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Agricultural Bulk Carriers in Mato Grosso from the Strategic Orientation Point of View

Transportadoras de Granéis Agrícolas de Mato Grosso sob o Ponto de Vista da Orientação Estratégica

Graneleros agrícolas en Mato Grosso desde el punto de vista de la orientación estratégica

Virgil Prado Sogabe [1]
vergiliops@gmail.com

Jose Iderlan da Silva Agenor [1]
e-mail

Roberto Giro Moori [2]
roberto.moori@mackenzie.br

Esther Felix [3]
ester.felix@mackenzie.br

1 – FACC-UFMT – Universidade Federal de Mato Grosso
2 – Pesquisador Sênior CNPq
3 – Universidade Presbiteriana Mackenzie

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Abstract:

The state of Mato Grosso stands out in Brazilian agribusiness but loses competitiveness due to insufficient logistics infrastructure and the high road transport cost. Such a situation demands high levels of performance and *competitiveness from companies in the sector through the definition of strategies. Another factor constantly related to superior performance is the ability to innovate. The general objective of this work is to estimate the relationship between different strategic orientations and innovation capability. Then, we will estimate this impact on road carriers' competitive performance in the state of Mato Grosso. To this end, an empirical, theoretical model proposed by Grawe et al. was adapted and applied. al. (2009), measured using Structural Equation – PLS-SEM, confirmed two hypotheses regarding strategic orientation and innovation capability.*

Keywords: *agribusiness; competitiveness; performance; strategic orientation; innovation; costs; Resources and Capacities; RBV.*

Resumen:

El estado de Mato Grosso se destaca en el agronegocio brasileño, pero pierde competitividad debido a la insuficiente infraestructura logística y al alto costo del transporte por carretera. Tal situación exige de las empresas del sector altos niveles de desempeño y competitividad a través de la definición de estrategias. Otro factor que se relaciona constantemente con un rendimiento superior es la capacidad de innovar. El objetivo general de este trabajo es estimar la relación entre las diferentes orientaciones estratégicas y la capacidad de innovación. Luego, estimar el impacto de esto en el desempeño competitivo de los transportistas por carretera en el estado de Mato Grosso. Para ello, se adaptó y aplicó un modelo teórico empírico propuesto por Grawe et Éx. al. (2009), el cual medido por medio de la Ecuación Estructural – PLS-SEM confirmó dos hipótesis sobre la orientación estratégica y la capacidad de innovación.

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Palabras clave: *agronegocios; competitividad; desempeño; orientación estratégica; innovación; costos; Recursos y Capacidades; RBV.*

1. Introduction

Brazil is consolidating itself as one of the world's largest grain producers and exporters. Brazilian agribusiness stands out for producing commodities aimed at export, and, year after year, this production has led the country to advance in terms of productivity and technology in the field, increasing its global competitiveness. However, when analyzing Brazilian performance, the advances achieved in the field are neutralized by the insufficient logistics infrastructure and the high production distribution costs.

According to data from the Center for Advanced Studies in Applied Economics (CEPEA), Brazilian agribusiness accumulated growth of 1.91% in 2014, much higher than the 0.58% of the economy as a whole. The importance of agribusiness for Brazil is evident when we see that in 2013, 22.5% of the GDP and 43% of the country's surplus were due to the sector's good performance (CEPEA, 2013 and 2014).

In this scenario, the state of Mato Grosso - MT stands out as it is responsible for 24% of national production, reaching 2% of world grain production. The state stands out for its production of soybeans, which corresponds to 9% of world production; corn, which corresponds to 22% of the Brazilian output; cotton, which accounts for 51% of national production, and with a cattle herd of 10 animals per inhabitant, while the national average is 1 animal per inhabitant (IMEA, 2013).

The state of Mato Grosso stands out in the Brazilian and global agribusiness scenario but loses competitiveness due to insufficient logistics infrastructure and a high-cost transportation model (IMEA, 2013). According to the CNA (2013), the results could be even better if not for the costs and waste generated by infrastructure, or the lack thereof in certain regions, in Brazilian logistics. According to the CNT (2014), 49.9% of Brazilian highways have average, poor or very poor pavement. This factor significantly impacts costs, primarily fuel and fleet maintenance.

According to data from the CSCMP, logistics costs in Brazil are around 10% of GDP. Companies also have high costs: 8.5% of annual revenue is spent on logistics, transportation accounts for 4.6%, storage for 2.0% and inventory for 1.9% (ILOS, 2012). Despite this, Brazil has managed to maintain a growth rate in the transportation sector of around 2.3% per year.

