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A study of the environment as moderator of the strategy and performance relationship of Brazilian companies

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This paper was designed to identify and discuss the function of Industry level performance, in the relations between corporate strategic factors and performance, following the classic and modern prospects of Industrial organization theory, applied to the Brazilian industrial activities. Objects of this study are Brazilian enterprises, in activity between 1997 and 2006. The results obtained by the study of the proposed models show that this research intend was successfully reached, helping the understanding of the industrial environment role in the relations between corporate strategy and performance, under the vision of the industrial organization economy; Insignificance of the strategy role. A relation between industrial environment and organization performance was also found. Although no moderator role is played by environment, as former proposed in this study, the influence of the corporate strategies appears directly in the interlocking strategies, and indirectly in strategies in terms of size and diversification, through the length of time variations, which in turn influence positively variations in the capital market performance, this way suggesting adoption of an evolutionary perspective, when doing new researches on the theme.

Key words: Industrial organization theory, corporate strategy, performance, Tobin’s Q.

INTRODUCTION

The main aim of this article was to identify and discuss the role of the industry level performance in the relations between corporate strategic factors and organizational performance, following the classic and modern concepts of the industrial organizational theory, in the Brazilian industrial sectors. The specific objectives were: (a) identify and measure the relations between the variables of the representative constructs and (b) identify and measure the relations between the valid constructs variations of the proposed models, with emphasis on the function of the industry level performance as moderator of the relations between strategic factors and organizational performance.

Although the industrial environment was not identified as a moderator of the relations between corporate strategy and performance, a direct relation between industrial environment and organizational performance was found. Another result is the identification that the influence of corporate strategies appears directly in the interlocking strategies, and indirectly in strategies in terms of size and diversification, through the length of time variations, which in turn influence positively variations in the capital market performance, this way suggesting adoption of an evolutionary perspective, when doing new researches on the theme.

To resolve and justify this work propositions, it was necessary to characterize the macro-economic context existing when the data were obtained: the second half of the 1990’s and the period from 2000 to 2006, because of the great changes in the Brazilian economic and Indus-
trials sectors, and the influence of external factors on the country industrial production.

The macro-economic context studied in this work is characterized by an intense turbulence. The demand for modernization and technological development of the productive capacity and the relationship with old and new competitors made the Brazilian organizations take differing postures. Their investments were made to adequate themselves to their former environment and reach a performance higher than the usual, resulting in a lot of firms with some similar and others very different characteristics.

Based on the conceptual perspective that the corporate strategy have a direct effect on organizational performance and that it is established taking with reference the competitive environment, the hypothesis formulated in this research states that the environment is a moderator of the relations between corporate strategy and performance.

\[ H_1: \text{The industry environment is a significant moderator of the corporate strategy and organizational performance relations.} \]

In order to test the proposed hypothesis, two multilevel models are presented subsequently. The first one considers the environment as a moderator of the relations between corporate strategy and performance and the existence of a direct effect of environment on performance. The second one considers the non-existence of a moderator effect of environment on corporate strategy, but maintains the direct effect on performance. Following the models specification, theoretical references are presented.

