

Port of Spain Commuter Patterns and Satisfaction Levels

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Abstract: Port of Spain (POS) functions as the administrative, political, and commercial capital of Trinidad and Tobago, attracting many commuters daily. This paper reports the first part of a two-stage process of developing a quantitative measure of the performance of the Port of Spain public transportation network. It provides insight into the key stakeholders and the needs, preferences, and satisfaction of users of the Port of Spain transportation network. The key stakeholders in the transportation network were identified and classified in a stakeholder matrix on the basis of their interest and influence. A survey was undertaken to understand the public's perception of the transport network and the travel patterns and characteristics. The results suggest that while most trips to and within Port of Spain are completed for employment, a significant percentage is for personal business and shopping/leisure. Moreover, while the largest number of trips ended in the central business district (CBD) of Port of Spain's most destinations are outside the CBD. Survey participants were broadly dissatisfied with the transport system, indicating strong dissatisfaction with congestion, lack of accessibility and lack of information experienced in the capital city. Indeed, a minimum of forty-four percent and a maximum of seventy-eight of respondents were either dissatisfied or very dissatisfied with some aspects of the transport system. No more than twenty-five percent, and in the case of congestion only three percent, of respondents were either satisfied or very satisfied. Although transport safety received the least negative response among the transport indicators, approximately forty-six percent of respondents were dissatisfied or very dissatisfied with it. Also, in general, females reported more dissatisfaction with transport safety compared to men. The findings also highlighted how disadvantaged users of public transportation are with respect to ease of travel to and within the city. This paper reports on the mapping of the network and the development of a performance index.

Keywords: Commuter surveys, Stakeholder engagement, traveller perceptions, Port of Spain, Trinidad and Tobago

1. Introduction

The Republic of Trinidad and Tobago is located within the south-east zone of the Caribbean. This twin-island nation has a population of 1.3 million (Central Statistical Office, 2012), a gross domestic product (GDP) per capita of US\$15,424 (The World Bank, 2020) and motorisation of 583 vehicles per thousand people (Bollers et al, 2019). Its capital city, Port of Spain (POS) covers an area of 12.3 km² and functions as the administrative, political, and commercial capital of the country.

Businesses within this municipality cover a wide range of sectors. The predominant sectors consist of retail and distribution, finance, insurance, real estate and business services (Kairi Consultants Limited, 2016). As a result, the area attracts many commuters daily. Movement of this predominantly transient population is facilitated by private vehicles, public transportation providers and non-motorised methods such as walking. Public transportation is provided by taxis, maxi-taxis, Public Transport Service Corporation (PTSC) buses and

Transportation Network Companies (TNCs). Taxis are 4 to 9-seater cars registered to convey multiple passengers between locations of choice. Registered taxis are identified by the first letter "H" on the license plate. Fares are not metered but instead, a fixed fare is assigned to each route. On several routes, private vehicle owners illegally operate as taxis, in competition with the registered taxis. These are called 'PH taxis'.

Maxi-taxis are privately owned 9 to 25-seater minibuses (OBG, 2016). They are painted off-white with horizontal bands at the mid-portion of the vehicle in the colour assigned to its respective route area (MAGLA, 2016). Maxi-taxis operate within fixed geographical areas and have fixed stands but their routes within their assigned areas are not fixed. Maxi-taxis do not operate on a fixed schedule. Fares for any given route are fixed by the associations of operators. Rides are shared with others who are picked up and let off along the route.

The PTSC is a state-owned, bus service company governed by the Public Transport Service Act, Chapter

48:02 of Trinidad and Tobago. The organisation provides national bus transport, chartered bus service, contracted school transport and specialised transport for persons with disabilities. The buses carry passengers along fixed routes for fixed fares.

'Drop', 'TT RideShare', 'PinkCab', 'RideConnect' and 'Caribbean Taxi' are examples of Transportation Network Companies operating in Trinidad. Transportation Network Companies (TNCs), also known as ride-sharing companies, provide on-demand transport services for passengers. Passengers request a ride and are matched to private drivers under contract with the TNC through a mobile application.

This paper identifies the key stakeholders of the POS transportation network and examines the travel patterns, preferences, and satisfaction levels of the transport users of the identified network. Focus was given to the transport users, since analysis of user experiences and user perceptions is critical in advocating to stakeholders with greater influence.

2. Challenges Associated with the Port of Spain Transportation System

Extant research confirmed that the Latin American and Caribbean urban transport environment is characterised by high private transport usage, high congestion rates, long commute times and a limited distribution of information related to routes and schedules.

Leung (2009) and Bollers et al. (2019, p.24) presented evidence of these challenges in Port of Spain. As of 2001, 221,000 private vehicles entered the capital city of Port of Spain transporting 330,000 individuals daily (Leung, 2009). As shown in Figure 1, these private vehicles represented 85% of the total number of vehicles entering the city. The other 15% consisted of 39,000 public transport vehicles (PTSC buses, taxis and maxi-taxis) which transported approximately 270,000 persons (Leung, 2009).

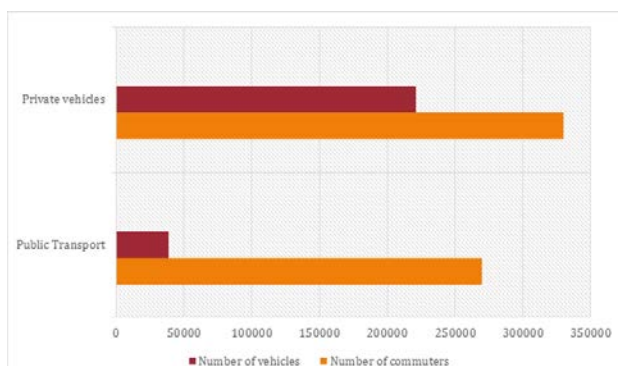


Figure 1. Daily Distribution of Vehicles Entering Port of Spain based on 2001 Study. Source: Adapted from Leung (2009)

More recently, the Inter-American Development Bank (IDB) reported that a total of 260,000 vehicles

entered the capital city daily (Bollers et al., 2019, p.24). This suggests a seventeen percent (17%) increase in the number of vehicles entering the city from 2001 to 2019. In addition, the IDB highlighted that Trinidad has a motorisation rate of 583 vehicles per 1000 persons, the highest in the Caribbean (Bollers et.al, 2019).

