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TRANSPORT NOIJIIDE MARKETS

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Abstract

Transport infrastructure has been known to influence land use patterns which in turn directly shape mobility behaviour. Globally, it is common to find commercial activities around and within different modes of transport; air, road, rail and sea. The purpose of this paper is to document trends of commercial activity around and within all modes of transport nodes. This was done by conducting a desk study on secondary data. A brief history of development of commercial activities across all modes of transport nodes has been discussed. The paper provides case studies that illustrate the influence of economic activities on all modes of transport nodes. The study results found that there are various types of commercial activity based on the demographics, economic status and the type and nature of the transport node.

Keywords: *Transport nodes, Commercial activity*

1. Introduction

Transport infrastructure planning has been recognized as needing constant interaction between land use and transportation in a consistent fashion thus creating the need for land use transportation models (Southwork 2018). Transport infrastructure influences land use patterns which in turn directly shape mobility behaviour. When it comes to the economy, a wide range of benefits are derived from transport infrastructure from the jobs created during construction and maintenance to the ability of the transport infrastructure to generate economic activity and employment (McKinsey, 2016).

According to Rodrigue (2017), land use shapes transport as much as transport shapes land use. Different land uses, like areas of production and consumption, location of resources, labour and markets, generate the movement of people and goods. The structure of these flows from the origin to the destination can be related to the spatial organization; therefore, transport networks can be said to design spaces at different scales.

Transportation as a factor of spatial organisation is also linked with the location of economic activities, including retail, manufacturing, and services (Rodrigue 2020). Transit stations like airports, rail stops and bus stations are places where potential customers are a “captive audience”; once they arrive, they stay until departure time. They have become a significant location for globally oriented activities that tend to agglomerate in the vicinity. They derive their business almost exclusively from the terminal’s passenger activities. These include duty-free shops, retail outlets, hotels, restaurants among others. Rail and road transit marketplaces offer ideal opportunities for buy-and-go sales such as newspapers, magazines, coffee, food, cosmetics and selected services. Since transit systems concentrate people at particular locations, the terminals generally become economically viable for businesses trying to capitalize on this larger visibility.

2. Research Methodology

This research was conducted using a desk study approach, building upon the understanding of existing literature in the related concepts of the proposed work and aimed at identifying how transport and commercial activities are linked. The objective of this research is to document the types of commercial activities across all modes of transport around and within transport nodes. Literature was based on secondary data carried out through researching journal articles, books (library and eBooks), previous dissertations from various institutions and internet sources.

3. Transport Node Markets

Extensive research on urban and architectural research has been conducted in different urban spaces like streets, parks and neighbourhoods. However, a few have focused on urban spaces around transit stops stations. These spaces are gradually becoming dominant in civic life as time progresses. The space in and around transit stops is valuable space and needs to be picked out and studied. Due to the influx of people brought by transit stations, the pattern of people's behaviours and the variation in the physical built environment in these spaces from other urban spaces, planners/urban designers should pay more attention to these spaces.

Transport stops are commonly considered as functional components of the transport system. Their design is based on technical factors and standardization. Public transport stops can play an essential role in the urban realm as they generate and enhance public spaces. Public transport stops are widely spread throughout the city and are usually neglected by urban designers. The study explores how the potential role of public transport stops as shaping features of the urban environment is dealt within the urban realm. Discussed below are commercial trends across all modes of transport nodes.

3.1 Retail at Airports

Airports have grown into complex hubs and multi-faceted mega structures, offering spaces for larger terminals accommodating a budding number of functions unrelated to aviation. Airport retailing has evolved with time due to the evolving culture. As one spends more time travelling greater distances, it has forced airports to operate as a business in the form of malls with increasing product varieties.

Airport shopping and business are considered valuable income sources for every airport operation. It has become a popular trend for air travellers. The primary source of commercial revenues in airports are duty-free shops and food and beverages activities. Airports have transformed to miniature cities that house hotels, retail and dining. Similar to other cities, the value of adjacent land is ripe for development. This created the growth of the “aerotropolis”.

