. *Total Quality Management & Business Excellence*, 18(6), 631-652.
27. Hitt, M. A., Ireland, R. D., Camp, S. M., & Sexton, D. L. (2001). Guest editors, introduction to the special issue strategic entrepreneurship: Entrepreneurial strategies for wealth creation. *Strategic Management Journal*, 22(6/7), 479-491.
28. Hitt, M. A., Keats, B. W., & DeMarie, S. M. (1998). Navigating in the new competitive landscape: Building strategic flexibility and competitive advantage in the 21st century. *Academy of Management Executive*, 12 (4), 22-42.
29. Hotinha, P., Lages, C., & Lages, L. F. (2011). The trade-off between customer and technology orientation: Impact on innovation capabilities and export performance. *Journal of International Marketing*, 19(3), 36-58.
30. Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1-55.
31. Huber, G. (2001). Organizational learning: The contributing processes and the literature. *Organization Science*, 2(1), 88-115.
32. Iansity, M. (1995). Shooting the rapids: Managing product development in turbulent environments. *California Management Review*, 38(1), 37-58.
33. Im, S., Vorhies, D. W., Kim, N., & Heiman, B. (2016). How knowledge management capabilities help leverage knowledge resources and strategic orientation for new product advantages in B-to-B high-technology firms. *Journal of Business-to-Business Marketing*, 23(2), 87-110.
34. Jeong, I., Pae, J. H., & Zhou, D. (2006). Antecedents and consequences of the strategic orientations in new product development: The case of Chinese manufacturers. *Industrial Marketing Management*, 35(3), 348-358.
35. Kero, C. A. & Sogbossi, B. B. (2017). Competitive strategy orientation and innovative success: Mediating market orientation a study of small-medium enterprises. *Global Journal of Management and Business Research: E Marketing*, 17(3), 74-89.
36. Kim, N., Im, S., & Slater, S. F. (2013). Impact of knowledge type and strategic orientation on new product creativity and advantage in high-technology firms. *Journal of Product Innovation Management*, 30(1), 136-153.
37. Kirca, A. H., Jayachandran, S., & Bearden, W. O. (2005). Market orientation: A meta-analytic review and assessment of its antecedents and impact on performance. *Journal of Marketing*, 69(2), 24-41.
38. Kozlenkova, I. V., Samaha, S. A. & Palmatier, R. W. (2014). Resource-based theory in marketing. *Journal of the Academy of Marketing Science*, 42(1), 1-21.
39. Kumar, V., Jones, E., Venkatesan, R., & Leone, R. P. (2011). Is market orientation a source of sustainable competitive advantage or simply the cost of competing?. *Journal of Marketing*, 75(1), 16-30.
40. Lado, N. & Maydeu-Olivares, A. (2001). Exploring the link between market orientation and innovation in the European and US insurance markets. *International Marketing Review*, 18(2), 130-144.
41. Lin, H. C. & Rababah, N. (2014). CEO-TMT exchange, TMT personality composition, and decision quality: The mediating role of TMT psychological empowerment. *The Leadership Quarterly*, 25(5), 943-957.
42. Löfqvist, L. (2017). Product innovation in small companies: Managing resource scarcity through financial bootstrapping. *International Journal of Innovation Management*, 21(2), 1-27.
43. Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135-172.
44. Martinez-Costa, M. & Martinez-Lorente, A. R. (2008). Does quality management foster or hinder innovation? An empirical study of Spanish companies. *Total Quality Management & Business Excellence*, 19(3), 209-221.
45. Mavondo, F. T., Chimhanzi, J., & Stewart, J. (2005). Learning orientation and market orientation: Relationship with innovation, human resources practices and performance. *European Journal of Marketing*, 39 (11/12), 1235-1263.
46. Miller, D., & Friesen, P. H. (1983). Strategy-making and environment: The third link. *Strategic Management Journal*, 4(3), 221-235.
47. Moorman, C., & Rust, R. T. (1999). The role of marketing. *Journal of Marketing*, 63(Special Issue), 180-197.
48. Mu, J., Thomas, E., Peng, G., & Benedetto, A. D. (2017). Strategic orientation and new product development performance: The role of networking capability and networking ability. *Industrial Marketing Management*, 64, 187-201.
49. Narver, J. C. & Slater S. F. (1990). The effect of a market orientation on business profitability. *Journal of Marketing*, 54(4), 20-35.

50. Nasution, H. N., Mavondo, F. T., Matanda, M. J. & Ndubisi, N. O. (2011). Entrepreneurship: Its relationship with market orientation and learning orientation and as antecedents to innovation and customer value. *Industrial Marketing Management*, 40(3), 336-345.
