The Quality of Public Transport in Urban Average Cities: A Case Study in Palmas – Tocantins

A Qualidade do Transporte Público Urbano em Cidades Médias: Estudo de Caso em Palmas – Tocantins

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Resumo

Este artigo apresenta conceitos e análises sobre transporte público (doravante TP) na cidade de Palmas, capital do Estado do Tocantins (Brasil), relativo principalmente à avaliação da qualidade do sistema de transporte coletivo urbano com enfoque no ponto de vista do usuário. Busca-se identificar os pontos críticos impactantes na qualidade do sistema de TP bem como isso afeta de forma direta ou indireta a eficiência econômica da cidade. Também é proposta, estimular reflexões em torno do termo cidade média, com vistas a propor critérios que, considerando as especificidades da rede urbana do Tocantins, permitam identificar suas cidades médias. Inicialmente, apresentam-se algumas ideias e conceitos, postos por diferentes autores, sobre cidade e sua relação com a urbanização decorrente do processo de implementação do Estado. Faz-se em seguida, uma reflexão do tema cidade média, em que se analisam questões referentes ao tamanho demográfico como princípio de identificação, suas características e papéis.

Palavras-chave: Transporte Público. Qualidade. Palmas (TO). Transporte Coletivo.

Abstract

This article presents concepts and analysis on public transport (TP) in the city of Palmas, Tocantins state capital (Brazil), mainly related to the evaluation of the quality of the urban mass transit system with a focus on the user's point of view. The aim is to identify the issues impacting the quality of the TP system and how it affects the economic efficiency of the city. It is also proposed to stimulate reflections on the urban terms and average town with a view to proposing criteria, considering the specificities of the urban network of Tocantins, identifying their medium-sized cities. Initially, they present some concepts, laid by different authors on the city and its relationship with urbanization due to the state of the implementation process. It will be then a reflection of the average city theme, which analyzes issues related to population size as a principle of identity, characteristics and roles.

Keywords: Public Transport. Quality. Palmas (TO). Collective Transport.

Introduction

The State of Tocantins in the northern region installed, has an area of 277.620.914 km² (square kilometers) according to IBGE (2014). Is the newest federal unit of Brazil. The Palmas was founded on 20 May 1989, soon after the emergence of Tocantins by the Constitution of 1988. Palmas has a population of 228.332 inhabitants in 2010 its area is 2218.943 km^2 of territorial extension according to IBGE (2014).

With regard to the collective, this and/or TP by definition, is a means of transport for public or private companies merchandise which allows the urban population displacement from one point to another within the municipality.

To Lefebvre (1999) it is important to understand that the development of urban policy and its instruments do not get along in political or administrative neutrality since the conflicts of interest are a permanent aspect in the production of urban space.

The approach proposed here aims to identify and evaluate the perception that users of urban mass transit service by bus offered in the city of Palmas (TO) have on the quality of the service provided, in addition to identifying critical points and to characterize the user who uses the system. So, it is possible to have an integral vision of the problem and collaborate for the improvement in the quality of the service provided. According to Hayes (2003) the knowledge of the perceptions and reactions from users, in relation to a particular business organization, can greatly increase your chances of make better business decisions.

In order to achieve the goals outlined developed in the course of the three-step methodological research. The first covers the literature search based on authors that deal with the subject, seeking a theoretical basis and bibliographical.

The second stage was based on the determination of the degree of satisfaction of users of TP in the city of Palmas (TO), displaying characteristics of certain group, what about the ends, and make up in a descriptive research. Electing and listing what could highlight the satisfaction and at the same time help us to profile the target audience.

The methodological procedures of third step began to elect the lifting of quantitative data. Then we leave for the data collection, carried out from a field research with questionnaires next TP users.

It is necessary to point out that the questionnaire was a support/important tool to the premises of this work. According to Malhotra (2006), the questionnaire consists of a formal set of questions – written or oral-whose goal is to obtain information from respondents.