For many passengers, especially those on holiday view shopping as a planned activity of their trip (Timothy & Butler 1995). Road, rail and air are used by tourists getting to their destination but air transport has a major impact

on tourism (Khan et al 2017). Around three-quarters of tourists use air travel on international trips to get to their destinations (Air Transport Action Group 2017; Tang et al 2017)

Retail spaces in airports share many similarities with traditional retail environments in terms of commodities being sold but the unique environment and experience that passengers go through differs to the non-airport spaces. The passengers are affected by the airport shopping environment and local shopping cultures (Chung et al 2013). The influence of the airport setting combined with the trip being taken is a purchasing factor for many passengers at the airport (Baron & Wass 1996).

The first airport to experiment with a themed development of retail was Portland International Airport in 1988. The market was called the "Oregon market". It had a central shopping and dining area whose goal was to market the unique cultures and experiences of the Pacific Northwest, with shops and restaurants that captured the local and regional flavour. The retail shops were oriented around "a main street" to complete the street-like pedestrian experience. This program was successful, and in 1994, the retail area expanded to include nine food outlets and three additional retail shops.

Prior research on airport retailing, in general, is limited and most previous studies on travellers' shopping behaviour at airports have been mainly descriptive (Omar & Kent, 2001; Hsu & Chao, 2005; Bohl, 2014; Crawford & Melewar, 2003; Baron & Wass, 1996), and centred on identifying various shopping types (Geuens et al., 2004; Freathy & O'Connell, 2012) and their underlying motivations. Three predominant groups of travellers are found in airports: the shopping traveller, the browsing traveller and the fast-track traveller (Omar & Kent, 2001).

Airports can evoke a sense of timelessness and placelessness which may be experienced by travellers in transit, particularly those making an international journey. Shopping demographics are significant for retailers when targeting their products and services at different customer bases. However, at an airport, factors such as dwell time, time pressure, mode of travel, and class impact passenger behaviour in ways that are not the case in a non-airport retail environment.



Figure 1: Dubai Airport duty free. Source: Google images 2022



Figure 2: A section of Dubai Airport duty free shop. Source: Google images 2022

3.2 Water

Waterfronts prosper when they can be accessed by more than one mode of travel, that is by water and road. This enhances the character of a waterfront. The waterfront in Hong Kong, Sydney, Stockholm, Helsinki and Venice is accessed through boats as frequently as it is accessed by land. waterfront promenades that are essential for commercial deliveries, retail or marine uses should be well designed to reduce their impact on pedestrian safety and entertainment.

A seaport is an area and a terminal where ships are loaded or offloaded with cargo and also includes an area where ships are obliged to wait for their turn no matter the distance from the port. Seaports usually have an interface with other forms of transport and in the process provides connecting services (Branch A.E 1986).

Back when international trade, economics and transport were separate systems, production and marketing were treated as two separate elements and transport was divided into different stages. The function of ports in such a situation was to carry out their traditional functions of loading and offloading to and from ships, independent and indifferent to the activities in production, trade and transport. This situation has rapidly changed over time. Seaports have now become catalysts that initiate a wide range of commercial activities in surrounding areas and adjacent surroundings to stimulate their economy and trade (UNCTAD 2015).

The new role of ports is traced and analysed from foreign trade and transport chain. The chain begins from production of raw materials, intermediate or semi-finished products to the receiver of the final product in a foreign country. It is a complex transport chain because the goods are transformed from raw materials into finished products. The location of any given product is critical. Four principles are generally applied to this factor. The location should be where and whenever the cheapest acceptable production factors can be found; where and whenever the minimum time is required; where and whenever minimum transport is required; and where and whenever concentration of products is achieved. Ports are seen to play a significant role as “nodal points” on the transport chain.

