The Relationship Between Market Orientation and Business Performance: a Brazilian Meta-Analysis

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Abstract: Market orientation has emerged as a significant antecedent of performance and is presumed to contribute to long-term success. The growing number of academic studies on market orientation and the mixed findings they report complicate efforts among managers and academics to identify the antecedents and outcomes of this construct. To investigate the impact of this predictor, a national meta-analysis was conducted, aggregating a sample size of 4537, and findings suggest that the relationship between market orientation and business performance is positive and strong. The empirical evidence also shows that the relationship between market orientation and, on the other side, innovation, customer orientation and organizational learning (as endogenous variables) is positive and significant. This study shows that market orientation is a critical component of business performance and offers evidence of the effectiveness of the implementation of the marketing concept. On the basis of the findings, the author concludes with a discussion of the implication for practice and marketing academy.

Introduction

In the marketing concept, the Market Orientation theme is one of most important topic for studying and comprehending firms behave. In this marketing field, the early studies of Kohli and Jaworski (1990, 1993) and Narver and Slater (1990, 1995) stand out. Market orientation involves an implementation of the marketing concept since it facilitates a firms’ ability to anticipate, react to and capitalize on environmental changes, thereby leading to superior performance (Shoham, Rose & Kropp, 2005).

In the evolution of the market orientation concept, two approaches have been adopted. The first distinguishes three components: organization-wide generation of market information about current and future customer needs; dissemination of such information across departments and individuals within the market-oriented firm; and an organization-wide responsiveness to the disseminated information (Jaworski & Kohli, 1993, 1996; Kohli & Jaworski, 1990). The second one is a cultural perspective focuses on organizational norms and values that encourage behaviors that are consistent with market orientation (Narver & Slater, 1990, 1995). In this viewpoint, Narver and Slater (1990) present market orientation as formed from the gathering of three behavioral elements: customer orientation, competitor orientation and interfunctional coordination.

Throughout the past two decades, researchers have investigated several antecedents and consequences of market orientation to better understand its role in organizations and markets. As result, the literature evidences mixed results of market orientation impacting on performance. These results vary from nonsignificant (Neto, 2005) or negative (Bhuian, 1997; Sandvik & Sandvik, 2003) to positive (Jaworski & Kohli, 1993; Slater & Narver, 1994a). The assorted results might cause doubts about the construct power of explaining and predicting some important results.

As a possible solution to these mixed results, a meta-analysis can provide insights into theses inconsistencies by identifying measurement and sample characteristics that affect the market orientation-performance relationship and can assess the generalizability of the relationship (Brown & Peterson, 1993). In that sense, some meta-analysis papers were developed, relating positive correlations between market orientation and performance. These studies included results that market orientation construct is an antecedent of the performance of new product projects (Pattikawa, Verwaal & Commandeur, 2006), is an antecedent of performance (Kirca, Jayachandran & Bearden, 2005), is an antecedent of performance for not-
for-profit compared to profit firms and service compared to manufacturing firms (Cano, Carrillat & Jaramillo, 2004), is an antecedent of the voluntary and nonprofit organizations (Shoham, Rose & Kropp, 2005), is significantly affected by the cultural and economic characteristics of the host country (Ellis, 2006), is a direct and indirect antecedent of the performance (Shoham, Rose & Kropp, 2005).

In Brazil, a lot of papers looked to analyze the antecedents and consequences of market orientation. In a simple review in the main Brazilian journals and conferences, I identify more than 50 papers on this topic, varying from case studies to surveys. Of course, some of them did not test the association between market orientation and other variables. Specifically, they analyze the scales dimensionality, the market orientation degree, the marketing orientation implementation strategy, etc. On the other hand, the papers that exam the association between market orientation and other variables produce divergent results. For instance, Santos and Rossi (2005), Dalmoro and Faleiro (2007) and Costa (2006) found negative association between marketing orientation and performance. Carvalho (2001), Antoni (2004) and Neto (2005) found nonsignificant association with performance. These mixed results might introduce doubts about the construct. Because of that, this investigation does a meta-analysis on the Brazilian market orientation papers looking for providing insights into theses inconsistencies by accumulating effects across studies and by synthesizing the Brazilian scientific founds.