For the interviews was used a structured roadmap in simplified form as a template, so that it could be quickly interpreted and answered by users. More specifically, the questionnaire was structured into three groups:

Group I: Founded with the objective to obtain a profile of users, obtaining information such as: gender, age, education, monthly income range, reason and frequency;

Group II: composed of 27 criteria where shall assess the quality of the TP directed by bus,

where he established a scale whose extremes are "Good" and "Bad" and allowing respondents mark the site that best represents the degree of satisfaction of each criterion; and

Group III: consisted of an "open space" to express your criticism, suggestions and compliments about the TP.

The approach of the people was held at terminals and on buses, between 14 and 22 December 2015, the 7:00 the 19:00 hours, where respondents (inclusion and exclusion) had the age of 15 years and in the approach were clear the purposes of research and the purpose of the questionnaire.

The interviewees were chosen through a non-probabilistic sampling by convenience. To Malhotra (2006), in this type of sampling users are chosen because you are at the place and time of the researcher.

The questionnaire was applied to users who use transit at least twice a week and, in all 51 approaches were carried out – this number seems reduced to extract information widespread, however, we take into consideration the number of users of the two main roads of the Capital ("Teotônio" and "JK"), in a random sampling, in relation to N (number/quantity) of the city's population. The approaches for an average of 15

minutes (maximum). The data collected from the evaluations were tabulated in spreadsheet and then generated the graphics.

Finally, the fourth and last stage of the research, systematic analysis of the results obtained with the goal of exposing a diagnosis about the service provided by the TP.

Palmas while average city

The average cities can be classified in the first time according to their population, because the index leading the scale of greatness nothing is more significant. According to France (2007), the average city is that it has a population between 100.000 and 500.000 inhabitants. As the United Nations – UN-cities medium-sized are those with built-up areas between 100,000 and 1.000.000 inhabitants.

However, Sposito (2007) argues that the medium-sized cities are those that play roles of liaison, intermediary between small and major cities, without disregard the demographic size as a first level of analysis, as already noted, there is a close relationship between quantity and quality of dynamics and processes.

Considering these interpretations presented to classify and characterize an average city we can affirm that the city (Palmas-TO) fits as a city average. As state capital, Palmas exercise centrality, polarizes various services and agents not found in other cities in the State and commands its surroundings areas, such as: administrative policy, health services of medium and high complexity, banking services, regular flow of goods, people and information, education related mainly to higher education and industrial. In addition, it is the most populous city in the State of Tocantins, with 228.332 inhabitants in 2010, 221.741 inhabitants of which correspond to the urban population according to IBGE (2014).

Palmas and assignments providing public services in the range State. Its political-administrative functions extend to everything that affects the well-being of citizens and ultimately generate intense flows between the territories by demand of organ both in state as federal sphere.

A very important sector and which influences positively the city's health. Are present various types of medical institutions, however the main are connected to actions of protection, support, diagnosis and hospital ambulatory attendance, being this last identified as macro-regional, regional and reference micro-region. The Palmas has a 31 percent of the total establishments of health state of Tocantins according to data from the CNES (2016), with 439 units. Data from the Instituto Brasileiro de Geografia e Estatística (Brazilian Institute of geography and statistics), IBGE (2014), in the year of 2009, show that health services units totaling 144 establishments and public State 2.08 municipal public and private 57.63 40.27.

Banking services have become fundamental in everyday life of consumers and has major Brazilian banks ' agencies. According to the IBGE 2014 research, total 32 bank branches established in the city, in addition to financial innumerable.

In addition to this aspect, the diversity of the educational segment found in Palmas is quite comprehensive, especially in higher education, which demonstrates their importance as regional influence as to the local economy. In addition to having established in town the headquarters of the Universidade Federal do Tocantins (Federal University of Tocantins) – UFT, the Instituto Federal do Tocantins (Federal Institut of Tocantins) – IFTO, and Universidade do Tocantins (University do Tocantins) – Unitins, which are public universities, has also other philanthropic, private universities and centers of higher institutions that promote distance education. Together offer a range of courses that are not offered in other universities/colleges of the region and that offer promotes regular people and information flows coming both from cities of the State itself and the neigh boring States, mainly of Pará, Maranhão, Goiás and the Federal District.

