MARKET ORIENTATION, BUSINESS INNOVATION AND HRM IN TOP SLOVENIAN EMPLOYERS

By Matevž Rašković[1]

Barbara Mörec[2]

Maja Makovec Brenčič[3]

The paper builds on a cross-sectional longitudinal study of 101 best Slovenian employers (firms) in a three-year period between 2008 and 2010. It employs both regression and power analysis (Cohen's d effect size statistic). The paper analyzes the impact of internal and external marketing orientation, business innovation and HRM performance indicators on firm performance (added value per employee) in an economic crisis context. The effect size statistic further analyzes the link between the basic employee-firm relationship and the perceived importance of trust and long-term relationships with the firm in the "eyes of the customer"; as evaluated by respondent firms' managers. The results of our analysis confirm the increasing importance of relationship orientation in an economic crisis. On the one hand both internal and external relationship orientation are closely linked, while on the other hand, only the internal relationship orientation (internal marketing) seems to be directly linked to firm performance in our OLS regression model. This does not by imply that external market orientation is not important, but may indicate that is acts more as a buffer, not as a productive source of firm performance in an economic crisis. In addition, the results of our effect size estimation show how market oriented firms also display significantly higher scores on the basic employee-firm relationship; indicating a significant effect size relationship between the two constructs. More interestingly, this effect size is almost identical for 2008 and 2010, but considerably higher for 2009, when the economic crisis in Slovenia reached its climax. In the end, a series of implications for marketing and management theory and practice are discussed.

Keywords:
Market
Orientation
HRM
Business

[1] *Assistant and researcher, University of Ljubljana, Faculty of Economics, Kardeljeva pl. 17, 1000 Ljubljana, Slovenia, Phone: +386 31 307 049, E-mail: matevz.raskovic@ef.uni-lj.si*

[2] *Assistant and researcher, University of Ljubljana, Faculty of Economics, Kardeljeva pl. 17, 1000 Ljubljana, Slovenia*

[3] *President of the Slovenian marketing association and associate professor, University of Ljubljana, Faculty of Economics, Kardeljeva pl. 17, 1000 Ljubljana, Slovenia*

I. INTRODUCTION

The *"drastic, sudden and externally forced"* nature of an economic crisis (Lee et al., 2009, p. 1; *cf.* Tripsas & Gavetti, 2000) has in Slovenia highlighted the importance of better understanding the managerial implications and challenges of crises contexts; even though such circumstances are rare, and difficult to predict (Beebe, 2004). This is also consistent with the existing literature (Champion, 1999; Goad, 1999), where appropriate and responsive management has been outlined as a key *"survival mechanism"* (Naidoo, 2010, p. 1311). In spite of the underlying turbulence of the global and local socioeconomic downturns *"some organizations [still] prosper and other suffer"* (Lee et al., 2009, p. 1). This clearly points to the fact that different firms have invested in and developed various *capabilities* to adapt to such (environmental) changes (Walker, Madsen & Carini, 2002; Lin, 2001), and that some firms even benefit from such changes (Lee et al., 2009). This is in particular important within the increasing processes of globalization, and its competitive challenges, especially in a transition context (Tatic, Rovcanin & Dzafic, 2006).

In the Chinese language, for example, the term *weiji* (crisis) refers to both the dimension of *danger*, as well as *opportunity* (Kim, 1998). In this regard in particular, Gilbert (2006) points to co-existing and competing frames of threats and opportunities in many business contexts of everyday life. Applying this perspective to the management literature *"some firms [thus] view a crisis as an opportunity to change"* (Lee et al., 2009, p. 1). Even if firms do not *a priori* pursue crises-induced changes to take either advantage of new opportunities or start proactively thinking of creating new opportunities, they still strive towards developing flexible and dynamic capabilities, which lead to long-term sustainable competitive advantages (Lee et al., 2009; Teece, Pisano & Shuen, 1997; Prahalad & Hamel, 1990). In this context, Jerman & Zavrsnik (2006) particularly emphasize the link between the development of marketing capabilities, and firm competitive advantage.

This new stream of research specifically addresses the issue of the so called *real options* perspective, which extends the traditional *industrial organization* and *resource-based view* perspectives. The real options perspective addresses the issue of creating, maintaining and leveraging *flexible* firm capabilities, which can be seen as *options*. Such dynamic capabilities come particularly handy in times of dramatic changes, and enable the maintenance and/or transformation of a firm's core competitive advantage (Bowman & Hurry, 1993; Sanchez, 1993; Kogut & Kulatilaka, 2001; Lee et al., 2009).

The paper builds on a cross-sectional longitudinal study of 101 best Slovenian employers (firms) in a three-year period between 2008 and 2010. Overall, more than 22,800 employees, in more than 200 firms took part in the research between 2008 and 2010, making it one of the largest researches in South-East Europe of this type. The main purpose of this paper is to analyze the impact of *market orientation*, *business innovation performance* and *human resources management* (HRM) on *firm performance*.

The goal of the paper is to employ *regression* and *power analysis* (Cohen's *d* effect size statistic) and to analyze the impact of market orienation, business innovation and HRM performance indicators on firm performance in an economic crisis context. Coincidentally, this paper makes several contributions to the existing literature. First, its large sample of observations (more than 22,800 employees surveyed between 2008 and 2010) shed important insights into the interconnections between marketing, business innovation, HRM and firm performance in a non-Western, South-East European managerial context. Second, purposely following Beebe's (2004) call for research on low-probability-high-impact changes in a firm's external environment, the timing of the cross-sectional longitudinal data allows us a unique insight into the development of flexible dynamic capabilities of firms in a crisis environment. Third, most of the existing literature has focused on the analysis of pair-wise links between marketing and business innovation performance (Aldas-Manzano, Kuster & Vila, 2005) or HRM and business innovation performance (Jimenez & Sanz-Vale, 2005), and their impact on firm performance (Agarwal, Erramilli in Dev, 2003). In this regard, rare studies try to simultaneously analyze all three functional areas (marketing, business innovation and HRM), with respect to firm performance (Rašković, Makovec Brenčič & Pfajfar, 2008). Our analysis narrows this gap. Fourth, from the methodological point of view our analysis employs both regression analysis, as well as *power analysis* (Cohen's *d* effect size statistic). With regards to the latter, we follow the critique outlined by Breaugh (2003; Cohen, 1992 and 1994), on how management research focuses on determining the (in)significance of mean differences, without understanding the size or direction of the underlying effect, and the implications of sample size differences in traditional t-test mean significance testing. The employment of Cohen's *d* effect size statistic will hopefully further stimulate the employment of power analysis in the marketing and management literature in the region of South-East Europe, where it has been largely ignored thus far.

II. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

Starting with the seminal work of Penrose (1959/1995), and expanded by Wernerfelt (1984) and Barney (1996) the resource-based view (RBV) of the firm has not only become one of the key paradigmatic perspectives in the management literature, but has also been closely linked to the study of firm competitive advantage, and the recent emergence of the *new theories of competitive advantage*. The starting point of this perspective is that human resources can and should be considered as key organizational resources (see Wright, Dunford & Snell, 2001). This does not only point to the importance of employees, but requires all firm-based (ego-centered) relationships to be considered within the RBV of the firm, as key organizational resources (Ni, 2006). This holds not only important managerial implications, but also implications for building long-term, sustainable firm competitive advantage, which is increasingly based on dynamic capabilities.

According to Ni (2006) viewing relationships as resources satisfies all four resource criteria within the RBV, namely: *value*, *rareness*, *uniqueness (inimitability)*, and *non-substitutability* (Barney, 1996). This evolution stream of the relationships paradigm has transformed the initial RBV of Penrose, into a more recent research interest in *intangible resources* and *dynamic capabilities* (Carpenter, Sanders & Gregersen, 2001) as sources of strategic competitive advantage (Dyer & Singh, 1998). In this context, *"relationship keyness"* does not become only an underlying concept of relationship management (Ivens et al., 2009), but of management in general. E.g. Paliaga & Strunje (2011) were able to show on the sample of Croatian firms that a strong internal marketing orientation can be linked to a firm's competitive advantage, customer satisfaction and loyalty, as well as service quality. From this follows our first proposition:

<u>Proposition 1</u>: *High-performance firms display a stronger and more focused relationship orientation, both internally with their employees, and externally with their customers.*

Good internal organizational relationships (with employees) and external organizational relationships (with customers) may be seen as a firm's key resource, and source of *flexible* competitive capabilities (Prahalad & Hamel, 1990; Karami et al., 2004; Li et al., 2006). Ullmann (2003) also argues that high-quality relationships between firms and their employees, customers, and suppliers lead to long-term commitment and long-term contracting, and may be seen as a way out of critical situations and crises. Therefore, our proposition is:

Proposition 2: Relationship orientation, both internally with employees, and externally with customers, increases with the worsening of the economic crisis.

The underlying logic of the second proposition follows the idea of Ullmann (2003), and conceptualizes the increase of relationship orientation (both internal and external) in times of crisis, as a buffer that helps absorb the negative pressures to which a firm is subjected to in its turbulent environment.

Apart from the human dimension of the RBV and dynamic competitive advantage building, *market orientation*[4] has also been linked to firm performance (Diamantopoulos & Hart, 1993; Harris, 2001) and long-term competitive advantage building, either directly (Kumar et al., 2011; Zhou, Brown & Dev, 2009), or indirectly through (marketing) innovation (Augusto & Coelho, 2009; Hauser, Tellis & Griffin, 2006). According to Mouzas, Henneberg & Naudé (2007; *cf.* Morgan & Hunt, 1994; Håkansson, Harrison & Waluszewski, 2004; Young, 2006) the issue of *trust* is probably the most fundamental aspect of any business relationship. Trust is important both in inter- and intraorganizational relationship contexts, both as a facilitator of long-term, value-adding market-oriented relationships (Morgan & Hunt, 1994), as well long-term, value-adding relationships with the employees (internal customers), which lead to employee satisfaction (Ballantyne, 2000). Linking trust and the formation of long-term relationships with the firm to a firm's market orientation implies that more market oriented firms also poses a larger understanding and sensitivity to the importance of trust and long-term relationship formation 'in the eyes of their customers' (Makovec Brenčič, Rašković & Pfajfar, 2011; *cf.* Slater & Narver, 1998; Wei & Lau, 2008). For example, Irsic (2011) was able to show on a sample of Slovenian service firms that marketing orientation is closely and strongly linked to the formation of long-term relationships between the firm and its external environment (i.e. suppliers). Thus, we argue:

Proposition 3: Perceived customer expectations by the focal firm regarding trust and long-term relationships with the firm (as an indicator of market orientation) are positively linked to business innovation performance, and have a positive impact on firm performance.

Lastly, business innovation – or, rather, the ability to innovate -*"has recently [also] gained in prominence as one such dynamic capability that distinguishes firms which outperform their counterparts"* (Naidoo, 2010, p. 1311; *cf.* Danneels, 2002; Hamel, 2000; O'Connor & Rice, 2001). Particularly in turbulent environmental contexts (as in a crisis), business innovation is seen as a *"key mechanism for organizational growth and renewal"* (Lawson & Samson, 2001, p. 379). Consequently, we set our fourth proposition as:

Proposition 4: Business innovation is positively linked to firm performance, and gains in strength with the deepening of the economic crisis.

III. DATA AND SAMPLING

Our study is based on *The Golden Thread Survey* (GTS), which started in 2007[5] with the intent of carrying out a cross-sectional longitudinal management survey among top Slovenian employers (firms) on an annual basis. The main goal of the study is to promote and share best management practices in HRM, marketing, and business innovations of the top Slovenian employers, as well as

---

[4] *Defined simply as the implementation of both a customer- and competitor-focused strategic philosophies within a firm (Shergill & Nargundkar, 2005). Similarly, Day (1994) sees it as a focus on understanding and aiming to satisfy customers and other relevant stakeholders.*

[5] *Due to changes in the survey instruments, our analysis does not include data from the survey in 2007, as it does not allow direct comparison of all constructs in our analysis.*

to provide a link between the business world and academia in Slovenia, as well as the wider South-East European region.

Overall, more than 22,800 employees filled out the HRM part of the, while the marketing and innovation performance indicators were reported by a senior firm manager at the firm level (101 per year). In each of the three reference years (2008-2010) the data was collected in the last quarter (Q4) of the calendar year, with a third of respondent firms were the same in all three time studied years. Table 1 presents a summary of the key characteristics of the 101 respondent firms in each year.

