

TRANSPORT INFRASTRUCTURE INVESTMENT AND REGENERATION: A NECESSARY BUT INSUFFICIENT POLICY MEASURE FOR ADDRESSING SOCIAL EXCLUSION IN BRAZILIAN CITIES

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ABSTRACT

The paper describes a qualitative study of the mobility and accessibility needs and concerns of residents living in low-income communities in the city of Recife, Brazil. It discusses the conceptual framework for the study and the methodological approach that was developed to meet some of the specific fieldwork challenges that research with hard-to-reach and scrutiny shy participants often demands. This includes negotiations with gatekeepers to gain access to participants, targeted participant recruitment and issues with focus group facilitation, for example, communication of high-level concepts and constructs in terms that could be easily understood by the research participants.

The paper also offers the key findings from the focus groups that were conducted with different sectors of the resident population in our two study areas. In particular, our analysis focuses on the complex relationship between the social circumstances of the citizens of these communities, their activity patterns and how this affects their travel horizons and revealed travel behaviours. A key question the paper explores is how far the restricted mobility and activity patterns of the citizens in these communities have an influence on their poor quality of life outcomes? If so, does transport policy have a role to play in enhancing their life chances? However, this also has relevance beyond the sphere of transport policy and the boundaries of Recife to wider discussions about how to improve quality of life and social wellbeing for the many citizens who experience social exclusion across the whole of urban Brazil.

Keywords: transport, accessibility, low income, Brazil, urban planning

INTRODUCTION

In Brazil's rapidly developing cities, people increasingly need to travel to a variety of destinations outside of their residential area in order to work, to buy goods, to go to school, to secure healthcare and to undertake leisure and social activities. Ideally, every man and woman living in any settlement within a region should be able to get easy access to activities which support its economic and social life. However, the reality shows that difference in accessibility exists. We know from the literature that the ability to reach the destination is intrinsically affected by many variables such as the socio-economic background of individuals, the transportation infrastructure and availability of services, patterns of travel and travel behaviours, patterns of land use and urban form, transport and urban planning policies and strategies. People living in certain geographical areas can also have better access than others to employment, health care, education and social networks, for instance. Furthermore, the lack of opportunity to travel by certain modes of transport, such as the automobile, can have a significant effect on the ability of individuals to reach different destinations within the city.

In Brazil, transport costs have more than trebled over the last 20 years. In the 1970s, the transport costs of a family earning between 1 to 3 minimum wage were 5.8% of household expenditure; this figure increased to 12,5% during the 1980s and more than 15% in the 1990s (Brazil, 2004). The high cost of public transport fares currently excludes about 37 million people from using it. This number can be higher when taking into account, for instance, the number of disable and aged people who cannot get any kind of access because of the lack of facilities and universal design which would allow them to use the transport service available.

At the same time, Brazilian cities are changing rapidly. Whereas in the 1970's, less than 50% of the population lived in urban areas, in the 2000's this figure is more than 80%. Economic development is concentrated in Brazil's South and Southeast regions, with massive investment in the industrial plants and on modern services and third sector activities, as well as infrastructure investments on roads, rails, sanitation and other facilities. Even in these richer regions, the process of urbanization is characterized by highly unequal distributions of the benefits and dis-benefits of the rapid development process, with low income people often housed on inappropriate land, in areas of risk and/or located on the outskirts of the city with limited facilities and services, including the provision of schools, health care centres and public transport.

Another important consideration in understanding the Brazilian urbanization process is that land use and occupation does not necessarily follow a common pattern across the whole the country. For instance, whereas in Recife the low income population is scattered across all regions of the city, including in some sectors where the population is predominantly high income, in São Paulo they live massively in the periphery of the capital. These differences in housing location can not only make a huge difference to people's actual accessibility and

mobility given the differential provision of services and facilities but can also affect their travel horizon and their perceptions of the activities they can reach within the city.

The Metropolitan Region of Recife, where the fieldwork was undertaken, is the capital of the State of Pernambuco in the Northeast of Brazil and has 1.5 million inhabitants. It is the main city of a metropolitan region that houses 14 municipalities reaching a total of 3.7 million people¹ - the fifth largest in the country. Historically, this region is characterized as a place of social inequity and massive poverty, a place of huge contrast between the socioeconomic backgrounds of its population. In 2007, GDP per capita in Pernambuco was about US\$ 4,000, representing just half of the average Brazilian rate². Nonetheless, in the last few years the State has been showing a growth rate above the Country's average as a result of the implementation of an impressive industrial policy which has brought oil refinery, gas, petrochemicals and automobile companies to strategic areas in the north (Goiania) and the south (Suape) of Pernambuco. While Brazilian average GDP growth was 4.0% between 2007 and 2010, in Pernambuco it reached 6.6%³. Therefore, Pernambuco is one of the fastest growing and most affluent states in Brazil and will experience further development in the next 10 years. This will provide new opportunities for employment and property and land use development besides investments in infrastructure and services.