Noting the participation of sectors of the economy in GDP, there is strong growth in the sector of industry in the regional economy. In the year 2000 was a 13.24 percent of total gross value and the year of 2013 that figure jumped to 25.34 according to IBGE (2014). For exercise, Palmas centrality occupies a prominent position in the production and articulation of the territory. This fact comes to add trade making it diversified and specialized, and thus attracts consumers not only of the city as several cities in the region.

Problems of public transport in Palmas

With regard to the TP in the city of Palmas (TO) analyzing your complex formation and transformation, it is observed that the same has been facing great problems in relation to their distribution that happens in space according to an Urban master plan or in the most common situation, following the historical trend in the region.

The TP is a type of accessible transport-or at least should be-to the entire population and its services subject to several obligations, such as: carry all passengers according to a fixed schedule; charge rates set by the Government; explore permanently a certain transport network; and inform users the value of services rendered.

According to a study released by the Institute of Applied Economic, IPEA (1998), of 04 May 2011, 65% of the population of the capitals (Figure 1) use TP to move. While 2.85 commute on foot every day. This percentage shows a significant difference in relation to the inner cities. And still says that the collective is the most widely used means of bus where 78.4 spending among residents of the capital are in this mode. Metropolitan regions this percentage reaches 88%.

	On foot	Bicycle	Car	Motorcycle	PT
Capital	2,85%	3,22%	23,39%	5,57%	64,98%
Others	16,63%	8,54%	23,91%	15,02%	35,89%

Figure 01: Means of transport used for locomotion by capital and other means (%). Source: Sistema de Indicador de Percepção Social/IPEA (2012).

In addition, the System of Indicators of Social Perception, IPEA (1998), points three major concerns of the population with transport and urban mobility: speed, price and availability. The answers (Figure 2) obtained in the three questions sought to capture this perception (reason for modal choice, condition to use the TP and characteristics of good transportation) indicate that.

	On foot	Bicycle	Car	Motorcycle	PT
1º	be healthy	be faster	be faster	be faster	be cheaper
2º	be faster	be cheaper	be more comfortable	be cheaper	be faster
3º	get out at the right time	be healthy	be cozy	get out at the right time	It is the only way you know

Figure 2. Main reason for choosing the means of transport (placement). Source: Sistema de Indicador de Percepção Social/IPEA (2012).

In Oliveira and Giansanti (1999), the northern region of Palmas is characterized by a density more pronounced because there has been a series of occupations by part of the population that resulted in the emergence of small lots, narrow roads, lack of public facilities and free areas.

Still points out that the residents of the South are the most use the TP, where there is the highest concentration of jobs and investments in central city and because of the socio-economic profile of the population.

The Users of the services of TP are mostly urban for low-income people who perform their offsets mainly for work or school. According to the Association of Urban Transport companies, NTU (2004), about 40% of the passengers pay the fare using "bus pass", indicating that low-income workers constitute the largest group of beneficiaries of the TP.

The biggest problem is still the flaws in the structure of the system as primarily failures of communication (difficulty of understanding of the system by users), inconstancy in times of bus and precariousness of the physical facilities (accessibility and mobility in the stations, aesthetic quality and material continuity of sidewalks and dangerousness in the crossing of roads for pedestrians). These factors contributed to the great dissatisfaction of the users.

The lack of planning and the absence of public policies led to various problems, such as the great dispersion of the territory and urban voids with entire blocks without utility, close to areas devoid of infrastructure and no inhabitant. It caused today a TP system expensive and inefficient because of the great distances to traverse between the suburbs and the city center.

However, one of the big advantages of TP is their

contribution to economic efficiency because it presents less consumption of fuel, energy and road space per passenger, as well as much lower rates of emission of pollutants.

Quality in service

The population of major urban centers have faced numerous problems with respect to traffic quality in its cities, enlargement discussed, and the lack of urban mobility, great occurrence of congestion and traffic jams, lack of security and of public policies that relieve the lack of efficiency of urban public transport.

It is important to note that the public transport service by bus is provided collectively, and thus passengers exhibit variations in their profiles and similarly they do not share the same ideal about the quality of service.

The very definition of quality is very comprehensive, however, to Campos (1999), a product or service is one that perfectly meets, reliably, affordably, safely and on time to the needs of the client or user.