3.2.1 Kiama Seaside markets, New South Wales, Australia

Kiama is a coastal resort town in Australia popular for the Kiama Blowhole, a fissure in the volcanic rocks that produce “blows” of water seasonally. The area is a famous destination for trips for people from Greater Wollongong and southern Sydney. The town is packed with coffee lounges and fast-food shops. It contains a small boat harbour, a large area for hosting picnics and a promenade along the shore.

The Kiama Seaside Market is organised by the Kiama & District Business Chamber every third Sunday and on occasional public holidays. During the Sunday market days, locals and travellers enjoy eclectic market stalls displaying an array of arts, crafts, clothing, jewellery, collectables, farm produce, homewares including soft furnishings, art, handmade furniture, fashion clothing and a growing produce presence, as well as fresh food from our stalls and food vans and much more spread over one hundred stalls whilst enjoying the beautiful background scenery of Kiama harbour. The Kiama Seaside Markets are considered a great shopping experience for the whole family, right in the heart of Kiama.



Figure 3: Kiama Seaside markets. Source: Google images 2022

3.2.2 Mercado do Peixe (Maputo Fish Market) in Mozambique

Maputo is the capital of Mozambique, and it also serves as the country's Indian Ocean port. The Maputo Fish Market contains local vendors who sell seafood pulled straight from the Indian Ocean. The restaurants surrounding the fish market also allow visitors who buy fish at the market to have it cooked for them at an extra cost. The fish market is a popular destination for both locals and tourists. Locals mainly visit the market on Sundays as they come to enjoy the beachfront and restaurants with their families.

According to the Food and Agriculture Organisation (FAO), the fisheries sector plays a significant role in Mozambique's economy by contributing to thirteen percent of the export income. Generally, the country's foreign trade in seafood is characterised by imports of low-value fish and exports of high-value products.



Figure 4: Women selling fish in Maputo Fish market. Source: Google images 2022

3.3 Rail Stop Markets

Railway stations have created an established connection between retail and potential customers in train stations, with a view of convenience creating the name ‘convenience store’. Commuters make local, small-scale purchases which can be impulsive while long-distance travellers who have a higher purchasing power favour seated restaurant, personal goods and leisure activities as well as travel-related purchases.

Railways stations are also visited by external clients like supermarkets or shopping centres to purchase common consumer goods. This clientele is highly complementary in terms of needs; the differentiating factor from others is mainly related to the waiting period.

Retailers face many challenges in meeting demand from time-limited consumers. new approaches are required to retain links between the retailer and consumer and to increase mobile consumers. Changing the store concept in terms of style, out-fits, clarity of products, robust furniture, tailor-made furniture and showcase displays are some of the approaches made to attracts consumers. Faster payment methods are an additional approach so as not to slow down commuters.

3.3.1 Mae Klong Railway Market (Hoop Rom Market) in Thailand

Mae Klong Railway Station contains a 100-metre-long market that has existed since 1905. The market majorly sells fruits, fresh and dried food, seafood, vegetables, meat and other goods. It is usually open from 6.00a.m. to 6.00 p.m. The stalls in the market are attached to the Mae Klong-Ban Laem railway line risking the life of both buyers and sellers, giving rise to the name ‘life-risking’ market. parasols or canvas are put up to protect the traders and the goods from the sun. when the train signals its arrivals, the vendors rush to close their canvas and parasols and clear all the goods along the railway line in an attempt to clear the way for the train. Once the train passes the goods and

parasols are re-opened. This happens eight times per day. The market is also known as ‘Hoop Rom Market’ (umbrella/parasol closing market).



Figure 5: Mae Klong Railway Market. Source: Google images 2022

3.3.2 The Elgin Railway Market, Cape Town

The Elgin Railway Market is located alongside the Elgin Railway line and is housed in an old apple warehouse containing an art deco local food market, live music and craft vendors. The railway market is the gateway to the beautiful Elgin Valley.

Locals and travellers access the Elgin Railway Market by taking a 160 km round trip by train departing from Cape Town. The market displays a wide array of food vendors with products ranging from vegan salads, Neapolitan pizzas, fragrant curries, Mediterranean cuisine, Mexican nachos, fresh juices, sweet treats, ice cream, cakes and handmade chocolate. The bar serves local wines, locally made-gin, cider and beer and cider.