The rapidly expanding economy is not evenly distributed across the population or followed by the policies that are necessary to alleviate social disadvantage and there remains a significant proportion of citizens living in poverty and in poor environment. The 2010's Census revealed that the average monthly per capita income in the Metropolitan Region of Recife was about 290 US\$, ranking the 23th position amongst the metropolitan areas in Brazil. Of greater concern, is the evident social inequality when analysing the average monthly income throughout the neighbourhoods in Recife: the lowest figure is US\$92 in a *favela*, whereas the highest is US\$1.800 in one of the cities richest neighbourhood.

The image bellow shows the monthly per capita income as distributed throughout Recife's neighbourhoods.

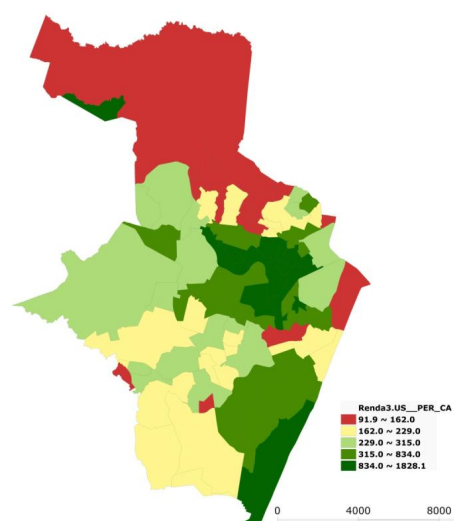


Figure 1: Recife income per capita distribution per neighbourhood, Census 2010

Similarly, although education indicators are improving overall, the number of people who have not completed the primary school is still high. In Brazil as a whole, 50.2% do not complete primary schooling, whereas in Recife the figure is 39.6% (IBGE, Censo, 2010). Only 9% of the population have a high education degree in the Metropolitan Region of Recife, occupying the 20th position across Brazilian metropolitan areas. These social gaps can be easily seen in land use and occupation which does not follow the common centre-periphery process. On the contrary, *favelas* or low income settlements can be found spread throughout the city, even in rich neighbourhoods, as mentioned before (see figure 2). The historic downtown, which once housed 'noble families', went through a decline and has only recently been regenerated. This traditional area still concentrates a variety of commercial and services activities and is one of the most important locations in terms of job's opportunities. It is also the most accessible area in the city by private and public modes of transport (Cunha e Maia, 2004).

For the poor, occupying well located land, even if illegally, can be considered as a strategy to be closer to the job market and as well as a means of reducing their transportation costs. It also represents easy access to public services such as hospitals and schools. Since the 1980's in Recife, people living on many squatter settlements conquered the right to live on the land they occupy even though it lacks proper urbanization standards and legal tenure.

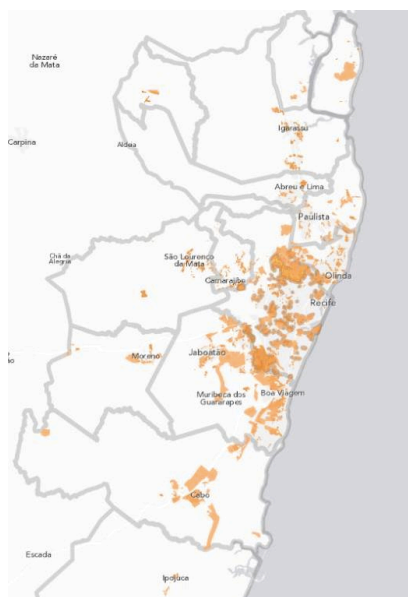


Figure 2: Location of poor areas in metropolitan Recife. "Cadastro de Áreas Pobres da Região Metropolitana do Recife", Observatório das Metrôpoles⁴.

This paper focus on the complex relationship between the social circumstances of these citizens living in two such low income communities in Recife and their activity patterns and how, in turn, this affects their travel horizons and revealed travel behaviours. A key question the paper explores is how far the restricted mobility and activity patterns of the citizens in these communities have an influence on their poor quality of life outcomes? If so, does transport policy have a role to play in enhancing their life chances? However, this also has

relevance beyond the sphere of transport policy and the boundaries of Recife to wider discussions about how to improve quality of life and social wellbeing for the many citizens who experience social exclusion across the whole of urban Brazil.

To our knowledge ours is one of the first studies of its kind in Brazil to work directly with residents of the *'baixa renda'* to identify the nature and intensity of the relationship between transport and people's opportunities to be engaged in socio-economic activities within this changing context of Brazilian cities. As such, very little is known about the emerging transport concerns and travel needs of urban populations, which until recently have been largely self-serving and inward looking in terms of their economic and social survival but which are now experiencing huge socioeconomic divides within the context of a dynamic and rapidly growing economy.