In that sense, the paper contributes to Brazilian Marketing Academic Community by comprehending the most topics that were researched, the most widely knowed association around market orientation construct, the guidelines for future research and the potentials moderators of market orientation-performance link. On the other hand, the Brazilian Managers can recognize the impact of marketing management on performance and comprehend that marketing efforts are scientifically supported and administrative applicable.

This paper as structured as follow. First, I review the literature of market orientation association, adapting a theoretical model of its antecedents and consequences. The next part, the method used in this market orientation meta-analysis is present. Subsequently, I discuss the data and end with general conclusions.

Theoretical Framework

This research tests the framework proposed by Kirca, Jayachandran & Bearden (2005), which depicts the relationships among the most frequently examined antecedents and consequences of market orientation. I recognized that some limitations of this paper exist, since the data collected in Brazil was not sufficient to examine all relationships proposed by those authors in their model. For instance, some of the papers researched neither measured some consequences of market orientation, such as quality, customer loyalty and role conflict, nor neither measured some antecedents of market orientation, such as interdepartmental conflict and market-based reward systems. Because of that, these relationships were not tested. Thus, the model used in this meta-analysis is showed in Figure 1.
Antecedents of Market Orientation

Interdepartmental Connectedness

It was possible to measure interdepartmental connectedness, defined as the extent of formal and informal contacts among employees across various departments, which is hypothesized to enhance market orientation by leading to greater sharing and using of information (Kirca, Jayachandran & Bearden, 2005). Specifically, the literature suggests that an organization that adopts a customer orientation, by refining understanding of the roles of leadership, interfunctional coordination, and the collection and dissemination of customer-focused data in the transformation process, tends to increase its interdepartmental connectedness toward the market (Kennedy, Goolsby & Arnould, 2003). If there is a more association among the departments, there is more market orientation. In that sense, it is hypothesized that $H_{1a}$: there is a positive relationship between interdepartmental connectedness and market orientation. For some examples of the variables used in interdepartmental connectedness in this meta-analysis, I can quote: (a) opinions sharing (Perin, 2002), (b) employees opportunity to give opinions (Goncalves-Filho, Goncalves & Veiga, 2002), (c) departments connectedness (Santos & Rossi, 2005), (d) communication among employees across various departments (Perin & Sampaio, 2006; Slongo & Bossardi, 2004) and so forth. Thus, in this meta-analysis, all of these constructs represent interdepartmental connectedness.

Interdepartmental Environment

I mean by interdepartmental environment those aspects of environment and work-style that help employees to do better their diary task. This friendly surrounding might bring more life-quality at workplace (Slongo & Bossardi, 2004) and harmony to the organization. The interdepartmental environment construct figure out as the formal and informal environment created among employees across various departments while executing the job. The positive atmosphere might reduce the tension between departments and increase the focus on the market and its consumers. The assumption is that an environment that provides employees with a sense of belonging, direction, and feelings of contributing towards satisfying customers’ needs and a sense of greater esprit de corps and social benefits to employees (Shoran, Rose & Kropp, 2005) increases the focus on market orientation. Because of that $H_{1b}$: there is a positive relationship between interdepartmental environment and market orientation.

Roles for Job Execution

Source: Author based on Kirca, Jayachandran & Bearden (2005, p.26)
The theory suggests that formalization, which refers to the roles definition, procedures, and authority through regulations, is inversely related to market orientation because it inhibits a firms’ information utilization and thus the development of effective responses to changes in the marketplace (Jaworski & Kohli, 1993; Kirca, Jayachandran & Bearden, 2005). In this paper, I defined roles for job execution as the top management emphasis in the conditions, and roles necessary to do the diary task, such as the behave roles for doing workpaper process and for attending clients needs (Costa, 2006). Of course some degree of formalization (Gonçalves-Filho, Gonçalves & Veiga, 2002) and control (Dalmoro & Faleiro, 2007) exist when executing the work, but they are created specifically to give more focus on the correct tasks. In that sense, it is assumed that these roles (as used in Révillon, 2005), although inhibits a firms’ information utilization, help firms development of effective job execution, since the guidelines were created to be followed, to learn how to do in a different situation and can served as guidelines to new workers. In that circumstance, it is hypothesized that $H_{1c}$: there is a positive relationship between roles for job execution and market orientation.

