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Success determinants of new products launched by foreign companies in Brazil

Abstract

In order to respond abroad to diverse customer, business, and cultural environments, a company depends on distinctive resources and capabilities. Since the Brazilian market has become very attractive – part of the BRIC (Brazil, Russia, India and China) – a natural movement to foreign enterprises is to improve Research & Development for Brazil, as a better way for effectively understanding and serving local clients. In search of a better understanding of this dynamic, this article presents a research on the determinants of new product performance (regarded as a whole or divided in its marketing dimension and financial dimension) for foreign companies in Brazil. The model tested brings together frameworks by Henard and Szymanski (2001) and Ingenbleek et al. (2004). The sample comprises 109 marketing executives working for foreign companies in Brazil. Market orientation and new product development process were related to new product performance. The characteristics of company processes, relative advantage of the new product and market characteristics were related to market performance of the new product. The characteristics of company processes, strategic characteristics of the company and demand uncertainty (negative) were related to the financial performance of the new product. The empirical results here differ from those in the studies taken as the basis for the present research. The lesson that in Business Administration "not everything that is successful in one country is valid for others" sounds opportune. This is a warning to the fact that the Brazilian academic system and managerial practices – like in the majority of the countries – strongly follow the knowledge generated in the United States. The adoption of models from abroad requires a critical focus. For a tangled phenomenon like new product development, the best approach should include national empirical validation.

Keywords: new product, innovation, development process, performance, Brazil, foreign country.

Introduction

Enterprises that realize a sustainable competitive advantage "produce more economically and/or better satisfy customer wants by creating greater value or net benefits" (Peteraf and Barney, 2003, p. 311). It is, in a great portion, contingent on superior resources and capabilities to develop new products. Since the Industrial Revolution, new products have been generated by companies (Clark and Wheelwright, 1993), but until the present days they are a risky business and the potentially high impact of a serious failure is frightening (Millson and Wilemon, 2008). Amongst the causes of this phenomenon are the fast changes in competition, customers and technology. Companies, however, can't escape the new product arena, whose success is crucial for maintaining them healthy, as evinced by the product life cycle (Urban and Hauser, 1993).

The product development process involves a complex array of activities that cut across all the main business functions and depend on multiple environmental factors. Given such complexity and the advantages reaped from triumphing on new products, its determinants factors constitute a relevant topic for research. In fact, many doubts and gaps remain, especially in developing and emerging countries. In search of a better understanding of this dynamic, this article presents a research into the determinants of new product performance in the case of foreign companies operating in Brazil.

Frequently, the developed countries invent and export the most sophisticated goods to developing countries until the latter figure out how to replicate them. Then, the developed countries tend to re-enter the markets of existing goods by innovating, probably offering a more sophisticated solutions (Grossman and Helpman, 1991). But the innovations from some developing countries are increasing, making them less restricted to the low labor costs strategy. China is an astonishing case. Speculation about the impact Chinese growth will have on developed and developing countries over the coming decade varies (Schott, 2008). Some experts argue that manufacturing will eventually end in developed economies (Europe, for example), others believe that low- and middle-income (like Brazil) countries are most at risk.

As a whole, the Brazilian population (190 millions of inhabitants in year 2010) has been gaining in wealth for the last decade, turning to be more sophisticated and demanding. At the same time, its consumers are still highly heterogeneous. Segments widely differ in their demographic, socio-cultural, geographic and psychographic profiles, creating a diversity that is challenging to foreign companies. It's is hard to decide whether to adapt products (goods and services) – as well as prices, promotion and distribution – to the relevant differences and, if so, in which levels and in what ways. Nevertheless,

although new product development is now, in great extent, global in scope, the two literatures – NPD and globalization – still flow in relatively separate streams (de Brentani et al., 2010).

There are global enterprises that conduct product development focused on the Brazilian market, but many companies conduct world-class projects. Since the Brazilian market has become very attractive, a natural movement to foreign enterprises is to improve Research & Development for Brazil, as a better way for effectively understanding and serving local clients. Otherwise, national companies can take advantage of the frequent lack of information about consumer behavior and values in projects undertaken by foreign enterprises. In the last years, multinational corporations have even built main R&D operations in Brazil (G&E, IBM, Du Pont, for instance), fostering alignment to customer' needs and desires and permitting innovative products targeted to nationals (but, in general, also for export).

The following section reviews the literature, and presents an integrative theoretical model of the determinants of new product success. The next section lays out the method and procedures of the empirical research. Then, the results and the findings are reported. Lastly, the limitations and conclusions are presented.

