

Exploring the link between market orientation and innovation in the European and US insurance markets

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Abstract *Despite the increasing research importance of market orientation in the marketing literature, few comparative studies between the European Union and the USA have been conducted. This limits the understanding of marketing orientation strategy in global markets. Investigates the influence of competitive environments on the uses of market orientation in insurance firms in the EU and the USA and the effects of market orientation on innovations. Using Lambin's conceptualization of market orientation, our results indicate that, although EU and US insurance firms analyze and react to their environment differently, which in turn is reflected in a differential impact on their degree of innovation, this, however, does not translate into overall market orientation differences across markets, differential relations across markets between overall market orientation and innovation degree and innovation performance. Furthermore, there is a positive impact of overall market orientation on insurance firms' innovation degree and innovation performance in both the US and EU markets. The managerial implications of these findings seem clear: the magnitude and the effectiveness of the innovation activities of a firm can be enhanced through the adoption of market orientation principles.*

Introduction

There is a growing interest in the concept of market orientation, as empirical evidence shows that companies with higher market orientation obtain better economic and commercial results. Researchers have extensively collected evidence of the positive effect of market orientation on business performance. We have attempted to summarize these empirical results in Table I. However, it is not yet clear why there is such effect and how it operates (Lambin, 1996). The most recent literature suggests that one of the keys to understanding this phenomenon lies in market orientation's positive effect on businesses' degree of innovation (Atuahene-Gima, 1995, 1996; Gatignon and Xuereb, 1997; Han *et al.*, 1998; Hurley and Hult, 1998).

Hurley and Hult (1998) have explicitly provided a theoretical framework linking market orientation, business performance and innovation, drawing on

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Author(s)	Country	Conclusions
Narver and Slater, 1990	USA	Positive relation MO BP
Ruekert, 1992	USA	Positive relation MO BP
Jaworski and Kholi, 1993	USA	Positive relation MO BP
Kholi, Jaworski and Kumar, 1993	USA	Positive relation MO BP
Diamantopoulos and Hart, 1993	UK	Mixed results about MO BP relation
Slater and Narver, 1994	USA	Positive relation MO BP
Deng and Dart, 1994	Canada	Positive relation MO BP
Deshpandé, Farley and Webster, 1993	Japan	Positive relation customer orientation BP
Van Bruggen and Smidts, 1995	The Netherlands	Positive relation MO BP
Greenley, 1995	UK	Positive relation MO BP
Lambin, 1996	Belgium	Positive relation MO BP
Fritz, 1996	Germany	Positive relation MO BP
Pitt, Caruana and Berthon, 1996	UK, Malta	Positive relation MO BP in both countries
Selnes, Jaworski and Kohli, 1996	USA, Scandinavia	Positive relation MO BP
Pelham and Wilson, 1996	USA	Positive relation MO BP
Atuahene Gima, 1995, 1996	Australia	MO is an important factor in new products success
Bhuiyan, 1997	Saudi Arabia	Non significant relation MO BP
Gatignon and Xuereb, 1997	USA	Different strategic orientations have different impact on innovation performance according to market characteristics
Greenley and Foxall, 1997, 1998	UK	The impact of multiple stakeholder orientation on performance is moderated by the external environment
Gray <i>et al.</i> , 1998	New Zealand	Positive relation MO BP
Caruana, Pitt and Berthon, 1999	UK	Non significant relation MO BP
Avlonitis and Gounaris, 1997	Greece	Positive relation MO BP
Lado, Maydeu Olivares and Rivera, 1998	Spain, Belgium	Positive relation MO BP
Kumar, Subramanian and Yauger, 1998	USA	Positive relation MO BP
Appiah adu, 1998	Ghana	Positive relation MO BP
Deshpandé and Farley, 1998	USA, EU	Positive relation MO BP
Han, Kim and Srivastava, 1998	USA	Positive relation MO innovation BP
Sargeant and Mohamad, 1999	UK	Non significant relation MO BP
Baker and Sinkula, 1999	USA	Positive relation MO BP
Pelham, 2000	USA	Positive relation MO BP