TABLE 1. SUMMARY OF KEY CHARACTERISTICS OF THE RESONDENT FIRMS (2008-2010)

Characteristic	2008	2009	2010
Number of small companies*	47 (46.5%)	50 (49.5%)	49 (48.5%)
Number of medium companies*	33 (32.7%)	26 (25.7%)	30 (29.7%)
Number of large companies*	21 (20.8%)	25 (24.7%)	22 (21.8%)
Number of respondent employees	7,500	8,014	7,357
Average added value per employee	60,392 EUR	62, 808 EUR	48,412 EUR
Average gross monthly salary	1,867 EUR	2,145 EUR	1,854 EUR

Source: The Golden Thread Survey, 2008-2010.

**A small company has up to 50 employees, a medium-sized company has between 51 and 250 employees, and a large company has over 251 employees*

As can be seen from the respondent characteristics, and especially related to added value per employee[6], the respondent firms in all three years were on average fairly above the Slovenian industry average; indicating the participation of only top and above average Slovenian firms in *The Golden Thread Survey*. This should also be taken into account in the interpretation of the results, which should be seen as "best results and practices" of top Slovenian firms (and employers), and by no means as representative of the whole Slovenian business sector.

IV. SURVEY INSTRUMENT AND OPERATIONALIZATION OF CONSTRUCTS

The idea of the GTS is built on the *Balanced Scorecard* approach (Kaplan & Norton, 1996), which is seen today not only as a holistic and continuously evolving management tool (Breyfogle, 2008), but also as a set of well-balanced organizational performance indicators, closely linked to both the strategic orientation of the firm and the resource-based perspective of the firm (Garrison, Norren & Seal, 2003).

[6] *According to the Statistical Office of the Republic of Slovenia, the average added value per employee in a Slovenian firm amounted to 33,137 EUR in 2009; and 34,253 EUR for 2008. No data is yet available for 2010.*

The GTS is based on an *open* call for participation[7] to all Slovenian firms in the Slovenian media, and under the patronage of the Slovenian Ministry of Labor, Family, and Social Affairs. Among all firms that have responded to the call, a list of the 101 best employers is selected every year. The selection of these 101 top employers is based on an extensive set of HRM, marketing and business innovation performance indicators, and financial performance. Having said this, the survey was carried out, based on two structured questionnaires, administered either in a pen-and-paper version or on-line.

The first questionnaire employs the Hackman & Oldham (1975) *Job diagnostic survey*, which measures six multi-item, Likert-type dimensions of firm-employee relationships, and their management (we refer to this as HRM). This questionnaire was distributed to all employees of a chosen respondent firm.

The second questionnaire was administered only at the firm level, and measured a series of selected (a) *marketing* (i.e. market shares, customer loyalty etc.) and (b) *business innovation* performance indicators (i.e. number of new products/services, share of revenues from new products/services within last three years etc.), as well as the level of (c) *perceived process changes* of marketing, HRM, and product/service production processes within the last three years. Lastly, the questionnaire also measured the perceived importance of (d) selected *value offer elements in the "eyes of the customer"*[8] (i.e. importance of quality, brands, trust and long-term relationships with the firm etc.) by the respondent firms' managers.

With regards to financial information, this was collected from the records of The Agency of the Republic of Slovenia for Public Legal Records and Related Services (AJPES), to which all firms in Slovenia must report to by law. Table 2 presents a summarized overview of the operationalized constructs employed in our OLS regression analyses.

[7] *Due to the open call nature of the survey, only the top Slovenian firms participated in the research, indicating a strong self-selection "bias".*

[8] *Perceived importance of respondent managers, regarding what is important "in the eyes of the customers".*

TABLE 2. SUMMARY OF CONSTRUCT OPERATIONALIZATIONS FOR OUR REGRESSION ANALYSIS

Construct	Scale	Description
Firm performance (*Add_Value*) *	Added value per employee (previous year) as a single item	Due to the severe economic conditions, financial measures such as *net income* proved to be an inappropriate measure of firm performance (Makovec Brenčič, Rašković & Pfajfar, 2011). Added value per employee turned out to be less biased by the crisis, and can be directly related to overall firm productivity (Sheth & Sisodia, 2002).
Employee-firm relationship (*HRM**	Five item 5-point Likert scale dimension of the "*Basic employee-firm relationship*"	While the Hackman & Oldham (1975) *Job diagnostic survey* includes six different 'HRM' dimensions, we use the first dimension (*Basic employee-firm relationship*), due to regression analysis limitations (number of included variables, multicolinearity etc.). Cronbach alpha reliability > 0.8.
Business innovation performance (*Innov*)*	Single 6-point ordinal item of the number of new products / services within last three years	This variable measured the number of new products and services, which were developed based on own know-how, within the last three years. Other business innovation performance indicators (i.e. share of revenues from new (3 years) products / services) have produced equally robust results, but were omitted from our regression analysis due to multicolinearity.
Perceived process changes (*Process_ch*) *	Three separate single item 5-point variables	Perceived rate of process changes in (a) marketing, (b) HRM, and (c) product / service production within the last three years.
Perceived customer expectations (*Cust_exp**	Single 6-point ranking of the perceived importance of "trust and long-term relationships with firm"	A 1 to 6 (1-most important, 6-least important) ranking of the perceived importance of "trust and long-term relationships with the firm" in the "eyes of the customer".

Source: The Golden Thread Survey, 2008-2010.

** Words in brackets refer to the naming of the variables in our regression analysis.*

V. KEY RESULTS

The results in this section of the paper first provide a longitudinal cross-sectional descriptive overview of a wide array of selected indicators between 2008 and 2010. The general purpose of such an overview is to provide a broader conceptual context for the results of our proposition testing and regression analysis, which follow in the paper, and are based on OLS, multi-linear regression analysis.

A. Perceived level of process changes

Given the turbulent economic nature in Slovenia between 2008 and 2010, Table 3 first provides an overview of the perceived levels of changes within the last three years for selected organizational processes. By measuring the level of perceived changes of selected organizational processes we wanted to see, how closely the changes of selected organizational processes follow the increased economic changes and competitive pressures in the market.