1. Factors related to new product success

Relevant studies concerning the success factors of new products began to appear around 1975 (Crawford and Di Benedetto, 2008). Cooper (1993) listed the 10 most important factors for obtaining success. Six themes in the effective development of new products are covered by Clark and Wheelwright (1993). Urban and Hauser (1993) synthesized four studies into what determines new product success. All studies mentioned in this paragraph recognize the multi-functional nature of a successful development, although the factors presented in each study vary slightly. Henard and Szymanski (2001) undertook a meta-analysis of 60 studies reporting antecedents of new product success, arriving at 24 variables reported frequently. Taxonomy to organize them was elaborated, grounded in existing frameworks, comprising the four categories bellow defined.

1. New product characteristics capture elements pertaining to the offering, such as price, innovativeness, and managers' perceptions of how well the offering meets customers' needs.
2. Strategy characteristics of the company refer to a firm's planned actions that have the potential for providing it a competitive advantage in the marketplace separated from any factors associated with the new product development process. These strategic elements include dedicating resources to the new product development initiative, timing

market entry, and capitalizing on marketing and technological synergies.
3. Company process characteristics refer to elements associated with the new product development process and its execution. They encompass department interactions, firm proficiencies, management support, marketplace orientation, as well as development, marketing, and launch of new offerings.
4. Market characteristics capture elements that describe the target market and include market potential, competitive activity, and the intensity of that activity (i.e., turbulence) in response to new product introductions.

2. Price management and new product success

The current world crisis is having an adverse effect on many companies. Consumers have learned how to extract more value from their purchases, by insisting on lower prices (Ottley, 2002). Weaker demand, shorter economic cycles, intense competition and companies seeking to grow have made the consumer more price sensitive, which impacts the profitability of companies. The globalization increases the number of competitors and the Internet expedites price comparison for buyers. A portion of the consumers is "loyal" while paying the lowest prices, but the link frequently disappears as soon as the competition offers less expensive products (Winninger, 2000). Therefore, many enterprises face a downward spiral: to sell the wanted quantities, they depend on charging increasingly cheaper prices. It is not a good pricing management, at all.

Articles and books on pricing defend that management must pay more attention to its decisions, as a requisite to a better return (Cressman Jr., 1999; Dutta et al., 2002; Wyner, 2002; Monroe and Cox, 2001). Traditionally, managers try to and reduce costs to improve profitability (Cressman Jr., 1999). However, cost reduction has its limits, due to the essential activities to the operation and the clients. Notwithstanding, there are pricing principles and techniques that can improve the shareholders' return. In short, price is the only element in the marketing mix that produces revenue (Hanna and Dodge, 1997), although it is somewhat complex (Day, 1994).

Each pricing approaches – based on costs, value or competition – has advantages and disadvantages (Lehmann and Winer, 2006). Strategic pricing, an integrative approach, posits the coordination of the inter-related competitive, financial and marketing decisions, aiming at profitability (Nagle et al., 2010). In fact, Noble and Gruca (1999a) noted that more than 50% of the companies they investigated used more than one base, although Mochtar and Arditi (2001) and Forman and Lancioni (2002) detected a predominance of cost-based pricing.

It seems strange that the new products literature just slightly mentions pricing. Cooper (1993) and Clark and Wheelwright (1993) didn't mention price in the 10 factors and topics they respectively listed. Urban and Hauser (1993) detected "high worth for the consumer" (which includes the price) in two (Brentani and Cooper & Kleinschmidt) of the four studies they examined. Moorde and Pessimier (1993) linked "price too high" and "detailed financial analysis" to the failure of new industrial products. In their meta-analysis Henard and Szymanski (2001) included the variable "congruence between price and new product performance". Nevertheless, development practices are still evolving. Professionals don't stop experimenting new approaches and tools, so it is reasonable that pricing has a more expressive influence on new product performance.

The insufficient understanding of the impact of pricing approaches on business performance (Cressman Jr., 1999; Monroe and Mazumdar, 1988) seems to be the main reason why, so far, the pricing literature has been of little practical relevance. Ingenbleek et al. (2003) formulated propositions on the degree to which the use of information on value for the consumer (1), competition (2) or costs (3) in pricing contributed to performance. The moderators analyzed were product advantage and competitive intensity. A sample of 78 industries in Belgium showed that pricing oriented by value information and competitive intensity contributed directly to the new product performance. The intervening limitations included com-

panies only from Belgium, the sample was small and restricted to electronics and engineering industries (featuring high fixed and low variable costs).

Ingenbleek et al. (2004) contains a new version of the framework, intending to improve the nomological network by: (1) dividing new product performance into market performance and financial performance; (2) including, as explanatory constructs, technological orientation, consumer orientation, competition orientation and inter-functional coordination; (3) dividing product advantage into relative advantage of the new product and relative cost of the new product.

