

Vibrant or Dull Urban Spaces: Are City of Tshwane “A Re Yeng” and “Gautrain” Connector Points Places of Social and Economic Interaction?

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1 ABSTRACT

Public transport infrastructure investments have been widely advocated for as catalysts for economic growth and development. They have also been regarded as pivots of functionality of economic nodes and communities. Thus, considerations of innovative strategies in investing in public transport infrastructure as contributors of socio-economic transformation through facilitating the growth of business operations and the creation of small-scale entrepreneurship has gained momentum. The common envisaged outcome of such innovative approaches is creation of vibrant urban centers and economic spaces characterized by a variety of social and economic activities. In the same vein, this paper investigated the impact of implementation of innovative urban public transport systems on business operations and formation of new small-scale businesses within the City of Tshwane. The study adopted mixed research approaches where qualitative and quantitative data were gathered concurrently. Field observations, key informant interviews, questionnaire administration were used for data collection. Subsequently, content data analysis was applied through the exploration of findings under various relevant themes of public transport infrastructure and business operations. Findings reveal limited improvement on business operations or formations, especially integration of previously disadvantaged communities and informal traders to the local economy. Even for few opportunities created, limited entrepreneurial skills, knowledge and expertise amongst people previously systematically excluded restrained them from taking advantage of such opportunities. Skewed focus on public transport infrastructure roll-out coupled with limited practical focus on trickle down effects as socio-economic benefits was observed as another obstacle hindering creation of vibrant socio-economic spaces through public transport infrastructure investments. Thus, the work recommends the creation of activity nodes for social and economic interactions at connector points to the benefit of local economy and residents. To complement such, human capacity development and entrepreneurial skills development amongst the previously disadvantaged group is advocated to attain socio-economic transformation.

Keywords: Place Making, Public Transport Infrastructure, Activity Nodes, Business Operations, Vibrant Communities

2 INTRODUCTION

Sustainable public transport infrastructure investments are characterised by applied analytical methods to optimize an efficient transport network with improved consumer experience and accelerated economic growth and development (Divall & Hine, 2017). Undoubtable, Integration forms the core of public transport infrastructure investments as it constitutes an organizational process through which the planning and delivery of elements of the transport system are brought together, across modes, sectors, operators and institutions, with the aim of increasing net social benefits (Preston, 2012). In the same vein, Boschetti, Maurizi, and Cré (2014) also notes that through innovative urban public transport systems with strong focus on integration, cities will become hotbeds for innovation, where trade, tourism, commerce, services and education will be improved and prosper. Notably, cities with well-coordinated integrated transport systems are most likely to have an improved Gross Domestic Product (GDP) accompanied by higher levels of productivity (Graham & Niekerk, 2014). The apartheid/colonial inherited, fragmented spatial form in developing countries is such that infrastructure investments should redress past spatial imbalances while creating vibrant socio-economic space(s) for social and economic interaction. Cervero (2001) observes that land use patterns of a city or town also influence the travel pattern transport network for socio-economic activities of people and overall

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economic functionality of cities. Thus, public transport infrastructure investments should find the right balances of all segments of the physical infrastructure, and socio-economic transformation.

Since the dawn of democracy in 1994, South Africa has prioritized socio-economic transformation through numerous policy pronouncements and public transport infrastructure investments which have been centred on reducing unemployment, poverty alleviation and bridging the inequality gap (Gumede, 2013). Nonetheless, Cilliers and Camp (2013) observe that South African government continues to produce policy instruments that are good on paper but does not contribute to socio-economic transformation that positively impacts people's lives hence continued challenges inequality, unemployment and poverty.

Lessons from the City of Linz in Austria suggest that an integrated approach to public transport systems and socio-economic transformation creates hotbeds for innovations, where stations or connector points can be designed as places of social and economic interaction (Klementschtz & Stark, 2009). Thus, mechanisms must be developed to ensure that public transport infrastructure investments and decisions do not compromise the value of social, economic and environmental aspects of development but must focus on realistic solutions to community problems. The paper starts by briefly discussing literature review, followed by research objective(s) and the methodology followed. The paper then discusses study findings and conclude by providing discussion, concluding remarks and recommendations.