**Consequences of Market Orientation**

**Commitment**

Kohli and Jaworski (1990) argue that by instilling a sense of pride and camaraderie among employees, market orientation enhances organizational commitment (i.e. willingness to sacrifice for the organization), employee team spirit and customer orientation. Shoham, Rose and Kropp (2005) comment that committed employees (a) are less likely to be absent from work or to resign from their firms, (b) are more likely to go beyond required norms to contribute to the attainment of organizational goals and (c) are willing to give of themselves for the general well being of the organization. Because of these features, organizational commitment should be associated with market orientation. In that situation, it is hypothesized that $H_2$: there is a positive relationship between commitment and market orientation.

**Learning**

Gonçalves-Filho, Gonçalves & Veiga, (2002), Perin (2001), Perin, Sampaio and Hooley (2006) and Costa (2006) found support to the relationship between market orientation and learning. Learning, for these authors, is the acquisition process, interpretation and dissemination of the organizational information (Slater & Narver, 1995) to become skilled at about market needs and behave. In that circumstance, learning is a cultural process accumulated by the organization. Farrell (2000) and Hurley and Hult (1998) also supported the association between market orientation and learning, commenting that learning is a cultural feature of the organization. In that situation, it is assumed that $H_3$: there is a positive relationship between learning and market orientation.

**Customer Orientation**

The market orientation concept has in its essence the customer needs. Customer orientation might include more quality in products, more consumer satisfaction and more loyalty. Market orientation enhances customer satisfaction and loyalty because firms are well positioned to anticipate customer needs and offer goods and services to satisfy those needs (Slater & Narver, 1994b). In that sense, the organization is in line with the market demands. Of course, the market orientation does not have unique focus on customers, but they are the core aspect of the construct. Research have found significant and positive association between
market orientation and customer orientation (Brady & Cronin, 2001; Jaworski & Kohli, 1993, 1996; Kirca, Jayachandran & Bearden, 2005; Slater & Narver, 1994a,b). From these evidences, it is hypothesized that $H_4$: there is a positive relationship between market orientation and customer orientation. In this meta-analysis, the variables used as customer orientation were clients exigencies (Gonçalves-Filho, Gonçalves & Veiga, 2002), loyalty capacity (Sampaio, 2001), tools for managing the clients demands (Révillion, 2005) and customer relationship (Souza, 2004).

Innovation Consequences

Innovation consequences include firms’ innovativeness and their ability to create and implement new ideas, products and process (Hult & Ktechen, 2001). Market orientation should enhance an organization’s innovativeness and new product performance because it drives a continuous and proactive disposition toward meeting customer needs and it emphasizes greater information use (Han, Kim & Srivastava, 1998). The notion that consumers have different needs and demand different products makes companies investing in P&D, generating more innovative products. According to the literature (Damanpour, 1991) and based on these arguments, $H_{5a}$: there is a positive relationship between market orientation and innovation; $H_{5b}$: there is a positive relationship between market orientation and new product performance and $H_{5c}$: there is a positive relationship between market orientation and market innovation capacity.