The occurrence of crime, lack of public information on available public transport routes and the public's poor perception of the public transport services provided, all contribute to this high private vehicle usage in the capital (Leung, 2009). As a result, the city experiences increased congestion, limited parking and a reduction in productivity (Leung, 2009). Accordingly, the IDB highlighted that the inadequacies in the road transport system cost users an estimated US\$267-345 million annually in lost time, reliability and fuel (Bollers et. al., 2019).

Measures to mitigate these negative features of the urban transport environment must be developed, deployed and evaluated. However, before solutions can be applied, an understanding of its organisation and performance in addition to the stakeholder experience must be examined.

3. Stakeholder Identification, Classification and Categorisation

Transportation policies are multi-agent and multi-sector in nature (Haial et al., 2017). A wide range of interests and issues must be considered. The major stakeholder groups that can impact or are impacted by transport strategy development fall under the main headings of government or authorities, businesses or operators and users of the transport system. Through the explanation of a three-component stakeholder analysis model, Kivits (2011) demonstrated how to achieve an in-depth understanding of stakeholder groups. The model involved classifying and categorising each stakeholder group based on salience, how the stakeholder viewed the world and the relationships among stakeholder groups.

The fundamentals of stakeholder analysis outlined by Kivits (2011, p.321) were further supported by Bossche et al. (2017). In the context of urban freight logistics policy development and implementation, van den Bossche et al. (2017, p. 16) considered stakeholder classification based on the stakeholder's influence, level of interest, contribution, legitimacy and, the relationship among stakeholders.

Figure 2 demonstrates how van den Bossche et al. (2017, p.16) categorised urban freight stakeholders using influence and interest. This is useful to understand the relationships amongst stakeholders as well as the level of engagement required by each stakeholder group. Accordingly, this research project adapted the Kivits (2011, p.329) model and van den Bossche et al. (2017, p.16) approach by classifying stakeholders according to salience, level of interest and relationships among stakeholders.

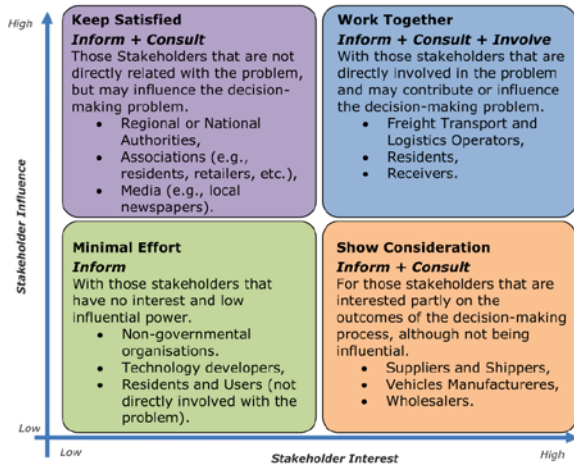


Figure 2. An Example of Stakeholder Classification Based on Influence and Interest
 Source: van den Bossche et al. (2017, 16)

3. Stakeholder Engagement and Identification

A stakeholder analysis was conducted to satisfy the following research questions:

- 1) Who are the key stakeholders and what are their levels of influence and interest?
- 2) What is the public’s perception of public transportation service?

3.1. Stakeholder Identification

Twenty-three stakeholders associated with the selected study network were identified. Using the categorisation as advocated by Kelly et al. (2004), these stakeholders were grouped into four main areas as shown in Table 1. The stakeholders listed were then positioned in a stakeholder matrix based on influence and, level of interest. Stakeholders were placed according to the definitions provided in the example quoted in Figure 2. Based on the classifications of van den Bossche et al. (2017, p.16), transport users were placed in the lower right quadrant of Figure 3. This is because transport users have a high interest and a low influence in transport network policy development. Analysis of user experiences and perceptions is critical in advocating to stakeholders with greater influence. Accordingly, this paper focuses on the activity patterns and the experience levels of transport users.

3.2 Stakeholder Engagement

Subsequent to the identification and classification of interest groups, the selection of an appropriate engagement technique is important for conducting a transport user survey. The European Commission has discussed some key considerations and guidelines for the selection of engagement techniques (van den Bossche et al., 2017). They include:

- 1) Considering a method which aligns with the available resources and timeframe allotted for the

Table 1. Port of Spain Transport Network Stakeholders

Stakeholder group	Code	Stakeholder Name
Government Level	G1	Traffic Management Branch, Ministry of Works and Transport (MOWT)
	G2	Ministry of Works and Transport (MOWT)
	G3	Ministry of Planning and Development
	G4	Port of Spain City Corporation
	G5	Trinidad and Tobago Police Service (TTPS)
	G6	Ministry of Social Development and Family Services
	G7	Ministry of Tourism
Operator Level	O1	Public Transport Service Corporation (PTSC)
	O2	Taxi operators
	O3	Maxi-taxi operators
	O4	Water-taxi operator (National Infrastructure Development Company Limited (NIDCO))
	O5	Transportation Network Companies (TNCs) e.g., TTRideshare
User	U1	Private transport users
	U2	Privately owned public transport users (e.g., maxi-taxi or taxi users)
	U3	Publicly owned public transport users (e.g., water taxi users, PTSC users)
	U4	The Consortium of Disability Organisations (CODO)
	U5	Residents
	U6	Tourists
Business	B1	Downtown Owners & Merchants Association (DOMA)
	B2	Carpark and parkade owners and operators
	B3	Trinidad and Tobago Industry of Chamber and Commerce
	B4	Port Authority of Trinidad and Tobago
	B5	Media