The paper first discusses the conceptual framework for the study based on a review of the relevant literature. In particular here, we focus on bringing innovation to existing primarily 'Northern hemisphere' discussions of transport disadvantage and transport-related social exclusion by generating a Latin American perspective on these issues. Second, the paper describes the methodological approach that was developed to meet some of the more challenging conditions we encountered on entering the field. This includes the issues of negotiation with gatekeepers, participant recruitment, focus group facilitation and coping with low levels of education attainment and illiteracy within the research design. Thirdly, we present some of the headline findings from the study in terms of the self-reported accessibility and mobility needs of the research participants. Their activity-spaces are then compared with GIS-mapped analyses of key activity destinations, such as employment sites, schools colleges, medical centres and local markets, both inside and outside the study area, together with analysis of the transport services that are available for reaching them. Finally, we offer a discussion of the implications of our findings for future urban planning and transport policy in the City of Recife, as well as the wider relevance of our findings for other rapidly developing urban conurbations.

LITERATURE REVIEW

The concept of social exclusion is crucial for the analysis of public policies and services of transportation and urban needs because it goes beyond the simple notion of poverty to embrace the social consequences and impacts of this condition to embrace different key parameters of social wellbeing. For example, to Sposati (1998) the concept of poverty is limited to the inability to acquire goods and services, while the idea of social exclusion broadens the vision of the problem to its behavioural social and cultural dimensions. You can thus explore the condition of "no" citizen, as a subject with full political and social rights, which is much broader than the analysis of the "have not" material conditions of survival and dignity.

The approach also favours a treatment of mobility that is not limited solely to its functional aspects, with the usual measurements of trips / day or tariff costs, but emphasizes the notion of accessibility to services and opportunities. This helps to deepen our understanding of the relationship between the processes of social exclusion and the effective delivery of public

transportation within the urban context. With this reasoning one can overcome traditional measures related to the improvement of public transport systems through reduced tariffs, subsidies or promotion of improved conditions for people with special needs to a much wider set of measures to assess the wider accessibility function of the public transport system to key destinations and accordingly to the activity needs of different potentially vulnerable sectors of the population (Silva et al, 2004).

Rodrigue et al. (2009) have argued that transport should be recognized as a multidimensional activity, which as well as having important political, economic and environmental consequences, also has a major influence on key social processes such as social exclusion. Its importance arises from the close relationship that improvements to transport systems have with socio-economic changes; the mobility of people, freight and levels of territorial accessibility are central to this relationship (Gutiérrez et al., 2010). For Siva et al (2004), a critical analysis of mobility within an exclusionary society must then verify the adherence of the public transport sector policies for social policy, as well as measuring the extent to which the removal of bottlenecks accessibility can contribute to the social reintegration of the excluded.

This shift from mobility and towards accessibility and social welfare perspectives has also already been enshrined within contemporary transport policy outside Brazil. For example, in the UK, it is achieved through the accessibility planning function as part of local transport plans (Department for Transport, 2006) In the Netherlands, all new transport projects must now prove their contribution to improved accessibility against new accessibility indicators (Ministry of Infrastructure and Environment, 2011). Some Australian States also now have transport policies, which directly aim to improve the accessibility of low income populations (Lucas and Curry, 2011). There is less evidence of this conceptual shift within transport planning in development context and in Latin-America most of the experience is concentrated in Colombia (e.g. Cahill Delmelle and Casas, 2012; Jaramillo et al, 2012). In Chile, some research has been undertaken to assess the role of public transport in the social disadvantage of individuals (Ureta, 2008) and for the development of indicators of social exclusion at the transit zone level (Jara, 2009).

In Brazil, however, specific recognition of this interface between transport provision, the accessibility of activities, goods and services and social disadvantage is largely absent from both academic and policy formulations. Although it is increasingly being recognised that without such a shift in focus, urban transport provision will be inefficient from the point of view of both network design and the delivery of public transport services (Santos and Aragão, 2000). Public policy for urban transport set up in Brazil in the 1990s is regarded as a secondary and discontinuous action. In so far as the 1988 Brazilian Constitution reaffirmed that urban transportation is an issue of municipal responsibility, under the framework of a strategic plan defined at the Federal level, the absence of a National Urban Transport Policy curbed the actions of the Federal Government sector. At the same time the municipal level was not prepared (or interested) to provide adequate and accessible public transport service. In such a context, to meet the accessibility needs of population and areas excluded from the urban economic dynamics becomes a particularly serious problem. The tendency was then

to merely reproduce patterns of organization and operation of a transport network, without taken into consideration the origin and cause of the segregationist character of prevailing socioeconomic development.

The typical response of official transport policy has been to make improvements to public transport services through increased service efficiency and fares policies only. However, such solutions do not necessarily meet the accessibility needs of socially excluded populations. The abundance of community and informal transport serving the *favelas* of many Brazilian cities can be used to attest to the inadequacy of Brazil's public transport networks in these areas. An example is the proliferation of *mototaxis*, vans and community minibus services which are highly valued by urban poor communities but, in general, remain unregulated by the public sector and considered as informal/illegal transport.

This suggests that public transportation in Brazil should be better integrated with the current mobility patterns of urban poor populations and also responsive to their emergent accessibility needs in response to rapid economic growth and urban expansion. More research is needed to explore what these needs might be from the perspective of the people who live in these areas, which is what this paper aims to address.