\[ Y_{ij} = \pi_{0ij} + \pi_{1ij} (\text{ONDA}) + \epsilon_{ij} \]
\[ \pi_{0ij} = \beta_{00j} + \beta_{01j} (\text{TAMAN}) + \beta_{02j} (\text{DIVPROD}) + \beta_{03j} (\text{INVATIV}) + \beta_{04j} (\text{ESTRUTK}) + \beta_{05j} (\text{RELAC3}) + \beta_{06j} (\text{RELAC2}) + \beta_{07j} (\text{RELAC1}) + \epsilon_{0ij} \]
\[ \pi_{1ij} = \beta_{10j} + \beta_{11j} (\text{TAMAN}) + \beta_{12j} (\text{DIVPROD}) + \beta_{13j} (\text{INVATIV}) + \beta_{14j} (\text{ESTRUTK}) + \beta_{15j} (\text{RELAC3}) + \beta_{16j} (\text{RELAC2}) + \beta_{17j} (\text{RELAC1}) + \epsilon_{1ij} \]
\[ \beta_{00j} = \gamma_{000} + \gamma_{001} (\text{RECTOT}) + \gamma_{002} (\text{RVLIQ}) + \gamma_{003} (\text{RBVPI}) + \gamma_{004} (\text{RBVMER}) + \gamma_{005} (\text{OREOP}) + \mu_{00j} \]
\[ \beta_{01j} = \gamma_{010} + \gamma_{011} (\text{RECTOT}) + \gamma_{012} (\text{RVLIQ}) + \gamma_{013} (\text{RBVPI}) + \gamma_{014} (\text{RBVPI}) + \gamma_{015} (\text{OREOP}) + \mu_{01j} \]
\[ \beta_{10j} = \gamma_{100} + \gamma_{101} (\text{RECTOT}) + \gamma_{102} (\text{RVLIQ}) + \gamma_{103} (\text{RBVPI}) + \gamma_{104} (\text{RBVPI}) + \gamma_{105} (\text{OREOP}) + \mu_{10j} \]
\[ \beta_{11j} = \gamma_{110} + \gamma_{111} (\text{RECTOT}) + \gamma_{112} (\text{RVLIQ}) + \gamma_{113} (\text{RBVPI}) + \gamma_{114} (\text{RBVPI}) + \gamma_{115} (\text{OREOP}) + \mu_{11j} \]
\[ \beta_{12j} = \gamma_{120} + \gamma_{121} (\text{RECTOT}) + \gamma_{122} (\text{RVLIQ}) + \gamma_{123} (\text{RBVPI}) + \gamma_{124} (\text{RBVPI}) + \gamma_{125} (\text{OREOP}) + \mu_{12j} \]
\[ \beta_{13j} = \gamma_{130} + \gamma_{131} (\text{RECTOT}) + \gamma_{132} (\text{RVLIQ}) + \gamma_{133} (\text{RBVPI}) + \gamma_{134} (\text{RBVPI}) + \gamma_{135} (\text{OREOP}) + \mu_{13j} \]
\[ \beta_{14j} = \gamma_{140} + \gamma_{141} (\text{RECTOT}) + \gamma_{142} (\text{RVLIQ}) + \gamma_{143} (\text{RBVPI}) + \gamma_{144} (\text{RBVPI}) + \gamma_{145} (\text{OREOP}) + \mu_{14j} \]
\[ \beta_{15j} = \gamma_{150} + \gamma_{151} (\text{RECTOT}) + \gamma_{152} (\text{RVLIQ}) + \gamma_{153} (\text{RBVPI}) + \gamma_{154} (\text{RBVPI}) + \gamma_{155} (\text{OREOP}) + \mu_{15j} \]
\[ \beta_{16j} = \gamma_{160} + \gamma_{161} (\text{RECTOT}) + \gamma_{162} (\text{RVLIQ}) + \gamma_{163} (\text{RBVPI}) + \gamma_{164} (\text{RBVPI}) + \gamma_{165} (\text{OREOP}) + \mu_{16j} \]
\[ \beta_{17j} = \gamma_{170} + \gamma_{171} (\text{RECTOT}) + \gamma_{172} (\text{RVLIQ}) + \gamma_{173} (\text{RBVPI}) + \gamma_{174} (\text{RBVPI}) + \gamma_{175} (\text{OREOP}) + \mu_{17j} \]

The second model shows that the organizational performance is suffering the influence of the time variation (Level 1) under influence of the corporate strategies (Level 2). The global performance of the industry enterprises (Level 3) moderates the time variations influence and pressures the average performance (Intercept) under the influence of the corporate strategies (Equation 2):
A cross-level, top-down approach was used in the multilevel study to estimate the models parameters, as stated by St. John (2005), who considers that the higher level constructs influence directly or indirectly the lower level ones.