TABLE 3. PERCEIVED LEVELS OF PROCESS CHANGES WITHIN THE LAST THREE YEARS (5-POINT SCALE)

Selected organizational processes	2008	2009	2010
Marketing processes	3.96	4.04	4.11
Human resources management (HRM)	3.91	3.97	4.02
Product and service production	3.80	3.82	3.74
Other organizational processes	3.80	3.88	3.95

Source: The Golden Thread Survey, 2008-2010.

As can be seen from the corresponding perceptions of organizational process changes within the last three years, *marketing processes* were consistently related to the highest levels of such changes, closely followed by *HRM process* changes. On the other hand *product and service production* process changes were the only process area, which marked a decrease in 2010, relative to 2008. This may imply that, relatively speaking, marketing and HRM processes are perceived to be the most "dynamic" among the listed organizational processes, and thus most closely related to the external environment volatility. One could also venture to guess that marketing and HRM functions represented the most important buffers, sheltering from external pressures brought on by the crisis.

B. Market orientation and market performance indicators

Complementing the perspective of higher perceptions of marketing process changes, relative to other organizational process areas, Table 4 provides an overview of the key market orientation, and marketing performance indicators of our sample firms.

TABLE 4. OVERVIEW OF KEY MARKET ORIENTATION AND MARKETING PERFORMANCE INDICATORS

Selected indicator	2008	2009	2010
Share of revenues from foreign markets	19.9%	21.5%	23.1%
Share of retained customers in the 91% to 100% (of retained customers) class	43.8%	40.0%	47.5%
Share of retained customers in the 71% to 90% (of retained customers) class	38.5%	44.0%	34.7%
Average coefficient of sales growth (year-on-year)	1.31	0.212	0.119
Importance of trust and long-term relationships with the firm (in the eyes of the customers)	393 pts*	441 pts*	437 pts*

Source: The Golden Thread Survey, 2008-2010.

** The importance of trust and long-term relationships with the firm was measured as the perceived ranking of six value concepts by a leading manager of the respondent firm from 1st to 6th place. It was thus measured on the firm level. It is used as a proxy of market orientation, where the total score of points refers to the weighted cumulative number of points (1st place ranking worth 6 points, to 6th place ranking worth 1 point).*

As we can see from the data the share of revenues from foreign markets remained fairly stable between 2009 and 2010, and represented less than a quarter of revenues by the average respondent firm. While the share of retained customers in the 91% to 100% retention class increased slightly between 2008 and 2010, the share of retained customers in the 71% to 90% retention class slightly decreased, marking a decrease in less "loyal" customers (even more consistent in lower retention classes, i.e. 51% to 70%). Perhaps most importantly, the perceived level of importance of *trust* and *long-term relationships with the firm* in the "eyes of the customer" increased by 11.1% from 2008 to 2010; and is statistically significant.

TABLE 5. PERCEIVED IMPORTANCE OF SELECTED VALUE ELEMENTS IN THE "EYES OF THE COSTUMER"

Selected indicator	2008	2009	2010
Quality (product, process, service)	522 pts	552 pts	551 pts
Brands (product, service)	289 pts	274 pts	256 pts
Price and payment conditions	374 pts	371 pts	377 pts
R & D	202 pts	220 pts	219 pts
Additional services (related to product offer)	256 pts	293 pts	290 pts
Trust and long-term relationships with the firm	393 pts	441 pts	437 pts

Source: The Golden Thread Survey, 2008-2010.

** The importance of the selected value offer elements in the "eyes of the customer" was measured as the perceived ranking of six value concepts by a leading manager of the respondent firm from 1st to*

6th place, where the total score of points refers to the weighted cumulative number of points (1st place ranking worth 6 points, to 6th place ranking worth 1 point).

While the importance of *additional services* (related to the product or service offer) increased by 13.8% in the given reference period, the importance of *brands* (product or service) decreased by – 11.1%, and the importance of *price and payment conditions* remained almost the same. Overall though, *quality* is perceived as the most important value element in the "eyes of the customers" in the market.

C. Business innovation performance and HRM indicators

Next, Table 6 provides an overview of key business innovation performance and HRM indicators between 2008 and 2010.

TABLE 6. OVERVIEW OF KEY INNOVATION PERFORMANCE AND HRM INDICATORS

Selected indicator	2008	2009	2010
Firms with 0 new products and services (based on own know-how) within the last 3 years	5.4%	4.1%	5.2%
Firms with 1-3 new products and services (based on own know-how) within the last 3 years	31.2%	28.6%	19.8%
Firms with 11+ new products and services (based on own know-how) within the last 3 years	29.0%	20.4%	26.0%
Firms spending 0% of their revenues on R&D	6.7%	8.2%	12.9%
Firms spending 1-10% of their revenues on R&D	63.3%	64.9%	49.5%
Firms with up to 1-10% of revenues form products and services 3 years or younger	23.9%	22.0%	16.5%
Share of firms with at least 1 registered innovation (last 3 years)	40.7%	42.1%	37.2%

Source: The Golden Thread Survey, 2008-2010.

Overall, in the 2010/2008 period a fair number of business innovation performance indicators show a decreased innovation activity of respondent firms (in terms of new products and services developed), a decrease in R&D funding, a decrease of revenues from new products and services (three or less years old) and firms with at least one registered innovation within the last three years.

TABLE 7. OVERVIEW OF HRM SCORES ACROSS 6 DIMENSION OF THE JOB DIAGNOSTIC SURVEY (5 –POINT SCALES)*

Selected HRM dimension**	2008	2009	2010
Basic employee-firm relationship***	3.89	3.81	3.86
Role and quality of the work of the individual in the firm	3.83	3.78	3.80
Org. culture, climate and interpersonal relationships	3.74	3.64	3.71
Entrepreneurship and innovativeness	3.58	3.51	3.57
Quality of the work environment	3.64	3.63	3.65
Personal growth and development (opportunities)	3.51	3.33	3.41

Source: The Golden Thread Survey, 2008-2010.

** Measured on the individual employee level (over 22,800 respondents in three years). ** All dimensions in all three years produced Cronbach alpha reliability scores above the critical value of 0.6. *** In our regression analysis we only use the score of this dimension, as the overall proxy for HRM, due to regression analysis constraints (multicolinearity, number of included variables).*

Overall, we can see a consistent increase of the average composite scores across all six HRM dimensions, with the *basic employee-firm relationships* having the highest relative score, and *personal growth and development* having the lowest possible relative score.