The sector's problems are constantly mentioned to justify the "Brazil cost," low competitiveness, the government's low management capacity, and the economic recession, among other things. This situation shows a range of business, investment and improvement opportunities to be explored in the transportation sector.

In Brazil, a country of continental dimensions, road transport is responsible for around 60% of cargo movements (CNT, 2014; ILOS, 2014). Studies by GEIPOT

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(1997) show that this mode is only recommended for transport up to 500 km; above that, other more efficient modes, such as rail or waterway, are recommended. Since the country does not have rail or waterway infrastructure, it is necessary to optimize the use of road transport.

The state of Mato Grosso, located in the Central-West region of the country, is, on average, 2,000 km from the main export ports and, therefore, has a high demand for long-distance transportation. However, the capacity of the railway serving the state is insufficient to meet all demands. The same occurs with the waterway that operates only seasonally on the Paraguay River and the high average transportation time by these modes. Thus, most of the production movement is done by road. This, in addition to the impacts on costs, is reflected in the high traffic of trucks on the roads and the consequent increase in the number of accidents (IMEA, 2013).

Despite not being the most suitable, this situation shows that road transport is the most widely used and that its activities are constantly growing. Therefore, this sector must also achieve high levels of performance and competitiveness.

Organizations' competitiveness in highly competitive scenarios requires establishing well-defined strategic guidelines to achieve satisfactory performance and efficiency results. Another factor constantly related to superior performance is innovation capability, which reflects the company's ability to generate competitive advantage (GRAWE, 2009; FERRARESI et al., 2014). Grawe et al. (2009) propose a model that relates three possible strategic orientations, namely customer orientation, competitor orientation, and cost orientation, with the capability of innovation in services and market performance.

Therefore, the following question is proposed: What is the relationship between strategic orientation, costs, competitors or customers, and the innovation capability for the market performance of transport agents in Mato Grosso?

The general objective of this study is to estimate the relationship between strategic orientation and innovation capability and its impact on the competitive performance of road transporters in the state of Mato Grosso. Specifically, it is expected to estimate the relationship between strategic orientation towards the customer, strategic orientation towards the competitor, and strategic orientation towards costs on the development of innovation capability. Finally, it is expected to estimate this capability's impact on transporters' market performance.

Identifying the strategic orientation of the State's transport agents and their organizational capacity to generate innovations for superior performance can provide indications of which strategic orientations can bring better performance (DAY, 1994; GATIGNON; XUEREB, 1997; NOBLE et al., 2002; LOPEZ-CABARCOS et al., 2015; OZKAYA et al., 2015).

This study applies the model proposed by Grawe et al. (2009). It is quantitative and exploratory research, with the application of a questionnaire in the form of a survey of transport agents in Mato Grosso. The research was conducted through an online questionnaire and physical questionnaires. This article consists of an introduction, a theoretical framework, and a methodology for the research.

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Finally, there is the presentation and analysis of the results and the final considerations.

2. Theoretical Basis

The following theoretical framework aims to contextualize better the reality of logistics and agro-industrial cargo transportation in Brazil, particularly in Mato Grosso. It then presents the concepts of strategic orientation, service innovation capability and performance.

2.1 Logistics and Transportation of Agro-Industrial Cargo in Brazil

According to Ballou (2006), a country's level of development can be analyzed based on its existing logistics infrastructure. As economic activities expand, the flow of people, goods, resources, etc. increases. According to the author, Brazil went through a period of growth that has now stabilized because the country's infrastructure did not expand at the same speed as economic development.

However, this is not a recent problem. The country's infrastructure is a historical problem. Since the 1950s, investment in the automobile industry has been prioritized. As a result, more investment has been made in road transport, which has considerably lower implementation costs than other modes (ILOS, 2014). As a result, the Brazilian transportation matrix is unbalanced and focused on road transport. Table 1 compares Brazil's transportation matrix with the United States, another country with continental dimensions like Brazil.

Table 1: Participation of modes in the transport matrix between Brazil and the USA

Modal	Brazil	United States
Road	67%	31%
Railway	18%	37%
Waterway	11%	10%
Pipeline	3%	21%
Air	0.04%	0.3%

Source: ILOS, 2014.