Table I.
Summary of empirical research on the relationship between market orientation (MO) and business performance (BP)

Slater and Narver's (1995) account of the relationship between market orientation and business performance. According to Slater and Narver (1995) market orientation only improves business performance when it is coupled with a learning orientation. In their own words:

Because of its external emphasis on developing information about customers and competitors, the market driven business is well positioned to anticipate the developing needs of customers and to respond to them through the addition of innovative products and services. This ability gives the market driven business an advantage in the speed and

effectiveness of its response to opportunities and threats. Thus, a market orientation is inherently a learning orientation (Slater and Narver, 1995, p. 67).

Hurley and Hult (1998) point out that there are two underlying assumptions in Slater and Narver's argument:

- (1) market orientation and learning orientation are inherent and inseparable;
- (2) a learning orientation mediates the market orientation performance relationship.

Furthermore, they find these assumptions contradictory and that "the apparent contradiction in Slater and Narver's (1995) framework can be resolved by incorporating constructs related to innovation into these models (. . .). We argue that models of market orientation should focus on innovation (implementation of new ideas, products, or processes) rather than learning (. . .) as the primary mechanism for responding to markets" (Hurley and Hult, 1998, p. 42). Motivated by rather similar arguments, the present investigation examines the relationship between market orientation and business innovation in the European Union (EU) and USA insurance markets.

Market orientation is very important to insurance companies, as with increasing global competition and changes in consumer needs companies have realized that they must stay closer to their markets (Greenwald, 1991). Just as an effective competitive strategy is important to survival in a competitive environment, so is market orientation. From a market orientation viewpoint, the insurance market is of particular interest, as it works with intangible products in which service quality and customer orientation are crucial elements. Yet, little research has been performed in the insurance sector.

This paper focuses on the US insurance market, which is highly relevant due to its size and importance, and on the EU insurance market. The competitive characteristics generated by the EU provide an additional interest to study market orientation in this area. The European insurance sector has traditionally been subject to strict regulations and strong protection from international competition. However, for some years now the European Commission (EC) has been working on the liberalization of this sector and the development of a single European insurance market. According to the insurance experts, there is still a long way to achieve an unrestricted insurance market, although the journey to go to a fully integrated EU and a true single European insurance market is on an inexorable course to fulfilment (Jennings, 1997; Shapiro, 1997). Effective implementation of this has brought about a major increase in competition within the sector and has provoked a major restructuring of insurance companies and groups. Lado *et al.* (1998) have investigated the market orientation of insurance firms within the EU. These authors have not found significant mean differences in market orientation by country. Furthermore, they report substantial agreement between the factor structures of market orientation across countries. Thus, it seems that the

European insurance sector can be considered a homogeneous population with respect to market orientation.

For US insurers there is a lot of potential in the EU market. The single European currency (Euro) and the enlargement of the EU present challenging new opportunities to the US insurers (Insurance Advocate, 1997). On the other hand, European insurers are both consolidating domestically and expanding across borders to obtain geographic diversification. European presence in the US insurance industry is not new, but the pace at which US insurance companies have come into ownership by major European insurers has been accelerating. Analysts believe that European life insurance presence in the US could double over the next few years (Friedman, 1999).

The competitive climate in Europe and the USA has also been influenced by changes in consumer behavior. European and US customers now show greater service expectations and less loyalty. As a result, rivalry among competitors is increasing, as is the importance of competitive strategies adapted to this sector's needs. In this background, the degree of orientation towards the customer, distributors, competition and the general socio-economic environment is becoming an increasingly important area of study, not only for academics but also for the business world.