A variety of retail goods can be found on the mezzanine and ground floors including genuine leather products, watches, oils, Himalayan salts and lamps, kids’ toys and clothes, ladies’ apparel and skincare products. The Elgin Railway Market is open on select days of the week; on Mondays and Fridays, guests can enjoy the steam coffee shop; on Wednesdays and Fridays, limited food vendors sell their goods, the bar also sells beer and wine, the full market is open on Saturdays and Sunday.



Figure 6: The Elgin Railway Market, Capetown. Source: Google images 2022

3.3.3 Grand Central Terminal Market

Grand Central is a world-famous landmark and transportation hub in Midtown Manhattan opened to the public on 2nd February 1913. The area was originally a section of 43rd Street before it became the terminal's first service dock. A bank was later built in 1975 before it was converted into a market place in 1998. Grand Central Terminal has over 750,000 visitors everyday excluding train and subway passengers while over 250,000 people commute through Metro-North trains, the subway and New York City buses. Grand Central is second to Times Square. It is considered one of the most visited places in New York City. Over the years, the grand central terminal has undergone significant re-engineering.

The market offers a European-style gourmet shopping experience. It is comprised of a variety of food shops, 40-plus retail stores including food vendors, fast-food outlets, two food halls, a grocery shop, delis, bakeries, restaurant and bars such as the Grand Central Oyster Bar & Restaurant which is considered the oldest business in the terminal and an annexe of the New York Transit Museum.

Gran Central Terminal's station is considered as a National Historic Landmark due to the station's distinctive architectural character and interior design.



Figure 7: Map of Grand Central Station. Source: Google images 2022



Figure 8: View of Grand Central Market. Source: Google images 2022

3.4 Road

Bus stations in Africa are considered amongst the most important sites of everyday social and economic activity. For example, Kaneshie in Ghana is a commercial hub in central Accra with more than 4,500 stalls and shops. A wide range of goods are sold at Kaneshie including, construction materials, electronics, groceries vehicle spare

parts, housing and beauty supplies and food and beverage. The multi-storey market is a significant landmark within the area, and it attracts shoppers from all over the city. Kaneshie accounts for almost half of commercial activity in the city.

3.4.1 Kaneshie Market in Accra, Ghana

Kaneshie area is a central transport hub that contains; a sizeable car park that serves long-distance buses, taxis and a tro-tro bus terminal for inter-city and intra-city travel; loading and off-loading points for tro-tros and loading and offloading of passengers and goods by buses. The transportation hub is adjacent to the Kaneshie Market.

The area has been cited as a major terminal in the Accra pilot BRT design. Street traders and public transport operators were identified among people who would be majorly affected by the construction of the BRT. A 2010 Mott McDonald study the impacts of the BRT identified 900 street traders and 180 commercial shops along this stretch.



Figure 9: Kaneshie market in Accra, Ghana. Source: Google images 2022

The introduction of Kaneshie market transformed the land use from a residential zone to a major commercial area serving as an anchor for existing commercial activity as well as attracting new commerce to the region. The residential buildings were converted into commercial space. New building structures were erected to accommodate imports of spare vehicle parts from Western and Asian countries. Kaneshie market has not only attracted formal businesses but it has also become a magnet for informal commercial activities where pedestrian walkways have been appropriated by street traders.

Congestion caused by distribution of goods on the outer lanes of the road and volumes of vehicles accessing the area has become a significant issue affecting transit in the area. Queuing of buses, extensive commercial transport services and passenger loading and offloading increases the strain to the available space. With the expansion of the market, it necessitated new roads and footpaths connecting to existing thoroughways.

3.4.2 Kivukoni and Kimara BRT Stations in Dar Es Salaam

The Bus Rapid Transit system (BRT) has been introduced in many developing countries, including Tanzania, to positively reduce commuter travel times and urban congestion.