D. Correlation matrix for selected market orientation, business innovation performance, HRM and firm performance indicators

Having presented a general descriptive overview of the results Table 8 presents a pair-wise (Pearson) correlation matrix of selected market orientation, business innovation performance, HRM and firm performance variables[9]. As can be seen from the pair-wise correlation coefficients, *added value per employee* (later on the dependent variable in our regression analysis) is positively correlated with the number of new products and services (developed within the last three years), and with the size of the firm (added value per employee is lower in smaller firms than in the others). Not surprisingly, perceived changes of marketing processes are positively correlated with the number of new products and services, as new products often require new marketing approaches. Again, size of the firm is positively correlated with business innovation performance, indicating smaller firms face more problems with respect to innovation; and subsequently they introduce less new products and services (based on own know-how) then larger firms. Nonetheless, smaller firms have consistently better employee-firm relationship than larger firms ($\rho = 0.4066$).

[9] *Bearing in mind multicolinearity and number of variables constraints for subsequent regression analysis.*

TABLE 8. PEARSON PAIR-WISE CORRELATION MATRIX FOR SELECTED VARIABLES

	lnAdd_Value	*Innov*	*Process _ch_mar*	*HRM*	*Cust_exp*	*t*	*d_ small*
lnAdd_Value	1.0000						
Innov	0.2693**	1.0000					
	(0.0000)						
Process _ch_mar	0.0260	0.2225**	1.0000				
	(0.6646)	(0.0001)					
HRM	0.1120	0.0634	0.1768**	1.0000			
	(0.0581)	(0.2788)	(0.0023)				
Cust_exp	-0.0788	-0.0497	-0.1109	-0.2206**	1.0000		
	(0.1876)	(0.3985)	(0.0583)	(0.0001)			
t	-0.0917	0.0548	0.0687	0.0089	-0.0711	1.0000	
	(0.1210)	(0.3487)	(0.2392)	(0.8770)	(0.2225)		
d_small	-0.2430**	-0.2197**	0.0946	0.4066**	-0.0387	-0.0040	1.0000
	(0.0000)	(0.0001)	(0.1051)	(0.0000)	(0.5067)	(0.9451)	

Source: The Golden Thread Survey, 2008-2010.

Notes: Table 8 presents pair-wise (Pearson) correlations for selected variables, defined in Table 2; t = time (0 for 2008, 1 for 2009, and 2 for 2010), d_small = dummy variable for small company. The sample consists of 276 firm-years observations of Slovenian top employers with available data on AJPES for the period 2008-2010. Star indicates statistical significance at 5 (*) and 10 (**) percent.

However, the crisis (measured with *t*) had no significant effect on the basic employee-firm relationship, relationships with customers, and frequency of introducing new products and services to the market. Furthermore, the perceived importance of *trust and long-term relationships with the firm* in the "eyes of the customers" (or customer expectations regarding trust and long-term relationships with the firm), as an indicator of market orientation, appears to have no significant effect on business innovation processes of the firm. It seems like the crisis had no effect on internal and external relationships. It is quite possible relationships could not be further improved, as our sample is composed solely of best employers. However, one can also look at it from the other perspective, and say that in spite of the economic crisis, firms were able to keep their internal and external relationship "levels" under control.

E. Regression analysis

Analyzing the impact of selected market orientation, business innovation performance HRM and other indicators on the dependent performance variable of *added value per employee*, Table 9 provides the results of our OLS regression analysis for the following regression model:

$$\boldsymbol{lnAdd\_Value_i = \beta_0 + \beta_1\, Innov_i + \beta_2\, Process\_ch\_mar_i + \beta_3 HRM_i + \beta_4\, Cust\_exp_i + \beta_5 t_i + \beta_6\, d\_small_i + \varepsilon_i}$$

TABLE 9. REGRESSION ANALYSIS RESULTS

$lnAdd\_Value_i = \beta_0 + \beta_1\, Innov_i + \beta_2\, Process\_ch\_mar_i + \beta_3 HRM_i + \beta_4\, Cust\_exp_i + \beta_5 t_i + \beta_6\, d\_small_i + \varepsilon_i$

	Predicted sign	Coefficient	*t*-stat.	*p*-value		VIF
Intercept		9.4696	23.46	0.000	**	
$Innov_i$	+	0.0873	3.21	0.001	**	1.14
$Process\_ch\_mar_i$	Not stated	-0.0228	-0.55	0.586		1.09
HRM_i	+	0.3149	3.36	0.001	**	1.31
$Cust\_exp_i$	+	-0.0220	-0.76	0.450		1.06
t_i	-	-0.0775	-1.71	0.089	*	1.01
d_small_i	Not stated	-0.3643	-4.38	0.000	**	1.31
F-stat.			7.88	0.000	**	
Adjusted R^2				0.132		

Source: The Golden Thread Survey, 2008-2010.

Notes: $lnAdd\_Value_i$ is the natural logarithm of added value per employee for firm i; $Innov_i$ is the number of new products / services within last three years for firm i; $Process\_ch\_mar_i$ is the perceived rate of process changes in marketing in firm i; HRM_i is the 5-point Likert scale dimension of the Basic employee-firm relationship in firm i; $Cust\_exp_i$ is the perceived importance of "trust and long-term relationships with the firm" for firm i; t_i is time (0 for 2008, 1 for 2009, and 2 for 2010); d_small_i is a dummy variable coded 1 if firm i is small firm. The sample consists of 276 firm-years observations of Slovenian top employers with available data on AJPES for the period 2008-2010. Star indicates statistical significance at 5 (*) and 10 (**) percent.

The results of our regression analysis show that the: (a) number of new products and services based on own know-how within the last three years (business innovation performance), (b) the basic employee-firm relationship (HRM), (c) the size of the firm, and (d) the impact of the crisis (time) all have a significant impact on added value per employee (firm performance). Interestingly enough, neither the perceived level of changes in marketing processes over the last three years, nor the perceived importance of *trust and long-term relationships with the firm* (in the "eyes of the customers") do not have a significant impact on added value per employee (firm performance) in our OLS regression model.