3. An integration of the determinants of new product performance

In the above literature review, the frameworks of Henard and Szymanski (2001) and Ingenbleek et al. (2004) stood out. These works are connected to somewhat different lines of research. The first focuses on the success of new product development, while the second concentrates on pricing practices. We opted to integrate them in the search for a broader set of factors that would explain new product performance. Figure 1 outlines the integrative framework. There constructs of new product characteristics, strategic characteristics of the company, characteristics of company processes and market characteristics were taken from Henard and Szymanski (2001). All the remaining ones came up with Ingenbleek, Debruyne, Frambach, Verhallen (2004).
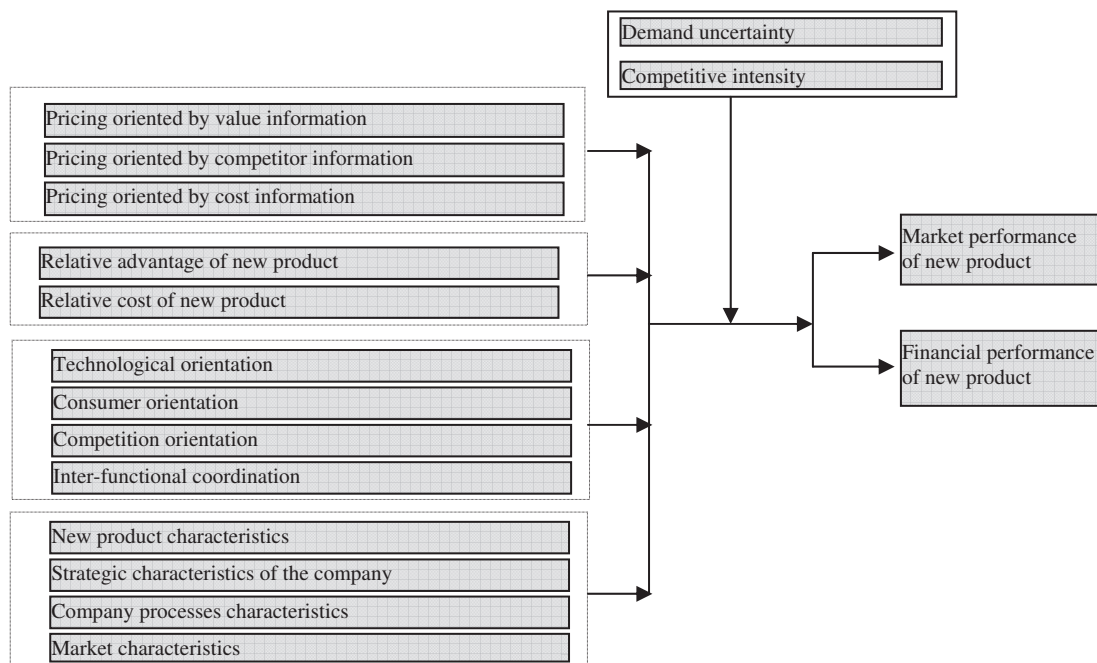
Source: Henard and Szymasnki (2001), Ingenbleek et al. (2004).

Fig. 1. An integrated model of new product performance determinants

There is no empirical research about the relationships in Figure 1 concerning Brazil or any other of the BRICs. Given this dearth, empirical evidence

must be obtained. Towards evaluating a theory and placing it to work in the solution of problems, abstract concepts must be converted into concrete ob-

servable events (Martin, 1994). An important part of the development of a scientific body of knowledge is bringing together and analyzing the empirical data. So, a fundamental question arises: Are the relationships in the integrated model of the determinants of new product performance (Figure 1) found in foreign companies playing in Brazil?

4. Empirical investigation

The main objective of this empirical research was to analyze the direct relationships in Figure 1, using the constructs listed in Table 1. The target popula-

tion of respondents was professional holding the position of product manager (1st option) or marketing director (2nd option) in foreign owned companies functioning in Brazil. These professionals should be considerably involved with new products management and they also interact with the other functional areas. The unit of analysis was a product launched by the respondent's company more than 12 months previously. The initial sample, taken from the *Foreign Companies in Brazil* database, consisted of people from 1,823 companies that had included the name of their main marketing executive.