Performance

Because market orientation helps firms track and respond to changing customer needs it should be associated to business performance. In that sense, firms manage their relationship with environment to maximize performance (Shoham, Rose & Kropp, 2005). Resource Based View Theory postulates that differential firm resources give rise to superior strategy and performance (Barney, 1991). Because market orientation helps firms to improve their resources, it should result as consequence performance (Sampaio, Perin & Henriqson, 2005). Thus, it is hypothesized that $H_6$: there is a positive relationship between market orientation and performance (Deshpandé & Farley, 1999; Kohli & Jaworski, 1990; Slater & Narver, 1994b; Urdan 2000; 2001a; 2001b). In this study, performance was measure in six forms, such as subjective likert-scale, objective scale form (sales, profit), sales, sales-by-employee, profit and market share. When more than one way of measure performance was used, for instance the market share, sales and profit from Sampaio, Perin & Henriqson (2005), I use the mean of the correlations to create a *global* performance indicator. In that sense, additionally to specific measures listed, the global performance represents the mean of the all organizational performance scales used in the studies (Dant, 2007).

Database Development and Studies Used

An extensive search of the CAPES dissertation site, Proquest, main Brazilian Universities Libraries (such as, USP, UFMG, PUC-RS, PUC-IAG-RJ, UFRGS and UFPE), Google Scholar, Brazilian top Business Journals (*Revista de Administração-RAUSP, Brazilian Administration Review-BAR, Revista de Administração de Empresas-RAE* and *Revista de Administração Contemporânea-RAC* [all years]), Business Conferences (*SEMEAD-USP [2003-2007] and 3E’s [three meetings]*) and Brazilian Leading Marketing Conferences (*EMA [2004-2006] and EnANPAD [1997-2007]*) was performed. The database was searched using key terms: market, orientation, performance, and customer. Additionally,
the more prolific authors of this topic were contacted requesting working paper that had not been published. Six researchers were contacted to obtain unpublished data. The only inclusion criteria were that the studies investigated market orientation and reported statistical information sufficient to calculate an effect size. When the same article was published in a conference and then in a journal, I choose to use the journal reference (just one paper or excluded if duplicated), since it passed in a blind review process.


Effect Size Integration

Not all the empirical studies, however, reported correlations or measures that could be converted to correlations. I therefore asked the authors reporting correlations or data base. In a few instances, the authors were able to provide de correlations requested. I decide do not transform the product-moment correlation \((r)\) into a Fisher’s \(Z_r\) because it introduces more error than \(r\) (Hunter & Schmidt, 2004).

File Drawer Limitation

Researchers conducting meta-analyses such as validity generalization can never be certain that their review contains all studies relevant to the research domain. Indeed, several authors in the past have noted ways in which research reviews may be systematically biased. A few techniques have emerged for addressing the issue of “missing studies” including the use of Rosenthal’s (1979) file-drawer equation. A file-drawer \(N\) estimates the number of unpublished studies with an effect size of zero that would have to exist in order to render the effect insignificant at the alpha = .05. It is important to comment that the widely used file-drawer analysis is irrelevant because it treats the inherently biased file drawer as unbiased and gives grossly wrong estimates of the size of the file drawer. For Scargle (2000), statistical combination can be trusted only if it is known with certainty that all studies that have been carried out are included. According to Ashworth (1992) and Iyengar and Greenhouse (1988), Rosenthal’s technique is inappropriate when applied to validity generalization findings. Because of that, there are limitations in analyzing just file drawer estimative.

Findings

Table 1 summarizes the bivariate correlations and other statistics for the relationships between market orientation and its antecedents and consequences (see also Figure 1). In total, 27 research were collected for the antecedents and consequences. Some of the research had two or more sample and then I analyzed the effect size for each one (see Menna, 2001; Perin & Sampaio, 2003; Gava & Teniza, 2007; Urdan, 2000). Positive and significant relationships between market orientation and performance measures and other constructs were found. The mean reliability presented between parentheses in the construct that is correlating to market orientation. They are detailed as follow.

