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THE IMPACT OF A RESPONSIVE AND PROACTIVE MARKET ORIENTATION ON INNOVATION AND BUSINESS PERFORMANCE

MATEJA BODLAJ*

ABSTRACT: *The purpose of the presented empirical study was to examine the impact of a responsive and proactive market orientation on the degree of novelty, innovation performance and business performance. Data obtained from 325 Slovenian companies that introduced product, process, marketing and organisational innovations during the 2005-2007 period were analysed via structural equation modelling. The main findings reveal that only a proactive market orientation is positively related to the degree of novelty, whereas no support was found for the direct impact of both market orientations on innovation performance and business performance.*

Key words: *responsive and proactive market orientation; degree of novelty, innovation performance, business performance*

JEL classification: M31

1. INTRODUCTION

During the past 20 years a rich body of research in marketing has examined a direct relationship between market orientation and business performance (Cano et al., 2004; Kirca et al., 2005; Ellis, 2006; Grinstein, 2008). However, significantly less research attention has been paid to the impact of market orientation on innovation (Han et al., 1998; Lukas and Ferrell, 2000; Kirca et al., 2005; Grinstein, 2008). For example, Kirca et al. (2005) report in their meta-analysis of 114 studies that 17% of all consequences of market orientation were related to innovation, whereas 60% of them were related to organisational performance, e.g. overall business performance, profit, sales and market share. Our understanding of the innovation consequences of market orientation is therefore limited and fragmented (Lukas and Farrell, 2000; Grinstein, 2008). According to Hurley and Hult (1998), there is a significant void in market orientation research because much of such research does not incorporate constructs related to innovation.

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Moreover, to date a relatively few empirical studies have examined the entire chain of relationships involved, i.e. market orientation-innovation-business performance (e.g. Han et al., 1998; Vazquez et al., 2001; Sandvik and Sandvik, 2003; Langerak et al., 2004; Gabrijan et al., 2005; Milfelner, 2009). However, the vast majority of these empirical studies does not distinguish between the two complementary forms of market orientation, i.e. responsive and proactive. The need for this distinction has recently been emphasised by ever more researchers who claim that past empirical research has focused only on a responsive market orientation (e.g. Narver et al., 2004; Atuahene-Gima et al., 2005, Tsai et al., 2008; Voola and O’Cass, 2010). Existing empirical research adopting both forms of market orientation is still very limited to a few studies, mostly conducted in non-European countries, that examine the impact of a responsive and proactive market orientation on new-product performance (Narver et al., 2004, Atuahene-Gima, 2005; Tsai et al., 2008) or business performance (Voola and O’Cass, 2010). Only a few studies examine the entire chain of relationships between both market orientation types, innovation and business performance (e.g. Milfelner, 2009). However, no study examines the entire chain of relationships between a responsive and proactive market orientation, degree of novelty, innovation performance and business performance. In addition, past research is biased toward product innovation, even though the literature suggests that innovation can occur in any value-creating activity (e.g. Weerawardena, 2003).

The purpose of this study is to fill this void in the literature and to examine these relationships with a sample of 325 Slovenian companies that introduced a product, process, marketing and organisational innovation during the 2005-2007 period. Data obtained at the beginning of 2008 via an Internet survey were analysed using structural equation modelling. The findings of this study could be particularly relevant for the Slovenian economy as increasing competitiveness by encouraging innovativeness and entrepreneurship is one of the most important development goals in Slovenia in the 2006-2013 period (Strategija razvoja Slovenije, 2005). According to the European Innovation Scoreboard 2009, which provides a comparative assessment of the innovation performance of EU member states, Slovenia is in the group of innovation followers with an innovation performance that is close to the EU average. Hence, the main research issue is therefore “What is the role of both market orientations in increasing the degree of novelty, innovation performance and, consequently, business performance?”

The rest of the paper is organised in four sections. The first section provides a literature review along with the development of the research hypotheses. In the second section, the research methodology is explained. The results of the study are presented in the third section. The paper concludes with a discussion of the results, the contributions of the presented empirical study to the marketing literature, research limitations and suggestions for future research.

2. LITERATURE REVIEW AND THE HYPOTHESES

Based on the theoretical and empirical literature review a conceptual model of the impact of a responsive and proactive market orientation on innovation and business per-

formance has been developed (see Figure 1). Hypotheses included in our model will be explained later in this section.

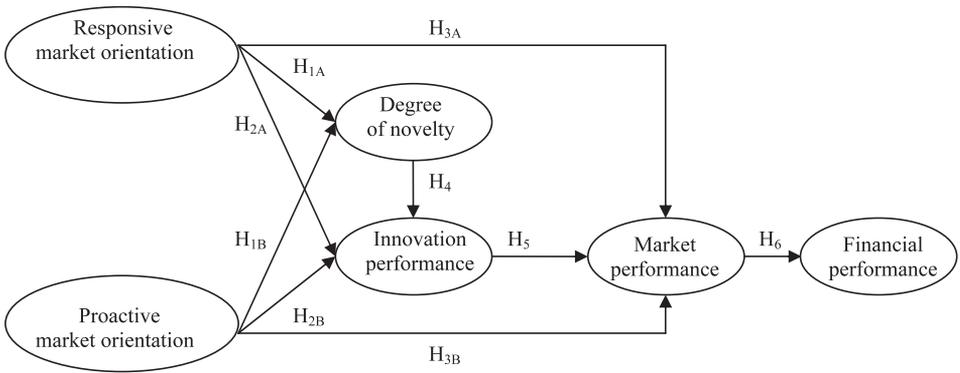


FIGURE 1. A conceptual model of the impact of a responsive and proactive market orientation on innovation and business performance