CONCEPTUAL FRAMEWORK AND RESEARCH METHODS

We based out conceptual framing for the study on Lucas (2012), which identifies a broad interface between transport poverty and social disadvantage that can lead to lack of access to goods, services and life opportunities and may, in turn, lead to social exclusion. Whilst recognizing that the context for a Brazilian study will be very different from that of the UK, we wanted to examine the extent to which this conceptualization remains true despite these recognized differences in the circumstances aspirations and social insertion horizons and information/skills/knowledge experiences of our study participants, as well as in the transport and land use opportunities and Brazilian/Recife social policy background.

Based upon this conceptual framing we then devised the following four high-level questions for further exploration:

1. Do people living in these low-income communities perceive a transport or mobility problem (s)? If so, what?
2. What factors/activities account for people's decision to make a trip or not make a trip?
3. How far is public transport part of the problem and/or solution? What are the different attitudes and perceptions of different population groups in relation to this?
4. Is there a relationship between levels of social exclusion and levels of (im)mobility? If so, at what point of social insertion does transport become in promoting improved quality of life?

The study methodology for exploring these questions was primarily qualitative, involving focus groups with different groups of local residents in two case study areas. We deemed this to be a more appropriate approach given the both the focus of our interest, which was in the detailed experiences of our participants and also the challenges and expense of conducting a traditional survey with this target audience (i.e. issues of illiteracy, mistrust,

scrutiny shyness, recruitment, retention and other challenges). The study areas for the focus groups were selected from the reports *Atlas de Desenvolvimento Humano de Recife* (Prefeitura da Cidade do Recife, 2003) and *Mapa de Áreas Pobres da Cidade do Recife*. The geographical criteria were based on three core selection criteria, as follows:

1. One low-income area should be located no more than 500m from a good public transport hub and be within the inner city close to a range of opportunities, activities and facilities;
2. The other (also low-income) should be located more than 1km from any public transport axis in one of the hill settlements in the North or South and be on the periphery of the City and thus with less opportunity for residents to easily access key activities.
3. The overall condition of each settlement was also taken into account, considering the types of local employment and other services that are available within easy walking distance of each area and the history of public interventions to urbanize and legalize them.

Two study areas were selected according to these criteria: Coque in the inner city and Alto Santa Terezinha situated in the hills in the North of Recife (see figure 4). Four focus groups were conducted in each area between October and November 2011: one with housewives with childcare responsibilities, one with employed women, one with unemployed men and one with scholars between the ages of 14-15 years. In Coque, this later was with females and in Alto Santa Terezinha with males. From 8 to 12 people participated in each focal group. In total 78 people participated in the group discussions.

Each group was conducted with a trained facilitator, an assistant facilitator and a note taker. In addition, all the groups were audio-recorded and then transcribed for the purposes of analysis. The focus groups were designed to ask questions about transport in relation to the daily lives and experiences of the participants, in order not to bias their answers toward an over-emphasis of the importance of transport. People were asked about the nature and duration of their personal and household responsibilities and general perceptions of the area in which they lived before talking about the spatial and temporal dimension of their daily activities and how easy it is to travel in and around the area by different modes of transport. Once these factors were established, the facilitators moved on to ask a more specific set of questions about the affordability of their transport and any trade-offs they might make between transport costs and other items of the household expenditure.

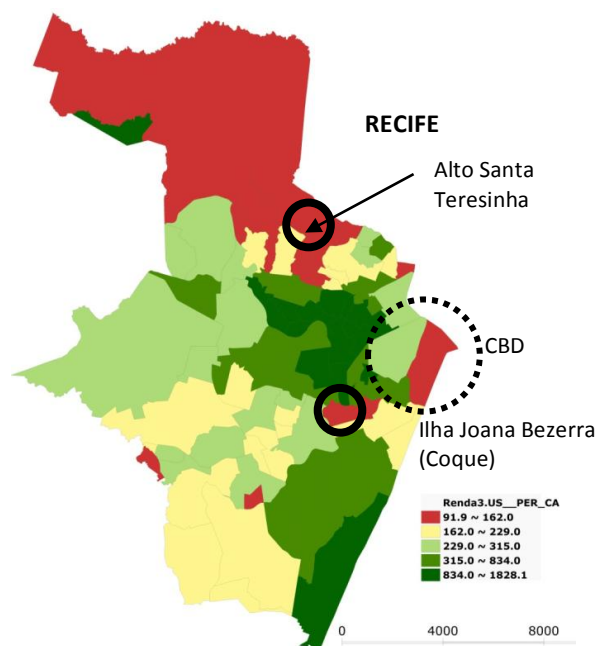


Figure 4: Location of the two study areas

After that, a series of transport-related issues were discussed using a collective cognitive mapping exercise, whereby each participant was invited to describe their travel patterns, pointing out destination for the facilitator to map their movements schematically, (e.g. Where do they go, for what reason, how often they travel to that destination and using what mode of transport?). Figures 5 below demonstrates the basic model and offers a worked example drawn by one of the groups. The maps were filled with different colour pens used to identify each participant and the three circles represent their travel horizons, from the immediate neighbourhood to a regional scale. These activity patterns were then entered into GIS so that they could be plotted against key activity destinations and travel routes inside and outside the case study areas. The outcome of both the focus groups discussions and these mapping exercises are discussed later in the paper. They maps were then used throughout the focus group to facilitate discussions about the perceived accessibility of different destinations and the adequacy of the transport system in terms of being able to reach them. The method helped to overcome differences in perceptions and assist understanding between the focus group participants and the facilitators, as well as to stimulate discussion between the participants about the availability of different activities within and outside their local areas.

is 2.5 people per household. When considering the inadequacy of housing conditions in both areas (attached houses, many of them varying from 25 to 40m²) without proper sanitation one can say that these areas are overcrowded, as are poor settlements in Brazil.