Table 1. Macro-constructs and constructs researched

Macro-construct	Construct
1. Pricing practices	C_1a. Pricing oriented by information about value C_1b. Pricing oriented by information about the competition C_1c. Pricing oriented by information about costs
2. Advantages of the new product	C_2. Relative advantage of the new product C_3. Relative cost of the new product
3. Performance of the new product	C_4a. Market performance of the new product C_4b. Financial performance of the new product
4. Business environment	C_5. Demand uncertainty C_6. Competitive intensity
5. Strategic orientation	C_7a. Technological orientation C_7b. Consumer orientation C_7c. Competition orientation C_7d. Inter-functional coordination
6. General characteristics	C_8a. New product characteristics C_8b. Strategic characteristics of the company C_9a. Process characteristics of the company C_9b. Market characteristics

A descriptive research – single cross section – study was undertaken. We adopted the scales used by Ingenbleek, Debruyne, Frambach, Verhallen (2004), Henard and Szymanski (2001), such as Likert or semantic differential with 10 points. In the macro-construct pricing practices, value, competition and cost information orientations were measured as coexisting (to a greater or lesser extent) in every company and all new products. Otherwise, respondents might have been tempted to go down a social responsibility route and justify their prices based on costs, something that many of them consider to be fairer (Foxall, 1972; Pearce, 1956). These scales were supposed to be interval, allowing for the application of parametric techniques (Myers et al., 2010).

A questionnaire was prepared for the Internet with the scales plus a series of items for classifying the respondent. Two pre-test rounds of the questionnaire were conducted personally with nine professionals from the target population, resulting in various small adjustments. The final version of the questionnaire is not here because of lack of space, but the authors will make it available upon request.

A letter was sent to the initial sample of professionals within the companies inviting them to take part in the research. A general password was supplied

providing access to the home page, where the questionnaire had been placed. Two letters (20 and 35 days later) were sent, following up on the invitation. The filling of the questionnaire was waited for two months, after which the access to it was blocked.

Multiple regression analysis served to evaluate the existence of a linear relationship between new product performance (dependent variable) and the constructs in the Model (Figure 1), supposed to be able to affect it (independent variables) (Tabachnick and Fidell, 2006). Two approaches were used. One was linked to the factor analysis done, by constituting variables that were representative of the factors that had appeared there, as the sum of the respective variables. This led to the following variables (Figure 2): (a) Factor Index 1 (now called market orientation and new product development process), notation Ind_F1, independent variable; (b) Factor Index 2 (now technology), notation Ind_F2, independent variable; c) Factor Index 3 (now pricing practices), notation Ind_F3, independent variable; (d) Factor Index 4 (now new product performance), notation Ind_F4, dependent variable; (e) Factor Index 5 (now relative advantages of the new product), notation Ind_F5, independent variable; (f) Factor Index 6 (now demand uncertainties), notation Ind_F6, independent variable; (g) Factor Index 7 (now competition dynamism), notation Ind_F7, independent variable.
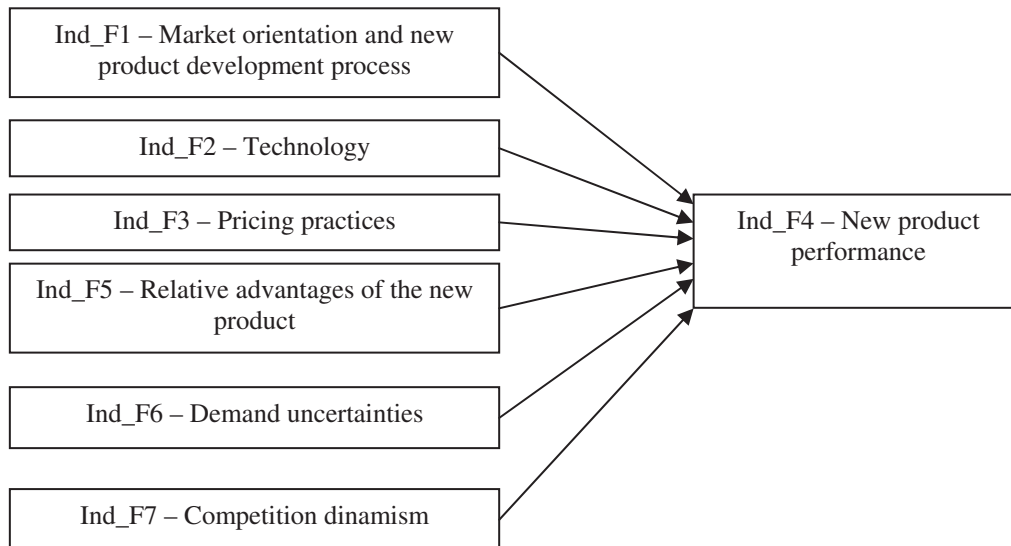
Fig. 2. A model, derived from the factor analysis, with new product performance as dependent variable

The other approach was centered on the original structure of the constructs and the variables (Figure 1). Variables were computed to represent these constructs, as the sum of the respective variables. This gave rise to variables such as: (a) Construct Index 1a (pricing oriented by value information), with the notation Ind_C1a, as an independent variable; (b) Construct Index 4a (market performance of the new product), notation Ind_C4a, dependent variable.