2.1 Scope of the paper

This paper investigates prospects of designing stations/connector points as activity nodes for socio-economic transformation as part of public transport infrastructure investments. Pretoria Central (Bosman) and Hatfield Innovative urban public transport systems (Gautrain and A Re Yeng) main connector points within the City of Tshwane were used as focus areas. It deliberates on the significance of public transport infrastructure investments in strengthen local economies and enhancing socio-economic transformation. The role of Transit-Orientated Development (TOD) in place-making and socio-economic transformation is the golden thread and focal point of discussion throughout the paper. The extent to which the previously disadvantaged and the urban poor benefited economically from such investment becomes essential in determining the effectiveness of such investments. The paper then advocates for designing/stations connector points as activity nodes for social and economic prosperity.

3 LITERATURE REVIEW

Transit-Orientated Development (TOD) as a core component of infrastructure development for smart growth and compact cities plays an integral role in shaping urban form (Todes, 2012). In the same vein, Situma, (2002) TOD contributes in shaping better spatial forms to create vibrant economic spaces through creation of activity nodes along public transport corridors and main intersections making public transport investments responsive to socio-economic disparities facing developing countries. Litman (2017) argues that Public Transport Infrastructure investments should look beyond the dynamics of a well-coordinated transport system. Thus, connector points or stations can be used as pivots for socio-economic innovation and prosperity through designing them as hubs, where small-scale entrepreneurs and informal traders can prosper and contribute to the local economy. Notably, well-coordinated and comprehensive public transport systems, it can still be disintegrated if it neglects social, economic and environmental considerations (Pojani & Stead, 2015). Thus, innovative approaches have been sorted to improve the state of public transport infrastructure for spatial integration and socio-economic transformation. In South Africa, such initiatives have been commissioned through national government led Integrated Rapid Public Transport Networks initiative which saw the introduction of the Gautrain and Bus Rapid Transit (Van Ryneveld, 2008). However, Mashiri, Mokonyama, Mpondo, Jakhwizara and Mdunge (2014) observe that despite massive investments, poor planning has meant insignificant changes in traffic congestion, conflicting vehicle-pedestrian movements, uncoordinated small-scale freight vehicles and parking shortages.

3.1 Spatial form effects on socio-economic vibrancy

Spatial structures and forms inherited from the apartheid planning system have hindered and frustrated social-economic transformation in most parts of the country (Turok, 2013). The defining feature has been the notion that issues of economic disparities and labour market polarization persist and coexist, with the previously disadvantaged being continuously marginalized. Many discussions are taking place around spatial

restructuring of public transport to support the economy (Cervero, 2013). The fragmented spatial form is central to prevailing socio-economic challenges, hence the renewed call for redressing the past spatial imbalances through transit orientated development (Chakwizira & Mashiri, 2009). Low income earners who reside in isolated townships are the most affected by the fragmented spatial form, hence some become discouraged job seekers or give up their jobs due to spending most of their income on transport before they can take care of other basic household needs. Travel costs and a lack of access to economic opportunities have been the predominant challenges with the urban poor having to spend more than a third of their income on transport (Roux, Mfinanga, & Del Mistro, 2012). Furthermore, the urban poor often spend most of their hard-earned money on transport, as they use more than one mode of transport (pay multiple fares) for one trip which perpetuates poverty and inequality due to lack of modal integration with single travel fare per trip instead of paying at each interchange (Franklin (2014). Accordingly, integrating residential areas and economic nodes through a single multi-modal public transport network can ensure affordability, thus enabling people to participate actively in the economy. Thus, spatial integration becomes central to socio-economic transformation.