Antecedents
The data show that all the three antecedents of market orientation were significant, supporting hypotheses $H_{1a}$, $H_{1b}$ and $H_{1c}$. It means that the interdepartmental connectedness ($r = .64; \alpha = .71$) and interdepartmental environment ($r = .53; p < .05; \alpha = .92$), which both reflex organizational atmosphere, have significant and positive impact on market orientation. Note that 41% of the market orientation variance is explained by interdepartmental connectedness. It denotes that managers should invest more dissemination of the marketing concept inside organization departments and employees to be more focuses on consumers. In that sense, the cultural perspective focuses on organizational norms and interchange values that encourage behaviors coherent with market orientation (Deshpandé & Farley, 1998). The construct rules for job execution, referring to the definition of roles, procedures, and authority through rules, also has significant positive relationship with market orientation ($r = .40; \alpha = .77$). The $Q$ test for homogeneity was not significant, meaning that the heterogeneity evidence was rejected ($6; p = NS$). Heterogeneity estimates greater than zero can indicate the presence of real heterogeneity or can be a result of sampling fluctuations. Monte Carlo simulations show that the $Q$ test kept the tightest control of the Type I error rate (when comparing with the Likelihood Ratio and Wald estimative), although the results emphasize the importance of large sample sizes within the set of studies (Viechtbauer, 2007).

**Consequences**

Market orientation has a strong impact on organizational commitment ($r = .78$) and learning ($r = .68$), supporting hypotheses $H_2$ and $H_3$. The literature considers that organizational learning represents the capacity of a company to move from a given situation to another desired situation of market orientation and performance, suggesting that the influence of market orientation on performance is significant when it is mediated by organizational learning (Jiménez-Jiménez & Cegarra-Navarro, 2007). Market orientation also predicts the customer orientation ($r = .34; \alpha = .80$). In the concept of innovation, market orientation influences innovation ($r = .43; \alpha = .83$), market innovation capacity ($r = .34 \alpha = .74$) and new product performance ($r = .31; \alpha = .81$). In the notion of innovation, Baker and Sinkula (2007) results reaffirm the position that a strong market orientation helps facilitate a balance between incremental and radical innovation by shifting firms’ innovation priority more toward radical innovation activities. As result, the hypotheses $H_4$, $H_{5a}$, $H_{5b}$ and $H_{5c}$ were supported.

**Performance**

The market orientation-sales link was the weakest ($r = .14; p < .001; \alpha = .92$) correlation found, which can be due to the large correlation coefficient range -.10 to .68 and to the large sample size reporting non significant effects. For instance, some non significant results (22%) were found by Neto (2005), $r = -.05; N = 781; p = NS$, and by Perin, Sampaio and Henriqson (2005), $r = .02; N = 208; p = NS$. On the other hand, some weaken associations (44% below $r \geq .14$) were found by Perin, Sampaio e Hooley (2005), $r = .13, N = 293; p < .05$, by Mandeli (1998), $r = .14; N = 29$, and by Silva, Damacena and Melo (2002), $r = .13; N = 43$. Based on these examples, the weaken result from market orientation-profit association in the meta-analysis could be due to the fact that correlations from large samples, listed behind, are near to the population mean, as proposes by the Central Limit Theorem (Hunter & Schmidt, 2004). If it is correct, a low or nonsignificant association between market orientation and sales can be assumed, as noted by the individual papers. Note that the market
orientation-sales link correlation corrected just by sample presents an effect size of .12 ($p < .01$).

The significant association between market orientation and profit performance was found to be moderate ($r = .24; \alpha = .91$). The market orientation-sales by employee comprehends the individual employee focus on sales, attending and politeness ($r = .39; \alpha = .92$). The association between market orientation and market share ($r = .41; \alpha = .75$) was the strongest of the Brazilian scientific data. As a comparative, Kirca, Jayachandran and Bearden (2005) suggested that market orientation-performance link ($r = .46$) was the strongest in their study. In this circumstance, the four studies used as market share were positive and significant, although the file drawer was low. It means that just five nonsignificant and unavailable studies are necessary to bring the cumulated effect size to a nonsignificant value. The objective and subjective performance ($\alpha = .90$) measures were positively associated with market orientation ($r = .38$ and $r = .26$).