2.1. Market orientation and degree of novelty

Although a market orientation can be viewed as a form of innovative behaviour because it involves doing something new or different in response to market conditions (Jaworski and Kohli, 1993) in order to continuously deliver superior customer value (Narver et al., 1998; Kotler, 2003), a prevalent view in theoretical discussions is that a market orientation alone is insufficient for the development of radical innovations (e.g. Hamel and Prahalad, 1991; Bower and Christensen, 1995; Christensen and Bower, 1996; Slater and Narver, 1995; Baker and Sinkula, 2002; Berthon et al., 2004). Companies that stay close to their customers and simply ask customers what they want end up being perpetual followers (e.g. Hamel and Prahalad, 1991; Bower and Christensen, 1995; Berthon et al., 2004). According to Christensen and Bower (1996) companies lose their positions of industry leadership because they listen too carefully to their customer who place stringent limits on the strategies companies can or cannot pursue. Hence, a market orientation without an entrepreneurial drive (e.g. Slater and Narver, 1995) or a strong learning orientation (e.g. Baker and Sinkula, 2002) will at best lead to adaptive learning which is necessary for incremental innovations, but insufficient for radical innovations (Slater and Narver, 1999). The common theme among the criticisms is that a penalty is incurred if companies only respond to customers' wants (Narver et al., 2004).

Empirical findings differ concerning the relationship between market orientation and degree of novelty. While some empirical studies support the criticism above (e.g. Atuahene-Gima, 1996; Gatignon and Xuereb, 1997), others suggest the opposite suggesting that a market orientation is positively related to the degree of novelty (e.g. Vazquez et al., 2001; Sandvik and Sandvik, 2003; Baker and Sinkula, 2007). In addition, some

studies find no evidence of a significant linkage of market orientation with incremental and radical innovation (e.g. Radas and Božić, 2009). It should be mentioned that these empirical studies are based on the “traditional” measures of market orientation, i.e. Ruekert’s scale (1992), the MKTOR scale (Narver and Slater, 1990), the MARKOR scale (Kohli et al., 1993) or some modified form of them, thereby focusing on a responsive market orientation.

According to Narver et al. (2004), a *responsive* market orientation refers to discovering, understanding and satisfying expressed customer needs, whereas a *proactive* market orientation refers to discovering, understanding and satisfying latent customer needs. While both market orientations should be the foundation of a company’s innovation efforts (Narver et al., 2004), the literature suggests that, with its focus on exploring new knowledge and markets significantly distant from the company’s existing experience (e.g. Atuahene-Gima, 2005; Tsai et al., 2008), a proactive market orientation may be more associated with radical innovation than a responsive market orientation which focuses on the company’s current knowledge and experience. In support of this argument, Narver et al. (2004) find in their empirical study that both market orientations are positively related to innovation orientation with proactive market orientation being more strongly related. In line with this finding along with empirical findings which suggest that a (responsive) market orientation is not necessarily limited to incremental innovation (e.g. Vazquez et al., 2001; Sandvik and Sandvik, 2003; Baker and Sinkula, 2007), we predict that both market orientations are positively related to the degree of novelty with proactive market orientation being more strongly related:

H_{1A} : A responsive market orientation is positively related to the degree of novelty.

H_{1B} : A proactive market orientation is positively related to the degree of novelty.

2.2. Market orientation and innovation performance

In the literature a number of measures of innovation performance can be found (e.g. Cooper and Kleinschmidt, 1995; Griffin and Hauser, 1996; Griffin and Page, 1996). All measures are related to product innovation. In our study, innovation performance refers to sales of new products, new-product market share, new-product launch on time, and percent of new-product sales in total sales (Cooper and Kleinschmidt, 1995; Griffin and Hauser, 1996).

New products should deliver value for the customers and therefore a market orientation is an important factor in successful new product development (Jensen and Harmsen, 2001). A number of empirical studies that are based on traditional measures of market orientation confirm a positive relationship between a market orientation and new product performance (e.g. Cooper, 1994; Cooper and Kleinschmidt, 1995; Wren et al., 2000; Matsuno et al., 2002; Baker and Sinkula, 2007). Gabrijan et al. (2005) and Milfelner et al. (2008a) report a positive relationship between market orientation and innovation resources, i.e. successful new-product development and a capacity to introduce successful new products. However, according to Atuahene-Gima (1995), a market orientation has a

stronger impact on the performance of a new product which represents an incremental change for both the customer and the company, implying that the impact of a market orientation depends on the degree of novelty. In contrast, Langerak et al. (2004) report an insignificant direct relationship between a market orientation and a new-product performance. In addition, three meta-analyses provide mixed results: while Henard and Szymanski (2001) report a statistically insignificant corrected value of the correlation coefficient, Kirca et al. (2005) and Grinstein (2008) confirm a positive relationship between a market orientation and innovation consequences, i.e. new-product performance and innovativeness.

