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Competitive Strategies in Urban Public Transport Companies Competitive strategies in urban public transportation companies

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ABSTRACT

The urban public transportation sector presents an important variation in ticket sales and operations during different times of the year, where according to the season there are important differences in the operations in specific routes given the volume of the user population and destinations, due to this arises the interest in studying the impact of competitive strategies in public transportation companies, specifically in the urban one, with the purpose of identifying the critical factor in business competitiveness and how it has contributed to their success. This descriptive research with a mixed approach allows determining strengths and opportunities based on an analysis of the impact of competitive strategies in each aspect of the companies, where despite the strength of the public transportation sector, important key aspects were found to determine which organizational factors make a difference with other companies. Situations such as the low influx of users or, on the contrary, high demand for specific routes depending on the season of the year, frame the results of the analysis of competitive strategies in aspects such as operational capacity, degree of sustainability and competitiveness, level of trust in users or degree of innovation and adaptation.

Keywords: Competitiveness, Strategies, impact, transportation.

1. Introduction

Public transport is an elementary means in the daily life of people in cities. According to Article 3 of the Colombian law 105 of (1993), "this is an industry aimed at guaranteeing the mobilization of people, by means of appropriate vehicles, under conditions of freedom of access, quality and safety of users and subject to an economic consideration." (Mintransporte, 2018). This is how this type of companies are consolidated as a great source of employment and an ally for the citizenship, since the responsibility falls on them for being legally authorized to provide the service, consequently, "stand out those companies that achieve a competitive position, that is, those that are dedicated to encourage to have strategic behaviors focused on innovation, quality and user satisfaction". (Ynzunza & Izar, 2013)

In accordance with the above, from the economic theory, specifically (poter, 2015)created his model of competitive strategy that also contains a table of typologies to place the company or companies in a given industry and build a competitive advantage. It was found that, some researchers study the author's five typologies, recognizing that strategy involves an offensive or defensive act that can be used as a justifiable position. For example, "it involves positioning a firm to maximize the value of the capabilities that distinguish it from its competitors, while the goal of any generic strategy is to create value for buyers", and "firms are competitive in the marketplace (Castro E. , 2010) and "firms are competitive on the basis of internal factors" (Martínez & Araujo, 2010)

From that logic, it has to be answered why there is so much competitiveness in the same sector and has each company different profitability? (Rodríguez & Becerra, 2014), The first premise is the heterogeneity of companies (Martínez & Araujo, 2010) with respect to their strategic resources and their mode of use, and also a second premise oriented to the transferability of resources from one company to another and how beneficial the process is. On the other hand, it is appropriate to inquire about the competitive forces that "enable the management of the companies to strategically face the external factors that can affect the position of long-term success within the industry and to outperform competitors." (Donawa & Morales, 2018)

In these areas of analysis, the need arises to conduct a reasoned study of the competitive strategies of urban public transport companies Cooperativa de Transportadores Hacaritama Ltda, Alfa Transportes S.A (first known as Cootransurbanos) and Cootraserpic, located in the municipality of Ocaña, Norte de Santander, because, "the population growth caused by the presence not only of residents but also of river residents and tourists, has caused a great variation in everything that refers to mobility and transportation" (Alcañiz, 2008) This population increase brings with it the problems of unbridled migration, mainly of Venezuelan migrants, generating an impact on the increase of informal work, in this particular case motorcycle taxis, direct competition of transport companies (Salas - Hernandez, Sagbini - Henriquez, & Salazar - Araujo, 2019).

Another factor is "the interest in quantifying the quality of the service" (Sánchez, 2010), es that is, the value of the fares paid by the user, a notorious problem that welcomes the population in the municipality, becoming a phenomenon of monetary inequality with respect to the routes where vehicles circulate, compared to cities of greater territorial extension, generating the rejection of the cost/benefit ratio. (Ceballos Ramirez, Lukau Quintero, &

Duque Castaño, 2019) E In this order of affectations, the limited network coverage does not allow access to the use of ICTs to update fare collection systems.