Each type of transport has specific service characteristic attributes that can be strategically combined to achieve the organization's objectives in terms of service level or cost. According to (BOWERSOX; CLOSS, 2001), rail and water transport modes are the most suitable for transporting large volumes over longer distances, ideal for low-value-added products. Meanwhile, road transport is the most appropriate for short distances and low volumes, as its fixed costs are low and variable costs are higher. This situation is what makes the Brazilian transport matrix inadequate.

According to Martins et al. (2005), the main factors that influence the costs of road freight in Brazilian agribusiness are the distance to be traveled, which in the case of MT easily exceeds the indicated 500 km; the seasonality characteristic of agriculture, the harvest season is usually the period of most significant demand for transport, since there is a shortage of storage; and finally, the negotiation

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between the freight taker and the carrier.

The infrastructure, the transportation matrix and the formation of freight prices denote the importance of road transportation for Brazil and its relevance for agro-industrial activities. Therefore, it is essential to understand the strategic orientation of transport agents and their search for innovation to ensure competitive advantage.

2.2 Strategic Orientation

Strategy is a series of integrated and coordinated actions and commitments that aim to exploit core competencies and gain competitive advantage. When defining a strategy, a company chooses ways to compete, explaining what it intends and does not intend to do (PORTER, 1996; HITT, IRELAND AND HOSKISSON et al., 2011).

Barney (1991) adds that a company has a competitive advantage when it has a strategy that increases efficiency and effectiveness, and this is valuable, rare and difficult to imitate. For Ferraresi et al. (2014), strategic orientation is the basis that a strategy provides for positive results in the long term.

Bowman in Faulkner Campbell (2006) defines this orientation as strategic assets, specifically cultural strategic assets, or in the author's words, "the special way things are done" in the organization; it includes behavioral aspects such as creativity, loyalty, cooperation, teamwork and commitment. Still, according to the author, strategic assets are necessary for an organization to enter a given market and produce above-average results when combined with entry assets.

As proposed in the model by Grawe et al. (2009), this study considers three possible orientation patterns that the company can adopt to achieve long-term success, namely:

a) Customer orientation: This organizational culture facilitates understanding of target customers and creates constant value for the customer. Companies with this culture develop strategic intelligence to map current and future customer needs and disseminate this information within the organization. Employees know who the customers are and how to serve them, and when they learn something new about the customer, they quickly share the information with other members of the organization. The key point of this orientation is to see the supply chain from the customer's point of view (PORTER, 1989; SLATER et al., 2006).
b) Competitor orientation: In this type of orientation, the organization focuses on developing an intelligence capable of identifying the strengths and weaknesses of competitors in the short and long term. Organizations with this type of orientation develop a “deep” relationship of knowledge of primary and potential competitors to acquire the knowledge necessary to face or exceed competitors' capabilities. Developing knowledge is not only the manager's responsibility, but all employees are committed to knowing the products and services of competitors. The key point of this orientation concerns discovering all the sources that consumers can use

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to satisfy their needs (PORTER, 1991; GRAWE et al., 2009).

c) Cost orientation: This differs from the previous two because its focus is internal. Cost orientation leads the organization to pursue efficiency throughout its value chain. In this case, intelligence seeks to acquire in-depth and specialized knowledge to provide products and services with total concern for the costs involved. The organization offers solutions with attractive prices or additional attributes without increasing prices. Employees seek to eliminate costs in all areas of the organization. The key to this type of orientation is to eliminate all services that do not add value, identify sources of cost reduction, and develop alternative products and work methods. (GRAWE et al., 2009)

In this way, the guidance and actions implemented by each company will result in different innovation capabilities, which consequently influence the level of performance and profitability in the long term (Lopez—Canarcos et al., 2015).

2.3 Service innovation

The innovation process cannot be separated from an organization's strategic and competitive context (Afuah, 2003). If the market changes, the consumer's value components tend to change. As a result, the company needs to anticipate consumer needs to offer superior value, which generally implies new knowledge to complement existing knowledge.

For Schumpeter (1985), innovation takes on vast contours. It can involve introducing a new service or variety of services, new methods of providing services, opening new markets, obtaining new sources of resources or even a new organizational or industrial arrangement.

Afuah (2003) defines innovation as using new knowledge to offer a new product or service that customers want. According to the author, knowledge can be related to technology or the market. In the case of technology, it can be knowledge of a component or interaction between components, a process, methods and techniques. In the case of the market, it can be knowledge of the supply chain, product application, customer expectations, preferences, needs and desires.