To date, only a limited number of studies have examined the relationship between a market orientation and innovation performance by distinguishing between a responsive and a proactive market orientation. Narver et al. (2004) and Milfelner (2009) report that only a proactive market orientation is positively related to new-product performance or a capacity to innovative, respectively. According to Narver et al. (2004), relying solely on customers' expressed needs to develop new products creates no new insights into opportunities for adding value. On the other hand, Atuahene-Gima et al. (2005) and Tsai et al. (2008) conclude that both market orientations are needed for the performance of a new product, yet the relationship between both market orientations and a new-product performance is more complex. For example, Atuahene-Gima et al. (2005) report that a responsive market orientation has a U-shaped relationship with new product program performance, suggesting increasing benefits of responsive market orientation after a certain point. In other words, in-depth understanding of current customer needs and market domains ensures that a company becomes more adept at effective product development. On the contrary, a proactive market orientation has an inverted U-shaped relationship with new product program performance, implying that a proactive market orientation becomes detrimental for new product performance beyond a certain level.

In addition, their study reveals that companies engage in both market orientations simultaneously but do not necessarily derive greater benefits from high levels of both market orientations: the new-product performance is enhanced when one market orientation is at a higher level and the other is at a lower level (Atuahene-Gima et al., 2005). On the other hand, Tsai et al. (2008) suggest that the curvilinear relationship between the two market orientations and a new-product performance may depend on external environmental characteristics.

To summarise, although the existing empirical literature on the relationship between market orientation and innovation performance provides somewhat mixed results, suggesting that the nature of this relationship might be much more complex than previously assumed, the main findings show, that both forms of market orientation are important for innovation performance. Hence, we predict that both forms of market orientations are positively related to innovation performance with proactive market orientation being more strongly related.

H_{2A}: A responsive market orientation is positively related to innovation performance.

H_{2B}: A proactive market orientation is positively related to innovation performance.

2.3. Market orientation and business performance

The vast majority of empirical studies confirm a positive relationship between a market orientation and various measures of business performance (e.g. Narver and Slater, 1990; Jaworski and Kohli, 1993; Hult et al., 2004; Gabrijan et al., 2005; Milfelner et al., 2008b; Gonzalez-Benito et al., 2009). In addition, three meta-analyses confirm a positive effect of a market orientation on business performance (Cano et al., 2004; Kirca et al., 2005; Ellis, 2006). More specifically, Kirca et al. (2005) report that a market orientation positively affects the overall business performance, profits, sales, market share, perceived quality, customer loyalty and customer satisfaction. However, several empirical studies report an insignificant relationship between a market orientation and business performance (e.g. Han et al., 1998; Iršič et al., 1999; Vazquez et al., 2001; Rojšek and Konič, 2003; Langerak et al., 2004; Jimenez-Jimenez et al., 2008; Merlo and Auh, 2009). In addition, some researchers find a significant effect of market orientation on business performance only in certain business environments (e.g. Greenley, 1995; Appiah-Adu, 1998). It should be noted that all the empirical studies mentioned above did not distinguish between a responsive and a proactive market orientation.

The more recent market orientation literature suggests that both forms of market orientation are needed for a long-run business performance (Sheth and Sisodia, 1999). Developing only a responsive market orientation may be insufficient for a company to attract and to retain customers (Narver et al., 2004). Therefore, a company should constantly increase its proactive market orientation in order to create and maintain a sustainable competitive advantage (Narver et al., 2004). So far, only one empirical study has examined the impact of both market orientations on business performance. Voola and O'Cass (2010) find that a proactive market orientation has a stronger influence on business performance than a responsive market orientation.

In our study, we draw a distinction between a market and a financial business performance (e.g. Homburg and Pflesser, 2000; Gabrijan et al., 2005). A market performance is the performance of a company's marketing activities which can be measured by customer loyalty, customer retention, providing value for customers and market share (Homburg and Pflesser, 2000). Basically, similar to some other studies we argue that a market orientation impacts financial performance indirectly through market performance (e.g. Homburg and Pflesser, 2000; Gabrijan et al., 2005). Hence, in line with the prevalent empirical literature that confirms a positive impact of market orientation on market performance (e.g. Kirca et al., 2005; Milfelner et al. 2008b; Gonzalez et al., 2009) and the recent study conducted by Voola and O'Cass (2010), we predict that both market orientations are positively related to market performance with a proactive market orientation being more strongly related.

H_{3A} : A responsive market orientation is positively related to market performance.

H_{3B} : A proactive market orientation is positively related to market performance.

2.4. Degree of novelty and innovation performance

Overall, truly new products are more successful in meeting profit objectives than incremental innovations (Song and Montoya-Weiss, 1998). A higher degree of novelty and a lower similarity of new products with competitive products are related to a better perceived performance of innovation (Gatignon and Xuereb, 1997). The advantage of new products in comparison to existing products on the market is among the most important factors of new-product success (e.g. Cooper, 1994; Gatignon and Xuereb, 1997; Song and Montoya-Weiss, 1998; Henard and Szymanski, 2001; Langerak et al., 2004; Bastič, 2004, 2007). In line with the existing empirical literature that provides support for the positive relationship between the degree of novelty and innovation performance, we predict that: H_4 : *The degree of novelty is positively related to innovation performance.*