The theoretical references that guided the research proposition and results discussion are presented in the subsequently. Its structure follows the hierarchy of the questions as established in the research perspectives, and also in the models proposed.

Theory

Industrial organization perspective

The industrial organization theory is based on the theories of monopolistic competition and of oligopolies, always considering the aspects related to the enterprise organization and decision process in its market structure (Grether, 1970). This author states that the market structure has to be always analysed as the point of view of a seller or a buyer, including all aspects of their business policies, and also of all sellers or buyers that, potentially may influence their sales.

The initial paradigm of the industrial organization theory, also referenced by the Bain studies (1959), states that the industrial structure decides the individual behaviour of the enterprises and that theirs global behaviour determines their performance in their market. As stated by the author, his work is aimed only on the enterprises actuation in the market, without caring for internal aspects.

One’s more, on this ‘classic perception of the industrial organization theory’, greatly influenced by the Bain studies: Porter (1981) highlights an interesting point, currently revised: the fact that the industry structure decides the strategy, that, in turn, decides the performance rate of the enterprise may let one forget about the strategy and concentrate the researches directly on the industrial structure to explain the enterprises performance variations.

The possibility to exclude the strategy in these researches is minimized by the incorporation of the Oligopolies theory, “study of the results of competition in a market in which one enterprise action may affect its competitors” (Porter, 1981:611), and the incorporation of the game theory to the theory conceptual base, demonstrating its development—modern perspective. Porter (1981) points out that as a result of this development, the industrial organization moves from being a mere tool in the strategy formulation to be one valuable concept in the researches on strategies.

In a study of Romanian firms, Gavrea et al. (2012) identified that the external environment has a significant impact on organizational performance, and that more competitors will have a negative impact on performance and the high level of uncertainty will lead to higher performance.

As explained by Caves (1980), the managers’ perception of the market decides the type of corporate strategy that, planned in long terms, will maximize the winnings, and also determine the organization structure, the decision rules and the remuneration policy, to reach and maintain this strategy.

According to Gani and Jermias (2009), the alignment between strategy and governance structure in relation to the competitive environment conditions will have performance implications. The results of data analysis pointed out to different relations in dynamic and stable environments.

Corporate strategies

Vance (1970) state that the corporate strategy is strictly bound to the resources allocation as a way to achieve an objective, and, independent of where, when and how it was conceived and processed, the knowledge acquired by experience will give the enterprise a wide guidance, telling its managers when to act. With this knowledge, the enterprise will be apt to formulate its future, including products, markets, income, obligation-level, assets structure, and growth projections.

According to Caves (1980), the corporate strategy is directly bound to the enterprises competitive surroundings, characterized by imperfect competition or differed oligopoly, because of the making of heterogeneous products out of differing production processes. As proposed by Gani and Jermias (2009), when the corporate strategy is considered in terms of product differentiation, that leads to more diversified portfolios, and cost leadership, that is based on more concentrated product lines, the relations between strategy...
and performance was identified as significant for organizations that compete on a dynamic environment.

**Diversification strategy**

According to Stigler (1983) on industrial competition, every resource in an industry allows equivalent winnings, but not greater, that it would allow if used in other industry. But, to satisfy their personal interests, the enterprises owners try channelling their resources in greater return rate industries, migrating to them and letting down the lesser attractive ones. This resources movement for better results make the enterprises adopt the business and product diversification strategy, amplifying their actuation areas and financial return sources.

Under the corporate strategy aspects, the diversification means that the enterprise is acting in various industries, to reduce the uncertainties and difficulties normally suffered by enterprises with only industrial product.

The diversification in businesses with no relation one to another (conglomerate) is meant to capitalize the opportunity of winnings in any industry. When this is done in related sectors, it means to operate in similar or complementary businesses, winning synergic benefits with lesser risks and uncertainties (Wright et al., 2000).

According to Montgomery and Wernerfelt (1988), the more the enterprise diversify, the farer it goes from its principal business, the lesser will be its efficiency and the competitive benefits of its productive factors, reducing its winnings in the length of time. The results of their researches confirm the existence of a negative relation between diversification level and performance, due to the enterprise management complexity and scale benefits reduction.