(Cruz Carbonell, Hernandez Arias, & Silva Arias, 2019) o Another determining factor is the low coverage by the cooperatives' vehicle fleet during the periods when school and university students are on academic recess (June to August and from December to February approximately), affecting the community. The great participation of the students of the University in the market of urban public transport is seen from the economic aspect, but little is prioritized to generate strategies to capture this population that being in processes of formation where it encourages entrepreneurship, in particular in the faculty of administrative sciences, seeking to respond to specific problems that are not taken into account by the companies. (Pineda- López & Manzano- Sanguino, 2018)

The generation of a positive impact on the community where companies operate, focusing efforts on the creation of good practice habits, require committed strategies that contribute to socio-environmental issues. (Pacheco - Sánchez & Rodríguez – Téllez, 2019) Management models that are out of the demands of the present imply an absence of leadership in the companies of study that cause traditionalist management, limiting the participation and the emergence of new leadership within the organization that can better describe the problems that arise in the conjunctural changes of the community (Angarita - Vega, Manzano, & Jimenez, 2021)

Due to the scenarios described above, the aforementioned urban public transport cooperatives have been immersed in a transition process and have not zoned new mobility routes for public buses and taxis required by citizens, which go hand in hand with the processes of urban development and population expansion that generate new locations or roads that start from the changes in urban land use planning. (Zambrano - Mercado, Muñoz - Hernández, Brito - Aleman, & Caro - Florez, 2020) Faced with these debatable aspects, each company has implemented competitive strategies to sustain its business plan and reduce the margins of affectation to the community of Ocaña.

That is why, the results of these competitive strategies are the reason for analysis in this research, starting from an exhaustive methodology of inquiry to determine what these strategies are and how effective they have been, since in some cases they may seem the same, it is noticeable that each company has its particularities and different scopes.

In short, the results will partially validate if the competitive strategies used by the companies are closely related and as an added value it will be possible to recognize the resources that most impact the performance of each company and the differentiators between the types of strategy used by them.

2. Theoretical Framework

2.1 Michael Porter's value chain.

It is focused on the sequence of actions aimed at positioning and revaluing a successful good or service through a feasible economic plan, continuously to optimize the competitiveness of the company or organization. According to its creator, the Harvard University professor Michael Porter, the value chain is catalogued as "a strategic management tool to the extent that it acts on the positioning of the product/service in the market, the reduction of costs and the creation of value". (Robben, 2010)

2.2 Five Forces Strategy Model.

This type of model was created by Michael Porter from the influence of competitive factors present in his studies on competitive strategies, where it is denoted that according to the combined strength in an industry can intensify and enhance the profits in a sector, measuring the performance of consumer satisfaction in the long term on the invested capital. What has been said so far assumes that the potential is not the same for all industries, as each one offers differentiating strategies for a specific purpose, which is business growth, and "their fundamental difference lies in their basic potential, as well as in the collective strength of the forces, which are sometimes quite intense... (Porter, 2015)

2.3 Porter's competitive strategies.

This great exponent of business competitiveness during his research time determined that each company in its strategically relevant activities must understand the monetary variation and differentiation existing between its potential sources of product or service. In other words, in order to obtain competitive advantages, it must strategically perform better and more economically sustainable activities than those of its competitors.

2.4 Miller's competitive strategies.

This scientist dedicated his training to investigate and question the works of Raymond Miles and Charles Snow and added with the appreciations of Michael Porter came to the conclusion that four more dimensions should be built for entrepreneurs to understand them easily or in a basic way, these are: the dimension of innovation, marketing differentiation, dimension of breadth and finally the dimension of cost control.

3. Methodology

The measurement of the effectiveness of the competitive strategies implemented by the urban public transport companies in Ocaña will be justified in the type of descriptive research, which consists of the "initial and preparatory process of a research, because to the extent that the phenomenon to be studied

forms a complex system, it allows us to delimit it, order it, characterize it and classify it, i.e. to make a description of the phenomenon as precise and accurate as possible" (Tinto, 2013).