According to Albrecht and Bradford (1998), to receive a service, the client experience a sequence of Moments of truth, called the duty cycle. A decisive moment represents the moment when the customer meets any aspect of the Organization (personnel, facilities, equipment, fax, email,

homepage, etc.) and, according to this contact, these moments can form his opinion about the quality of service. The Figure 3 illustrates a service developed for the problem treated in this article – the urban public transport service by bus.

Figure 3. Service Cycle and Decisive Moments in the public transportation by bus. Source: Own Author (2015).

By understanding this cycle of truth, it is possible to identify flaws more easily, since one of the features of the provision of services is the existence of direct contact with the production process and to the preventive corrective actions can be more agile, providing a better quality service.

Quality on the service user's vision of the operating company and its manager

Ferraz (2004), sets the following steps for the completion of a journey by public transportation: urban walking route of origin to the place of shipment in the system, wait for the collective, within the collective locomotion and walk from the landing point to final destination. According to the au-

thor, as these steps consume energy, time and expose users to contact with different environments it is necessary that certain requirements such as safety, convenience, comfort, speed, are met during all stages of the trip.

The definition of quality of service standards of the TP by users is quite intricate, since they are considered various aspects and their perception varies depending on the social and economic condition of the people, such as age, sex, among other factors. In this sense, Ferraz (2004) asks the fact a quality service involve high tariffs. For the richest people in the fare of the TP is nondescript, because the quality of the service is what matters most. Already the same cannot be said of the poorest people, since the low rate is preferable to a better quality service. Thus, "it is vital to take into account the ability to pay of the passage on the part of users of lower purchasing power that are captive users of public transport".

At the same time, for entrepreneurs, economic return on investment, ensuring the continuity of the provision of service for a time compatible with the investment and the importance of their work on the part of the community and Government are the premises for their own.

Anyway, the Government represented by the local management is responsible for the regulation of the TP service. With a leading role, has the competence the formulation, coordination and supervision of the transport system, the strategic planning and investments to increase and improve system performance.

Ferraz (2004) considers that there are three Government obligations: planning the transportation, implement relevant actions and the carriage works and managing the system. Therefore, to facilitate this process, must count on adequate administrative, technical and legal structure. In addition, stresses that the transport management encompasses the operating rules and regulations, supervisory activities, operational programming, database management and information system administration of communication with the public (complaints and suggestions).

To integrate the visions of the three authors involved in the production process of the TP, it is possible the understanding that quality is a result of planning offered system and its operation and control.

Results and discussions

In this section we report the result of the questionnaire applied to TP users conducted by bus in the city of Palmas (TO). According to the results of the Group I, 58.82% of respondents are male and 41.17% are female. This volume challenges the census data of 2015 conducted by IBGE (2014) that presents a tendency to equilibrium with 49.42% male ratio and 50.57% of the female gender. Although in the Group of respondents all

Sex	Age group	Aggregation	%
Male	15-20	3	10%
	21-30	15	50%
	31-40	9	30%
	41-64	3	10%
	More than 65		
	NA		
	TOTAL	30	100%

Figure 4. Distribution by age group (masculine). Source: Data from the author (2016).

Sex	Age group	Aggregation	%
Female	15-20	4	19,04%
	21-30	12	57,14%
	31-40	2	9,52%
	41-64	3	14,28%
	More than 65		
	NA		
	TOTAL	21	100,00%

Figure 5. Distribution by age group (female).Source: Data from the author (2016).

the genders are well represented, the prevalence and male hegemony is fair.

When comparing the gender in relation to the age group of the TP system users (Figure 4 and 5) you can consider that there is a predominance of the tracks between 21/30 and between 15/20 years for females and 21/30 years and between 31/40 years for males. This dimension of age (between 15 and 40 years) between men and women for professional activity and be composed for students, who typically are two activities that are easily linked to this period of life of the people.

Another important point to note is that there was a massive decline in use from 40 years in both genders, and analyzing along the sexes of respondents arrive at a sum of only 11.76%. It is understandable that this fact is due to two factors: the first is linked to early retirement for length of service or compulsory and the fact there is a very small volume of students with more than 40 years of age. The second lies in the case of this age group present relative ability to acquire private means of transport, due to the accumulation of wealth coming from industrial activities, pensions, inheritances, among others.