In the first approach, the dependent variable (Ind_F4) covers market performance as well as financial performance. In the second approach there are two dependent variables (Ind_C4a and Ind_C4b) that separately reflect the market performance and financial performance, respectively. So, three multiple regressions were processed. Given the considerable range of independent variables relative to the sample size, the stepwise procedure was carried out.

5. Results

The results here are brought forward broken down in sample, psychometric properties, univariate analysis, and multivariate analysis subsections.

5.1. Sample. 214 interviews had been recorded. Interviews that were not complete and those with less than 91% of the scales completed were excluded. This left 174 complete records, of which 60 were from companies whose head office was in Brazil, which were outside the remit of this paper. So the sample reduced to 114. Of these we eliminated 5 interviews that had taken less than 400 seconds to complete (time defined as the minimum for a reasonable replying task). The final sample had 109 elements, providing an effective rate of return of just 6.0% (109/1,823). The impersonal data collection – without any insistence of a interviewer in order to obtain a reply – is less persua-

sive. But, in this research, it would be impossible to afford the costs of personal interviews around the Brazilian huge territory.

There are 24 different business sectors in the sample, the most widely represented are "Equipment and machinery" (11%) and "Food" (9%), and the range of sectors is broad. Regarding the number of employees in the respondent's company, unlike what was expected, 70% of the valid cases have up to 500 employees in Brazil. At the other extreme, from 10,001 or more employees in Brazil there is no single company represented. In the sample 55% of the companies have a head office in Europe, 29% in North America and 11% in Asia, a varied cross-section of foreign origins.

5.2. Psychometric properties. The reliability of the scales was tested using Cronbach's Alpha (Hair et al., 1998), taking 70% as the minimum recommendable. Only one scale, that of construct "C_3. Relative cost of the new product", did not achieve the minimum on the Alpha, although the 63% that did it was not too far from the limit. The average of the Alphas in the 17 constructs was 84%, which is very favorable. So, these scales should produce measures with low levels of random error.

Factor analysis was applied to find out the dimensionality of the variables as a whole, instead of the dimensionality within the sphere of each construct. The principal component method was chosen and a factor rotation was performed. The sample of 109 elements, compared to the 70 variables, provided only 1.6 observations per variable, a figure far too low for the technique. We did not stop applying factor analysis, but we did so cautiously. The KMO was 0.75, which is compatible with the factor analysis, as well as the Bartlett's test of sphericity (a

significance level of 0.00). The variable, V_5.1 (with a negative direction statement) was substituted in the analysis by the inverted variable, V.5inv. We began by examining the solution with 17 factors, corresponding to the theoretical structure of 17 constructs, which proved to be very disjointed; some factors were left without any variable with a more expressive loading (minimum of 0.3). Of the alternative solutions evaluated, the most suitable seemed to be the one that had seven factors. In it the autovalue (the total variance explained by each factor) of the seventh factor was 2.034 (before rotation). Such an arrangement explains 60.5% of the total variance; the recommended minimum is 60% (Malhotra, 2009). The scree plot suggested between 7 and 11 factors, which included the solution with 7 factors.

In the factor matrix with seven components, after rotation using varimax orthogonal method, correspondence and non-correspondence zones were alternately formed with the arrangement of the constructs and the respective variables of the model used (Figure 1). Only three (V_1.8, V_3.1 and V_4.2) of the 70 variables did not have any expressive factor loading (over 0.40) in any of the factors at all. No more than nine variables proved to have an expressive factor loading in more than one factor. The signs are coherent in all variables, with no negative factor loadings. These are positive indications of the factor arrangement that were selected and of the constructs and variables studied. The factor solution selected is different in part from those originals conceptions of Ingenbleek et al. (2004) and Henard and Szymanski (2001), although the presence of the constructs − albeit in a more synthetic way − mentioned by them was clear here.

5.3. Univariate analysis. The univariate analysis here is based on the ranking of means at the construct level. In all of the constructs, relative advantage of the new product had the largest (8.9 out of 10.0) mean, indicating the competence to deal with it of those sampled foreign companies in Brazil. Henard and Szymanski (2001) identified it as the most important predictor of new product performance. This construct, with its variations, is among those listed by Cooper (1993) and Urban and Hauser (1993).

In the second place was pricing oriented by cost information (mean 8.3), which corroborates Mochtar and Arditi (2001), Forman and Lancioni (2002) and Noble and Gruca (1999a) as to the dominance of this orientation vis-à-vis those of value and competition approaches. However, the difference between the means of pricing oriented by cost information (8.3) and value information (8.1) was small, with

the latter coming in third position. This suggests a strengthening of pricing practices in the foreign enterprises operating in Brazil, compared to the perspective that price − in the marketing mix − receives the least attention (Simon et al., 2006). It may be that so many warnings have had their effect (Dutta et al., 2002; Wyner, 2002; Monroe and Cox, 2001). Pointing to the pre-eminent role of Marketing in the sphere of new products, also in the third place was consumer orientation (mean 8.1).