In contrast to research, the design and analysis can be quantitative or qualitative, thus, it is approached from a mixed approach, which "includes genres or patterns of interaction in addition to categorical tabulations of data or test scores." (Abreu J. , 2012) The mixed approach presents several perspectives of integration that systematizes qualitative and quantitative methods in a single study in order to obtain a more complete view of the problem situation in the environment.

It should begin by describing the full experimental design and theoretical procedures used. The assumptions and assumptions made should be explicitly stated and the choice of methods should be justified in situations where other reasonable alternatives exist.

Following the proposed methodology, the universe of study will be constituted by the population of urban public transport companies in the geographical area of the municipality of Ocaña, which are: Cooperativa de Transportadores Hacaritama Ltda, Alfa Transportes S.A and Cootraserpic. For this reason, the sampling was stratified probabilistic with proportional allocation developed in Microsoft Excel, which yielded the following data:

$$n = \frac{\sum_{1=1}^{1} NiPiQi}{NE + \frac{1}{N}\sum_{i=1}^{1} NiPiQi}$$

Tabla 1.

Muestreo estratificado afijación proporcional

GRUPO	Ni	Pi	Qi	PiQi	NiPiQi	Wi	ni
Cooperativa de Transportadores Hacaritama Ltda	100	0,5	0,5	0,25	25	0,313	54,9
Alfa Transportes S.A	120	0,5	0,5	0,25	30	0,376	65,8
Cootraserpic	19	0,5	0,5	0,25	4,75	0,060	10,4
TOTAL	319				79,75		

Nota. Tipo de población y muestra. Claro, D (2020)

To meet the needs and the nature of the phenomenon of this research, the approach to be used will be mixed, consisting of a systematic integration of qualitative and quantitative methods.

3.1 Techniques and instruments for data collection.

The techniques to be used are mixed, with a first stage of qualitative approach to identify the competitive strategies implemented by the companies, and from the quantitative a survey will be applied with a questionnaire as an instrument, using the Likert scale. "The Likert scale consists in that the researcher gives a statement or question and the participant of the survey has a series of options that represent the degree of his answer". "(Frenz, 2018).

4. Results

In order to determine the type of strategies that public transport companies in the city of Ocaña have implemented in order to increase their competitive advantage in the market, a survey was applied to the employees of each one of them that allowed characterizing the general practices of quality and added value of the service provided in the city. Among the basic criteria for identifying these strategies, aspects such as quality control, innovation, gender equality in hiring or employment, existing competition and infrastructure, among others, stand out.

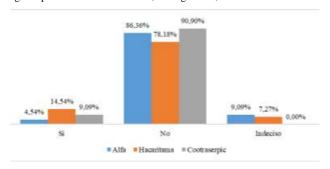


Fig. 1. Engines of change drive the development of the company. Source: self-made.

One of the issues that must be addressed in any organization is the selection or identification of mechanisms that allow it to develop or generate significant changes in its activities. In the engines that could drive business growth, the most outstanding aspects were the quality of the product or service in the case of Cootraserpic. This perception of relevance in its competitiveness stems from the sectorization of its business model with the use of exclusively buses to cover specific routes.

^{*} Muestreo probabilístico estratificado, p.28; **Afijación proporcional

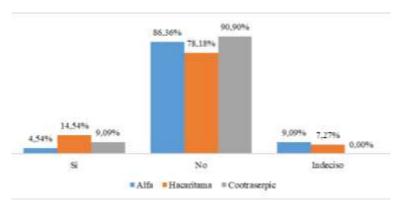


Fig. 2. Women as part of the value chain as vehicle drivers in the company. Source: Own elaboration.

Aspects such as gender equality allow characterizing the company as socially responsible, not only reflecting actions of this type towards society but also towards its own employees. However, the way in which women are involved in the value chain of the public transport service makes a negative aspect visible: women are not taken into account as potential drivers.

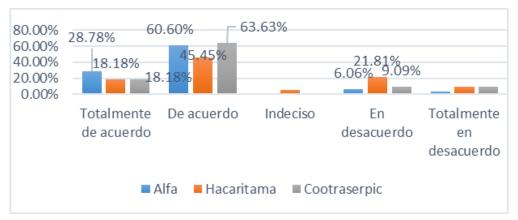


Fig. 3. Traditionalist management evidenced in the company. Source: Own elaboration.