**Enterprise dimension**

Why study enterprise dimensions, if it reduces its transaction costs? Coase (1937) states that, in their growth, the enterprises are increasing their additional intern organization costs to the level of open market transactions, or even the organization costs of another entrepreneur, turning difficult or even impossible a better use of the production factors.

If the enterprise is able to maintain its expansion costs under the open market commercialisation costs, and not bigger that its whole organization costs, it will be such as a market transaction. So, the enterprise will be bigger when: (a) the organization costs stay low even when increasing the organized transactions; (b) there are few management mistake possibilities; (c) bigger is the reduction of the production prices for greater enterprises (Coase, 1937).

According to Pfeffer (1972), the organization growth facilitates its adjustment to the environment, because greater enterprises are able to better absorb errors, influence the environment, and also diversify, reducing their dependence on products for some specific industry. Under an internal organization point of view, Holmstrom and Tirole (1989) highlights that traditional theories approaches the size of organizations under a technology based perspective, mainly those that are capable of generating scale economies and that marginal costs establish the optimal size of the organization.

Jain (2012) proposed that organizational size have a negative correlation with the organizational performance. The research results confirm the hypothesis presented and a scope advantage was identified for organizations that compete on a fast changing market.

The bigger the enterprise, greater is its managing complexity, obliging it to structure a management-governance structure able to solve internal processes and also relations with other organizations-interlocking, as shown in another this paper.

**Governance structure and interlocking**

Another factor of strategic choice is the governance structure adopted to reduce the agency costs and the uncertainty about the alignment of its interests and the managers’ decisions about corporate strategy. Pfeffer (1972) means that the board of directors composition reflects the organization perception about the various manners to treat the other industries and enterprises in its action area, that may be done in two mutually excluding forms: (a) through efficient productive processes to maximize the resources utilization and maintain or even increase the business and (b) through favourable businesses guaranteed by political relations with others market components, by means of formal and long-life contracts, or though interlocking strategy when one of the organization member possess formal relations with other enterprise, as member of the board, of the executive directory or of both.

Bazerman and Schoorman (1983) state that the enterprises, through interlocking relations, may gain information about market prices, publicity directions and research and development investments, when having horizontal relations with the concurrent; and when having vertical relations with suppliers, reduce the uncertainty about obtaining recourses and, controlling the atmosphere, diminish the transaction costs.

Gani and Jermias (2009) identified a positive effect of governance structure, expressed by means of board composition and independence, on organizational performance, when considering organizations that adopt a differentiation strategy. The intensity and duration of this interlocking strategy are ruled by the short- or long-time perspective of the managers, and the more or less
aggressive investments made in recourses; however, both themes are approached subsequently.

**Aggressive strategy posture and short- or long-time perspective**

Ferrier (2001) developed a model on competitive interaction process, describing the importance of organizational and marketing characteristics to supply and limit the forces that may influence considered aggressive competitive actions, their volume, duration, complexity and unpredictability, and discover how this process influences the economical-financial performance of the enterprises, because of their cost in material, human and financial recourses. This aggressive competition is directly related to the enterprises adaptation to the concurrency environment conditions, and strictly bounded to their intern policies of active investments and operations financing. Same as the prospective management enterprises, those called as aggressive minded invest the greater part of their recourses in research and development, hoping to win a bigger market share and conquer new activity spaces, but also submit themselves to risky situations.

As stated by Almazan and Molina (2005), enterprises actuating in the same industry may adopt different third-party capital debt levels, on account of their management more or less aggressive competitive posture, as also different proportions between short- and long-time debts. 

Fombrun and Ginsberg (1990) state that enterprise belligerency involves not only an intensive resources allocation but also risks in their use promoting the novelty and expanding it in the market. This way, different aggressive levels determine the enterprises capacity to discover new markets before their rivals, and this policy is strictly related to the risk exposition limits these enterprises establish.