2.5. Innovation performance and business performance

Innovation is one of the most important drivers of business performance (e.g. Deshpande and Farley, 2004; Fagerberg, 2005; Davila et al., 2006; Antončič et al., 2007; Bastič, 2007) and is crucial for competitiveness (e.g. Werawardena, 2003; Bastič, 2004). Every company must develop new products in order to survive in the long run. Companies that fail to develop new products put themselves at great risk since their existing products are vulnerable to changing customer needs and wants, new technologies, shortened product life cycles and increased domestic and foreign competition (Kotler, 2003). Empirical findings confirm a positive relationship between new-product performance and business performance (e.g. Langerak et al., 2004; Ledwith and O'Dwyer, 2008). Effective new-product development processes and the ability to launch successful new products positively impact customer loyalty, market share and sales volume (Gabrijan et al., 2005; Milfelner et al., 2008a). Product, process and administrative innovation are positively related to business performance (Jimenez-Jimenez et al., 2008). In line with the theoretical and empirical literature, we propose the following hypothesis: H_5 : *Innovation performance is positively related to market performance.*

2.6. Market performance and financial performance

Business performance can be measured with a number of measures that can be broadly divided into two groups: financial and non-financial (Rejc, 2002). Financial measures of business performance (e.g. revenues, growth of sales, economic added value, cash flows) are measured with a time-lag, therefore only considering financial measures in competitive environments is inappropriate (Kaplan and Norton, 2000). Measures of market performance are an important group of non-financial measures. In our study market performance refers to customer satisfaction and customer loyalty, whereas finance performance refers to sales value, sales growth and gross profit. The theoretical and empirical literature suggest that the market performance positively impacts the financial performance (e.g. Srivastava et al., 1998; Homburg and Pflesser, 2000; Morgan

et al., 2002; Gabrijan et al., 2005; Gruca and Rego, 2005). In line with the literature, we propose that:

H₆: Market performance is positively related to financial performance.

3. RESEARCH METHODOLOGY

3.1. Data collection and sample characteristics

The research was conducted in two steps: first, eight in-depth interviews with managers in six Slovenian companies from diverse industries were conducted in order to obtain a better understanding of the phenomena under study. In particular, the purpose of the preliminary qualitative research was to gain a better understanding of how managers themselves define and measure market orientation, innovation and business performance as well as managers' views on the relative impact of market orientation and innovation on business performance. In addition, the qualitative research sought to find out whether a single respondent within the company can provide answers to all related concepts under study.

In the second step, a quantitative research using an Internet survey was conducted among Slovenian companies from manufacturing and selected service industries (wholesale and retail trade, transport, storage and communications, and financial intermediation) with at least ten 10 employees. Based on the list of companies provided by the Agency of the Republic of Slovenia for Public Legal Records and Related Services (AJPES), a call centre at Slovenian's Chamber of Commerce and Industry compiled a list of 3,732 e-addresses of general managers and marketing managers. Managers received an email explaining the general purpose of the study and a link to the Internet survey. The electronic questionnaire was designed so that the respondents could not see all the questions and therefore could not alter their answers in light of additional information. The explicit term "market orientation" was not used anywhere in the survey. Two follow-up emails were sent to non-respondents. The survey was conducted from January to March 2008. After accounting for undeliverable emails, usable questionnaires from 441 companies were received, yielding a 16 percent response rate.

A subsample of 325 companies (73.7% of all companies participating in the survey) that had introduced a product, process, marketing and organisational innovation during the 2005-2007 period was retained for this study. The study sample consisted of 54% manufacturing and 46% service organisations. 51% of the companies in the sample were small (10-49 employees), 32% of them were medium (50-249 employees), while 17% were large (250 employees or more). 54% of all respondents were general managers, 30% were marketing managers and the rest mainly held other leading positions in the company. The sample is representative in terms of the main business sector (manufacturing vs. service organisations), but slightly biased towards larger companies. The latter should be taken into account when generalising the results of the study for small companies. An early versus late respondent analysis revealed no evidence of non-response bias.

3.2. Measures

Based on a literature review of theoretical discussions and the existing market orientation measures (e.g. Narver and Slater, 1990; Kohli et al., 1993; Homburg and Pflesser, 2000; Jaworski et al., 2000; Narver et al., 2004) and findings from eight in-depth interviews with managers, 20 items were included in the questionnaire in order to measure a responsive and proactive market orientation on a seven-point Likert scale (1=strongly disagree to 7=strongly agree). In line with the recent market orientation literature, a responsive market orientation addresses expressed customer needs, whereas a proactive market orientation addresses latent customer needs (Narver et al., 2004; Atuahene-Gima et al., 2005; Tsai et al., 2008). Items of a responsive market orientation were developed based on the widely used MARKOR scale (Kohli et al., 1993) and MKTOR scale (Narver and Slater, 1990), whereas items for a proactive market orientation were developed based on the scale developed by Narver et al. (2004). In addition, findings from in-depth interviews with managers were also taken into consideration in the development of both scales.