For decisions within an organization to be assertive, its managers must also be updated and develop their knowledge in relation to the economic sector in which they are. However, the perceptions are negative in this aspect, the management of these companies does not carry out any type of actions to keep updated in terms of trends in the public passenger transport sector, which represents a disadvantage with respect to other cities in the country.

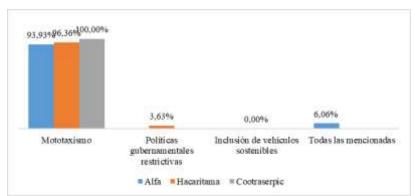


Fig. 4. Threats of substitution is the one that most affects the Public Transport Company where you work. Source: Own elaboration.

In terms of substitute services that could threaten the normal development of interurban public transport companies, the biggest problem continues to be the emergence of motorcycle taxis as a way for people without a stable source of income to get by. This aspect was the most relevant in the identification of possible threats.

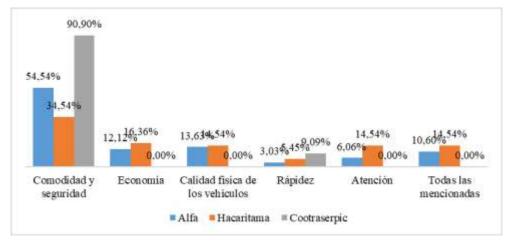


Fig. 5. Users' choice of service. Source: Own elaboration.

Regarding the quality criteria, which define the decision of public transport users, the most relevant factor is the comfort and safety provided. In this sense, for the company Cootraserpic, the service offered by them has this characteristic feature, as well as the speed of the transfer. On the other hand, the company Alfa, considers this determinant factor in the decision to access the service, but they are also influenced by the physical conditions of the vehicles.

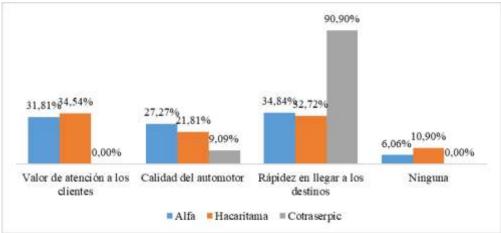


Fig. 6. Equality of service fares of Public Transport Companies in Ocaña. Source: Own elaboration.

Considering that the fare for the provision of public transport services in the city is standardized, the factors that determine competitiveness or are considered as an added value must be analyzed. In the case of Cootraserpic, the fundamental component of the offer provided in the city continues to be the speed of arrival at destinations.

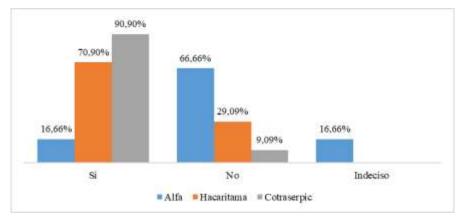


Fig. 7. Coverage of specific routes and schedules has been conducive to maintaining an adequate economy in the company. Source: Own elaboration:

Own elaboration.

While for Alfa Transporte and Cootraserpic, the actions of investigation of markets that allow the establishment of new routes or schedules have allowed to maintain an economic stability, in front of the demands and changing needs of the users, for Hacaritama this is not necessarily certain and considers that this factor has favored to maintain the economy of the organization.



Fig. 8. Value of the Public Transport Company for citizens to use its services thanks to the infrastructure of its vehicle fleet. Source: Own elaboration.

On the creation of added value by having new transport on the routes offered, the company Alfa is very positive, as are Cootraserpic and Hacaritama. On the other hand, there is a percentage that considered that the introduction of new vehicles should be considered a competitive advantage in the market.

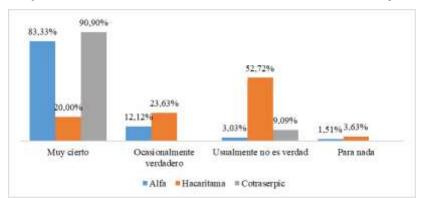


Fig. 9. Knowledge of the type of user most loyal to the company where you work. Source: Own elaboration.