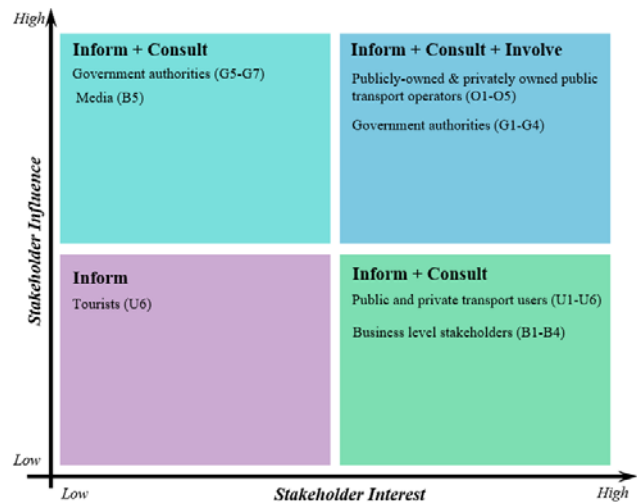


Figure 3. Classification of Port of Spain Transport Network Stakeholders

- 2) Understanding the values and culture of the stakeholders considered.
- 3) Selecting a technique which permits the clear communication of key items to stakeholders and also provides an avenue for feedback.
- 4) Being open to innovative and alternative methods whilst recognising that in some cases traditional project or initiative.

methods are most effective.

- 5) Considering engaging an expert or an individual who can manage any expectations and tensions.

Surveys, questionnaires, focus groups, interviews and meetings are some examples of traditional techniques which can be used to consult and collaborate with stakeholders (van den Bossche et al., 2017, p.23). Though researchers agree that stakeholder involvement increases the effectiveness and acceptability of transportation initiatives, stakeholder participation is commonly restricted to small groups. This issue is attributed to the planner’s or researcher’s inability to capture a large range of participants (Misra et al., 2014). To overcome limited participation Misra et al. (2014) encouraged embracing technology-mediated forms of engagement which do not rely on the physical presence of participants. Referencing multiple case studies, Misra et al. (2014) illustrated how traditional methods of data collection and feedback can be replaced to capture a wider group of participants without creating a financial burden. In 2018, an analysis of Trinidad and Tobago’s digital landscape reported 0.8 million social media users and 1 million internet users (Kemp, 2018). This represents 58% of the population and 73% of the population, respectively. For this research, technology mediated forms were designed and distributed to encourage participation.

4. Methodology

A survey was undertaken to understand the travel patterns and experiences of the transport network users. A questionnaire containing nineteen questions was developed. It prompted participants to answer both quantitative and qualitative questions which focused on respondent demographics (such as, age, gender, disability), travel behaviour (such as, frequency of visits, the purpose of visit, journey origin, journey destination, modal preference, journey duration), monthly transport expenditure, and transport experience.

A non-random sampling technique was employed. The questionnaire was distributed on social media platforms and multiple open groups. Participants were encouraged to re-share the survey to expand the captured population sample groups. In total, two hundred and fifteen (215) responses were provided. Responses were accepted between 28th January, 2020, and 2nd March, 2020. This approach aligned with the time and financial resources available for the project and was expected to still produce results that were indicative of the commuting population.

4.1 Sample Description

Age and level of disability are socioeconomic characteristics that influence how the transportation system is experienced. Whilst other socioeconomic characteristics such as income may affect transportation choices, the reported experience is independent of those

characteristics. Our current study did not collect income data. A recent household travel demand study of the East West Corridor showed that for a wide range of income levels, income had no significant effect on either trip generation or modal choice (Townsend, 2021).

From the two hundred and fifteen (215) responses obtained, 59% of survey participants were female and 41% were male. Age was divided into 8 categories which ranged from 17 years old to over 50 years old. Respondents predominantly fell within the 25 to 29-year-old age category. This was followed by the 30 to 34-year-old age category. The 17 to 19-year-old category was the least represented. Figure 4 shows the age distribution of the survey participants.

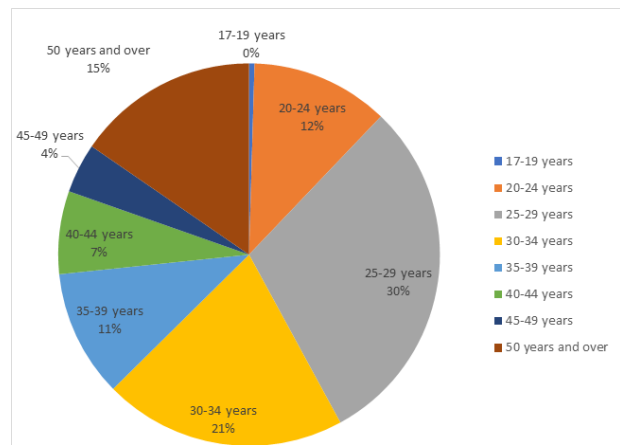


Figure 4. Age Distribution of Survey Respondents

Table 2 compares the sample age distribution to the 2011 Population and Housing Census (CSO 2012). As shown, there is an overrepresentation of 25 to 34-year-olds compared with 35 to 49-year-olds, indicating that the sample is skewed toward younger people within the 25 to 49-year-old generation. What this means is that the sample is more likely to have young single adults or married adults with no or young children.

Table 2. Comparison of Age Distribution

Age (years)	Population Percentage (%)	Sample Percentage (%)
20 – 24	14.7	12
25-34	29.4	51
35-49	35.3	22
Over 50	20.6	15

According to the World Health Organisation (WHO) disability is a broad term for impairment, activity limitations and participation restriction (WHO, 2002). Participants of the survey were prompted to indicate the presence of a long-standing disability. This was done to determine the experience of disabled groups.