Figure 10: Bus rapid transportation along the Morogoro road, Dar es salaam, Tanzania. Source: Google images accessed 2021.

The design of the new BRT is reflected by the separate bus lanes and in the layout of the bus stations. The location of bus stations between bus lanes made it necessary to extend pedestrian paths and pedestrian crossings. This clear structure has considerably reduced the risk of accidents at the BRT.

The Kivukoni and Kimara bus stops in Dares salaam, Tanzania were selected specifically according to their location, functionality and importance within the BRT network. They are terminals of the BRT trunk routes. Kivukoni is the city centre's terminal leading to the harbour and ferries. Kimara is the western bus station and an important traffic hub for further travel on Morogoro road.

A survey was conducted on the immediate surroundings of the selected BRT stations to get an impression of street vendors' experiences with the BRT and its influence on their lives and income generating activities.

Kivukoni BRT Station

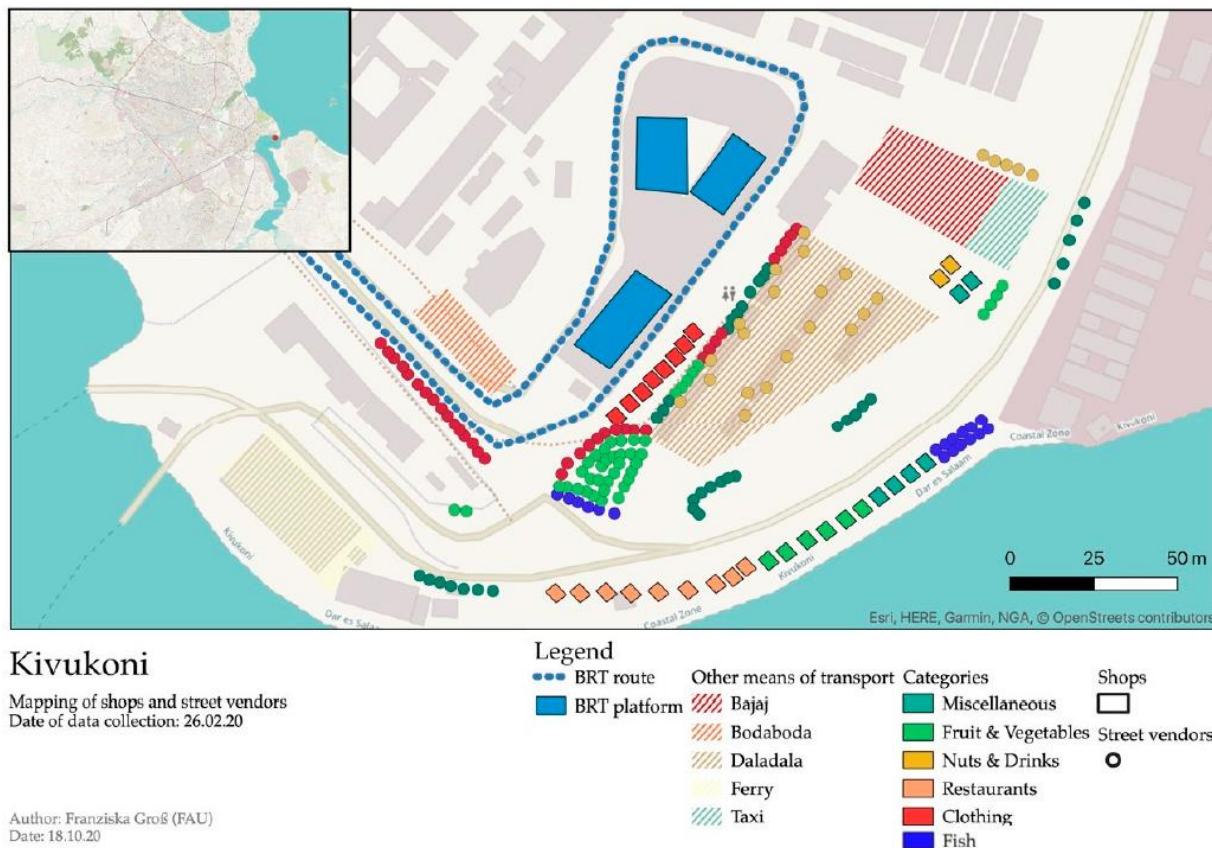


Figure 11: Map of the BRT Terminal at Kivukoni, Dar es Salaam. Source: Google images accessed 2021