In Figure 6, the distribution of passengers by schooling where it did not matter the sex of the users. Note that 6% of those interviewed have high school as minimum education and 82% of the respondents have incomplete or complete higher education. Having the relationship between poverty and low education, there is a tendency to use the TP system for people with higher education degree suggesting that it influences the mobility of individuals. According to Vasconcellos (2001) the lack of schooling exposes the vicious cycle: less mobility, which generates greater difficulty to find jobs; and unemployment, which prevents people from acquiring sources of income, which produces more poverty.
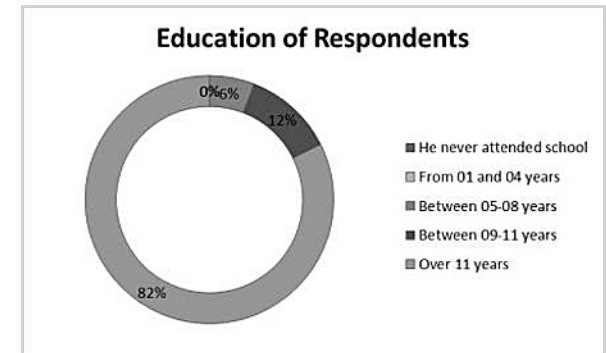

Figure 6. Evaluation of the level of educations of respondents. Source: Data from the author (2016).

Regarding the distribution of household income of the users of the system, most have three income to five minimum wages with 41%, and none of the respondents presents more than 10 minimum wage income.

In addition, about 28% of the respondents use the service more than 10 times per week and 22% use 5 to 10 times a week. That is to say, has more credibility to the study results, since a significant proportion of respondents in the TP ser-
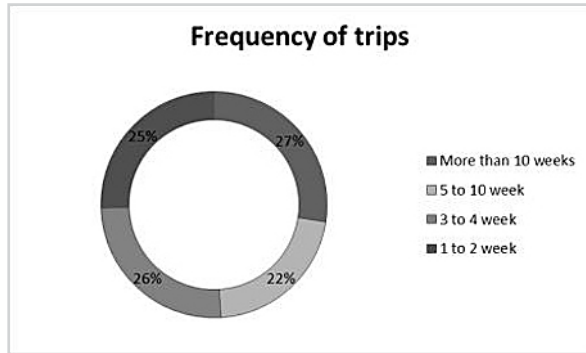
Figure 7. Assessment the income respondents. Source: Data from the author (2016).
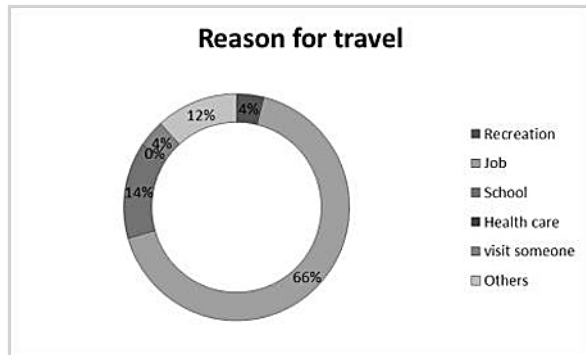

Figure 8. Evaluation of the travel of the reason. Source: Data from the author (2016).

vice has intense access. Yet, it was observed that about 67% of respondents use the service for their daily commutes to work and about 14% of the respondents use to study, as the Figure 7 e 8:

With regard to the results found in compliance with the price paid by users of the system (Figure 9), about 78% of respondents assess so negatively. Although it is a point that cannot be evaluated in the light of a question about the value of the ticket, (people relate expensive prices paid, especially when they are not satisfied with the service) it is recommended that the company investigate the possible causes for this dissatisfaction since it can be rated as one of the problems that most affect the realization of citizens daily activities Therefore, reaching directly the quality of life.

In the following phase was instructed to assess the interviewed items in five different levels (bad, regular, good and very good). The graph 06 depicts there is a balance in the trials of the users about the satisfaction with the TP in which, where about 33% evaluated how bad the line used, while about 23% opined as regular.