F. Effect size estimation

While the perceived importance of *trust and long-term relationships with the firm* in the "eyes of the customer" appeared not to be significant with regards to firm performance (added value per employee) in our OLS regression model, the pair-wise Pearson correlation between this market orientation proxy and our HRM variable (basic employee-firm relationship) led us to further analyze the effect size differences between firms with different levels of market orientation, and their HRM scores. For this purpose we have employed the most common mean difference-based effect size measure, namely *Cohen's d* coefficient, also following the advice by Breaugh (2003) on how most managerial research inappropriately applies only basic mean-based significance testing, and with a total disregard for sample size issue, the size of the underlying effect, and its direction.

Formula 1: Cohen's *d* effect size measure formula

$$d=(M_1 - M_2)/\,\sigma_{pooled}\,; \quad \sigma_{pooled} = \sqrt{\left[\frac{1}{2(\sigma)}\right]_1 + \sigma_2\Big)}$$

Table 10 provides a summary of the calculated pair-wise Cohen's *d* coefficients between market orientation and HRM (basic employee-firm relationship) across all three years, where the analysis compared the mean difference for the HRM variable score between firms with a higher vs. lower market orientation (1st or 2nd ranking out of 6 for the perceived importance of *trust and long-term relationships with the firm* in the "eyes of the customers").

TABLE 10. SUMMARY OF COHEN'S EFFECT SIZE ESTIMATES FOR STANDARDIZED NEAB DIFFERENCES OF HRM SCORES BETWEEN HIGHER AND LOWER MARKET-ORIENTED FIRMS*

	2008	2009	2010
Cohen's d coefficient (absolute value)	0.36**	0.69***	0.37**

Source: The Golden Thread Survey, 2008-2010.

** In our analysis high market-oriented firms corresponded to firms, which ranked the perceived importance of trust and long-term relationships with the firm in the "eyes of the customer" in either 1st or 2nd place (out of 6 places). ** Small to medium effect size. *** Medium to large effect size.*

Based on the corresponding effect size estimates, and Cohen's (1992) effect size guideline values, we can conclude that there are small to medium[10] effect size differences between higher and lower market oriented firms, with regards to their HRM scores (basic employee-firm relationship). Putting it more simply, more market oriented firms also display significantly higher scores on the

[10] *This already corresponds to statistically significant mean score differences within the t-statistic (α=.05).*

basic employee-firm relationship. What is perhaps more interesting, is the fact that the calculated effect sizes were almost identical in 2008 and 2010 (small to medium effect sizes close to 0.4), but considerably higher (medium to high effect size; close to 0.7) for 2009, when the economic crisis in Slovenia reached its climax.

VI. RESULTS OF PROPOSITION TESTING

Based on the presented pair-wise Pearson correlation matrix in Table 8, and the results of our OLS regression model in Table 9, the results of the testing of our four propositions are presented in Table 10.

We can fully confirm that the crisis (and its worsening) has lead to a stronger relationship orientation (Proposition 2). This is seen internally with the increase of values of HRM dimensions scores, and a higher perceived level of HRM process changes within the last three years. Externally, this is seen from an increased perceived importance of trust and long-term relationships with the firm in the "eyes of the customer" with the deepening of the crisis. The results of our power analysis also show a significant effect size difference in HRM scores between more and less market oriented firms. Furthermore the positive link between business innovation and firm performance can also be confirmed, as well as its increasing importance with the worsening of the crisis (Proposition 4).

TABLE 10. SUMMARY OF PROPOSISTION TESTING RESULTS

Proposition	Proposition summary	Testing result
Proposition 1	Stronger and more focused relationship orientation (internal and external) among high-performing firms.	**Partially confirmed (only internal)**
Proposition 2	Stronger relationship orientation (internal and external) with the worsening of the crisis.	**Confirmed**
Proposition 3	Perceived importance of trust and long-term relationships with the firm in the "eyes of the customer" is positively linked to business innovation, and have a positive impact on firm's overall performance.	**Not confirmed**
Proposition 4	Business innovation is positively linked to overall firm performance, and increases in importance with the worsening of the crisis.	**Confirmed**

Source: authors' own work.

In addition to this, we could also partially confirm Proposition 1, and say that a stronger and more relationship focused orientation, in an internal marketing context, has a positive impact on firm performance (and is more typical for high performing firms). However, no support was found for this link with regards to external market orientation and firm performance. Lastly, no support was found within our OLS regression mode for the positive link between the perceived importance of trust and long-term relationships with the firm in the "eyes of the customer", and either business innovation or overall firm performance.

VII. LIMITATIONS OF THE RESEARCH

Several limitations of our research should be considered in the interpretation of our results. First, a self-selection of only top Slovenian firms is clearly evident from our sample characteristic overview. Furthermore, among the top 101 Slovenian employers every year, there is a relatively higher share of high-tech (mainly IT) manufacturing and service firms. Also, a disproportionally large share of large firms was included in our sample. Therefore, the interpretation of our results should be seen as shedding insight from top Slovenian firms and employers, not the general Slovenian business sector.

The second group of limitations can be linked to the survey instruments, and corresponding construct operationalizations. The Golden Thread Survey has a strong media-research background, and is not a purely scientific research endeavor. This has profound implications for the employed scales and constructs operationalizations, since they are more business-oriented, rather than scientifically rigorous. Adding to this, one could also question how both the *basic employee-firm relationship* and the *perceived importance of trust and long-term relationships with the firm (in the "eyes of the customer"* by respondent managers) are effective proxies for internal and external marketing orientation. Furthermore, the same could be addressed for added value per employee and overall firm performance.

A third group of research limitations can be linked to our OLS regression model. Looking firstly to the OLS regression framework itself, the firm level sample of only 101 respondent firms limited the number of possible variables to be included in the model. Thus, on the *basic employee-firm relationship* was taken among all six Hackman & Oldham (1975) dimensions, as a proxy for HRM effectiveness. Looking outside the OLS regression framework, one of the possible avenues for our future research could employ PLS regression, given the small firm-level data sample. This could most importantly enable the inclusion of all six HRM dimensions, not just one in our regression estimations.