Grawe et al. (2009) define service innovation as developing a new service perceived as new and valuable for a particular group. For the author, service innovation can add value to the organization since service innovations can be difficult to imitate. This type of innovation, which serves a particular group, is known as ad hoc innovation, as Vargas and Zawislak (2006) proposed, where the interaction between customer and supplier generates new service forms.

In the unique and picturesque context of Brazilian road logistics, the possibilities and the need emerge as a fertile field for innovations in products, processes and services that can minimize difficulties and increase competitiveness.

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2.4 Theoretical framework and presentation of hypotheses

The resource-based theory – RBV serves as a framework for developing this work, considering that the effective use of resources can create a superior competitive advantage (Barney, 1991).

The RBV examines a company's ability to obtain and/or exploit strategic resources to leverage its market position. This ability is seen as a strategic resource and includes tangible and intangible organizational assets (Wernerfelt, 1984; Barney, 1991).

Since the goal of organizations is to generate value, which is measured by the performance characteristics of a product or service and by the attributes for which customers are willing to pay, the RBV proposes that how the organization arranges its resources to generate value are the sources of competitive advantage (Hitt, Ireland and Hoskisson, 2011). In this case, it is proposed that strategic orientation and innovation capability are generators of superior market performance.

Since decisions are not routine, identifying, developing, distributing and protecting essential resources and capabilities can be challenging (Hitt, Ireland and Hoskisson, 2011). Hence, strategic orientation and innovation capability must be related to ensure superior performance. Figure 1 below presents the conceptual model to be applied in this research.

This work aims to test the hypotheses of Grawe et al. (2009):

H1: Strategic customer orientation is positively related to service innovation capability.
H2: Strategic orientation towards the competitor is positively related to innovation capability.
H3: Strategic cost orientation is positively related to innovation capability.
H4: Innovation capability is positively related to market performance.

Limitations in applying the model to transport companies in Mato Grosso may arise from the lack of adaptation of the model to the Brazilian reality. In addition, there may be translation errors, or the same concepts not applied in Brazilian organizations. Another limitation, according to Ferraresi et al. (2014), may come from the effects of interactions between strategic orientation and innovation, and the results generated may be indirect since the interactions are complex and there are many internal and external factors to the organization that can influence these results.

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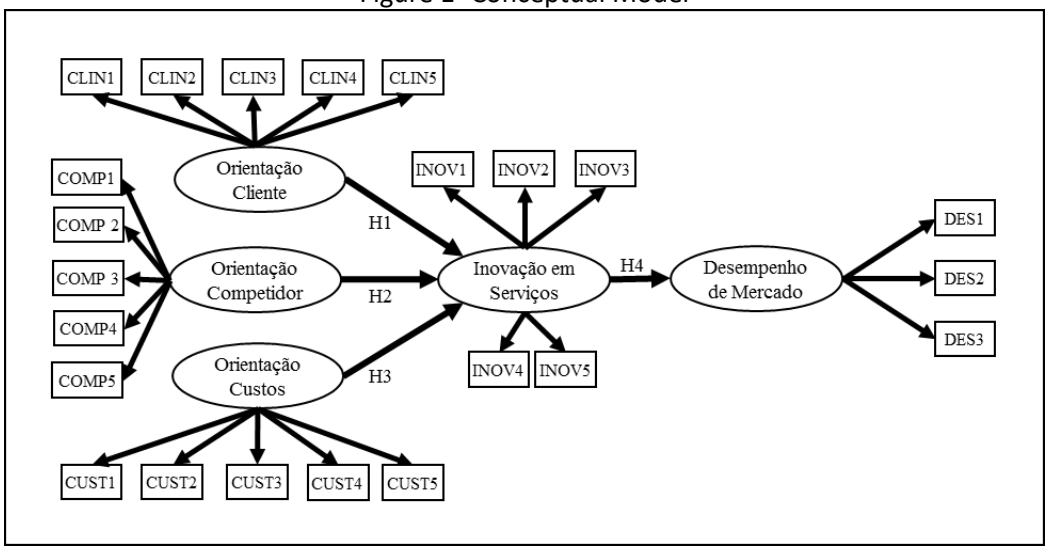
Figure 1- Conceptual Model



Source: Adapted: Grawe et al. (2009)

3. METHOD

Research in administration has evolved dynamically, new questions have been addressed, and new approaches have always emerged (HAIR JR et al., 2005). According to Collis and Hussey (2005), this is quantitative research, and its objectives constitute a descriptive study. It refers to research that proposes to measure and relate a specific object and treat it using quantitative (mathematical) methods. This type of study looks for patterns, ideas or hypotheses. Descriptive research aims to elucidate the characteristics of a given situation or context (Creswell, 2010).