When comparing the opinions of users as Figure 11, shows users are satisfied with the travel time, because 50.98% consider how regular and 23.52% consider good and only 5.88% as bad. In relation to the conservation of vehicles; 21.56% consider good, 45.09% regular and 23.52% bad. It is important to note that the high percentage
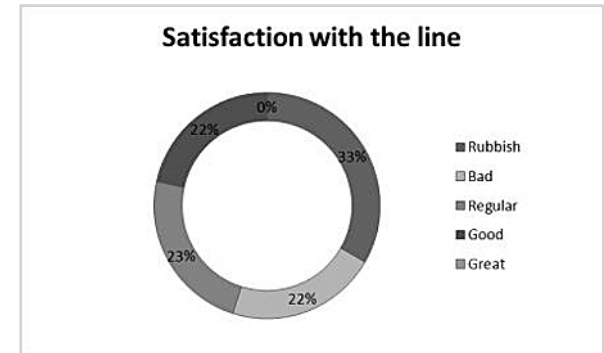

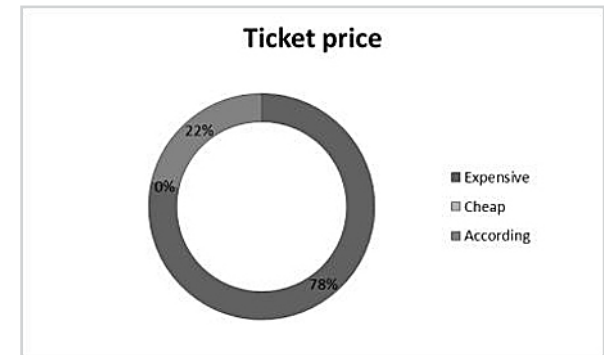Figure 9. Evaluation of the prices. Source: Data from the author (2016).

Figure 10.Evaluation of satisfaction with the line. Source: Data from the author (2016).

of satisfaction about the state of conservation can related to the acquisition by SETURB (Urban Transport companies Union of Palmas) of 71 bus to the fleet of Palmas.

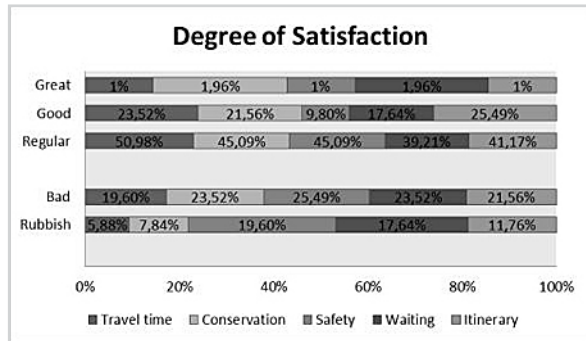The concept of security is mostly characterized by users as 45.09% as regular and 25.49% bad

Figure 11. Consumer Survey: satisfaction evaluation criteria for the TP system user. Source: Data from the author (2016).
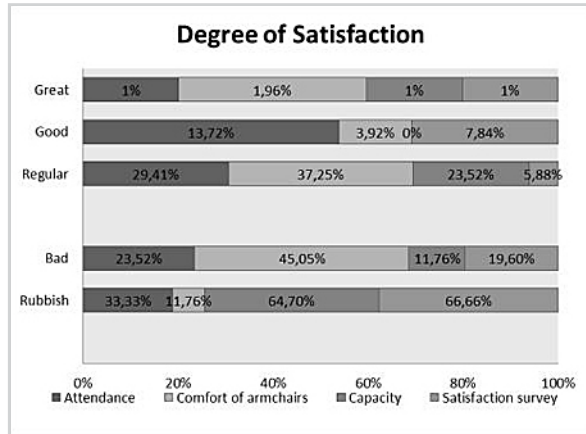

Figure 12. Consumer Survey: satisfaction evaluation criteria for the TP system user. Source: Data from the author (2016).

and 19.60% as very bad. In that item sought to assess traffic conditions in General, such as: the malpractice of drivers, characteristics of the itineraries, the conditions of use and maintenance of vehicles. These conditions cause in the TP system users a feeling of insecurity, which is the uncertainty of arriving at the destination. It appears then, that some lines deserve intervention in search of improvements especially considering the bad and bad reviews.