3.2 Spatial injustices and socio-economic disparities

Social and economic transformation has undoubtedly been the core of South Africa's post-apartheid economic growth and development agenda (Patel, Freeman & Mitchell, 2001). Pre-1994, the South African economy used to be that of a polarised labour market, where benefits of most skilled jobs were accessible mainly by the minority or whites, and the native people occupied the low-income jobs in the unskilled or semi-skilled labour market (Triegaardt, 2006). Thus, persistent income disparities reflect historical imbalances with a racial and geographic footprint, hence post-1994 policy interventions being aimed at spatial and socio-economic transformation. Skills shortages, limited training and experience has been observed as central to urban poor's inability of to be absorbed to the middle and high-income jobs (Adelzadeh, Alvillar & Mather, 2001). Questions have been raised as to whether the state has created a dependency culture, where people are solely dependent on government to provide for their needs. Evidently, there has been minimal impact of the transformation strategies on spatial integration, socio-economic transformation and land reform, despite having proliferation of micro-financing and institutional transformation (Musakwa & Gumbo, 2017). In the public dialogues, service delivery protests and economic disparities in the country have been the focal point of the discussion, where the inclusive nature of government policy initiatives has been questioned. The defining feature agreed upon in all these dialogues has been the notion that issues of economic disparities and labour market polarization persist and coexist. It is now generally acceptable that informal trading has become a viable source of income for the urban poor and previously disadvantaged (Srinivas, 2016). Thus, mechanisms such must be developed to accommodate informal traders to trade legally by designing urban spaces structures that are in keeping with the aesthetic and spatial form of economic nodes where the stations are located.

4 OBJECTIVES /RESEARCH QUESTIONS

Since the dawn of democracy, South African metropolitan cities like Tshwane, Cape Town and Johannesburg have witnessed massive public transport infrastructure investments, (Tsikai, 2016). While public transport infrastructure is advocated for as the backbone of economic development (Cromhout, 2016), does the said investments in public transport infrastructure witnessed in the City of Tshwane contribute to creation of vibrant urban spaces for social and economic interaction characterised by the growth of small-scale entrepreneurship to the benefit of the local economy. The main objective was to determine whether main stations are designed as innovative hubs for socio-economic vibrancy when implementing innovative urban public transport system was used as the main reference point as through creating enabling environment for small-scale entrepreneurs to thrive and enhance social cohesion. This paper investigated the core components that influence business growth that can be incorporated into design guidelines to design connector points as activity nodes for a variety of social and economic activities.

5 APPROACH AND METHODOLOGY

The study followed mixed approach by combining components of qualitative and quantitative approaches in data collection, analysis and interpretation. Field observations (including informal discussions with the people who are directly or indirectly involved in activities within main nodes or main stations), key informant interviews (20 demi-structured interviews), questionnaire administration (100 questionnaires) were used instruments for data collection. Subsequently, an inductive approach to data analysis was followed through exploring findings under various relevant themes of public transport infrastructure and business operations. The questionnaires were structured according to themes that were aimed at determining factors that influence socio-economic interaction and business growth for small-scale entrepreneurs in urban or public transport nodes. The field observations and key informant interviews with officials working directly with public transport infrastructure investments were used to broadening the researcher perspective on the main subject and ensure appropriateness analysis, interpenetrations, conclusions and recommendations. From this premise, the researcher could assess and determine socio-economic vibrancy of station precincts. The SPSS statistical software was then used to capture data collected through administering of questionnaires to small-scale entrepreneurs and local residents with the aim of identifying core components that influence business growth using the Chi-Square test by way of assessing significance levels of various factors.