As shown in Figure 5, 95% of respondents indicated ‘No impairment’, 4% highlighted the presence of a

‘visual impairment’ and less than 1% reported the presence of a ‘physical impairment’ and ‘deaf/hard of hearing’. Comparatively, results from the 2011 Trinidad and Tobago Population and Housing Census indicated that there are approximately 52,244 individuals living with a disability (MSDFS, 2018). This represents 4% of the total population. Thus, the presence of disability within the sample appears to be at a similar level as the population.

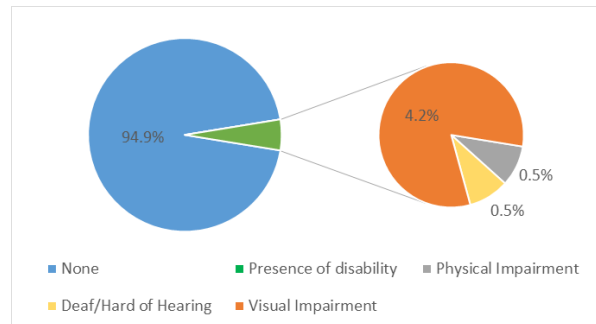


Figure 5. Disability Distribution

4.2 Journey Characteristics

The survey prompted participants to indicate the main purpose of their trips to Port of Spain. This was done to quantify the activity patterns of travellers (see Figure 6). The trip purpose categories considered were, (1) work; (2) business; (3) education; (4) shopping or leisure; (5) escort (for example accompanying children to school) and; (6) other.

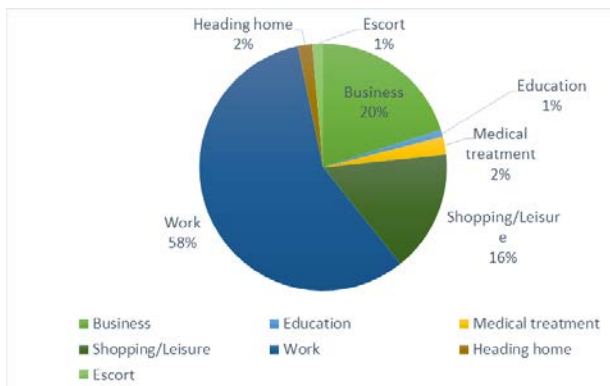


Figure 6. Reasons for Travelling into Port of Spain

Since Port of Spain functions as the centre of commerce and business in Trinidad and Tobago and houses the seat of government (Kairi Consultants Limited, 2016), it was expected that a large proportion of transport users enter the capital for business or work. Accordingly, considering the main trip purpose, fifty-eight per cent (58%) of respondents visited the city for work, twenty per cent (20%) for business and, sixteen per

cent (16%) for shopping or leisure. The remaining six per cent (6%) contributed toward medical treatment, heading home and escort. Since the majority of the respondents indicated that their main purpose was “work”, it is expected that timeliness is a critical factor to the majority of Port of Spain transport users.

4.3 Modal Choice Behaviour

In the context of transport engineering, a journey is defined as a one-way trip of travel which has a single purpose. A journey consists of one or more stages. For this research, a journey is separated into two main stages. The first stage is treated as a trip between the point of origin and entry point into Port of Spain. The second stage is considered as the trip from this entry point to the traveller’s specified destination.

4.3.1 Modes Used to Arrive into Port of Spain

Figure 7 presents a non-exhaustive list of the motorised transport modes available to arrive in Port of Spain. As shown, public transport is disaggregated into publicly owned and privately owned.

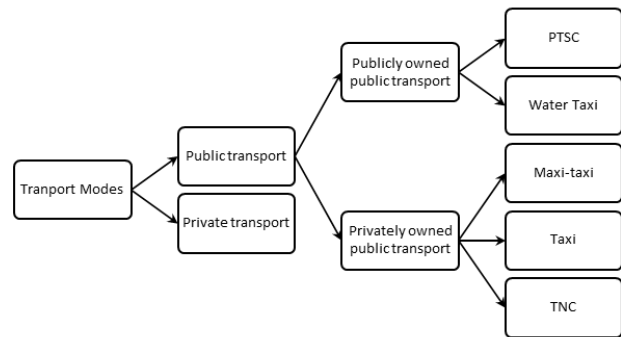


Figure 7. Available Transport Options for Entering Port of Spain

It was found that seventy-one percent (71%) of trips to Port of Spain are completed using private transport while approximately twenty-nine percent (29%) are made using public transport (see Figure 8). Maxi-taxi trips represent only nineteen percent (19%) of the sample population, the highest among public transport modes.

4.3.2 Modes used within Port of Spain

Figure 9 depicts the modal distribution of trips within the city. Forty-five percent (45%) of trips were completed using private vehicles whereas twenty-eight percent (28%) of trips were completed by walking. The distance between parking facilities and workplaces or business places accounts for the reduction in private car usage and increased use of walking during the second stage of journeys. Maxi-taxi usage within the capital contributed to only one percent (1%) of trips, a reduction of eighteen percent (18%) from the corresponding value reported (see Figure 8).