At Kivukoni bus stop, there are several fixed stalls in the immediate vicinity of the entrance and exit areas and on the south-eastern side facing the coast (see Figure 11). At the Bajaj (what is commonly known as tuk-tuks in Kenya) points of departure, snacks, fruit and drinks are sold mainly. Clothes are mainly sold along the roads leading to the terminals. Owing to its proximity to the fish market and the harbour, the sale of fish is also dominant. Kivukoni is a busy place with many street vendors. This is shown by the large availability of Bajaj, Daladala and Boda-boda as depicted in Figure 11. Moreover, the construction of the BRT system was an additional attraction factor for street vendors and this led to the mushrooming of more stalls. The overcrowding of the terminal prevents the development of parking areas for cars and other modes of transport.

Kimara BRT Station

Kimara has always been an important transport terminal; it connects the city-centre to the neighbouring suburbs by other transport means that act as feeders. In comparison to Kivukoni, Kimara provides a larger transfer area for other transport services such as Tuk-tuks, Daladala or Boda-boda and parking lots for Park and Ride (see Figure 12). The BRT terminal station of Kimara is completely fenced, so there appears to be only a few street vendors in its immediate vicinity. At the large Tuk-tuk stop, mainly fruits and vegetables are sold. Most of the permanent stands are located around the Daladala departure points. The establishment of the BRT terminal has intensified Kimara's role as a suburban centre and has led to an increase of street vendors along Morogoro Road. They are

mainly concentrated at the western part of the terminal and offer clothing and miscellaneous items such as sweets and snacks. In Kimara, street stalls rather than fixed shops dominate. Only a few fixed shops, which mainly sell fruits and vegetables, are located towards a large market north of the Kimara Terminal.

The BRT is influencing economic possibilities. By staging the bus stops as local hubs, street vendors can find more locations for their business with good sales due to an increased number of passengers. Nevertheless, street vendors remain dependent on unreliable political decisions.