The income of the population varies between Coque and Alto Santa Terezinha. While in Coque the monthly nominal income was R\$ 705,00 in Alto Santa Terezinha this figure was 921,00 (Prefeitura da Cidade do Recife, 2012)

The two figures below identify the health (red crosses) and education (green houses) facilities in the Coque and Alto Santa Terezinha areas respectively. The distribution of the basic health and education services units suggests an extensive network of that offers plenty of access within relatively easy walking distance. However, the population main complaint is related to the poor quality of the service offered and, therefore, the need to travel further to access better provision.

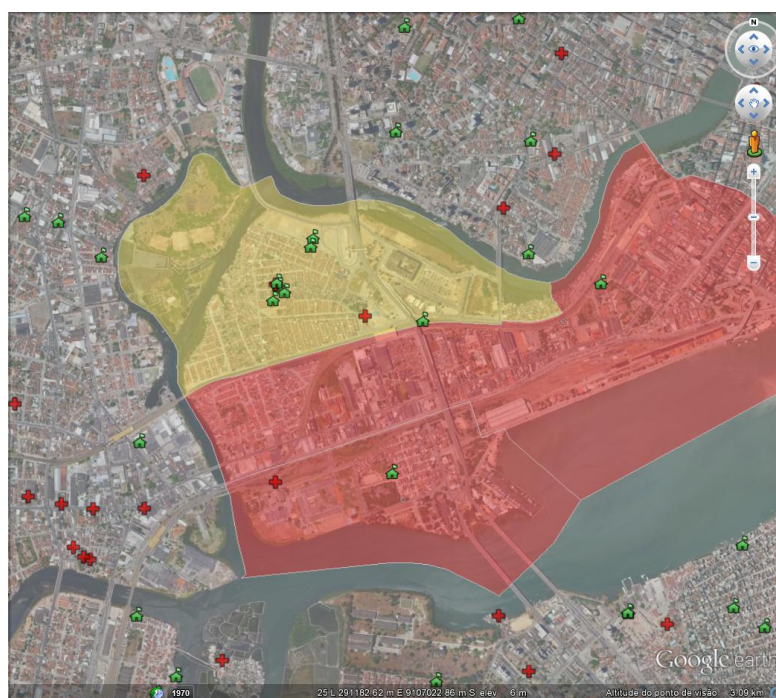


Figure 6: Spatial distribution of basic health and education services - Coque (Prefeitura do Recife, 2009).

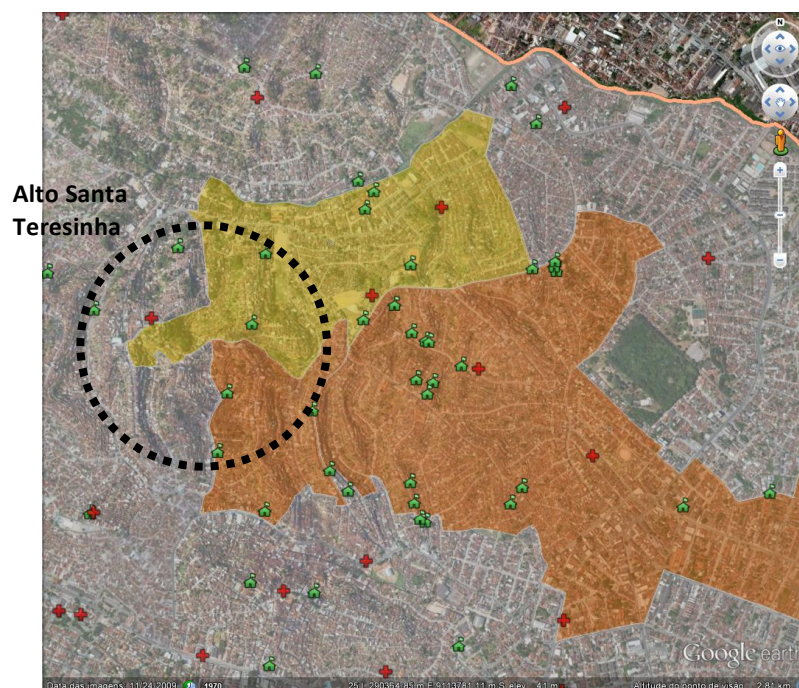


Figure 7: Spatial distribution of basic health and education services - Alto Santa Teresinha (Prefeitura do Recife, 2009).