VIII. IMPLICATIONS FOR MARKETING THEORY AND PRACTICE

The results from the GTS undoubtedly show how even the top Slovenian firms were significantly affected by the current economic crisis. This can be seen from their financial performance indicators. The perceived levels of organizational process changes indicate that marketing and HRM had the highest "propensity to change" and "dynamism" over the last three years. This is linked to the turbulent external economic environment, and its varied impact on different organizational processes. One might even venture to guess that these two organizational functions took the bulk of the "heat" from the economic crisis, and may be seen as the first line of organizational defense. Thus, these two organizational functions should have the appropriate resources (financial and otherwise) to perform their buffering function.

One message is also clear from the GTS results: relationships and relationship orientation matter more in an economic crisis. One the one hand both internal and external relationship orientation are closely linked, while on the other hand, only the internal relationship orientation (internal marketing) seems to be directly linked to firm performance in our regression model. This does not by imply that external market orientation is not important, but may indicate that is acts more as a buffer, not as a productive source of firm performance in an economic crisis. It may also indicate that in an economic crisis, there can be a hierarchy of market orientation, with internal orientation being relatively speaking more critical. In turn, external customers may as well become more rational in their purchases, assigning higher importance to quality and additional services, and less to even higher levels of trust and long-term relationships with the firm.

We could also say that most firms in Slovenian had to look within themselves, and find internal strength (mainly in their employees) to weather this difficult economic storm. It can thus be said, that in a severe economic crisis internal marketing, relatively speaking, matters much more than external market orientation (although the latter should by no means be decreased).

While the descriptive results related to business innovation show that most Slovenian firms cut their R&D budgets, assigned less money to R&D activities, and have generated less revenues from new-to-the-market products in this crisis, business innovation still has a significant impact on firm performance, and may together with good and focused internal marketing provide the make-or-break organizational factor and capability to survive the current economic crisis. Having said this, the Chinese *weiji* perspective of looking at a crisis, both as a threat and as an opportunity, seems to provide an answer on how to survive in this crisis. It however also poses more questions on *how* to create such dynamic capabilities, as sources of opportunities, and even more so on how to turn them into a long-term, strategic competitive advantage.

REFERENCES

Agarwal, S., Erramilli, M. K. & Dev, S. C. (2003): *Market orientation and performance in service firms: role of innovation*, Journal of Services Marketing, Vol. 17, No. 1, pp. 68-82.

Aldas-Manzano, J., Kuster, I. & Vila, N. (2005): *Market orientation and innovation: an inter-relationship analysis*, European Journal of Innovation Management, Vol. 8, No. 4, pp. 437-452.

Ballantyne, D. (2000): *Internal relationship marketing – A strategy for knowledge renewal*, International Journal of Bank Marketing, Vol. 18, No. 6, pp. 274-286.

Barney, J. (1996): *The resource-based theory of the firm*, Organization Science, Vol. 7, pp. 469.

Beebe, B. L. (2004): *Planning for crisis – The unexpected and its increasing importance*, The Review of Communication, Vol. 4, No. 3/4, pp. 198-204.

Bowman, E. & Hurry, D. (1993): *Strategy through the option lens: An integrated view of resource investments and the incremental-choice process*, Academy of Management Review, Vol. 18, pp. 760-782.

Breaugh, J. A. (2003): *Effect Size Estimation: Factors to Consider and Mistakes to Avoid*, Journal of Management, Vol. 29, No. 1, pp. 79-97.

Breyfogle, F. (2008): *Going beyond the balanced scorecard*, ASQ Six Sigma Forum Magazine, Vol. 7, No. 4, pp. 39-40.

Carpenter, M. A., Sanders, W. & Gregersen, H. (2001): *Building human capital with organizational context: the impact of international assignment experience on multinational firm performance and CEO pay*, Academy of Management Journal, Vol. 44, pp. 493-512.

Champion, D. (1999): *The Asian crisis: The price of under-management*, Harvard Business Review, Vol. 77, No. March/April, pp. 14-15.

Cohen, J. (1992): *A Power Primer*, Psychological Bulletin, Vol. 112, No. 1, pp. 153-159.

Cohen, J. (1994): *The Earth Is Round (p < .05)*, American Psychologist, Vol. 49, No. 12, pp. 997-1003.

Danneels, E. (2002): *The dynamics of product innovation and firm competences*, Strategic Management Journal, Vol. 23, No. 12, pp. 1095-1121.

Day, G. S. (1994): *The capabilities of market driven organizations*, Journal of Marketing, Vol. 58, No. 4, pp. 37-52.

Diamantopoulos, A. & Hart, S. (1993): *Linking market orientation and company performance: preliminary evidence on Kohli and Jaworski's framework*, Journal of Strategic Marketing, Vol. 1, No.2, pp. 93-121.

Dyer, J. H. & Singh, H. (1998): *The Relational View: Cooperative Strategy and Sources of Interorganizational Competitive Advantage*, Academy of Management Review, Vol. 23, No. 4, pp. 660-679.

Garrison, R. G., Norren, E. W. & Seal, W. (2003): *Management accounting*, European ed., McGraw-Hill, New York.

Gilbert, C. (2006): *Change in the presence of residual fit: Can competing frames coexist?* Organization Science, Vol. 17, pp. 150-167.

Goad, G. P. (1999): *Playing by new rules*, Far Eastern Economic Review, Vol. 162, pp. 38-40.

Hackman, J. R. & Oldham, G. R. (1975): *Development of the Job Diagnostic Survey*, Journal of Applied Psychology, Vol. 60, pp. 159-170.

Hamel, G. (2000): *Leading the revolution*, Harvard Business School Press, Boston, MA.

Harris, L. C: (2001): *Market orientation and performance: Subjective and objective empirical evidence form UK companies*, Journal of Management Studies, Vol. 38, No. 1, pp. 17-44.

Håkansson, H., Harrison, D. & Waluszewski, A. (2004): *Rethinking marketing: developing a new understanding of marketing*, Wiley, Chichester, UK.

Irsic, M. (2011): *How qualitative elements of relational exchanges influence an implementation of purchasing marketing strategies – a case of service companies in Slovenia*, Economic research / Ekonomska istraživanja, Vol. 24, No. 1., pp. 28-48.