In summarize, a global effect size was created to represent the performance. It was used the average of the performance measures to create a universal indicator. The sample accumulated was 4537 with just 9% of variance due to sampling error. The general correlation between market orientation ($\alpha = .86$) and performance ($\alpha = .92$) was strong $r = .39$ ($p < .001$). Overall, the findings are consistent with the predominant expectations in prior research.

**Hypothesized Moderators**

Organizational performance can be classified into measure that account for the costs involved in implementing a strategy vs. measures that emphasize revenues that do not reflect costs. It introduces a hypothesis that the impact of market orientation on performance is stronger for revenue-based performance than for cost-based performance. For instance, according to Jaworski and Kohli (1993), though market orientation enhances sales performance, the costs of its implementation might reduce profits. Kirca, Jayachandran & Bearden (2005) tested this hypothesis and the results indicated that the strength of the relationship does not vary across the measures. I cannot test this hypothesis, since from the 22 studies that measured performance, all of them used some kind of revenue-based performance.

I test the moderator hypothesis by regression analysis, which the effect size coefficient was the endogenous variable and the factors were the exogenous variables (i.e. dummy variables). This procedure is similar to others used in other meta-analysis (Kirca, Jayachandran & Bearden, 2005). Alpha coefficients for $y$ and $x$ and sample size were included as covariates, although they did not show significance. The moderator variables were objective ($f = 7$) vs. subjective measures ($f = 19$); multi ($f = 21$) vs. single-item measure ($f = 5$); manufacturing ($f = 10$) vs. service industry ($f = 16$) and measurement MARKOR ($f = 19$) vs. MKTOR ($f = 6$).

**Objective vs. Subjective Measures**

Business performance has been investigated by both subjective (e.g. self-reported) and objective (e.g. ROI, market share) measures. The discrepancy between objective and subjective scales has been recognized in market orientation research (Cano, Carrillat & Jaramillo, 2004). According to Harris (2001), the strength of the relationship between market orientation and organizational performance using subjective evaluations of performance might differ from relationship tests based on objective measures. In this condition, common methods variance may strengthen the correlation between market orientation and performance when research uses subjective measure (Doty & Glick, 1998). There is a danger of obtaining a false
positive (i.e. Type I Error) when using subjective rather than objective measures of business performance (Dawes, 1999). Consequently, subjective measures of business performance may cause the correlation coefficient of the relationship to be artificially inflated (Cano, Carrillat & Jaramillo, 2004). This hypothesis was supported by Kirca, Jayachandran & Bearden (2005) and discarded by Cano, Carrillat and Jaramillo (2004). In this article, the result, although positive, which is in the subjective measure direction, did not have significance ($\beta = .04; p > .86$), rejecting the assumption.

**Multi vs. Single-Item Measures**

The use of multi-item measures of performance should also be associated with higher market orientation-performance correlations than the use of single item measures because multi-item measures are more capable of capturing various facets of complex constructs (Kirca, Jayachandran & Bearden 2005). The regression analysis, although positive, which is in the multi measure direction, did not have significance ($\beta = .02; p > .94$).

**Manufacturing vs. Service Industry**

For Gray and Hooley (2002) there is equivocal evidence as to the moderating effect of industry type (service vs. manufacturing) on the relationship between market orientation and business performance. The implementation of market orientation could entail a higher degree of customization in services firms than in manufacturing firms, which implies that the correlation of market orientation with organizational performance might vary (Cano, Carrillat & Jaramillo, 2004). Moreover, this association should be greater in service firms due to greater dependence on person-to-person interaction, which has more customer interactions than manufacturing firms (Kirca, Jayachandran & Bearden, 2005). In this article, the result, although negative, which is in the manufacturing industry direction, did not have significance ($\beta = -.17; p > .43$), rejecting the assumption.