The construct pricing oriented by competitor information, on the other hand, falls behind the others (mean 7.7), occupying 5th place in the classification. Close to this construct by nature, competition orientation occupies the next step down (mean 7.5). Maybe this reduced attention paid to competitors comes from the Brazilian macroeconomic expansion for the last years or the not too distant past when the Brazilian market was fairly well protected by government measures that worked in favor of companies, even the foreign ones that had operations here; but this is a reality that is long dead and buried.

Technology is more evident in the constructs technological orientation (mean 7.9) and company process characteristics (mean 7.4), which are in the 4th and the 7th places, respectively. A greater emphasis on technological aspects was expected, compared to those of marketing and general strategy. But the respondents were marketing professionals, which might have led them to provide a more favorable evaluation of those constructs that are the closest to their tasks and these normally does not include technology.

At the opposite end of the ranking, the smallest means are for the constructs relating to the business environment: demand uncertainty (mean 5.6) and competitive intensity (mean 5.7). They were perceived as merely moderately unfavorable when it comes to getting new business. This being the case, this is even more justification for a systematic effort on the part of companies at planning new products. The following constructs are relative cost of the new product (mean 6.6) and financial performance of the new product (mean 6.9) The reduced financial performance of new products − a worrying fact − is against the positive trend in profitability on stakeholders' equity presented by the largest Brazilian companies. As far as higher relative costs are concerned, Brazilian deficiencies, referred to as the "Brazil Cost", must be among the causes; these include diverse factors such as the really heavy tax burden and the decrepit and expensive means of transportation.

5.4. Multivariate analysis. Table 2 shows the results of the regression that has new product market

performance (Ind_F4) as a dependent variable. At the 5% level, only the variable market orientation and new product development process (Ind_F1) is significant in the equation. The estimates were not affected by multicollinearity, since the smallest tolerance value was 0.6. None of the cases in the sample had a residual outside more or less three standard deviations. In plotting the studentized residuals (that correspond to t values) of the regression versus the predicted values of the dependent variable (Ind_F4), there is a distance from the void plot, denoting violation of suppositions. In plotting normal probability relative to the dependent variable, there are undesirable swings around the residuals line, albeit not large, when compared to the line of normal distribution.

Table 2. Regression of the factor index 4 on the variables of the other factor indices

Variable			Non-standard coefficient		Standardized beta	t	Sig.
Dependent	Independent		B	Standard error			
Ind_F4	Included	Constant	29.512	5.038		5.858	0.000
		Ind_F1	0.195	0.027	0.579	7.345	0.000
	Excluded	Ind_F2			0.065	0.648	0.519
		Ind_F3			0.171	1.919	0.058
		Ind_F5			0.128	1.497	0.137
		Ind_F6			0.090	1.115	0.267
		Ind_F7			0.012	0.152	0.880
Coefficient of determination = 33.5%			Adjusted coefficient of determination = 32.9%				

Table 3 shows the results of the regression with market performance of the new product (Ind_C4a) as a dependent variable. At the 5% level, process characteristics (Ind_C9a), relative advantage of the new product (Ind_C2) and market characteristics (Ind_C9b) are significant in the equation. In the variables excluded from the regression, the least tolerance is 0.4 (sufficient for a multiple regression). Just one element of the sample (questionnaire 83) had a residual outside more or less three standard deviations. The studentized residuals regression plot versus the predicted values of the dependent variable are distant from the void plot, denoting violation of suppositions, as it does in the normal probability plot (albeit on a smaller scale).

Table 3. Regression of the construct index 4a on the variables of the other construct indices

Variable			Non-standard coefficient		Standardized beta	t	Sig.
Dependent	Independent		B	Standard error			
Ind_C4a	Included	Constant	9.996	4.082		2.449	.016
		Ind_C9a	.144	.037	.352	3.904	.000
		Ind_C2	.298	.112	.217	2.663	.009
		Ind_C9b	.290	.109	.234	2.660	.009
	Excluded	Ind_C1a			.071	.797	.427
		Ind_C1b			.031	.364	.716
		Ind_C1c			-.031	-.379	.706
		Ind_C3			-.011	-.122	.903
		Ind_C5			-.143	-1.720	.088
		Ind_C6			-.045	-.574	.567
		Ind_C7a			-.045	-.521	.604
		Ind_C7b			-.084	-.843	.401
		Ind_C7c			.136	1.310	.193
		Ind_C7d			.156	1.485	.141
		Ind_C8a			.163	1.537	.127
		Ind_C8b			.215	1.686	.095
Coefficient of determination = 37.5%			Adjusted coefficient of determination = 35.7%				

Table 4 shows the results of the regression with financial performance of the new product (Ind_C4b) as a dependent variable. At the 5% level, the variables process characteristics (Ind_C9a), market characteristics (Ind_C9b), and demand uncertainty (Ind_C5) (the latter with a negative sign) are significant in the equation. In the variables excluded, the least tolerance was 0.4. In no case in the sample there was a residual outside more or less three standard deviations. The studentized residuals regression plot versus the predicted values of the dependent variable denotes violation of supposition, as does the normal probability plot (albeit, once more, on a smaller scale).