To measure the variables, this study will initially use the same questionnaire proposed by Grawe et al. (2009). For its operationalization, the questionnaire was translated and tested through reverse translation. However, an interview was conducted with five experts in the logistics area as a complement. In addition, three pilot interviews were conducted to adapt the questionnaire to the reality of Brazil. The researcher took field notes to adjust the questionnaire that served for its adequacy (Creswell, 2010).

It is important to emphasize that the questionnaire will use a Likert scale of 1 to 7 points, where 1 = strongly disagree, 4 = indifferent, and 7 = strongly agree, for the constructs of strategic orientation and innovation. For the construct of market performance, the scale will be as follows: 1 = much worse, 4 = almost the same, 7 = much better). The assertions and questionnaire are found in Appendix A.

In addition to the questions that make up the constructs, data will be collected regarding the organization's size, revenue in the last year, length of existence, and the respondent's role to characterize the sample better.

After adjustments, the questionnaire was sent to a larger non-probabilistic sample. Since there is a large dispersion of potential respondents and given

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budget and time restrictions, sampling will be done based on ease and availability of access to the interviewees and their location. This was observed by the researcher, who identified that transporters are generally clustered at gas stations, which facilitates the application of the physical questionnaire to a more significant number of transporters (LAKATOS; MARCONI, 2010). The "snowball" strategy will also be used in applying the physical questionnaire, which consists of asking an interviewee to indicate another potential respondent for the survey (CRESWELL, 2010).

Seeking to increase the sample size and geographic dispersion, the questionnaire was emailed with a link to answer electronically via Google *Forms* between July and December 2016. Respondents responded poorly to this last type of collection: only two responses.

The results' presentation and analysis initially use statistical techniques, such as descriptive statistics and confirmatory factor analysis, to verify the variables' adequacy to the constructs of Moori and Zilber (2003). This is necessary considering that this research seeks to adapt a foreign model to Brazilian reality, particularly the reality of the road transport sector.

Then, the structural equation modeling technique based on *partial least squares* (PLS-SEM) was used to estimate the relationship between the model's constructs and their degree of prediction for organizational performance. The PLS-SEM model was chosen due to its better prediction performance. Furthermore, the model is more flexible in terms of theory, favoring the exploratory context of this research. Finally, the model does not assume that the data have a normal distribution but is more flexible regarding sample size. Generally, statistical power is measured with the model's portion with the most significant number of predictors, or 10 times the largest. In the context of this research, 5 predictors for the latent variables, which would correspond to a sample of 50 cases, are within the recommended minimum of between 30 and 100 cases (Zwicker et al., 2008; Ringle et al., 2014; Bido et al., 2015).

However, according to the Gpower statistical software, the sample recommendation, also recommended by Ringle et al. (2014) and Bido et al. (2015), would be 119 samples; according to the number of latent variables, this number is also very close to that recommended by Hair et al. (2005), which constitutes one of the most significant limitations of this research.

For data analysis and preparation of tables and graphs, the following software was used: Excel, "R" with the "R commander" package and the software SMART-PLS 2.0 (Fox; Bouchet- Valat, 2015).

4. Results and Discussion

In total, 64 respondents participated in the survey, of which approximately 61% declared themselves to be partners or owners of the organization, 15.6% were supervisors or coordinators, 17.2% declared themselves to hold positions as general managers or managers, and the remaining 6.2% declared themselves to be presidents or directors. This shows that the sample comprises respondents