About the time of waiting for the bus, the survey pointed out that users consider 39.21% as regular, 23.52% bad and 17.74% terrible. It points out that the timetables are not sitting properly fulfilled and dissatisfied users. The Figure 11 still allows us to verify that respondents evaluate 41.17% as regular itinerary, and 25.49% good.

The research pointed out that 56.85% are dissatisfied with the service provided, being 33.33% bad and 23.52% terrible. This component deserves attention, since the courteous treatment in addition to being a consumer law is one of the ways to achieve empathy that must exist between the actors involved in the use of public transport. And 45.05% of respondents assessed as bad the comfort of armchairs and 37.25% as regular.

The graph allows verifying that the 08 level of satisfaction of users with regard to capacity deserve caution. The percentage of bad come to 64.70% and correspond to a significant disapproval in this

regard. With this, it is evident that the fleet of buses is inadequate for local demand and/or itinerary planning is running way erroneous. Another question rather worrying is about satisfaction survey that presents a percentage of 66.66% as bad. This certifies that there is an efficient channel of communication between the involved ones, in case users and the company for information and suggestions.

The concept punctuality has a percentage of 58.82% regular and 21.56% good, which shows that there is compliance with the timetables. Nevertheless, the survey pointed out that the bad, bad and regular percentages added together total a total of 92.14% as good values and good add up 7.86% only with regard to information on and access to the internet. This certainly is the biggest problem in the TP system studied and represents a significant disapproval in this item.

About the question of adaptation to people with special needs to hear balance of satisfaction of respondents, for terrible 31.37% and 31.37% as good. This aspect is justified by the fact that the majority of the buses meet. However, there are still non-accessible buses or in bad conditions. Another problem is the lack of accessibility to all terminals and stops, which ends up hindering mobility.

According to the data collected, 49.01% of respondents characterized as bad item on new vehicles and 7.84% and comfortable as good. Moreover, the incentive to use is evaluated
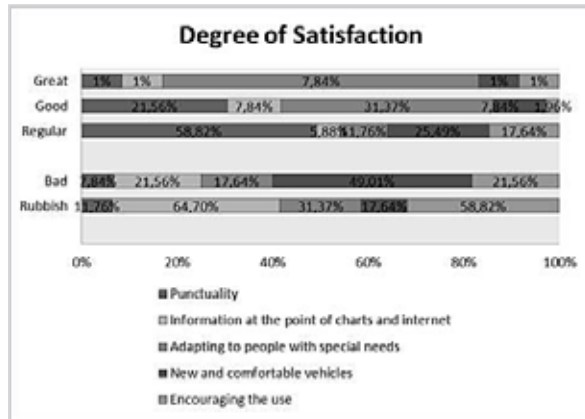
Figure 13. Consumer Survey: satisfaction evaluation criteria for the TP system user. Source: Data from the author (2016).
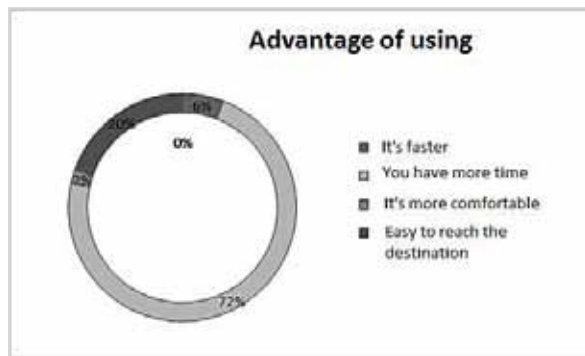

Figure 14. TP system using advantages. Source: Data from the author (2016).

58.82% terrible and bad 21.56%, which features lack of encouragement of local government.

As can be seen from Figure 14, despite of respondents assess some items in a negative way, the TP system of Palmas is at some points accepted by the user. Research has indicated that the respondents' opine 72.56% as the biggest advantage of using TP availability schedules, 19.60% points which is the ease in reaching the destination and 5.88% believe the buses are faster.