Alfa is not clear about the type of users who make the most use of the service provided, in contrast to Hacaritama and Cootraserpic, which stated that they know which is the customer with the highest degree of loyalty. This component is taken into account from the attention given to users to the perception of the market in general, which allows implementing strategies and actions according to the type of customer that is most important for the company.



Fig. 10. Adequate collection system. Source: Own elaboration.

5. Discussions

In the case of the value chain of suppliers, mentioned in the theoretical foundations of this research, it can be seen how the management carried out by the company supplying the services or products, directly influences the determination of costs and therefore, in the benefits obtained from the sales of the company. Of course, the generation of inter-institutional alliances contributes in the reduction of costs of the service, increasing the indicators of efficiency and quality of the same one until the user has the own experience.

However, in the case of suppliers, the role of the companies Alfa Transportes and Hacaritama stands out, as they became owners of their own fuel supply, parking and maintenance units, which represents a competitive advantage and an added value to the first link in the value chain.

Table 2 - Identification of driving variables for value chain development

Motor de desarrollo	Hallazgo	Oportunidad		
Eficiencia del sistema	Control zonal de tiempos de circulación Registro ficha técnica de operación	Informes de operatividad Buzón de PQRS Registro de indicadores de accidentalidad Seguimiento condiciones de salud óptima del conductor Seguimiento o control del grado de alcoholemia Implementación de softwares para el registro y control de calidad		
Calidad del servicio	Capacitación del personal Nivel de operatividad del conductor Atención al usuario	Inversión en actualización vehicular Innovación del servicio		
Diferenciación del servicio	Rapidez en llegada a destino Comodidad de los vehículos	Actualización tecnológica Vehículos sostenibles Evaluación de las		
Normas sociales y ambientales	-	condiciones socioambientales favorables Equidad de género		
Entorno empresarial favorable	La competencia no representa amenaza para las empresas solidificadas en el sector	Incapacidad para mantener los niveles de eficiencia al responder a la ventaja del explorador		

The efficiency of the system focuses on reducing costs and increasing the response indicators of the actors in a market, whether they are large or small. In that sense, this must be constantly measured and controlled to carry out improvement actions that allow to achieve a competitive advantage. However, on having evaluated the three companies object of study, it could be appreciated that the instruments for the registry and control of the operations are scarce and therefore, the quantity of information to gather, that allows a significant improvement in the service of public transport of the city of Ocaña are scarce. However, the other missing elements serve as opportunities for improvement and implementation of existing control activities.

Regarding the quality of the service offered, the most important differentiating factor in the evaluation was the high level of driver efficiency, an element that was maintained in all three companies. However, there are other aspects such as comfort and speed of service, which were taken into account beyond quality, as differentiators that intervene in the perception of the end user. On the other hand, aspects such as innovation, technological updating and the introduction to the market of sustainable vehicles and gender equity in the employment processes, are presented as opportunities to gain a competitive advantage and therefore contribute to compliance with socio-environmental standards.

6. Conclusions

Observing the results obtained in the development of objective 1, it can be established that the introduction of new competitors to the market does not represent a considerable threat for two of the three companies in the sector, since they consider that their time in the market and the positioning itself represent a competitive advantage, which is why it can be stated that it is a favorable environment for business development and, of course, the entry of new competitors to the market. On the other hand, a reluctant attitude towards sustaining business efficiency indicators is observed, if it is necessary to explore new development proposals by the participating entities, being Alfa Transportes the only one that is assertive to changes that deserve constant adaptation.

From another point of view, both the management and the employees of the companies in the sector are characterised by their corporate traditionalism, which makes them reluctant to make formative, technological and even structural changes within the organisations. For this reason, the capacity for innovation, marketing strategies, logistical and operational flexibility of the service are affected. In spite of this, it was possible to appreciate that the company Alfa Transporte showed a high degree of assertiveness in the components of the research related to the adoption of changes in the system and in the environment, demonstrating a greater capacity to maintain the levels of efficiency at the time that they take advantage of the exploited advantage.

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