Following the innovation literature and the Oslo Manual (2005) which provides guidelines for measuring innovation in the European Union, four types of innovation were included in the survey: product, process, marketing and organisational. In the existing literature, almost all definitions and measures of radical and incremental innovations are limited to new products and changes in technology (e.g. Gatignon and Xuereb, 1997; Chandy and Tellis, 1998). According to Chandy and Tellis (1998), radical innovations involve fundamental changes in technology for the company and provide substantially greater customer benefits relative to existing products, whereas incremental innovations are product improvements and line extensions which involve relatively minor changes in technology and provide relatively few customer benefits. This definition of degree of novelty cannot be applied to marketing and organisational innovations because these types of innovations are often based on non-technological knowledge (Oslo Manual, 2005). In our survey, the respondents were asked to assess the predominant level of each type of innovation introduced by the company during the 2005-2007 period ('Please indicate the predominant level of product/process/marketing methods/organisational method innovation your company introduced during the 2005-2007 period') on a seven-point scale (1=minor change to 7=new-to-the-world; X=no introduction). For each of the four types of innovations some examples of innovations were included in the questionnaire (see Table 1, *Degree of novelty*). A similar approach can be found in previous empirical studies (e.g. Werawardena, 2003; Leskovar-Špacapan and Bastič, 2007).

Following the innovation literature (e.g. Cooper and Kleinschmidt, 1995) and findings from the in-depth interviews with managers, the performance of innovations introduced during the 2005-2007 period was measured relative to the company objectives on a seven-point scale (1=very unsuccessful to 7=very successful; X=I do not know) for each of the following five measures: new-product launch on time, sales of new products, new-product market share, profit of new products, and percent of new-product sales in total sales. The business performance in 2007 was measured relative to the biggest com-

petitors (1=much worse to 7=much better; X=I do not know): market performance was measured by customer satisfaction and customer loyalty, whereas financial performance was measured by sales value, sales growth and gross profit.

The questionnaire was pretested with nine academics and twelve managers. In addition, the face validity of the market orientation scale was tested with two academics and four managers.

4. RESULTS

A confirmatory factor analysis (CFA) using the AMOS 18.0 software was conducted in order to assess the measurement model with six constructs (*Responsive market orientation*, *Proactive market orientation*, *Degree of novelty*, *Innovation performance*, *Market performance*, *Financial performance*). Similar to numerous previous studies (e.g. Atuahene-Gima, 1996; Langerak et al., 2004; Atuahene-Gima et al., 2005; Baker and Sinkula, 2007; Milfelner et al., 2008a) all constructs in our model are considered reflective. According to Hair et al. (2005) the reflective measurement model is appropriate when items are caused by the construct, when the items are expected to covary highly with each other and if all of the items share a common conceptual basis, meaning they all indicate the same thing.

Table 1 shows the measurement items retained for the analysis along with the standardised loading and t-value of each item, the composite reliability index (ρ_c) and the variance extracted (ρ_v). The latent variables exhibit indices superior to the reference values of $\rho_c=0.6$ and $\rho_v=0.5$ (Hair et al., 2005), indicating convergent validity. The only exception is *Degree of novelty* with variance extracted less than 0.5, however, the composite reliability index of this latent variable is higher than 0.7 and all standardised factor loadings are higher than 0.6, indicating a sufficient convergent validity.

In order to assess discriminant validity, each of the related variable pairs was constrained to correlate perfectly and then the fit of constrained and unconstrained model has been compared. For each of the related pairs the fit of the constrained model was significantly worse than the fit of the unconstrained model, confirming the presence of discriminant validity of our constructs.

TABLE 1. *Measurement items retained for the analysis*

Items	SFL*	t-value
Responsive market orientation ($\rho_c = 0.85$; $\rho_v = 0.53$)		
We respond quickly to changed customer needs, wants and/or buying behaviour.	0.81	17.04
Business functions work in a co-ordinated way so as to satisfy the needs of our target markets.	0.79	16.31
We adapt the marketing mix (products, prices, distribution, communication) to the selected target markets.	0.70	13.88

We respond quickly to competitors' activities.	0.69	13.38
In the case of customer dissatisfaction or complaints we take corrective steps as fast as possible.	0.64	12.32
Proactive market orientation ($\rho_c = 0.86$; $\rho_v = 0.55$)		
We examine problems customers may have with existing products in the market in order to offer a new or better solution to satisfy a need.	0.80	16.84
We try to recognise needs and wants which existing and potential customers are unaware of or which they do not want to disclose.	0.77	15.76
We examine which needs and wants customers may have in the future.	0.75	15.18
We work closely with lead customers who recognise their needs months or years before the majority of potential customers recognise them.	0.68	13.01
We develop new products that will satisfy still unexpressed customer needs.	0.67	12.99
Degree of novelty ($\rho_c = 0.76$; $\rho_v = 0.45$)		
Degree of novelty for organisational methods (i.e. innovation in company organisation, management techniques, e.g. introduction of team work, a new employee training system)	0.72	12.34
Degree of novelty for processes (i.e. new or improved production or delivery process, e.g. production automation, innovation in logistics etc.)	0.70	12.09
Degree of novelty for marketing approaches (i.e. in marketing communications, pricing, marketing channels, new market entry etc.)	0.62	10.57
Degree of novelty for products (i.e. new or improved products/services)	0.62	10.61
Innovation performance ($\rho_c = 0.86$; $\rho_v = 0.56$)		
Sales of new products	0.86	18.44
New-product market share	0.80	16.69
New-product launch on time	0.72	14.44
Percent of new-product sales in total sales	0.71	14.09
Profit of new products	0.63	12.08
Market performance ($\rho_c = 0.80$; $\rho_v = 0.67$)		
Customer satisfaction	0.91	15.94
Customer loyalty	0.72	12.78
Financial performance ($\rho_c = 0.80$; $\rho_v = 0.58$)		
Sales value	0.81	15.79
Sales growth	0.77	14.86
Gross profit	0.69	12.85