On the other hand, despite the increasing internationalization of firms, and increasing market integration, most of the studies on market orientation confine themselves to domestic markets (with some notable exceptions such as Selnes *et al.*, 1996; Webster, 1994; Pitt *et al.*, 1996). Deshpandé and Webster (1989) have already pointed out the lack of comparative studies between countries. Comparative studies are important, as a nation's character and culture differences as well as political-economic differences can affect the way firms respond to their markets (Porter, 1990). There is a lack of studies providing empirical evidence for the generalizability of domestic markets research to international markets. This is in spite of the fact that sparse replications and extension research have deleterious consequences for the development of a cumulative body of knowledge in the business disciplines (Hubbard *et al.*, 1998).

The present research aims at filling these gaps by evaluating whether the link between market orientation and business innovation could withstand generalization across two large insurance markets (European Union and the USA) with varying political-economic and cultural contexts. Furthermore, if a positive relationship between these two constructs is found, we shall investigate whether this relationship is comparable across markets. This being the primary objective of the present investigation, our research design also will allow us to investigate mean differences across markets in both market orientation and innovation.

Theoretical framework

Contemporary marketing theory is heavily grounded upon the construct of market orientation. Yet, only recently have operational definitions of market

orientation been developed (Narver and Slater, 1990; Kohli and Jaworski, 1990). Furthermore, contrary to what one might expect, the essence of the market orientation concept is still an issue under debate. In this theoretical debate, two different approaches seem to prevail – one considers market orientation as mainly a company culture, while the other regards it as basically a specific set of behaviors.

Market orientation, as a form of company culture, refers to a specific set of organizational values. In this framework a market-oriented organization places the highest priority on the profitable creation and maintenance of superior customer value (Narver and Slater, 1990; Slater and Narver, 1995). The alternative conceptualization of market orientation, based on its conception as a specific set of behaviors, has been advanced by Kohli and Jaworski (1990). These authors conceptualized market orientation as the implementation of the marketing concept. In their own words:

Market orientation is the organization wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organization wide responsiveness to it (Kohli and Jaworski, 1990, p. 6).

There have been several attempts in the literature to integrate these competing theoretical approaches. For instance, Deng and Dart (1994) have attempted to synthesize these two conceptions of market orientation by defining market orientation as the implementation of a particular business philosophy; the marketing concept. On the other hand, Lambin (1996) and Lado *et al.* (1998) have defined market orientation as:

A competitive strategy geared to generating and maintaining a situation in which there is a value exchange with [the firms'] markets. The equity in this exchange creates a differentiating position that leads to loyalty to the brand and high economic returns (Lambin, 1996, p. 25).

In their definition of market orientation Lambin (1996) and Lado *et al.* (1998) expand the concept of market orientation to include distributors, since these constitute the firm's first external client (Day, 1992), and they make products or services available to the final customer (Whiteley, 1991). Likewise, the effects of the environment are also included in the concept of market orientation, since these influence the organizational efficiency and because the firm is an open system that cannot maintain itself. Their definition of market orientation also takes into account that company competitiveness depends on the allocation of human resources and materials to obtain and analyze information on the needs and behavior of market participants. This information is later used to coordinate inter-functional actions for designing and developing plans of action related to market participants. The "analysis" and "strategic actions" components are taken into consideration for each of the four market participants previously described, and are based on the organizational component of "coordination".

In Table II we have attempted to summarize these four different theoretical conceptions of market orientation by listing their respective components. In

Authors	Components of market orientation
Kohli and Jaworski (1990)	Generation of market intelligence Dissemination of market intelligence Entire organization's capacity to respond
Narver and Slater (1990)	Customer oriented Competitor oriented Inter functional coordination
Deng and Dart (1994)	Customer oriented Competitor oriented Inter functional coordination Profit oriented
Lambin (1996) and Lado, Maydeu Olivares and Rivera (1998)	Information gathering and analysis on: <ul style="list-style-type: none"> • final customers • distributors • competitors • environment Inter functional coordination Strategic actions on: <ul style="list-style-type: none"> • final customers • distributors • competitors • environment

Table II.
Alternative conceptions
of market orientation

this paper we shall use Lambin's (1996) conceptualization of market orientation.