6 RESEARCH ANALYSIS & FINDINGS / RESULTS

It is evident that the apartheid inherited fragmented spatial form can no longer be reversed. Rather, mechanisms should be put in place to mitigate the situation, especially for the urban poor who find themselves located far from socio-economic opportunities and without adequate sources of income to sustain their households. Densification along public transport corridors as already envisaged in the City of Tshwane is essential in ensuring that congested townships are freed from overcrowding with more housing opportunities available closer to economic opportunities. This will even help mitigate heavy traffic congestion between townships and economic opportunities. However, accommodating the urban poor in housing options that may be created is a challenge, with property developers concerned about their investment returns if they support the municipal corridor densification strategy. Findings suggest limited improvement in business growth, especially in the integration of previously disadvantaged communities and informal traders to the local economy. Skewed focus on the public transport infrastructure rollout coupled with limited practical focus on trickle down effects as socio-economic benefits was observed as another obstacle hindering the creation of vibrant socio-economic spaces through public transport infrastructure investments. Missed opportunities were observed, especially when it comes to accommodating the informal economy and small-scale entrepreneurs. The need to design main stations as activity nodes that encourage a variety of economic and social activities was identified as an area of improvement. Though limited in quantity, economic activities around the Pretoria Central precinct confirmed that this is indeed an area that needs to be explored further, while missed opportunities were note in the Hatfield economic node.

6.1 Socio-Economic Transformation through Business Growth and Operations Improvements

The state of business operations is essential to socio-economic transformation, as it provides a platform for small-scale entrepreneurs to thrive and for employment creation. The informal economy is often-in the policy formulation, yet it supports most families of the urban poor or previously disadvantaged communities (Brown & McGranahan, 2016). Evidently, too little if anything at all that has been done at the planning and strategy formulation phase to ensure that implementation of innovative urban public transport systems goes beyond improving urban mobility to create an enabling environment for small-scale businesses to grow to boost the local economy and create jobs. The Municipal regional spatial development frameworks focus mainly on densification, with no emphasis on creation of activity nodes on major intersections along densification corridors which will enable small-scale entrepreneurship growth and employment creation. Where there is minimal improvement in business operations and lack of opportunities for upcoming entrepreneurs, poverty, unemployment and inequality will continue to rise with more people trapped in poor living conditions. The study findings suggest that there are limited improvements on business operations which can be attributed to public transport infrastructure investments. The informal economy is evidently

neglected, as it is one of the segments which has hardly benefited from the implementation of innovative urban public transport systems.

6.1.1 The state of business operations around the Pretoria (Bosman) Central Stations

The observations made during primary data collection suggest that there is a potential for small-scale business around the main stations. Figure 1 below provides an overview of the business operations in Pretoria central for both the A Re Yeng and Gautrain stations. The significant aspect in the Gautrain station is the presence of established business and small-scale entrepreneurs (though very limited). The top-left corner shows the small-scale entrepreneur kiosk or mini-shop providing perishable goods typical of those provided by informal traders in business nodes. The structure and physical appearance of this container is in keeping with the aesthetic value around the Bosman Station and not in conflict with an established coffee shop as seen in the top-right corner. Such can be explored further to create vibrant socio-economic space(s) through designing station precincts as activity (mixed-use) nodes characterised by a variety of social-economic activities like the ones created in the City of Linz in Austria light railway stations.