**Performance**

Rowe and Morrow (1999) state performance accounting measuring is more satisfactory for a short time perspective, beyond giving information about the enterprise history. On other side, the performance measuring based on capital market information reflects the expectative about the enterprises capacity to create more value.

The authors found that, from the 374 articles published in the Strategic Management Journal between 1980 and 2004, 190 (52%) used accounting measures to represent the organizational performance, and 64 (34%) of them made use of the return on assets as proxy for performance, representing 17% of the published articles. The market share was used as proxy for performance in 7 articles, and the Tobin’s Q in 15 studies.

Wernerfelt and Montgomery (1988) used the Tobin’s Q as proxy for performance and identified an important participation of the industry effects in its variations, as Schmalensee (1985) did, and also that less diversified enterprises have a tendency to show a better performance level. The same concluded by McGaham (1999), identifying constancy in the industry effect on performance, especially when measured by the Tobin’s Q.

Lloyd and Jahera (1994) refer to the Wernerfelt and Montgomery (1988) study, stating that the advantage of the Tobin’s Q on the accounting measures is to minimize the effects and biases of differing accounting measuring. The authors, in their approach to the relations between diversification strategy and long time performance, used the Tobin’s Q as performance measure and did not identify any effect of diversification in the big enterprises of the sample. After this exposition of the theme theoretical bases, come next the methodological development aspects of data collection, analysis and interpretation of the results, as also the evaluation of the proposed models parameters.

**METHODOLOGY**

The multilevel modelling, through the HLMS5.04 ® software was adopted to estimate the proposed models parameters, and evaluate the rejection or not of the study hypothesis. Next, comes the explanation about the studied models composing variables measuring operation.

**Variables definitions**

The concept to use the representing industry environment variables founds support in the Bain (1959) perspective, stating that the performance level of the industry in which it pertains rules the enterprise performance level. The variables were obtained from the database of the Brazilian Institute of Geography and Statistics, and its methodology was:

(a) RECTOT: percentage variation between the total income periods, sum of the operational and non-operational incomes, with the total liquid sales incomes;
(b) RVLIQ: percentage variation between the periods of the liquid sales incomes, which are the differences between the total gross income and all deductions;
(c) The variable RBVPI: variable percentage between gross income of industrial products sales;
(d) RBVMER: variable percentage between merchandise sales gross-income periods—coming out of the sale of merchandises or goods bought by the enterprise for resale without transformation; and (e) OREOP: percentage variation between periods of other operational incomes, as industrial propriety licences, franchises, recuperation of operational costs from earlier periods, insurance bonuses, refunding of frauds and robberies, etc.

As to the variables used as representing the corporate strategy, ESTCORP —, the (a) debt profile—ESTRUTK—reflecting the policy of short or long time obligations adopted by the enterprise, was calculated as the proportion of the short time debts in the total debts; (b) The aggressive profile was calculated through the level of assets-investments, INVATIV as the ratio between the resources used to buy fixed-assets and the total of assets; (c) the enterprise...
size, TAMAN was estimated through the logarithmic transformation of the enterprise total assets at end of the fiscal year, following the Hansen and Wernerfelt (1989) and Mendes-da-Silva and Pontual (2005) methods; (d) the diversification level, DIVPROD was found through the Herfindahl-Hirschman index for the sales concentration per product-line, obtained through the summing of the contribution of each product-line squared percentage to the total gross invoice; the smaller the index, the more diversified is the enterprise. The necessary data were extracted from the yearly information given by the enterprises to the Brazilian Securities and Exchange Commission.

The representative variables for interlocking strategies were:

(a) RELAC 1: number of individuals, members of the directory, with formal bounds to other organizations;
(b) RELAC 2: number of individuals, only of the board of directors, with formal bounds to other organizations and;
(c) RELAC 3: number of individuals actuating not only in the directory but also in the board, and with formal bounds to other enterprises.

The data on directory and boards of directors, as also the identity of their members, were obtained from the Brazilian Securities and Exchange Commission.