Little is known about how market orientation changes to accommodate different cultural environments within an economic sector. As can be seen in Table II, only Lambin's (1996) conceptualization of market orientation explicitly takes into account environmental factors. It is difficult to compare the US and EU insurance markets with regard to their orientation to their distributors and clients. European firms have outdistanced their US peers in some areas, particularly *bancassurance* (i.e. the successful delivery of life and non-life insurance products through banking channels). In spite of this, however, though fragmentary, current evidence supports the widespread view that US financial service firms lead their European peers in most dimensions of the retail delivery revolution. According to a *Bank Management* article (Davis, 1995), it appears that leading US firms have invested more heavily in branch automation, branch network segmentation and software needed to develop useful customer information. Thus, within Lambin's (1996) theoretical framework, our first hypothesis is:

H1: US insurance firms show a higher degree of environmental analysis and a higher number of targeted actions than their EU counterparts.

It is hard to hypothesize a priori whether further mean differences are expected between US and EU insurance firms in the remaining components of Lambin's conceptualization of market orientation. Nevertheless, it is difficult to foresee whether the expected mean differences in the environmental components of the

model will result in an overall mean difference in market orientation. Thus, by parsimony we hypothesize that:

H2: There are no mean differences between US and EU insurance firms in the components of the model involving customers, distributors and competitors, nor in interfunctional coordination.

H3: There are no overall mean differences in market orientation between US and EU insurance firms.

Interesting as it may be to contrast these hypotheses, the main objective of the present investigation is to explore whether these mean differences translate into differential relations between market orientation and innovation, as according to Hurley and Hult (1998) this may be the key dimension that explains the recurrent empirical findings linking market orientation to superior business performance.

Within Slater and Narver's (1995) framework, innovation is one of the "core value-creating capabilities" that drives MO-performance association. Han *et al.* (1998) have recently provided empirical evidence supporting the view that market orientation positively influences the organization's innovativeness. However, why is this so? Is it because market oriented firms are able to develop and introduce more new product/services to the market and/or is it because of its greater general effectiveness in innovation activities? Han *et al.* do not distinguish between a company's degree of innovation and its degree of new product success, and hence they do not address this issue. The contribution of innovation to corporate survival and growth is an accepted notion but aggressive rates of products' introductions are not always associated with successful product/service innovation (Manu and Sriram, 1996). Calantone *et al.* (1994) do distinguish between the constructs of degree of innovation and of innovation success and examine the relationship between the two. According to these authors innovation performance or the degree of success refers to the level at which new products/services meet their commercial and financial objectives. Innovation degree, on the other hand, is defined as a "holistic construct based on several factors, such as the rate of new product launch and the rate of improvements in the production or rendering service". Rather interestingly, Calantone *et al.* (1994) found the empirical relationship between these constructs to be non-significant. Hence, these two phenomena appear to be distinct. In this research we shall assess the level of innovation degree and innovation performance of US and EU insurance firms. Again, there does not seem to be any theoretical or empirical result that suggests differential levels of innovation across markets in this sector. Therefore, by parsimony we formulate the following hypothesis:

H4: There are no mean differences in innovation degree and innovation performance between US and EU insurance firms.

Also, if we take market orientation to be the generation of market intelligence (i.e. ascertaining current and future customer needs and monitoring competitors and environmental factors), it follows that market orientation is a

source of ideas for new products and services and that it should therefore positively affect the degree of innovation in companies. At the same time, the market-oriented firm's greater understanding of its market environment should also reduce the incidence of new product failures (Cooper, 1994; Ottum and Moore, 1997). For instance, in a recent study, Song and Parry (1996), using data on 788 new products introduced by 404 Japanese firms, examined the links between new product performance and several factors. Their findings clearly support the importance of market understanding for the success of new products. Also, in their cross-national research on the controllable factors of new product performance, Calantone *et al.* (1996) concluded that:

It is important to collect and assess market and competitive information in order to understand customers' needs, wants and specifications for the product (...), to understand customers' purchase decisions, and to learn about competitors' strategies ... (p. 341).