*SFL: Standardised Factor Loadings

Model fit: $\chi^2=400.61$; $df= 234$; $p<0.0001$; $GFI=0.906$; $NFI=0.895$; $TLI=0.944$; $CFI=0.953$; $RMSEA=0.047$

As seen in Table 2, the mean score of proactive market orientation is significantly lower (mean=5.06; SD= 1.09) than the mean score of responsive market orientation (mean=5.36; SD= 1.00). Taking all four types of innovation into account, the average degree of novelty is very close to the scale midpoint (mean=3.98; SD= 1.17). With regard to performance, the mean score of market performance (mean=5.50; SD= 0.84) is significantly higher than the mean scores of innovation performance (mean=4.63; SD= 1.20) and financial performance (mean=4.91; SD= 1.01).

TABLE 2. Means and Standard Deviations

Variables	Number of items	Mean	Standard Deviation	95% Confidence Interval for Mean
Responsive market orientation	5	5.36	1.00	5.25 – 5.47
Proactive market orientation	5	5.06	1.09	4.94 – 5.18
Degree of novelty	4	3.98	1.17	3.86 – 4.11
Innovation performance	5	4.63	1.20	4.50 – 4.76
Market performance	2	5.50	0.84	5.41 – 5.59
Financial performance	3	4.91	1.01	4.80 – 5.02

The SEM method was applied in order to test the hypotheses about the relationships between both market orientations, degree of novelty, innovation performance, market performance and financial performance. The analysis resulted in an adequate model fit with the data ($\chi^2=434.1$; $df=238$; $p<0.0001$; $GFI=0.900$; $TLI=0.936$; $CFI=0.945$; $RMSEA=0.050$). It should be noted that the p-value is significant, indicating a significant difference between the observed sample and SEM estimated covariance matrices. However, according to Hair et al. (2005) the χ^2 value is influenced by the sample size and the number of indicator variables, hence the researcher should not rely on only one goodness-of-fit measure. For samples larger than 250 and models with more than 12 but less than 30 total indicator variables, the literature recommends CFI or TLI values above 0.92 and RMSEA values less than 0.07 (Hair et al., 2005). Our fit indices meet these criteria for establishing an acceptable goodness-of-fit.

Table 3 in Figure 2 summarise the results of testing the hypotheses. The findings support the hypotheses that a proactive market orientation is positively related to the degree of novelty (H_{1B}), the degree of novelty is positively related to innovation performance (H_4), innovation performance is positively related to market performance (H_5) and market performance is positively related to financial performance (H_6). On the other hand, no support was found for the relationship between a responsive market orientation and the degree of novelty (H_{1A}), between both market orientations and innovation performance (H_{2A} and H_{2B}) and a direct relationship between both market orientations and market performance (H_{3A} and H_{3B}).

TABLE 3. Baseline Model Results: Testing the Research Hypotheses

H	Antecedent	Criterion Variable	Standardised Path Coeff.	t*	Result
H_{1A}	Responsive market orientation	Degree of novelty	-0.19	-0.77	Not supported
H_{1B}	Proactive market orientation	Degree of novelty	0.60	2.43	Supported
H_{2A}	Responsive market orientation	Innovation performance	0.41	1.95	Not supported
H_{2B}	Proactive market orientation	Innovation performance	-0.08	-0.35	Not supported

H _{3A}	Responsive market orientation	Market performance	0.01	0.03	Not supported
H _{3B}	Proactive market orientation	Market performance	0.34	1.68	Not supported
H ₄	Degree of novelty	Innovation performance	0.34	4.40	Supported
H ₅	Innovation performance	Market performance	0.38	5.56	Supported
H ₆	Market performance	Financial performance	0.57	8.16	Supported