The organizations performance was measured using the Tobin's $\pi$, calculated dividing the sum of the ordinary shares, the preferential ones and the accounting value of the total debt through $Q$, calculated dividing the sum of the ordinary shares, the preferential ones and the accounting value of the total assets, as proposed by Chung and Pruitt (1994).

Data analysis

Data analysis shows the various models processing results, initially the characterization of the analysed sample and next the verification of the multilevel approach adequacy to the performance variation analyses of the performance variables.

Sample characterization

Brazilian enterprises in activity between 1997 and 2006, with accounting information in Economatica® database for three consecutive years or more, with three-monthly information published in the Brazilian Securities and Exchange Commission, and also shares negotiated in those years, were selected as part of the sample. Six nine enterprises were initially selected, of which 6 were excluded after identification of discrepancies through the Leverage statistical values analyse with significance level of 0.05 and less than three periods to analyse. The sample ended with 63 enterprises in 17 subsectors, totalising 505 cases.

Adequacy of the multilevel approach

Adjustment comparisons of each model with the null model adjustment were realized, as adopted by Luke (2004). The evaluation of the models through the interclass correlation index (ICI), measuring the variance explained proportion in the dependent variable corresponding to each hierarchic level (Luke, 2004) points out the viability to estimate the parameters in three levels, with significant variance percentage between the levels without noteworthy concentration in one of them.

First a null model (Equation 3) was used to evaluate the applicability of the hierarchic perspective to the enterprises performance determining factors analyse:

$$ Y_{ij} = \pi_{0ij} + \epsilon_{ij} $$

$$ \pi_{0ij} = \beta_{00j} + r_{ij} $$

$$ \beta_{00j} = \gamma_{000} + \mu_j $$

Where: $Y_{ij}$ = dependent variable; performance. $\pi_{0ij}$ = average performance for level 1; $\beta_{00j}$ = average performance for level 2; and $\gamma_{000}$ = average performance for level 3.

Both models had Deviance values smaller than the null model had, and their differences are statistically significant (p<0.01). Same wise, the Akaike Information criterion (AIC) index, calculated for the 1 and 2 models, is smaller than the null model one. According to these, one may state that those are adequate to analyse the relations between the studied enterprises performance factors, under a hierarchic perspective. The explicative capacity of the models, found through the difference between the null model variance component (VC) and those of models 1 and 2, reinforce this affirmation (Table 1).

RESULTS AND DISCUSSION

Adjustments between the models were compared to verify the models adequacy to the proposed hierarchic relations, as processed by Luke (2004). The model 2 had a Deviance value smaller than the model 1, with a statistically significant difference (1,480.864 and 1,580.366, respectively). The AIC index for model 2 is smaller than the one for model 1 (1,646.366 and 1,672.864, respectively) (Table 2).

On base of the models adjustments, one may conclude

### Table 1. Compared explicative capacity.

<table>
<thead>
<tr>
<th>Comparison criterions</th>
<th>Models</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Null</td>
</tr>
<tr>
<td>Variance component (VC) – level 1</td>
<td>2.140</td>
</tr>
<tr>
<td>Difference VC Level 1</td>
<td>------</td>
</tr>
<tr>
<td>Variance component (VC) Level 2</td>
<td>2.054</td>
</tr>
<tr>
<td>Difference VC Level 2</td>
<td>------</td>
</tr>
<tr>
<td>Variance component (VC) - Nivel 3</td>
<td>0.009</td>
</tr>
<tr>
<td>Difference VC Nivel 3</td>
<td>------</td>
</tr>
</tbody>
</table>

Non-explained variance reduction. Negative values represent explicative capacity reducing.

### Table 2. Comparison between models null, 1 and 2.

<table>
<thead>
<tr>
<th>Comparison criterions</th>
<th>Models</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Null</td>
</tr>
<tr>
<td>Deviance</td>
<td>1,951.575</td>
</tr>
<tr>
<td>Difference – deviance</td>
<td>------</td>
</tr>
<tr>
<td>Evaluated parameters</td>
<td>4</td>
</tr>
<tr>
<td>AIC</td>
<td>1,959.575</td>
</tr>
</tbody>
</table>

*Qui-squared test–significant to 1%.
that the model 2 has a better adjustment than the number 1. With these results, we began an analysis of the independent variables relations composing the model selected through the best adjustment model (model 2) and the variable representing the performance.