Figure 8 below shows the bus line density in the city (Recife, 2010). The intensity of services towards the CBD is clear and that Coque is much better served with public transport than Alto Santa Terezinha. It is important to stress that there is an integrated public transport system in the Metropolitan Recife, called SEI, whereby one can pay a single fare and travel inside the system to other municipalities. One of the SEI's integrated bus/metro terminal is located in Coque, which makes the area more accessible than Alto Santa Terezinha. Even though Coque is better connected to the public transport system than Alto Santa Terezinha one can say that the provision of public transport is not necessarily a problem in either area, as both are reasonably well served.

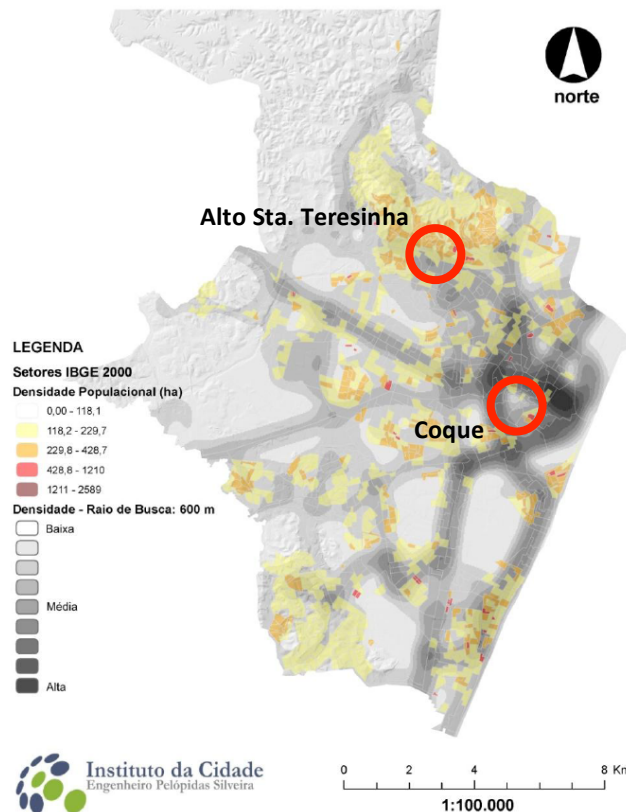


Figure 8: Demographic density and the bus lines density map (Recife, Instituto da Cidade Pelópidas Silveira, 2010).

Having outlined the physical context for the study, we now offer some of the key findings from our analysis of transcripts from the focus group exercises.

KEY FINDINGS FROM THE FOCAL GROUPS

Activity mapping outcomes

In Coque, the participants identified that even though the environment is very poor they like to live there because of the high level of accessibility to the City. There is an overall prejudice to Coque from outsiders due to levels of crime and violence in the area. There was a general perception in groups that everyone in the area comes from the same low-income backgrounds but conditions are worse for older people. The group could identify the company that provides public transport, but not any other services in the area and they could not identify any government officials, only an influential local leader who helps them in their day-to-day activities and was the gatekeeper for recruiting the group.

The level of prejudice towards the Alto Santa Terezinha was perceived as much lower than in Coque. Poverty is less, income is higher, the level of education is better and people are more aware of environmental problems than Coque. They also recognized the official consortia of transport providers; there is a free van service to take people up the hill as well

as *mototaxi* services (these are informal motorbike taxis that are used to get people up the steep incline of the hill where most of the houses are located).

Housing location

What emerged as a key distinction between the two study areas is the locational quality of Coque in terms of its accessibility. The participants of all the Coque groups emphasized that it is near everywhere; general medical care, specially hospitals, shopping areas, job opportunities, primary and secondary public schools, the beach, the SEI transport terminal. One female student told us:

“Coque is near to everything, all the places, Afogados, Pina and Boa Viagem beach. That is the good thing of Coque”.

Whereas in Alto Santa Terezinha many participants recognized that it is easier to go to the commercial areas in the north of the city than the CBD and that the area has a good local shopping facilities.

Affordability issues – the costs of transport relative to income

In Coque, initially participants reported being independent of welfare benefits and largely self-supporting. On deeper probing, however, the housewives groups reported receiving milk vouchers, school fees and family allowance of RS160 p.m. (the Brazilian minimum wage was RS540 in 2011). This was described as a significant benefit to them.

The participants in both the housewives and unemployed man groups in Coque complaint about the price of the bus fare showing the high costs of transportation relative to income. Two housewives reported that:

“Any penny I can save is good. Two reais (US 1,0) not spend in transport fare we can buy a snack”.

“I walk to Cabanga. I earn R\$ 75,00 (US 32,5) per week, imagine how much I would spend on transport, paying fare, only to go for work every day?”

Asked about how she looks for a job, an employed woman said:

“I’ll go walking. I cannot pay for a bus ticket.”

Affordability is, therefore, identified as a major barrier to people’s ability to travel further than neighbourhoods around Coque area. The locational quality of the settlement, near to hospitals and schools, jobs location and leisure facilities and the possibility to travel by walking can minimize the level of social exclusion.