51. Noble, C. H., Sinha, R. K., & Kumar, A. (2002). Market orientation and alternative strategic orientations. *Journal of Marketing*, 66(4) 25-39.
52. Papadakis, V. M., & Barwise, P. (2002). How much do CEOs and top managers matter in strategic decision-making? *British Journal of Management*, 13(1), 83-95.
53. Podsakoff, P.M., Mackenzie, S. B., Lee, J. -Y., & Podsakoff, N.P. (2003). Common method biases in organizational research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903.
54. Porter, M. (1985). *Competitive Strategy*. New York, NY: The Free Press.
55. Priem, R., Rasheed, A., & Kotulic. A. (1995). Rationality in strategic decision processes, environmental dynamism and firm performance. *Journal of Management*, 21(5), 913-929.
56. Putri, A. K., Suryana, Y., Tuhpawana, & Hasan, M. (2016). The effect of market orientation and competitive strategy on marketing performance. *International Journal of Economics, Commerce and Management*, 4(7), 274-288.
57. Quintana-García, C. & Benavides-Velasco, C. A. (2008). Innovative competence, exploration and exploitation: The influence of technological diversification. *Research Policy*, 37(3), 492-507.
58. Rababah, N. M. (2017a). The role of psychological empowerment and innovation on firm performance: An empirical study of SMEs in Saudi Arabia. *International Journal of Economics, Commerce and Management*, 5(6), 298-318.
59. Rababah, N. M. (2017b). The interface between CEO-TMT and its effects on the firm performance. *The International Journal of Business & Management*, 5(11), 32-46.
60. Ruba, R., Westhuizen, T. & Chiloane-Tsoka, G. E. (2021). Influence of entrepreneurial orientation on organisational performance: Evidence from Congolese Higher Education Institutions. *Journal of Contemporary Management* 18(1) 243-269.
61. Sen, B. (2014). Multiple strategic orientations: The public library as a societal organization. *Procedia - Social and Behavioral Sciences*, 147(25), 111-119.
62. Slater, S. F. & Narver, J. C. (1994). Market orientation, customer value, and superior performance. *Business Horizons*, 37(2), 22-28.
63. Soto-Acosta, P. & Meron˜o-Cerdan, A. L. (2008). Analyzing E-business value creation from a resource-based perspective. *International Journal of Information Management*, 28(1), 49-60.
64. Tan, J. & Tan, D. (2005). Environment-strategy co-evolution and co-alignment: A staged model of Chinese SOEs under transition. *Strategic Management Journal*, 26(2), 141-157.
65. Tutar, H., Nart, S., & Bingöl, D. (2015). The effects of strategic orientations on innovation capabilities and market performance: The case of ASEM. *Procedia - Social and Behavioral Sciences*, 207(20), 709-719.
66. Venkatraman N. (1989). Strategic orientation of business enterprises: The construct, dimensionality, and measurement. *Management Science*, 35(8), 942-961.
67. Verhees, F. & Meulenber, M. T. G. (2004). Market orientation, innovativeness, product innovation, and performance in small firms. *Journal of Small Business Management*, 42(2), 134-154.
68. Wang, H., & Li, J. (2008). Untangling the effects of overexploration and overexploitation on organizational performance: The moderating role of environmental dynamism? *Journal of Management*, 34(5), 925-951.
69. Winter, S. G. (2003). Understanding dynamic capabilities. *Strategic Management Journal*, 24(10), 991-995.
70. Yang, S., & Kang, H.-H. (2008). Is synergy always good? Clarifying the effect of innovation capital and customer capital on firm performance in two contexts. *Technovation*, 28(10), 667-678.
71. Zacharias, N. A., Stock, R. M., & Im, S. (2017). Strategic givens in new product development: Understanding curvilinear effects on new product performance. *International Journal of Innovation Management*, 21(1), 1750010 (31 pages).
72. Zahra, S. A. & Bogner, W. C. (1999). Technology strategy and software new venture's performance: Exploring effect of the competitive environment. *Journal of Business Venturing*, 15(2), 135-173.
73. Zahra, S. A., (2008). Being entrepreneurial and market driven: Implication for company performance. *Journal of strategy and management*, 1(2), 125-142.
74. Zhang, J. & Duan, Y. (2010). The impact of different types of market orientation on product innovation performance evidence from Chinese manufacturers. *Management Decision*, 48(5-6), 849-867.
75. Zhou, K. Z., Yim, C. K., & Tse, D. K. (2005). The effects of strategic orientations on technology- and market-based breakthrough innovations. *Journal of Marketing*, 69(2), 42-60.