* Significant at $p < 0.05$ if $|t| > 1.96$

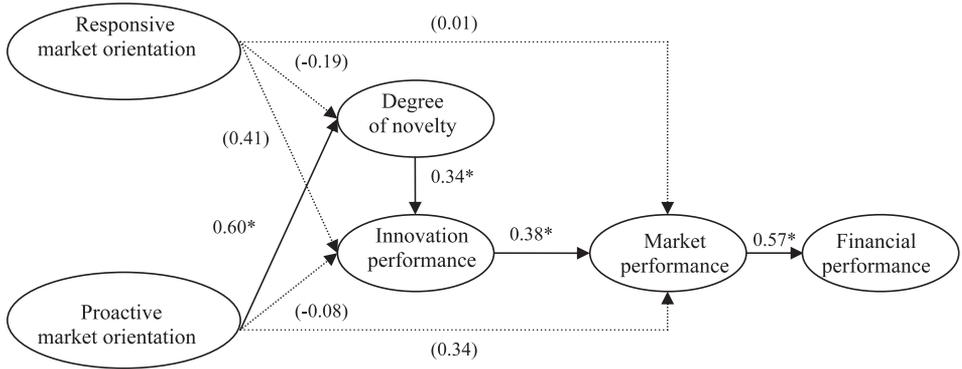


FIGURE 2: Results of hypotheses testing

5. DISCUSSION AND CONCLUSION

The study of a sample of 325 Slovenian companies that introduced a product, process, marketing and organisational innovation during the 2005-2007 period provide additional support for past research arguing that a higher degree of novelty enhances innovation performance which, in turn, enhances financial performance through a positive impact on market performance. Further, our study reveals that only a proactive market orientation significantly and positively impacts the degree of novelty, whereas the impact of a responsive market orientation is insignificant. The finding of a positive relationship between a proactive market orientation and the degree of novelty was expected since this form of market orientation addresses latent customer needs (Narver et al., 2004) and therefore focuses on exploring new knowledge and markets significantly distant from existing company experience (Atuahene-Gima et al., 2005; Tsai et al., 2008). Our finding is also in line with Narver et al. (2004) who empirically confirmed a positive relationship between a proactive market orientation and innovation orientation. However, in contrast to Narver et al. (2004) who report a positive, yet a weaker relationship also for a responsive market orientation, our study found no evidence of a significant relationship between a responsive market orientation and the degree of novelty. Yet, our finding is in line with Radas and Božić (2009) who report an insignifi-

cant relationship between a market orientation (measured by the “traditional” MKTOR scale) and incremental or radical innovation.

Our study also reveals that a market orientation, whether responsive or proactive, has no direct impact on innovation performance. Our finding contradicts earlier empirical studies suggesting that both market orientations are important drivers of new-product performance (e.g. Atuahene-Gima et al., 2005; Tsai et al., 2008) or which revealed a significant impact at least for the proactive market orientation (e.g. Narver et al., 2004). Yet, with regards to a responsive market orientation, some other studies have also failed to confirm its significant impact on new-product performance (e.g. Narver et al., 2004; Langerak et al., 2004). Finally, our study reveals that both market orientations are positively, yet insignificantly related to market performance. While this finding contradicts several past researches that confirm a significantly positive relationship between a market orientation and business performance (e.g. Kirca et al., 2005), it is consistent with a group of studies that find only indirect effects of a market orientation on business performance (e.g. Han et al., 1998; Langerak et al., 2004; Jimenez-Jimenez, 2008).

In summary, our study suggests that neither a responsive nor a proactive market orientation has a direct impact on innovation performance and business performance. Since results of our study are in many cases contrary to existing literature we discuss possible explanations for our results. Again, it should be noted that not all previous studies confirmed a direct positive impact of a market orientation on innovation performance (e.g. Langerak et al., 2004) and business performance (e.g. Han et al., 1998; Langerak et al., 2004; Jimenez and Jimenez, 2008; Merlo and Auh, 2009). For example, based on the review of 51 studies which addressed the market orientation-business performance relationship between 1990 and 2002 Langerak (2003) concludes that there is no unequivocal evidence as to if and when market orientation has a positive impact on business performance. On the other hand, a meta-analysis of 56 studies on the relationship between market orientation and performance conducted in 28 countries (Ellis, 2006) reveals that in general the market orientation is a determinant of company performance. However, this relationship is not strong: the mean (corrected) size effect is 0.26. Less than 7% of the variation in company performance is associated with market orientation (Ellis, 2006). A meta-analysis also reveals that the market orientation-performance link is significantly stronger in large and mature markets. Further, market orientation has a significantly stronger impact on performance in the West (particularly in the United States where the relationship is significantly stronger in comparison to other geographical areas). Importantly, the relationship between market orientation and business performance in Eastern Europe (in a meta-analysis represented by Hungary, Poland, Romania and Slovenia) is among the weakest ($r=0.195$). In summary, these findings clearly show that the market orientation-performance link is significantly affected by contextual factors (Ellis, 2006). In line with the above-mentioned meta-analysis the characteristics of Slovenian market (i.e., a very small, transitional economy in the South-Eastern Europe) can help us to explain insignificant effect of market orientation on performance found in our study.

Another possible explanation for our results might be the potential costs associated with market orientation. Atuahene-Gima et al. (2005) point that scholars present an overly positive view of responsive and proactive market orientation and neglect the potential costs associated with each dimension of market orientation that may diminish company performance. Their study revealed that innovation performance is enhanced when one form of market orientation is at higher level and the other is at lower level (Atuahene-Gima et al., 2005). Further, both market orientations may require different organisational conditions to ensure positive influence on innovation performance. More specifically, Atuahene-Gima et al. (2005) report that a responsive market orientation is only positive related to new-product performance under specific conditions such as when strategic consensus among managers is high. On the other hand, the positive effect of proactive market orientation on new-product performance is stronger when learning orientation and marketing power are high (Atuahene-Gima et al., 2005). Our study did not examine the impact of these organisational conditions which might reveal a better understanding of the impact of both market orientation also in the case of Slovenian companies.

A third possible explanation for our results might be the subjective nature of the presented study's measures. We can argue that companies high on both orientations are more "market sensitive" and therefore likely to set very high performance goals and thus less likely to achieve them (Atuahene-Gima et al., 2005).

Although our study did not confirm a direct positive impact of both market orientation on innovation and business performance, this finding does not diminish the importance of a market orientation. Instead, it suggests that both market orientations are required, yet are insufficient for innovation performance and business performance. As Langerak et al. (2004) point out, the channelling effects of a market orientation are much more subtle and complex than the direct relationships between a market orientation and business performance. Similarly, Tsai et al. (2008) conclude that the effects of a responsive and a proactive market orientation on new-product performance are more complex than previously theoretically argued and empirically examined.