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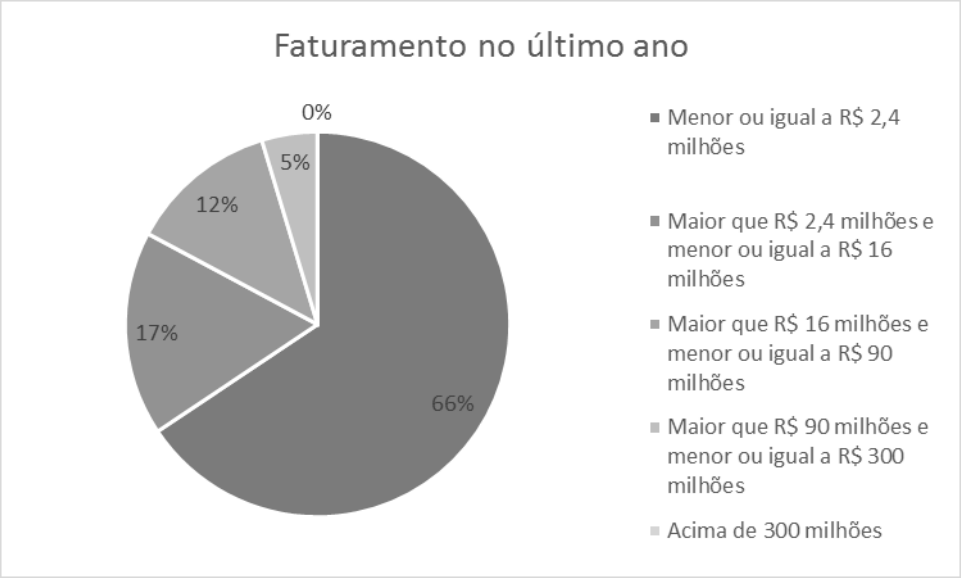
theoretically qualified to participate in the survey since they are involved in management activities.

Of the companies analyzed, 76% have been in the market for more than 5 years, 10.9% have been in the market for between 4 and 5 years, while 4.7% have been in the market for between 1 and 3 years, and only 7.8% of the companies have been in the market for less than 1 year. These numbers are interesting, considering the mortality rate of Brazilian companies and the high turnover of companies in the road transport sector since approximately 87% have been operating in the activity for more than 4 years.

Considering the size of service companies, according to the classification of SEBRAE and IBGE, 76% of the companies are considered micro-enterprises since they have up to 9 employees, and 18.8% are small companies, with between 10 and 49 employees, a number consistent with the road transport activity in Brazil. Only 1 company was classified as medium-sized, with between 50 and 100 employees. Only 2 companies are classified as significant, with more than 100 employees. Figure 2 shows the average revenue of the companies analyzed, considering the BNDES classification.

Figure 2 - Company revenue in the last year (2015)



Source: Research data

The revenue data corroborates the classification of micro and small companies in 83% of the sample with the profile of the road transport sector.

The data was analyzed and pre-cleansed before being analyzed. Thus, respondents who answered more than 80% of the questionnaire with the same value on the Likert scale were removed from the sample to prevent biased data or bad faith responses from harming the reliability of the analyses (Ess Edu Net, 20XX; Malhotra, 2001).

According to this criterion, 10 respondents were removed. In addition, 4 respondents whose answers were considered outliers, a situation where the answer had a standard deviation greater than 3, were removed. Therefore, the following analyses considered a total of 50 respondents.

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Initially, a Factor Analysis was performed to confirm that the scales, constructs and models, adapted from the work of Grawe et al. (2009), met the criteria of internal consistency, convergent validity and discriminant in their measurements. Thus, several "rounds" were necessary to remove some measures; 4 variables with low factor loading were eliminated so that all variables met the criterion of loading ≥ 0.7; only one variable with a factor loading of 0.6981, which is very close to this limit, was maintained, to prevent the customer orientation construct from having fewer than 3 variables. Thus, the model met the convergent and divergent validity criteria, as shown in Table 1. The factor loadings of the remaining items can be seen in Appendix A.

Table 1- Correlation matrix of reliability and validity indices of the model

	Customer	Competitor	Cost	Innovation	Performance
Customer	**0.78670**				
Competitor	0.37517	**0.84846**			
Cost	0.25521	0.303391	**0.80631**		
Innovation	0.69040	0.31996	0.03472	**0.83954**	
Performance	0.18998	0.43211	0.02294	0.24906	**0.92319**
BIRD	0.53153	0.59638	0.64997	0.70476	0.85253
Composite Reliability	0.81635	0.87919	0.90246	0.92199	0.95854
Cronbach's Alpha	0.71273	0.83328	0.86514	0.89322	0.94300

*** Note:** The values on the diagonal are the square root of the average variance extracted - AVE (RINGLE et al., 2014).

Source: Research data

As can be seen, the AVE values representing convergent validity are above 0.5. Composite reliability and Cronbach's alpha are also above 0.7 (Pasquali, 2007; Oliveira et al., 2012; Ringle et al., 2014). Discriminant validity at the latent variable level is calculated by taking the square root of the AVE, which are the diagonal values in the table. In this case, the correlation values between the constructs must be lower than the diagonal values (RINGLE et al., 2014). The high correlation between innovation capability and customer orientation is noteworthy. However, since it is below the horizontal and vertical diagonal values, it was decided not to make any further adjustments.