Given that market orientation provides enhanced knowledge of customers' preferences and wants and enables companies to adapt better to these wants, we formulate the following two hypotheses concerning insurance companies in the EU and US markets:

H5: Firms' market orientation is positively related to their innovation degree.

H6: Firms' market orientation is positively related to their innovation performance.

Furthermore, from our previous discussion on differential levels of environmental focus between US and EU insurance firms, we hypothesize that:

H7: There are differential relations between environmental components of market orientation and innovation degree and performance between US and EU insurance firms.

Methodology and measurement

Since the constructs of interest are not directly observable, a series of indicators was used for each target construct. The measures of these constructs were developed in several stages. First, based on the defined constructs, preliminary measures were adopted from the existing literature. Then, in a second stage, we submitted a list of the defined constructs and measures to a panel of six marketing, service operations management, and strategic management academicians, with acknowledged expertise in the insurance service field. Three of these experts were familiar with the US insurance field, and the remaining three with the EU insurance field. Given a definition of the constructs we intended to measure, all our experts concluded that our instruments were valid measures of the theoretical constructs under consideration. Finally, in a third stage, a pre-test was conducted in both markets among three executives from three selected insurance firms:

- *Market orientation.* We used a questionnaire designed by Lado *et al.* (1998) to measure the market orientation of insurance companies in

Belgium and Spain and this has been found to be valid and reliable. Their questionnaire was based on a preliminary set of items designed by Lambin (1996). The questionnaire consists of 30 items, yielding a score for each of the nine components of their definition of market orientation, and an overall market orientation score. Each item was presented as a statement representing the ideal behavior of a market-oriented company. A scale from 0 to 10 was used for these items, where 0 indicated that the statement “was entirely untrue” of the firm, 5 that it was “more or less true” and 10 that “it was entirely true”.

- *Innovation degree.* We used the widely used scale developed by Miller and Friesen (1982). This is a Likert scale comprising three items. A seven-point scoring format was employed for these items.
- *Innovation performance.* We used the four-item scale developed by Atuahene-Gima (1996). Here, the respondent is asked to choose a new product/service that the company has introduced within the last five years (a new product is defined as an improved product, the expansion of a product line or a totally new product). This new product is used as a reference to assess the degree of achievement of objectives set for new products in terms of sales, market share, sales growth and profits using a seven-point Likert scale.

Sample

A questionnaire was mailed to the managing directors of insurance companies that sold personal insurance with a domestic market quota greater than 0.05 per cent in either the US or the EU markets. Although previous studies (see Narver and Slater, 1990) used responses from SBU managers, we chose only corporate level managers and CEOs/managing directors, because top management involvement is vital to implementing market orientation (Kohli and Jaworski, 1990; Deshpandé *et al.*, 1993), and it is the responsibility of corporate level executives (Webster, 1994).

The survey yielded 211 valid questionnaires, 137 from the EU and 74 from the USA. In order to assess the possibility of non-response bias, the questionnaires were divided into quartiles on the basis of reception date (Armstrong and Overton, 1977). Early-late respondents comparisons revealed non-significant non-response bias.

Results

Before we can proceed to investigate our main hypotheses, we must assess whether the questionnaires yielded reliable results across populations. The reliability estimates we obtained are shown in Table III. As can be seen, all subscales and scales showed adequate reliability across populations. The lowest reliability estimate was 0.62 for the Distributor Targeted Actions subscale in the USA.