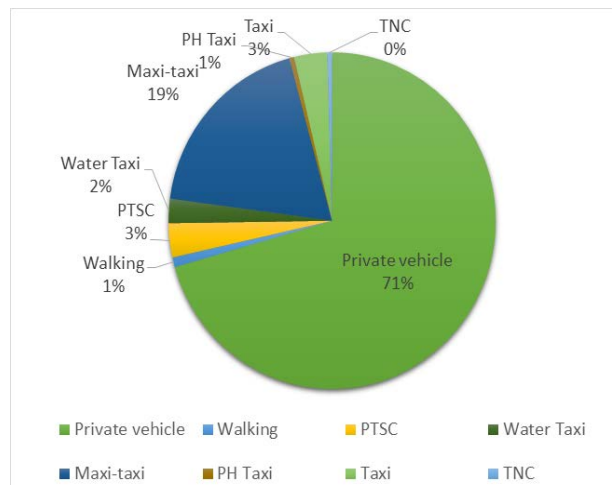


Figure 8. Distribution of Transport Mode used to Enter Port of Spain

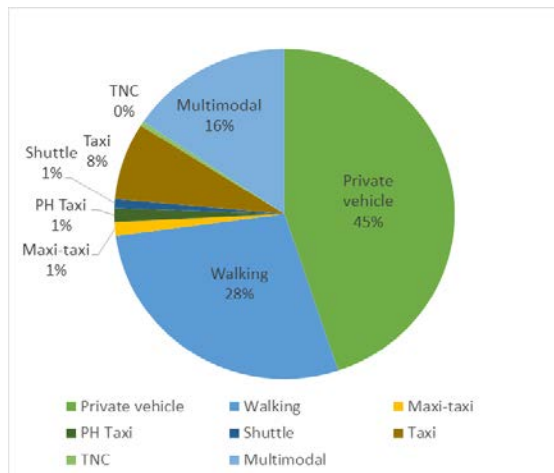


Figure 9. Distribution of Transport Modes within Port of Spain

The restricted maxi-taxi usage within the capital may explain this variation. It was found that sixteen percent (16%) of users indicated that the second stage of their journey may comprise of multiple modes of transport. Respondents reported using the following combinations of transport modes upon arrival in POS:

- Maxi-taxi, walking
- Private vehicle, walking
- Taxi, walking
- ‘PH’ taxi, taxi, walking
- Walking, taxi, TNC

The most popular multimodal combinations were (i) ‘Maxi-taxi, walking’ and (ii) ‘Private vehicle, walking’. Figures 8 and 9 demonstrate the low usage of Transportation Network Companies (TNC).

4.4 Trip Purpose and Transport Mode

Adding another layer to this analysis, the relationship between trip purpose and transport mode was evaluated. A 100% stacked column chart was generated as shown in

Figure 10. Except for homeward bound trips, private transport usage remained the predominant modal choice for each trip purpose considered. For trips to access education, medical treatment and to escort individuals, private transport was the only form of transport used. Thirty-three percent (33%) of trips into Port of Spain to get to work were facilitated using public transport, the highest public transport usage observed.

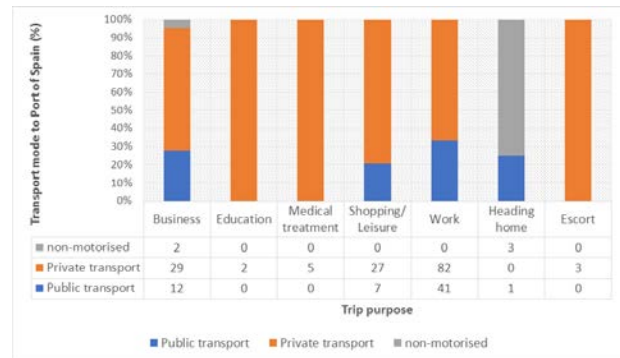


Figure 10. Relationship between travel activity and transport mode

Survey participants were prompted to indicate the start and endpoints of their trips. Using this data, the centroid road distance traversed by each participant was approximated using Google Maps. As demonstrated in Figure 11, trips originating from Chaguanas (10.4%) accounted for the highest percentage of trips recorded, followed by San Juan (9.4%) and, St. Augustine (8.5%). As shown in Figure 12, approximately forty-two per cent (42%) and seventeen per cent (17%) of trips ended within the Central Business District (also referred to as Downtown Port of Spain) and Woodbrook, respectively. These trends indicate that POS attracts travellers from throughout the country. Whilst under half of these trips end in Downtown POS, a significant portion of trips is dispersed in POS. This means that users may need to transfer or have a long walking trip within the city.

A bar chart was developed using the average distance travelled for each trip purpose (see Figure 13). The median distance travelled is 42km for medical treatment, 32km for business, 31.8km for shopping/leisure and 30.5km for work. There is a marginal difference between the distance travelled for business and work, however, the average distance travelled for healthcare is 31% greater than the average distance traversed for business. This suggests that, for the survey respondents, the distance patients are willing to journey to access healthcare is greater than the distance away from work. Related to this, (Kelly et al., 2016) revealed that factors excluding distance contribute to how easily patients are capable of travelling to access healthcare facilities. The results also indicate that POS is a unique destination for specialised medical care.