Having met the validation criteria for internal consistency, convergence and discrimination of the measures, the structural evaluation of the empirical model was initiated. Figure 3 presents the test results. The variables highlighted in gray had to be excluded to ensure the model's validity.

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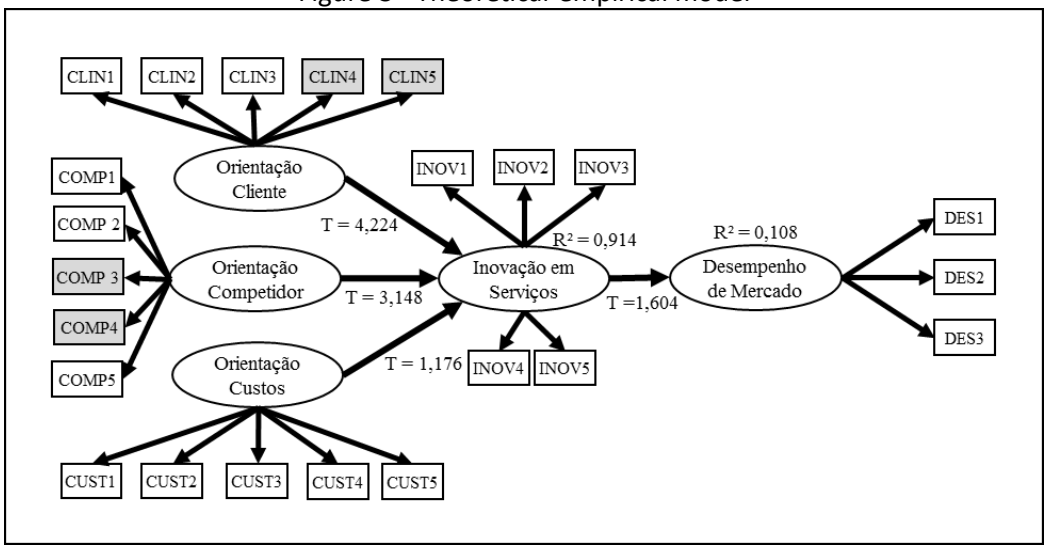
Figure 3 - Theoretical-empirical model



Source: Research data

The results show that 91.4% of innovation capability is explained by strategic orientation. This relationship presents a satisfactory fit in terms of estimation. However, the observation that approximately 11% of the variance of the market performance construct is explained by innovation capability brings to light a low value. These values differ significantly from those observed by Grawe et al. (2009), where the model presented a higher level of variance for innovation capability on market performance (49%), while the influence of the strategic orientation constructs on innovation capability was 35%; the values were reversed, although not proportionally. Table 2 presents in more detail the statistical significance of the structural relationships of the model, as well as the representative decisions for the hypothesis tests.

Table 2- Structural coefficients and hypothesis testing

Structural Relationship	Original Sample	Standard Error	T-statistic (|O/STERR|)	p-value	Hypothesis	Decision	R^2
Client > Innovation	0.58379	0.13755	4.24406	0.0000*	H1	Yes	
Competitor > Innovation	0.40010	0.12710	3.14777	0.0017*	H2	Yes	91.4
Cost > Innovation	0.28647	0.24358	1,17610	0.2398	H3	No	
Innovation > Performance	0.32902	0.20510	1.60414	0.1090	H4	No	10.8

* < 0.01: Significance level (t > 2.58)

Source: Research data

The structural relationship between the constructs of strategic orientation towards the customer and competitor presented significant results in forming the innovation capability construct; the same did not occur with the cost construct, repeating the results observed by Grawe et al. (2009).

On the other hand, the structural relationship between the construct's innovation capability and market performance did not reach significant values, which differs from the results obtained by Grawe et al. (2009). Thus, the only hypotheses supported by the empirical, theoretical model were H1 and H2,

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which allows us to state that high levels of strategic orientation towards the customer and supplier can generate excellent innovation capability for companies in the transportation sector.

5. Conclusion

First, it is essential to emphasize the limitations of the presented results since the sample was well below what is conventionally necessary to obtain a reasonable model estimation. On the other hand, this article aims to present partial results of ongoing research. It is expected that, based on the criticisms and contributions, it will be possible to improve it so that, at the end of the research, more consolidated and more credible results can be presented. Data collection is ongoing, and a larger sample could allow for more prosperous and better-estimated results.