In Alto Santa Terezinha the high cost of transport was not so clear. One should consider, however, that the municipality offers a free van service with trips up and down the hillside, which reduces the cost of local transport relative to income considerably. Although for some users their travel horizon may be limited to the van route, the provision of this service can minimize the level of social exclusion. The groups that complained most about this issue were the housewives and employed women. One worker said:

“The transport fare is expensive and I stayed at home because I did not have money to pay for it”.

A housewife told us:

“I’m unemployed and I cannot go out for leisure with my husband and children because we would expend RS20.00 (\$10) only with transport fare”.

Some concerns were also raised about the high cost of transport to school, which are discussed in the section below on access to education.

Provision of public transport services, vans, taxis and mototaxis

The majority of participants in all the groups were not car owners, nor did they have a driver’s license. Some of them have parents and friends who do have a vehicle. Their low incomes make them dependent of the provision of public transport to travel beyond their community boundaries and to get the opportunity to participate in what the wider city offer to its citizens. However, most people in both areas and across all groups described walking a lot. Men generally use bicycles more than women and their use was more common in Coque than in Alto Santa Terezinha. Students (male and female) use bicycles more than housewives and employed women.

As noted previously, Coque is better much served by public transport than Alto Santa Terezinha and Coque also has a SEI Terminal inside the area, integrating bus and metro, which makes the connection with the transport metropolitan system easier than in Alto Santa Terezinha. Nevertheless, the participants in both study areas recognised that access to public transport is generally very good within the City as a whole and people from both areas also recognised the importance of SEI to travel in the wider metropolitan region.

Given its remoter location from the city centre, people in Alto Santa Terezinha clearly have to rely more on public transport to access destinations such as work, hospitals, the CBD and secondary centres than in Coque. However, it is important to note that in Alto Santa Terezinha some households can only be accessed by poorly maintained and often very steep stairways. The municipality provides a van service, which is free of charge and makes routes connecting the top and bottom of the hillside and also acts as a feeder to the mainstream transport system. The service is highly valued by the population not only because it provides a free transport service but rather because it provides access into areas that are restricted to regular buses due to extremely narrow roads and steep ground slopes.

There was also a high reliance on *mototaxis* (motorbike taxis) in Alto Santa Terezinha. These are private and non-regulated service and are common in more peripheral areas of the City. The routes and fares are negotiated between the driver and the customer, the service is door to door and it is used as an alternative to the public transport. For some places the fare is similar to that of the bus (US\$1).

“An alternative to the bus, when we have to wait a lot, is to take a mototaxi” (male student, Alto Santa Terezinha)

“I take a mototaxi to go to the doctor and to the beach” (unemployed male, Alto Santa Terezinha)

In Coque, it was clear that people largely do not need to use the public transport system because its location is near to important destinations in the CBD as well as the low-income levels of residents means they mostly rely on walking. It is also important to note that travel distance to some destinations in Coque can be shorter and direct if you go walking than by bus or metro. As such, the research team assumed that the quality of the pedestrian environment in the local area would be a key concern for our participants. This is because Coque is a settlement next to a busy thorough route and it was evident from field visits that the quality of the environment for pedestrian is very poor, with no amenities, no trees, no pedestrian cross, no bus shelter, irregular surfaces, paths occupied by informal activities, etc.

Interestingly, this did not emerge as a problem from the participants' point of view, whereas in Alto Santa Terezinha the participants of all four focus groups recognised that the use of streets, especially the paths, should be transformed to ensure priority to the pedestrians. Some statements illustrated this point of view:

“What makes the transit worst is that the paths are occupied by market stalls (known as *fiteiro*) and we have to walk on the street” (employed woman)

“The transit is a problem and it is getting worse, the flow of motorbikes increases and the paths are full of stalls and it is dangerous for us because we have to walk on the street” (housewife)

“It is difficult to move around safely; the paths are full of market stalls” (male student).

Night travel was seen as the most difficult, especially for shift workers and people in both study areas complained about the infrequency of the night buses. Complaints about bus drivers' behaviour appeared in Alto Santa Terezinha. Some examples of statements are:

“The frequency of the bus is good but the drivers are rude” (employed woman, Alto Santa Terezinha)

“The bus drivers don't stop for older people because they don't pay a fare and take longer to board” (housewife, Alto Santa Terezinha)

Groups in both areas also reported problems with accessing taxis. It is important to note that they use them most frequently in case of emergencies or special occasions, sometimes at night when the frequency of the bus system is reduced. For Coque, the problem reported was related to the stigma of crime and violence in the area and the prejudices of the overall population about safety in the neighbourhood. This same problem was also mentioned in case of ambulances. The drivers do not feel safe to enter the area. In Alto Santa Terezinha, the problem reported relates to the topography of the area and the unwillingness of drivers to make trips to the top of the hill.

Access to employment, health care and education

In both study areas, it was possible to observe the low travel horizons of people to access more qualified jobs outside their neighbourhoods. For instance, none of the participants mentioned the job opportunities that are offered in the region of Suape and Goiana (south and north of Metropolitan Region respectively) where many industries have been installed. Their low skills levels have contributed to their low travel aspirations, which in turn feeds and reinforces their social disadvantage.