Ivens, B. S., Pardo, C., Salle, R. & Cova, B. (2009): *Relationship keyness: The underlying concept of different form of key relationship management*, Industrial Marketing Management, Vol. 38, No. 5, pp. 513-519.

Jerman, D. & Zavrsnik, B. (2006): *Can marketing capabilities lead to the competitive advantage of the firm?* Economic research / Ekonomska istraživanja, Vol. 19, No. 1, pp. 53-64.

Jimenez, D. J. & Sanz-Valle, R. (2005): *Innovation and human resource management fit: an empirical study*, International Journal of Manpower, Vol. 26, No. 4, pp. 364-381.

Kaplan, R. S. & Norton, D. P. (1996): *Using the balanced scorecard as a strategic management system*, Harvard Business Review, Vol. 74, No. 1, pp. 75-85.

Kim, L. (1998): *Crisis construction and organizational learning: Capability building in catching up at Hyundai*, Organization Science, Vol. 9, No. 4, pp. 506-521.

Kogut, B. & Kulatilaka, N. (2001): *Capabilities as real options*, Organization Science, Vol. 12, pp. 744-758.

Kumar, V., Jones, E., Venkatesan, R. & Leone, R. P. (2011): *Is Market Orientation a Source of Competitive Advantage or Simply the Cost of Competing?* Journal of Marketing, Vol. 75, No. 1, pp. 16-30.

Lawson, B. & Samson, D. (2001): *Developing innovation capability in organizations a dynamic capabilities approach*, International Journal of Innovation Management, Vol. 5, No. 3, pp. 337-400.

Lee, S.-H., Beamish, P. W., Lee, H.-U. & Park, J.-H. (2009): *Strategic choice during economic crisis: Domestic market position, organizational capabilities and export flexibility*, Journal of World Business, Vol. 44, pp. 1-15.

Lin, Z. (2001): *The dynamics of inter-organizational ties during crises – empirical analysis and computational analysis*, Simulation modeling practice and theory, Vol. 10, pp. 387-415.

Makovec Brenčič, M., Rašković, M. & Pfajfar, G. (2011): *Managing in a time of crisis: Marketing, HRM, and innovations*. Paper accepted for publication in a special issue of Journal of Business and Industrial Marketing (publication data still pending).

Morgan, R. M: & Hunt, S. D. (1994): *The commitment-trust theory of relationship marketing*, Journal of Marketing, Vol. 58, No. 3, pp. 20-38.

Mouzas, S., Henneberg, S. & Naudé, P. (2007): *Trust and reliance in business relationships*, European Journal of Marketing, Vol. 41, No. 9/10, pp. 1016-1032.

Naidoo, V. (2010): *Firm survival through a crisis: The influence of market orientation, marketing innovation and business strategy*, Industrial Marketing Management, Vol. 39, pp. 1311-1320.

Ni, L. (2006): *Relationships as organizational resources: examining public relations impact through its connection with organizational strategies*, Journal of Public Relations Research, Vol. 21, No. 1, pp. 100-120.

O'Connor, G. C. & Rice, M: P. (2001): *Opportunity recognition and breakthrough innovation in large established firms*, California Management Review, Vol. 43, No. 2, pp. 95-116.

Paliaga, M. & Strunje, Z. (2011): *Research of implementation of internal marketing in companies in the Republic of Croatia*, Economic research / Ekonomska istraživanja, Vol. 24, No. 1, pp. 107-121.

Penrose, E. (1959/1995): *The Theory of Growth of the Firm*, Basil Blackwell, Oxford.

Prahalad, C. K: & Hamel, G. (1990): *The core competence of the corporation*, Harvard Business Review, Vol. 68, No. 3, pp. 79-91.

Rašković, M., Makovec Brenčič, M. & Pfajfar, G. (2008): *Trikotnik trženja, človeških virov in inovacij v najboljših slovenskih zaposlovalcih*, MM Akademija, Vol. 8, No. 12, pp. 19-33.

Sanchez, R. (1993): *Strategy flexibility, firm organization, and managerial work in dynamic markets*, Advances in Strategic Management, Vol. 9, pp. 251-291.

Shergill, G. S. & Nargundkar, R. (2005): *Market orientation, marketing innovation as performance drivers*, Journal of Global Marketing, Vol. 19, No. 1, pp. 27-47.

Sheth, J. N. & Sisodia, R. S. (2002): *Marketing productivity – issues and analysis*, Journal of Business Research, Vol. 55, pp. 349-362.

Slater, S. F. & Narver, J. C. (1998): *Research notes and communications – Customer-led and market-oriented – Let's not confuse the two*, Strategic Management Journal, Vol. 19, No. 10, pp. 1001-1007.

Tatic, K., Rovcanin, A. & Dzafic, Z. (2006): *Globalization, competitiveness and the environment*, Economic research / Ekonomska istraživanja, Vol. 19, No. 2, pp. 29-39.

Teece, D., Pisano, G. & Shuen, A. (1997): *Dynamic capabilities and strategic management*, Strategic Management Journal, Vol. 18, No. 7, pp. 509-533.

Tripsas, M. & Gavetti, G. (2000): *Capabilities, cognition, and inertia: Evidence from digital imaging*, Strategic Management Journal, Vol. 21, pp. 1147-1161.

Young, L. (2006): *Trust: looking forward and back*, Journal of Business and Industrial Marketing, Vol. 21, No. 7, pp. 439-445.

Zhou, K. Z., Brown, J. R. & Dev, C. S. (2009): *Market orientation, competitive advantage, and performance: a demand-based perspective*, Journal of Business Research, Vol. 62, No. 1, pp. 10631070.

Walker, G., Madsen, T. L. & Carini, G. (2002): *How does institutional change affect heterogeneity among firms?* Strategic Management Journal, Vol. 23, No. 2, pp. 89-104.

Wei, L. Q. & Lau, C. M. (2008): *The impact of market orientation and strategic HRM on firm performance – The case of Chinese enterprises*, Journal of International Business Studies, Vol. 39, pp. 980-995.

Wernerfelt, B. (1984): *A resource-based view of the firm*, Strategic Management Journal, Vol. 5, pp. 272-280.

Wright, P. M., Dunford, B. B. & Snell, S. A. (2001): *Human Resources and the Resource-based View of the Firm*, Journal of Management, Vol. 27, pp. 701-721.