Neither the relations between the various variables representing the industry performance nor the corporate strategies of the studied enterprises were observed, in conformity with the model adopted, measured by the Tobin’s Q. This consideration follows the Bain (1959) perception presuming the irrelevance of the corporate strategies as mediators of the relations between environment and performance.

As shown in Table 3, positive and statistically significant relations were estimated between the variables RECTOT and RBVMER, showing the performance of the industry (AMBIND), and the capital market average performance of the studied organization (INTERCEPTO) (18.71145; p<0.05 and 0.83958; p<0.05). The relation between RVLIQ and INTERCEPTO showed a negative relation, statistically significant (-20.61334; p<0.10). As could be approached in the Table 3, relations between the industry environment variables and a performance variation in the length of time was not found significant (ONDA).

About the level 2, as shown in the Table 4, a negative and statistically significant relation was identified between the variable RELAC2, representing the corporate strategy in terms of interlocking and the average performance of the studied organizations, as measured by the INTERCEPTO (-0.21763; p<0.05), showing the tendency for insignificant results in the capital market for enterprises possessing in their board of directors persons with formal relations with other organizations. There is a positive performance tendency for enterprises maintaining in their directory, persons with formal relations with other organizations (RELAC1) (0.32426; p<0.01).

The organizations size variation shows a negative and statistically significant relation with the length of time (ONDA) (-0.09638; p<0.05), as also the diversification level chosen by the enterprises (DIVPROD) (-0.00368; p<0.10).

According with the Table 5, there is a positive and
Table 6. Research main results.

<table>
<thead>
<tr>
<th>Items</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research models</td>
<td>Verified the Multilevel approach adequacy to the research problem</td>
</tr>
<tr>
<td></td>
<td>No industry environment moderation was found in the relations between corporate strategy and performance.</td>
</tr>
<tr>
<td>Dependent variable performance in the capital market</td>
<td>Interlocking corporate strategies were identified as direct influences in the performance variation, and the in terms of size and diversification strategies as indirect influences.</td>
</tr>
<tr>
<td></td>
<td>Proved the positive influence of the in the length of time variation on performance.</td>
</tr>
</tbody>
</table>

statistically significant influence of the variable ONDA in the performance of the studied enterprises (0.18077; p<0.01) that indicates a growing performance tendency, measured by the variable Tobin’s Q, in the length of time.

Conclusion

The results obtained demonstrate that the general objective of this research was successfully reached and contributed to the understanding of the industry environment role in the relations between corporate strategy and performance, on the perspective of the industrial organization economy irrelevance of the strategy role. These results are resumed in the Table 6.

A relations structure between the industry environment and the enterprises performance was also identified, in tune with the proposition of Porter (1981) to direct the industrial organization theory focus on enterprises and industries as way to understand the performance level variations. Although the environment do not play a moderator role (a hypothesis suggested in the research), the corporate strategies influence is acting directly through the interlocking strategies and indirectly through the size and diversification strategies, by the length of time variation, influencing positively the variation in the capital market, suggesting the adoption of an evolutionary perspective in its study, when studying new researches.

The interlocking strategies effect on performance reinforces the perspective that organizations must establish relations with organizations that could provide access to financial resources, raw materials, technology and information in order to obtain competitive advantages. Another result that should be approached, is the role played by diversification strategy on the determination of the organization’s performance level. According to the parameters estimated, the more diversified organizations presents a better performance level than the less diversified ones, reinforcing the relevance of the access to technologies and raw materials that could be facilitated by the adoption of the interlocking strategies, mainly if the technologies and raw materials are capable of create and maintain competitive advantages through time.

REFERENCES

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