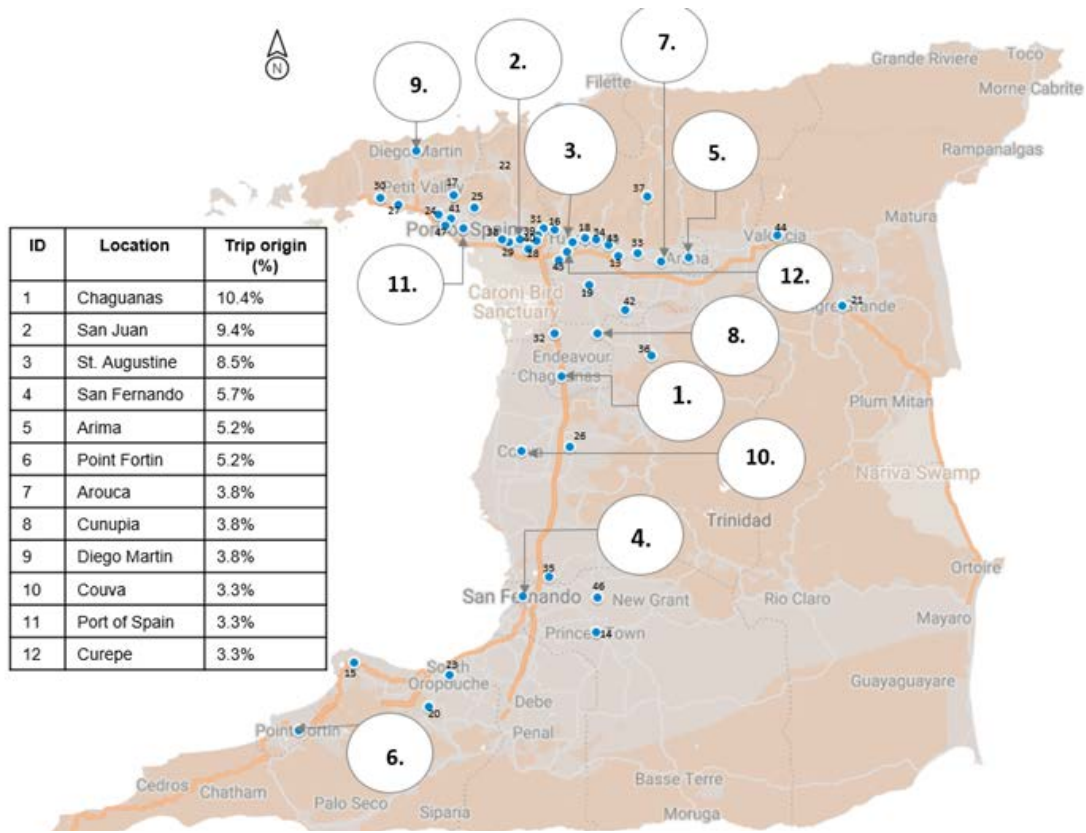


Figure 11. Map Showing Trip Origins.

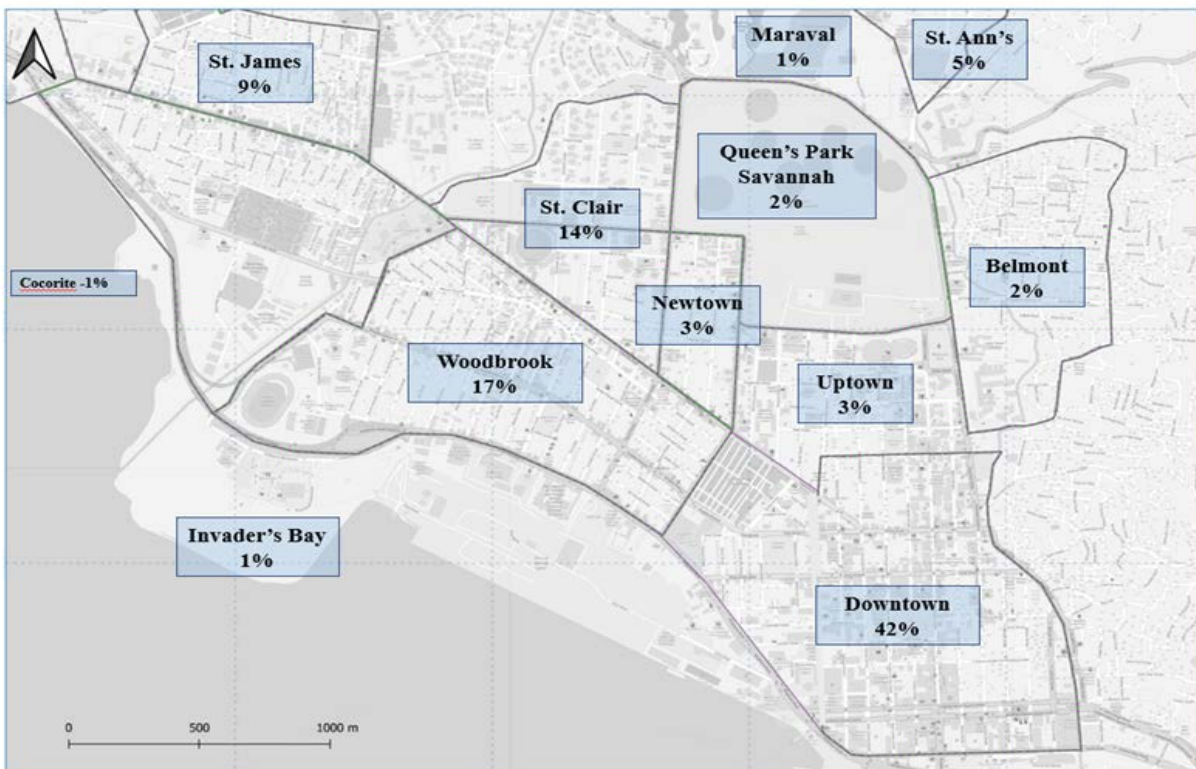


Figure 12. Map Showing Area of Interests upon Arrival in Port of Spain

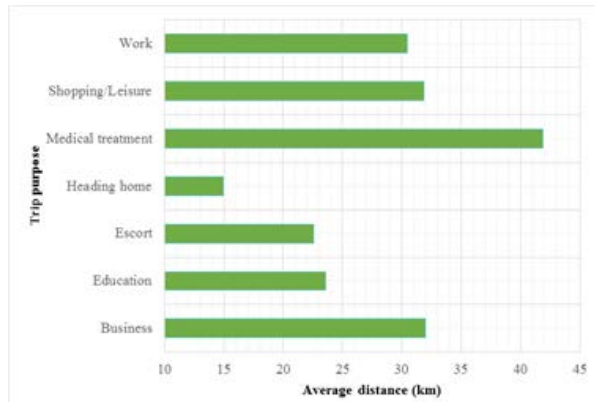


Figure 13. Average Travel Distance to Port of Spain Disaggregated into Trip Purpose

The monthly cost expended for transport was separated by public and private transport users. Private transport users reported an average monthly transport expense of seven hundred and thirty-three Trinidad and Tobago dollars (\$733). Public transport users indicated a four hundred and sixty-six T&T dollars (\$466) average monthly transport cost. This was almost two hundred and sixty-seven T&T dollars (\$267) less than the corresponding private transport figure. The cost quoted for private transport users represents the fuel and parking costs whereas the prices quoted by public transport users signify the fares paid. The fuel cost and the public transport fare represent the ‘out of pocket’ direct user costs. Private transport cost did not include vehicle maintenance expenses, insurance fees and the cost of the vehicle. Similarly, public transport cost does not capture government subsidies. The results suggest that although private transport users report significantly higher costs, the advantages of using private transport outweigh using public transport.