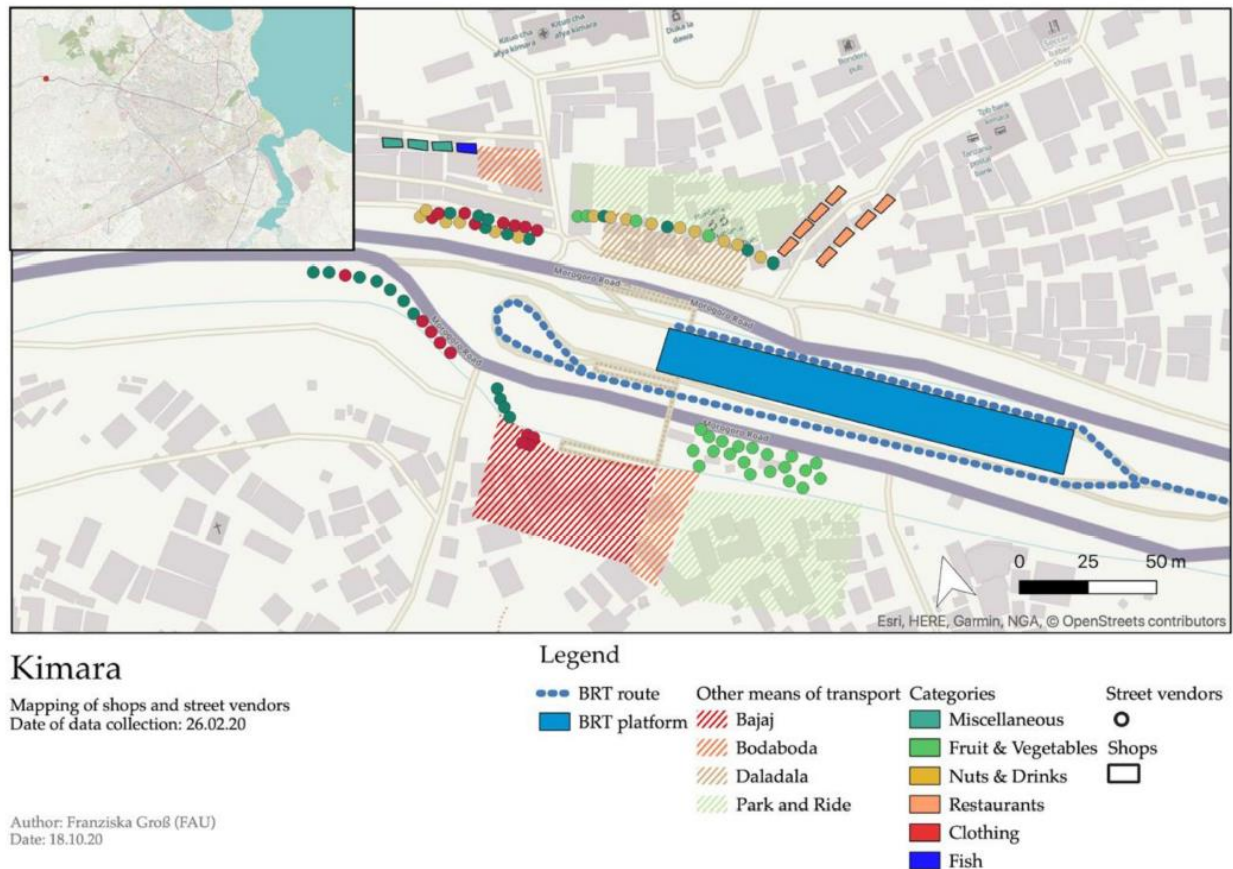


Figure 12: Map of the BRT Terminal at Kimara, Dar es Salaam. Source: Google images 2021

In summary, as much as the BRT system has helped create more jobs and generate more income opportunities for the street vendor and informal transport systems, the terminal could be utilised more efficiently by catering for shopping facilities and parking bays for other transport modes within the vicinity. The BRT is a good example of how inter-dependencies of different stakeholders, and their fields of action, manifest within the transport sector but expand into the economic and social sphere as transport connects citizens to their income-generating activities and basic services.

4. Conclusion

The main objective of the study was to document the types of commercial activities existing within the vicinity of transport nodes across all modes of transport. Airports have high-end retail facilities such as duty-free shopping, hotels, retail and dining. Commercial activities along waterfronts originated from sea ports. Ports act as catalysts that initiate a wide range of commercial endeavours in surrounding areas. A lot of fish markets and restaurant can be

found along the waterfronts as a form of tourist attraction. Rail stop markets have convenience stores, restaurants, travel-related stalls that compliment both short-distance and long-distance travel. Informal markets are located along the rail as previously discussed in Mae Kong Railway market. A good example of a modern rail stop market is Grand Central that comprises of a cluster of food shops, restaurants, a grocery market, bakeries and a Transit Museum. Bus Transit market are prominent sites of economic activities. Both formal and informal stalls, shops and vendors are located within the vicinity of bus stops. The Kivukoni and Kimara BRT case study illustrates how the construction of the BRT influences city development and people's livelihoods. It maps out the types of street traders and transportation services within the vicinity of the BRT station. The case studied is a good example of how the improvement of the transport system needs to be inclusive of the street traders and transport services.

Transport nodes have grown into complex and multi-faceted structures. It is evident all modes of transport provide opportunities and an atmosphere for activities to mushroom within and around their sphere. They not only attract commercial activities but also create a platform for leisure and cultural activities.

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