Table 4. Regression of the construct index 4b on the variables of the other construct indices

Variable			Non-standard coefficient		Standardized beta	t	Sig.
Dependent	Independent		B	Standard error			
Ind_C4b	Included	Constant	11.291	2.816		4.010	.000
		Ind_C9a	7.17E-02	.032	.220	2.223	.028
		Ind_C9b	.337	.102	.341	3.305	.001
		Ind_C5	-.211	.094	-.203	-2.232	.028
	Excluded	Ind_C1a			.117	1.219	.226
		Ind_C1b			.068	.741	.460
		Ind_C1c			.091	.999	.320
		Ind_C2			.082	.900	.370
		Ind_C3			-.027	-.292	.771
		Ind_C6			.060	.677	.500
		Ind_C7a			-.163	-1.755	.082
		Ind_C7b			.085	.783	.435
		Ind_C7c			.121	1.062	.291
		Ind_C7d			.042	.359	.720
		Ind_C8a			.168	1.435	.154
		Ind_C8b			-.006	-.042	.967
Coefficient of determination = 24.4%			Adjusted coefficient of determination = 22.2%				

The final model of the determinants of new product performance for the sample of foreign companies in Brazil, taking separately into account marketing and financial performance is sketched in the Figure 3 (arrows indicate the significant relationships).
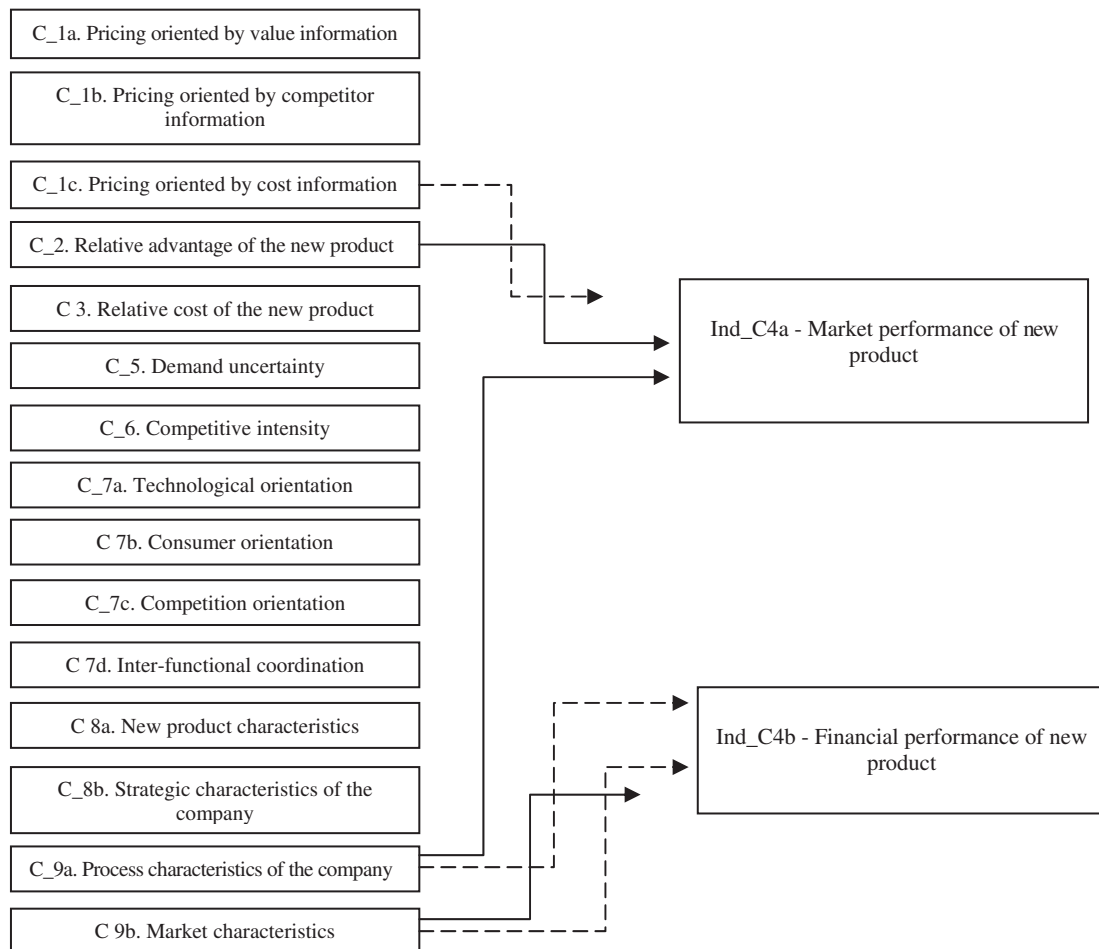