**MARKOR vs. MKTOR Measurement**

Research indicates that although both scales are theoretically consistent, in general MKTOR outperforms MARKOR for explaining variance in business performance (Oczkowski & Farrell, 1998). Some evidences present that MKTOR has a more direct link to business performance than MARKOR because it fully captures the notion of providing customer value and superior business performance (Narver & Slater, 1990). Shohan, Rose and Kropp (2006) hypothesized that the association between market orientation and performance might differ among scales. The empirical data of the authors did not support the assumption. In this article, the result of the moderator analysis suggests that the relationship between market orientation and performance is stronger when using in the MARKOR scale ($\beta = .44; p < .07$; VIF maximum = 1.51), giving partial support the assumption. This found could be in consequence of the extensive use of MARKOR scale in Brazil, indicating that it could be more adapted to our business field. Cano, Carrillat and Jaramillo (2004) also found that measurement influences the relationship between market orientation and business performance, being stronger when market orientation is measure using MARKOR.

**Discussion**

**Managerial Implications**
First, the outcomes salient the importance of interdepartmental connectedness in firms to be market oriented \( (r = .64; \text{File Drawer} = 20) \). Interdepartmental connectedness is defined as the degree of formal and informal direct contact among employees across departments (Kohli & Jaworski, 1990). Related literature (Deshpandé & Zaltman, 1982) suggests that connectedness facilitates the exchange and use of information across organizational boundaries. There are several examples of recent studies which indicate that informal networks rather than formal organization structures are increasingly affecting organizational activities and outcomes (Menon et al., 1997).

Second, market orientation has strong impact on learning. Slater and Narver (1995) conclude that market orientation is only likely to significantly enhance performance when it is combined with a strong learning orientation \( (r = .68) \). Learning orientation may be viewed as the degree to which firms’ proactively question whether their existing beliefs and practices actually maximize organizational performance (Baker & Sinkula, 2002).

Third, as important as market orientation and entrepreneurship are, they must be complemented by an appropriate climate to produce a learning organization (Slater & Narver, 1995). In customer orientation \( (r = .34) \) concept reliance on either customer-focused or competitor-focused decision making can often lead to an incomplete business strategy, leaving an organization handicapped by a reactive posture (Day & Wensley, 1988). According to Day and Wensley (1988), focusing primarily on either customers or competitors could lead to a partial and biased picture of reality. Market orientation through intelligence generation is a source of ideas for new products and services; this fact together with the focus on providing superior value to the customers by means of fulfilling their needs and the evolution of their preferences should positively affect the degree of innovation in companies (Vazquez, Santos & Alvarez, 2001).

Fourth, the ten studies included in this meta-analysis supported that market orientation has strong impact on profit \( (r = .24; \text{File Drawer} = 3) \). In parallel, the four studies included in this meta-analysis supported the market orientation-market share link \( (r = .41) \). Note that these are two important measures of objective performance supporting the managers use of marketing strategy philosophy. The market orientation-sales link is not supported in this study, since the correlation coefficient was weak and the file drawer was zero \( (r = .12 \text{ by sample}; r = .14 \text{ Effect Size, File Drawer} = 0) \). The confidence interval of market orientation-sales link, an alternative indicator of significance, ranges from .08 to .20.

**Theoretical Implications**

The empirical evidence showed that the relationship between market orientation and performance is stronger when using in the MARKOR scale \( (\beta = .44; p < .07) \) rather than the MKTOR scale. This result is in line with previous research (Cano, Carrilat & Jaramillo, 2004), although more theoretical explanations and empirical investigations need to be done since Cano, Carrilat & Jaramillo (2004) hypothesized in favor of MKTOR scale and found support to MARKOR scale. Specifically, the theory behind both scales should be reviewed with more details to present convincing evidences that MARKOR measure introduces stronger effects. The arguments explaining and predicting MARKOR measure are not lucid. Contrary to Cano, Carrilat & Jaramillo (2004) and this meta-analysis, Oczkowski and Farrell (1998) affirmed that in general MKTOR outperforms MARKOR for explaining variance in business performance. When I did an isolated analysis, the effect size for market orientation-performance link was stronger in the MARKOR sample \( (r = .30; N = 2495) \), when comparing to the MKTOR sample \( (r = .20; N = 1094) \).
Second, the theory that proposes the relationship between market orientation and sales need to be appraised. Brazilian scientific papers introduced mixed results to this association, which might weaken the theoretical arguments. Specifically, some doubts appear, such as which conditions market orientation increase sales? Which additional factors influence the market orientation-sales link? The results showed that some studies with large sample size supported a non significant association between the constructs (for example, \( N = 184; r = -0.05 \) and \( N = 208; r = 0.02 \)) or supported a negative association between them (\( N = 54; r = -0.10 \)).