4.5 Parking Choice Behaviour

During a telephone interview made on 21st March, 2012 with the Guardian Newspaper, the president of the Downtown Owners and Merchants Association (DOMA) underscored the symbiotic relationship between parking, vehicular access and the survival of downtown Port of Spain (Clyne, 2012). High private transport usage triggers high parking demands. Also, the quality of the available parking impacts traffic flow. According to (Furlonge, 2010), the rate of flow of traffic is related to how effectively both on and off-street parking can reintegrate vehicles into the system.

Figure 14 depicts the parking choice behaviour of survey participants. One-hundred and sixty-eight (168) participants indicated the use of either public parking lots, on-street parking or company parking provision. Of this, 46% of respondents utilise parkades or public paid parking lots, 20% use on-street parking and 35% benefit from company parking provision. Although the number

of persons using parkades is significant, it is outweighed by the number of persons who park through company provision or on-street. This highlights that private transport users prefer to use a free parking option.



Figure 14. Parking Choice Behaviour

If a standard nineteen and a half square metres (19.5 sq.m) of land is allocated to provide parking for each private vehicle in the city (Garber and Hoel, 2002), ignoring multi-story carparking, approximately 430ha of space is required, 36% of the total area of Port of Spain. Leung (2009) reported data which suggested that 221,000 private vehicles entered Port of Spain each day. It is expected that private vehicle volumes have increased since then. Furthermore, these figures do not include the space required for vans, delivery vehicles, buses, trucks or taxis within the city.

4.6 Motor Fuel Choice

Fuel stations offer unleaded gasoline (for vehicles equipped with fuel-injected engines), compressed natural gas and diesel. The unleaded options include ‘Super’ which has an octane level of 92, and ‘Premium’ which has an octane level of 95. Hybrid vehicles are also available on the market having electrical energy capability. As shown in Figure 15, gasoline is the popular fuel choice for private transport users followed by diesel. Compressed Natural Gas (CNG) contributes to less than one percent of motor fuel usage. Dolcy (2019) argued

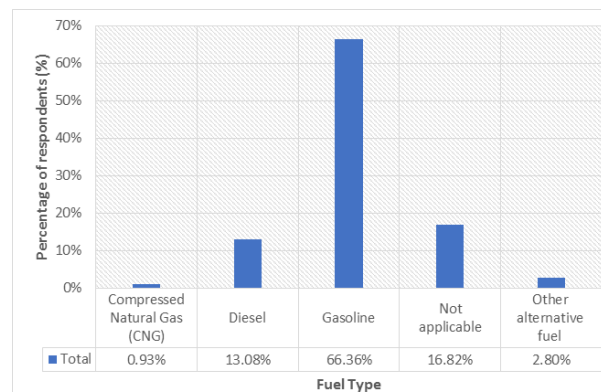


Figure 15. Motor Fuel Choice Based on a Commuter Survey

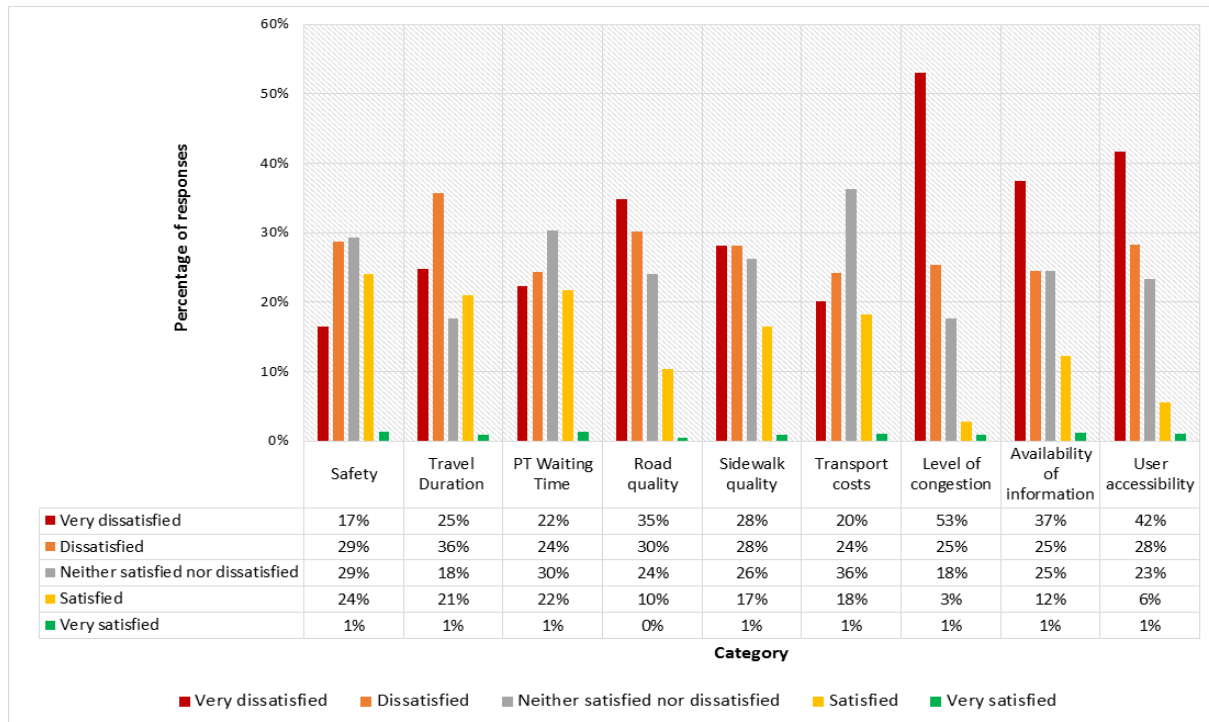


Figure 16. The Commuter Rating of Elements of the Port of Spain Transport Network

that the resistance toward CNG in private vehicles in Trinidad and Tobago is due to the cargo space required to accommodate fuel storage and the cost of conversion.