The results of adapting and testing the theoretical-empirical model proposed by Grawe et al. (2009) present two managerial implications. The first highlights the need for organizations to emphasize external relationships with customers and suppliers, given that these can bring more excellent benefits in developing a highly valued capability such as innovation. The importance increases if we consider the context of relationships in networks and supply chains enhanced by information and communication technologies (GRAWE, 2009).

Secondly, it also allows companies to analyze and, if necessary, improve strategic cost management, aiming to innovate processes that provide cost reduction and, consequently, gains in market performance. Some studies emphasize the need for companies to adopt agile supply chains to offer more significant differentiation, in many cases through innovations while seeking to be lean to be competitive (Naylor et al., 1999; Christopher, 2000; Gligor; Holcomb, 2012; Qrunfleh; Tarafdar, 2014).

Another contribution of this research is its inclusion in the context of micro and small businesses, which are important for the Brazilian economy. In this sense, the research allows managers and other agents in the sector to reflect on their management practices, especially in the strategic aspect. Since the road transport sector is composed of many micro and small businesses, there is a need to contribute to consolidating these companies with increasingly effective management (Pereira et al., 2009; Picchiai, 2016).

From a public policy perspective, this article highlights the need to guarantee financing, technical assistance, and specific incentives for micro and small companies in the road transport sector, given the sector's characteristics and the fact that decision-makers often lack knowledge of administration.

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Appendix – A – Questionnaire and Factor Loadings

Considering the activities related to the transportation service. How many employees does your company have?
□ Micro: up to 9 employees □ Small: 10 to 49 employees
□ Medium: 50 to 99 employees □ Large: more than 100 employees

How many years has the company been operating in the market?
□ Less than 1 year □ Between 1 and 3 years □ Between 4 and 5 years □ More than 5 years

What position do you hold in the company?
□ Partner/Owner □ President □ Director
□ General Manager □ Manager □ Supervisor/Coordinator

What is your company's gross operating revenue?
□ Less than or equal to R$ 2.4 million □ Greater than R$ 2.4 million and less than or equal to R$ 16 million
□ Greater than R$ 16 million and less than or equal to R$ 90 million
□ Greater than $90 million and less than or equal to R$300 million □ Greater than R$300 million

The scales of customer orientation, competitor orientation, cost orientation, and innovation capability follow the 7-point Likert model, where 1—strongly disagree and 7—strongly agree. For construct market performance, there is also a 7-point scale ranging from 1—much worse to 7—much better.

Customer orientation construct		**Factor loading**
CLIN1	Our business goals are primarily driven by customer satisfaction.	0.851303
CLIN2	We communicate how we want to relate to the customer to everyone in the company.	0.802871
CLIN3	Our strategy to gain competitive advantage is based on customer needs	0.698134
Competitor orientation construct		**Factor loading**
COMP1	Our sales department regularly collects information about competitors	0.87477
COMP2	Directors and managers regularly evaluate the actions of competitors	0.92487
COMP5	We try to identify competitors' strategies	0.734232
Cost orientation construct		**Factor loading**
CUST1	Improving operational efficiency (doing more with less) is a high priority for our company.	0.728388
CUST2	Achieving economies of scale (achieving high volume to reduce costs) is a crucial element of our strategy	0.795625
CUST3	Having the lowest cost is very important for our company	0.846893
CUST4	Cost is the most critical component in our company's performance measures	0.848164
CUST5	We consider that costs always come first in any decision-making in our company.	0.806535
Innovation capability construct		**Factor loading**
INOV1	Innovations and improvements are readily accepted by company management	0.900413
INOV2	Managers and directors prioritize innovation in our services	0.940777
INOV3	Our company is constantly looking for new ways to provide better customer service.	0.855602
INOV4	Our company is willing to change/modify our services to meet any special requests from customers.	0.719662
INOV5	Compared to our competitors, our company is one of the most prepared to introduce new services.	0.760511
Market Performance Construct		**Factor loading**

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DESP1	In the last year, our sales have grown more than those of our competitors	0.917501
DESP2	In the last year, our profit margin grew more than that of our competitors	0.924218
DESP3	market share share) grew more than that of our competitors	0.939472
DESP4	In the last year, the company has improved its position in the ranking compared to its competitors	0.911356