Taking as general, the global measure index created by mean of all performance measures showed that there is a positive and significant correlation between market orientation and performance (\( r = 0.39; N = 4537 \)). This finding is in line with previous research that suggests a clear positive relationship between market orientation and business performance (Deshpandé & Farley, 1998; Slater & Narver, 2000). Furthermore, six file drawer cases reporting null results would be needed to make the relationship between market orientation and business performance non significant.

**Future Research**

First, future research should address the inconsistence in the data used to measure sales performance. Some research, as presented at the back, presented negative, positive and nonsignificant results. The sales construct was the only performance measure that showed more mixed results from the others used (i.e. market-share, profit, sub and objective). In that sense, more research in different market segments might comprehend the market orientation-sales link. Second, investigations should deal with the other market orientation scales suggested by the literature. I found much focus on MARKOR instrument. In this circumstance, many of the papers in this meta-analysis used MARKOR (\( f = 19 \)) scale rather than MKTOR (\( f = 6 \)) scale. Urdan (2000; 2001a,b), which used two samples in a research (2001a), was the Brazilian researcher that more used the MKTOR scale, taking a different view of the market orientation phenomenon. As result, comparisons between these two instruments and others suggested by the literature should be done. Forth, not only the market orientation-performance link demands test in moderator analysis, but also market orientation-innovation, market orientation-customer orientation and market orientation-learning associations needs exam in the moderator variables. These tests might clarify more the strength between them.

In summarize, this study extends prior attempts to understand the market orientation-performance association, by employing a considerable large number of effect sizes. The main data base was the Brazilian Academy knowledge that represents our scientific research effort. The results found here have not only supported the international literature on this topic, but also the Brazilian industry focus on market and customers. The finds might indicated the managers maturity of understanding national markets, anticipating competitors’ moves, finding new opportunities and discovering what customers need.

**References**

* Asterisks denotes papers used in this meta-analysis


*Faleiro, S.N. (2001). A relação entre orientação para o mercado, orientação para a aprendizagem e inovação, o caso dos cursos de graduação em administração filiados à


### Table 1: Overview of Antecedents and Consequences of Market Orientation

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<tr>
<th>Construct Hypothesis</th>
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<th>Range of $r$</th>
<th>Simple Average $r$</th>
<th>Sample Weighted Adjusted $r$</th>
<th>Effect Size</th>
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<th>Lower CI</th>
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<td><strong>Antecedents of Market Orientation</strong></td>
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<td>.27</td>
<td>.50</td>
<td>11***</td>
<td>9%</td>
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Notes: * $p < .05$; ** $p < .01$; *** $p < .001$; K = number of studies; N = Combined N over all independent cumulative samples; O = Number of observations; Range = Minimum and Maximum value for $r$; Effect Size = is corrected by both the sample-size-weighted and reliability-corrected estimates; SE = Standard Error of Effect Size ($1/\sqrt{N-3}$); LCI = Lower confidence interval (Homo); UCI = Upper confidence interval (Homo); $Q$ = Statistic for Homogeneity at Individual Level ($Q = \Sigma w_i ES_i^2 - (\Sigma w_i ES_i)^2/\Sigma w_i$); % Acc. = Indicates how much variance is due to sampling error; File Drawer = refers to the number of unpublished studies reporting the null results needed to reduce the cumulative effect across studies to the point of non-significance (Hunter & Schmidt, 2004); NC = no calculated since $O \leq 2$. 