Finally, in Group III that became an "open space" to express your criticism, suggestions and compliments about TP, the main observances were regarding the reduction of the tariff charged by the system and the increase in bus fleet. Easily realize that both constitute incentives for increased use of TP by the population.

Some considerations

In the face of the changes introduced by the urbanization process over the years, the medium-sized cities are relevant economic and demographic centers where they play a major role in the production and regional consumption. Two criteria are considered for the identification of medium cities: the first criterion relates to quantitative order, considering the demographic; the second criterion identified is the qualitative nature, as its influence on the urban network, regional importance, infrastructure and geographical location.

Palmas as state capital, reflects the administrative and economic dynamism in the State, as a reaction to their local and regional influence, securing his position as city average. Centralizes various services not found in the cities of the State and commands its surroundings areas, thus generating intense flow of capital and people.

Amid the challenges and urgent need of improvement of TP is of utmost importance the reorganization of urban space mainly on a regional scale by means of planning (in all areas), public policy (not only of mobility as well as popular participation) and thus the possible reduction of car. Aiming in this way, in the near future, the TP could be the most widely used form of locomotion in the city and not only for the low-income population.

For this to happen, you first need greater amount of buses and investments in the sector, means by which much of the population will adapt. On another hand, the development of a specific project for the improvement of the functioning of roundabouts which due to their large number in the city causing traffic congestion and consequently fuel consumption, air pollution, noise and accidents, the problem of traffic alleviates.

Considering the elements of quality evaluation of TP as justification, it is concluded that the prevailing points to be improved, according to the opinion of the users are: the price of the ticket, as

main factor of dissatisfaction, the capacity of the bus, information in charts and internet points and encouraging use.

With regard to the capacity factor, it is necessary a reorganization of the TP system in its entirety in order to avoid the overhead of passengers mainly in timetables with greater demands on the part of company management.

The research pointed out that the lack of incentive for use, characterized by lack of stimulus to local public power, cause a widespread dissatisfaction. It was also found that the points judged on the quality of services have been positive: the travel time, the conservations of the vehicles, safety and punctuality.

On the exposed, we understand we agree that more than assess and rank the quality of the services provided by the TP bus in the city urban average of Palmas, one must understand the aspirations of the users in order to promote democratization of access to the TP and so local public policies. Such actions represent the trends that will guide the continuity of this study.

References bibliográficas

ALBRECHT, K.; BRADFORD, L.J. **The Service Advantage.** New York: Richard D. Irwin, Inc.,1998.

CAMPOS, V. F. **Controle da Qualidade Total:** No Estilo Japonês. Belo Horizonte: Management Development Publisher,1999.

CNES. Available at: <http: cnes.datasus.gov.br>. Accessed: February 01 2016.

FERRAZ, C. P. **Transporte Público Urbano.** San Carlos: Rhyme, 2004.

FRANCE, I. S. **A cidade média e suas centralidades:** O Exemplo de Montes Claros no Norte de Minas Gerais. 2007.

HAYES, B. E. **Medindo a Satisfação do Cliente.** Rio de Janeiro: Thorsons, 2003.

IBGE-Brazilian Institute of geography and statistics, Available at: <www.cidades.ibge.gov.brx-trasperfil.php?codmun172100>. Accessed: February 01 2016.

IPEA. **Redução das (Des)Economias Urbanas com a Melhoria do Transporte Público.** Brasília: Final report, 1998.

IPEA. **A Nova Lei de Diretrizes da Política Nacional de Mobilidade Urbana.** Comunicados do IPEA, n. 128. Brasília, 2012.

LEFEBVRE, H. **A revolução urbana.** Belo Horizonte: UFMG, 1999.

NTU-National Association of Urban Transport Companies. **Sistema de rede:** construção de redes de transportes públicos de qualidade. Brasília, 2004.

OLIVEIRA, J.; GIANSANTI, R., **Espaço e modernidade, temas de Geografia do Brasil.** São Paulo: Current, 1999.

SPOSITO, M.E.B. **Construindo o conceito de Cidade Média.** Cidades Médias: espaços em transição. São Paulo: Popular Expression, 2007.

VASCONCELLOS, E. A. **Transporte urbano, espaço e equidade:** análise de políticas públicas. São Paulo: Annablume, 2001. ∎