We next examined whether there were mean differences across populations in any market orientation component or in innovation. The results are shown in

Scale	No. of items	Cronbach's α	
		Europe	USA
<i>Market orientation</i>	30	0.95	0.91
Customer analysis	5	0.85	0.82
Customer targeted actions	3	0.71	0.71
Distributor analysis	5	0.86	0.86
Distributor targeted actions	3	0.73	0.62
Competitor analysis	3	0.87	0.78
Competitor targeted actions	2	0.79	0.73
Environment analysis	2	0.84	0.75
Environment targeted actions	2	0.77	0.84
Interfunctional coordination	5	0.82	0.87
<i>Innovation degree</i>	3	0.71	0.76
<i>Innovation performance</i>	4	0.91	0.94

Table III.
Reliability estimates
across markets

Table IV. As can be seen in this Table, we found significant differences at $\alpha = 0.01$ only in the market orientation components directly related to their market environment, with US insurance companies reporting higher levels of environment analysis and environment targeted actions. This, however, does not translate to higher overall levels of market orientation. Hence, we obtained empirical support for *H1*, *H2* and *H3*. No significant differences at this significance level were found for the spread of these measures. Furthermore, no significant mean differences across populations were found in innovation degree and innovation performance, thus supporting *H4*.

Next, we examined the correlations between firms' market orientation and their levels of innovation degree and innovation performance across markets. As can be seen in Table V, in EU insurance firms, all market orientation components are significantly related to the firms' degree of innovation and their innovation performance. In contrast, in US insurance firms, none of the analysis components

Variable	Europe		USA		<i>t</i>	Sig
	<i>x</i>	std	<i>x</i>	std		
<i>Market orientation</i>	6.19	1.45	6.58	1.15	1.10	0.30
Customer analysis	5.64	1.90	5.89	1.85	0.85	0.36
Customer targeted actions	6.21	1.76	6.45	1.86	0.86	0.36
Distributor analysis	6.64	1.72	6.86	1.47	0.80	0.37
Distributor targeted actions	7.00	1.84	7.54	1.61	4.30	0.04
Competitor analysis	6.30	1.91	6.17	1.74	0.22	0.64
Competitor targeted actions	6.05	2.07	5.88	1.86	0.36	0.55
Environment analysis	6.08	2.08	7.15	1.95	13.06	<0.01
Environment targeted actions	5.51	2.39	6.63	2.10	11.15	<0.01
Interfunctional coordination	6.36	1.92	6.66	1.93	1.08	0.30
<i>Innovation degree</i>	14.14	2.92	12.50	4.17	2.88	0.01
<i>Innovation performance</i>	19.57	5.78	19.12	6.70	0.47	0.64

Table IV.
Means, standard
deviations, and mean
comparisons across
markets

Variable	Europe		USA	
	Innovation degree	Innovation performance	Innovation degree	Innovation performance
<i>Market orientation</i>	0.57	0.58	0.41	0.55
Customer analysis	0.48	0.42	0.24*	0.43
Customer targeted actions	0.53	0.53	0.30	0.57
Distributor analysis	0.40	0.48	0.29	0.30
Distributor targeted actions	0.37	0.42	0.47	0.30
Competitor analysis	0.43	0.35	0.19*	0.10*
Competitor targeted actions	0.33	0.43	0.42	0.34
Environment analysis	0.45	0.45	0.11*	0.35
Environment targeted actions	0.42	0.33	0*	0.32
Interfunctional coordination	0.44	0.49	0.30	0.37

Table V. Correlations between market orientation and innovation

Notes: All correlations are significant ($p < 0.05$) except those marked as *; the correlations marked in bold are significantly different ($p < 0.01$) across populations

of Lambin's (1996) model (i.e. customer analysis, competitor analysis, and environmental analysis) is related to the firms' degree of innovation. Furthermore, US insurance firms' environmental targeted actions are not related to their innovation degree, nor is their competitors' analysis related to their innovation performance. In spite of this, overall market orientation is significantly related to both innovation degree and innovation performance across populations. Thus, we obtain partial support for *H5* and *H6*.