It is common for employed women in Coque to take a bus to go to work as their job is in wealthiest neighbourhoods in the city.

“I work in Torre neighbourhood and I have to go by bus” (employed woman, Coque)

Not surprisingly given its less central location, people in Alto Santa Terezinha generally found it more difficult to access employment and other key activities, such hospitals and leisure than in Coque, as they have to take public transport. It is important to note that contrary to Coque, Alto Santa Terezinha is full of local shops employing many people who live nearby.

“My work is in the neighbourhood and I go for it by walking” (employed woman, Alto Santa Terezinha).

Participants in both areas mostly walk to medical or education units, as there are a reasonable numbers of primary schools and health care units (local clinics) that can be easily accessed on foot. However, people’s main concern is the poor quality of the service provided, especially in relation to health care units, rather than their accessibility. Some examples of their statements were:

“To access the clinic is easy the difficult is to be attended” (employed woman, Coque)

“The clinic is not good, there is only one doctor to attend the whole community” (employed woman, Alto Santa Terezinha)

In Metropolitan Recife, students can have the benefit of paying a half price fare with a student card, which costs U\$4.50. They must register for with the *Grande Recife Consórcio*, which manages the metropolitan transport system. However, our study found that none of the students in Coque had either the student or the transport card because the cost of acquiring them was seen as unaffordable by the majority of participants. In Alto Santa Terezinha, although most of the students had both cards, this was not always the case and many students walk to the local school:

“My daughter goes to school by walking as she does not have a student travel card” (housewife, Alto Santa Terezinha)

“Every morning I take my grandchildren to primary school located in the community by walking” (housewife, Alto Santa Terezinha)

Visiting friends, family and leisure

The participants' social networks in Coque and Alto Santa Terezinha were mainly structured around their local community boundaries. Many participants in both groups reported only visiting their friends and family who live nearby. When relatives/parents live outside the community and there is a need to travel by bus the frequency of visits is very low because of the cost of transport to pay them a visit.

Coque's close proximity to leisure areas such as Pina and Boa Viagem beach meant that residents can go there every weekend, whereas the costs of a bus fare to these areas makes them less available to people living in Alto Santa Terezinha. As such, although the overall level of income in Coque is lower than in Alto Santa Terezinha, people in the former have more frequent access to leisure, especially the beach, due to the location of the settlements.

Many people from both areas also reported going to their local church every week as a key social activity. In some cases a bus trip outside the local area to the city centre was seen as a treat in itself:

“Once a month I take my son to the city centre to have a walk. We go by bus” (employed woman, Alto Santa Terezinha)

A number of people also commented on the pointlessness of making visits to the city centre because they would have no money to spend when they got there anyway.

PRELIMINARY CONCLUSIONS

In our study, we set out to explore whether people living in low-income communities of Recife perceive they have transport and/or accessibility problems and if, so what these problems are. We also sought to identify whether there is relationship between their evident economic and social disadvantage and their current levels of mobility and, therefore, whether improved transportation services could contribute to improved quality of life in these areas. What we have found in these respects is inconclusive, partly due to the qualitative nature and scope of the study and partly to other methodological and communication constraints and it is clear that much more work is still needed on this topic.

One key finding is that the notion of distance was quite an alien concept for most of our study participants; everything was considered to be *very close* and *easy to access*, although as outsiders to the area we did not find them easy to get to (e.g. from the University or other key employment sites or other neighbourhoods). Neither were they necessarily very easy area to freely walk or cycle around due to degraded pavements, narrow streets and heavy traffic. This raises the question of the expectations and aspirations of local residents versus those of the local and national policy makers and city planners who are seeking to revitalise the local economy and upgrade these slum areas through inward investment and improved connectivity to the new job markets that are now flourishing on the outskirts of the City. It was clear that the people in our focus groups neither wished to relocate closer to these new employment opportunities or to undertake any more travel in order to get to them, which

suggests that they will continue to remain excluded from the economic benefits that are accruing locally, regionally and nationally within Brazil.

Our research suggests that some fundamental challenges have to be faced especially those relating to the integration of transport policy and planning, land use planning and social welfare policies. These policies need to *explicitly* consider the accessibility needs of the low-income population within Recife's evolving urban structure. Transport infrastructure and service improvements are necessary but will be insufficient on their own to reduce current inequalities or to provide for the future increases in mobility demand that will be necessary to secure the economic insertion of these low-income and currently low-mobility communities. More research is needed to raise the profile of the issue of transport-related social exclusion with policymakers and other key stakeholders, as well as to learn about best practices specially in other Latin American cities experiencing similar trends is also useful.

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¹ IBGE- Instituto Brasileiro de Geografia e Estatística. Censo 2010.

² Agência Estadual de Planejamento e Pesquisas de Pernambuco CONDEPE/FIDEM. Pernambuco: realidade e desafios. Recife, 2009.

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⁴ See: < <http://www.arcgis.com/explorer/?open=bf8a43149944a18b9aff0010f57978c>>