Further, although our study suggests that only a proactive market orientation significantly impacts the degree of novelty, it would be wrong to conclude that a responsive market orientation is not important. According to Narver et al. (2004), a company must first consider the customers' expressed needs since they are in the consciousness of the customer. However, if a company relies solely on the customers' expressed needs, it is very vulnerable economically. First, that is because it relies on customers' best guesses when it develops new products and, second, because responsive market-oriented behaviours, in particular, can be successfully imitated by competitors (Narver et al., 2004).

Our findings hold important managerial implications. Companies can improve their business performance by improving their innovation performance and hence they are advised to increase the degree of novelty as this leads to a higher innovation performance. An important driver of the degree of novelty is the level of proactive market orientation. Companies should therefore invest resources in raising the level of their proactive

market orientation. They can achieve this by investing resources into examining and satisfying latent and future customer needs, by examining problems customers may have with existing offerings and working closely with lead customers. Raising the level of a proactive market orientation is particularly important for Slovenian companies as our study reveals that proactive market-oriented behaviours are significantly less developed than responsive market-oriented behaviours. This implies that Slovenian companies currently pay relatively more attention to understanding and satisfying their customers' expressed needs than understanding and satisfying their customers' latent needs.

Our study contributes to the existing market orientation literature in several ways. First, we distinguish between a responsive and proactive market orientation. To date, marketing literature adopting both forms of market orientation is still very limited to theoretical discussions and a few empirical studies, mostly conducted in non-European countries (e.g. Narver et al., 2004; Atuahene-Gima et al., 2005; Tsai et al., 2008; Voola and O'Cass, 2010). Second, past research into the entire chain of relationships between market orientation, innovation and business performance is still limited (e.g. Han et al., 1998), in particular when considering both a responsive and a proactive market orientation. It is important to note, that all existing studies only partially examined the impact of both market orientations on innovation and business performance: one group of researchers examined the impact of both market orientations on innovation performance (e.g. Narver et al., 2004; Atuahene-Gima et al., 2005, Tsai et al., 2008), whereas the other group of researchers examined the impact of both forms of market orientation on business performance (e.g. Voola and O'Cass, 2010). To our knowledge, our study is the first that simultaneously examines the entire chain of relationships between both market orientations, the degree of novelty, innovation performance and business performance. Our study implies that the distinction between a responsive and proactive market orientation is important for better understanding the role of a market orientation in increasing the degree of novelty and consequently in improving business performance. Third, Menguc and Auh (2006) believe that in transitional economies a market orientation is still a novel concept and there is a limited understanding of whether a market orientation alone is sufficient or it needs to be complemented with other internal resources such as innovativeness. Our findings suggest that more complex models with indirect relationships between the two market orientations, innovation performance and business performance may be more appropriate than models with a direct relationship between a market orientation and business performance. We believe that this finding is an important contribution towards a better understanding of the impact of market orientation on business performance, especially in transitional economies.

Fourth, past research has been largely biased towards product innovation although innovations can occur in any value-creating activity (Weerawardena, 2003). In our study we adopt a more comprehensive view of innovation by considering four types of innovation (i.e. product, process, marketing and organisational).

This study also has a number of limitations that underpin several recommendations for future research. First, the measurement of a market orientation that encompasses both a

responsive and a proactive market orientation is still under development. Thus, further testing of the psychometric properties of the two scales is required. Second, although a distinction between the four types of innovation according to the Oslo Manual (2005) provides a more holistic view of innovation, it does not use an adequate set of criteria for the classification. For example, a distinction is made between innovation related to a production and a marketing business function, but not between innovation related to other business functions. In addition, the degree of novelty for each type of innovation was only measured with a single item in our study. In future research, it is recommended to develop more items to measure the degree of novelty of each type of innovation in order to obtain a more reliable and valid measure. Third, it should be considered that a company can be proactive only in certain markets and/or product categories. As Menguc and Auh (2006) assert, a proactive market orientation may be essential for innovators and early adopters, but less required for late majorities and laggards. It is recommended that future research examine the relationships between both market orientations, innovation strategy and market position as well as the relative importance of both market orientations with respect to different markets and/or product categories. Fourth, this study is cross-sectional. The impact of a market orientation on innovation and business performance as well as the impact of innovation on business performance can involve a considerable time lag and a longitudinal study in future research is therefore highly recommended. Fifth, the response rate in our study is relatively low (16%). However, a low response rate had been expected due to the survey being conducted on the Internet and the length of the questionnaire. In addition, the response rate is comparable to some similar studies (e.g. Atuahene-Gima et al., 2005; Baker and Sinkula, 2007; Voola and O'Cass, 2010). Last but not least, this study does not examine the moderator effects of the business environment such as market turbulence, technological turbulence and competitive intensity. Tsai et al. (2008) suggest that with a high level of technological turbulence a responsive market orientation may become detrimental to new-product performance beyond a certain level. On the other hand, with a low level of technological turbulence or competitive intensity a proactive market orientation may become detrimental to new-product performance beyond a certain level (Tsai et al., 2008).

This study also does not examine possible differences in market orientation-innovation-business performance relationships when considering company characteristics such as the main business sector (manufacturing vs. service organisations), size and type of the market (consumer vs. business markets).

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