To quantify the observed trends in Table V that suggest differential correlations between market orientation and innovation across populations, we tested equality constraints among the observed correlations (Steiger, 1990). The results are also shown in Table V. Again, we found significant differences across markets at $\alpha = 0.01$ only in the associations between environmental market orientation components and innovation, with US insurance companies reporting a lower association between innovation degree and environment analysis and environment targeted actions. This, however, did not result in a lower association between overall market orientation and innovation degree. No significant correlation differences between market orientation components and innovation performance were found.

Discussion

Our empirical findings provide relevant insights regarding the generalization across the EU and US insurance market of both the concept of market orientation and its influence on business innovation. Our key results can be summarized as follows:

- (1) Market orientation, innovation degree and innovation performance can be reliably and validly measured across EU and US insurance firms.
- (2) There are no mean differences between US and EU insurance firms in their innovation degree or in their innovation performance.

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- (3) US insurance firms show a higher degree of environmental analysis and environmental actions than their EU counterparts. These differences, however, are not so substantial as to result in higher overall levels of market orientation.
 - (4) Despite (3), EU insurance firms' environmental analysis and environmental actions translate into higher levels of innovation, whereas US insurance firms' environmental analysis and actions do not translate into higher levels of innovation. Again, these differential relations are not so substantial as to result in differential associations across EU and US firms between market orientation and innovation.
 - (5) Overall market orientation is significantly related to innovation degree and innovation performance in both the EU and US insurance markets.

Our research findings expand earlier empirical studies that focused on identifying market orientation and its configuration. We defined market orientation as the behaviors of the firms that routinely and systematically analyze and use information about its stakeholders to coordinate and implement strategic actions. Hence, our theoretical model of market orientation expands this construct's traditional definitions by integrating the distributor orientation and the environment orientation. US companies seem to significantly devote more efforts to analyze their environment and to implement environment-focused strategic actions. However, European firms' environmental analysis and actions significantly translate into higher levels of innovation degree, whereas US firms' environmental efforts do not. This is a surprising finding that requires further exploration, and which we are currently looking into in further depth. We would like to point out that this finding was made possible by our use of a broader conceptualization of market orientation that includes environmental aspects. Note, however, that, relevant as this finding may be, we did not find significant differences in overall market orientation, nor in their spread, nor in its relationship to innovation degree and performance across markets. This empirical finding should be emphasized, as meaningful comparisons across different contexts or cultures require that the measures are functionally equivalent.

Furthermore, our measure of market orientation was found to be valid and reliable across markets, which indicates that our scale is meaningful across cultural differences. This is critical information for managers who must cope with international competition. It assures them that their market strategies can maintain normal competitiveness, even though countries and markets vary. However, further research along these lines in other economic sectors is clearly needed.

In closing, the empirical findings presented in this article provide relevant insights regarding the generalization across both the EU and US insurance markets of the concept of market orientation and in its influence on business innovation. We found a statistically significant positive association between market orientation and business innovation. Previous studies support the view that stressing a market orientation leads to innovation improvements (for example, Han *et al.*, 1998) but in line with Calantone *et al.* (1994) our study

examined two important dimensions of business innovation (degree of innovation and innovation performance) and has shown that a market orientation emphasis improves both. More market oriented insurance firms are more innovative and have higher innovation success. This finding supports prior empirical research, which suggests that the predominant sources of ideas for new products in the financial service sector are the marketing activities, especially the customers, and an analysis of the competitors (Davison *et al.*, 1989). In addition, an investigation of over 600 new product launches in the financial service industry concluded that a critical success factor that distinguished the top performers in new products/services was having a market-oriented new product process (Cooper and Edgett, 1996). The managerial implications of these findings seem clear: the magnitude and the effectiveness of the innovation activities of a firm can be enhanced through the adoption of market orientation principles.

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