4.7 Commuter Satisfaction

Figure 16 shows the indicators used to measure the attitudes toward transport in Port of Spain. A 5-level Likert scale was used for the respondents to measure these indicators. The scale was categorised by: very satisfied, satisfied, neither satisfied nor dissatisfied, dissatisfied and very dissatisfied. Road quality, level of congestion, availability of information and user accessibility have a negative skewness, with most participants highlighting strong dissatisfaction with the level of service provided in these categories.

The highest percentage (53%) of respondents indicated strong dissatisfaction toward the congestion levels experienced. This was closely followed by user accessibility (42%), availability of information (37%) and road quality (35%). For transportation costs, the modal response was neutral (36%) however the combination of dissatisfied and very dissatisfied represents forty-four percent (44%) of the sample.

Fifty-six percent (56%) of respondents expressed dissatisfaction with the sidewalk quality. Since the analysis showed that walking is a part of most person’s journey, the need to improve walking experience is critical.

‘Safety’ received an overall negative response with twenty-nine percent (29%) of respondents indicating

dissatisfaction and seventeen percent (17%) stating strong dissatisfaction.

Compared to the other factors considered, safety received the least negative response. It should be noted that the definition of ‘safety’ was left to the respondents. No distinction was made between security, road safety or any other construct.

Figure 17 compares the perception of safety in POS based on gender. As shown, more females reported dissatisfaction with safety in POS compared to males. This trend substantiates the validity of the claims by Yáñez-Pagans et al. (2018) that women experienced more safety concerns when using transportation systems in Latin American and Caribbean cities.

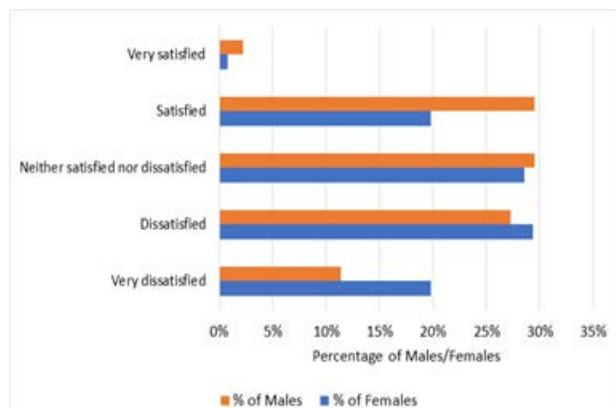


Figure 17. Rating of Safety Based on Gender

5. Conclusion

This paper examined the characteristics, preferences, and satisfaction of users of the Port of Spain (POS) transport network. The key stakeholders in the transportation network were identified and classified in a stakeholder matrix on the basis of their interest and influence. Four stakeholder groups were identified. These were government, operator, user and business.

A traveller survey was administered to gather information on traveler experience. Most survey participants travelled to POS for employment. On average, respondents travelled 31km to get to POS for work. Trips originate from several towns with the highest percentages from Chaguanas, San Juan and St. Augustine. The Central Business District (also referred to as Downtown Port of Spain) was the most popular destination followed by Woodbrook. Whilst under half of these trips end in Downtown POS, a significant portion of trips were destined for areas other than the Central Business District. This means that commuters, especially public transportation users need good intra-city connections and easy walkability to destinations in order to complete their journeys.

Private vehicles continue to be the dominant transport mode choice. The analysis of the travel mode used to enter POS showed that 71% of trips were completed using private transport. The remaining 29% used public transport. Although only 19% of the trips were completed by maxi-taxis, this mode was the most popular public transport used to enter POS. A significant disparity between public transport and private transport direct user costs was observed. Specifically, private transport users reported an average monthly transport cost of \$733 Trinidad and Tobago dollars compared to \$466 Trinidad and Tobago dollars reported by public transport users. These trends indicate that although private transport users report significantly higher costs, the advantages of using private transport outweigh using public transport.

Transport users who participated in the survey were broadly dissatisfied with the system. Although the 'safety' category received the least negative response, approximately 46% of respondents were dissatisfied or very dissatisfied.

Participants indicated strong dissatisfaction with the congestion experienced in the capital city. Whilst the modal response for transport cost was neutral, the combined number of persons indicating either dissatisfied or very dissatisfied was higher than those who were neutral. Apart from congestion, commuters were very dissatisfied with both accessibility and the availability of information. This problem would be particularly acute for public transport users who need to transfer from one vehicle to another.

Transport safety received the least negative responses among the transport indicators examined. Also, in general females reported more dissatisfaction with transport safety compared to men. For every measured

aspect of the transport system, more people were dissatisfied than either satisfied or neutral. A minimum of forty-four percent (44%) and a maximum of seventy-eight percent (78%) of respondents were either dissatisfied or very dissatisfied with some aspects of the transport system. No more than twenty-five percent (25%), and the case of congestion only three percent (3%), of respondents were either satisfied or very satisfied.

The research points to the need to take actions that would improve the travel experience of public transportation users both into and around the city. These actions should include improving their access to information about public transportation services so that they can have more confidence in using these services to fulfill their travel requirements and conditions.

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