Fig. 3. The final model of the determinants of new product performance, split in its market and financial dimensions, for the sample of foreign companies in Brazil

Conclusions

This research has immediate implications for both professionals in foreign companies doing business in Brazil. To obtain superior performance with new products priority has to be given to: (a) introduce a market orientation into the organization (Day, 1994); (b) develope appropriate processes, which involves such issues as formalized procedures, inter-departmental communication and the incorporation of the specifications of the new product consumer; (c) seek markets with characteristics that are favorable as far as the reaction of competitors is concerned; (d) avoid contexts where demand is uncertain; (e) take the market products that really have a relative advantage in the eyes of the target market. In particular, the great advantage of products launched in Brazil (if this is not an error on the part of the respondents, who exaggerate the reality of their companies as far as this aspect is concerned) becomes auspicious; the higher relative advantage of the new products should lead to a better market performance.

Broadly speaking, the results here differ from those in the pillar studies (Ingenbleek et al., 2004; Henard and Szymanski, 2001). The lesson that in Administration – not everything that is successful in one country is valid for others – sounds opportune. This is a warning, as the major part of Brazil's academic system and managerial practices – like the majority of countries throughout the world – have the United States as dominant source of knowledge. The adoption of foreign frameworks requires a critical focus, with empirical evaluation and potential adjustment being essential for describing and prescribing any complex phenomena.

To be successful in Brazil, international managers should be familiar with the characteristics of the new product development process most influential to the success there. On the academic side, more research about the determinants in Brazil is necessary. This fact has already encouraged a second phase of the research presented here. In general terms, with increasing globalization, understanding national singularities linked to managing a business has become prerequisite to a executive interested in acting on a country, which must be followed by competence to deal with them (Pranee, 2009).

It is well know that countries (developed as well as developing) across the globe are exposed to China and other low-wage countries in terms of both the breadth of products and prices charged. To 'move away' them, it is crucial to raise the efficiency (outputs versus inputs) and differentiation of the offerings through a new product development process adjusted to each national reality. Academics and practitioners in each country search for the specifics determinants in such process and are prepared to qualify students and professionais accordingly.

Limitations

Some of the limitations of this research cannot go without mention. This should help to interpret the findings, as well as to encourage and help subsequent attempts to overcome the restrictions.

Firstly, there may have been an error in the non-response of the executives of the initial sample. Almost 90% of the 1,823 companies approached didn't reply. Perhaps there was reluctance on the part of them to reveal, albeit anonymously, what they do and the results they achieve in relation to new product development.

Secondly, there are no bases for comparing the results here obtained. We had no access to any other study in Brazil of the same type that used similar methods. In the next stage of this research we shall compare the sample profiles of the executives who work for companies with a head office in Brazil and those with a head office abroad. It would be very interesting to repeat the study at intervals of a few years, thereby mapping the changes in the constructs and in the relationships.

Thirdly, the size of the final sample was too small (109 elements) relative to the number of variables analyzed and the multivariate statistical techniques applied.

Fourthly, there were differences as to the dimensionality of the original scales, taken from Henard and Szymanski (2001) and Ingenbleek et al. (2004). But this makes sense, because the integration of the two frameworks must have introduced a degree of overlap among some of the constructs. This is what seems to happen, for example, with the constructs inter-functional coordination (C_7d) and characteristics of company processes (C_9a). Nevertheless, the factor analysis also showed that the constructs constitute in large part different dimensions that must be analyzed as such.

Fifthly, the data came from a single informant and we could not control for the problem of common method variance. We believe the contacted managers were knowledgeable about the content of the questionnaire and the subject matter. Nevertheless, this possible bias should be kept in mind.

Notwithstanding all these realized limitations, a theoretical model is always a representation of the most important elements, a condensation of, a perceived system of the real world (Naert and Leeflang, 1978). In the best situation a model may be an ap-

proximation and, as such, may be useful without being entirely truthful. It's reasonable, therefore, to consider, albeit cautiously, the derived conclusions.

In terms of further research, it would be very interesting to discover whether the profiles and relationships reported above are similar in companies whose head office and/or owners of the capital are in Brazil. The same research design should be implemented in other countries, like Ukraine, discovering similarities that make possible theoretical generalization, but also singularities that make business actions, geared to a particular context, more powerful.

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