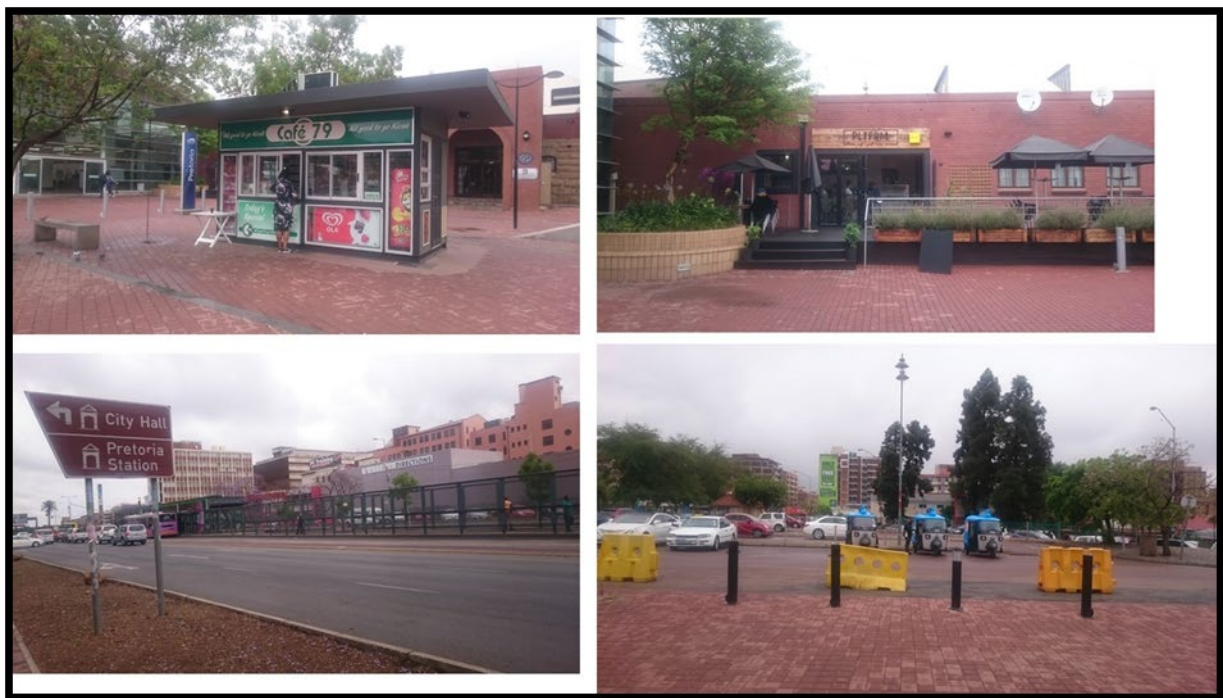


Figure 1: Spatial form around Gautrain and A Re Yeng stations in Pretoria central (Source: Author's illustration based on field observations during primary data collection)

The opportunity presented by the high concentration of various public transport related activities in one node cannot be over-emphasized. Such a variety of public transport modes concentrated in one location presents an opportunity for the creation of a mixed-zone activity node which accommodates small-scale entrepreneurs and established business, given the different services they provide to the commuters, people working and living in the area. The city should consider such initiatives in the form of a precinct plan linking Bosman station with the City Centre, where there is also the Church Square main station for the Tshwane Bus Service also near the A Re Yeng Station. Activities of small-scale entrepreneurs are evident, but with proper planning this can be transformed to a vibrant activity node for small business and social upliftment. Given the amount of space evidently available as seen in the bottom left corner picture, there is a potential for more opportunities being created to accommodate small-scale entrepreneurs (including informal traders) around the stations without negatively affecting the aesthetic value of the station precinct. One of the common concerns that was evident was the need for skills development to enable previously disadvantaged people to take full advantage of opportunities created.

6.1.2 Missed opportunities in the Hatfield stations nodes

Unlike the Bosman station in Pretoria Central, there is not even a single shop in the precinct of the A Re Yeng and Gautrain stations in Hatfield. With ample space available as is evident on figure 2 below, this presents an opportunity to create an activity node. The picture on the top-left corner depicts the A Re Yeng Station, with the Gautrain bus stations nearby. The picture on the bottom right corner depicts the Gautrain station taken from the same location as the one on the top left corner which clearly illustrates the proximity of the Gautrain and A Re Yeng Stations. Considering the prospects that were already observed in the Pretoria Central Stations and comparing this with the socio-economic hubs created in the City of Linz light rail stations, the ample space available around Hatfield station represents a missed opportunity for a vibrant socio-economic node where small-scale entrepreneurs can be allowed to trade and provide services to commuters and people living and working in the area. Structures of aesthetic value like the one in Bosman/Pretoria Station on figure1 above could be ideal to accommodate informal traders in the Hatfield node.

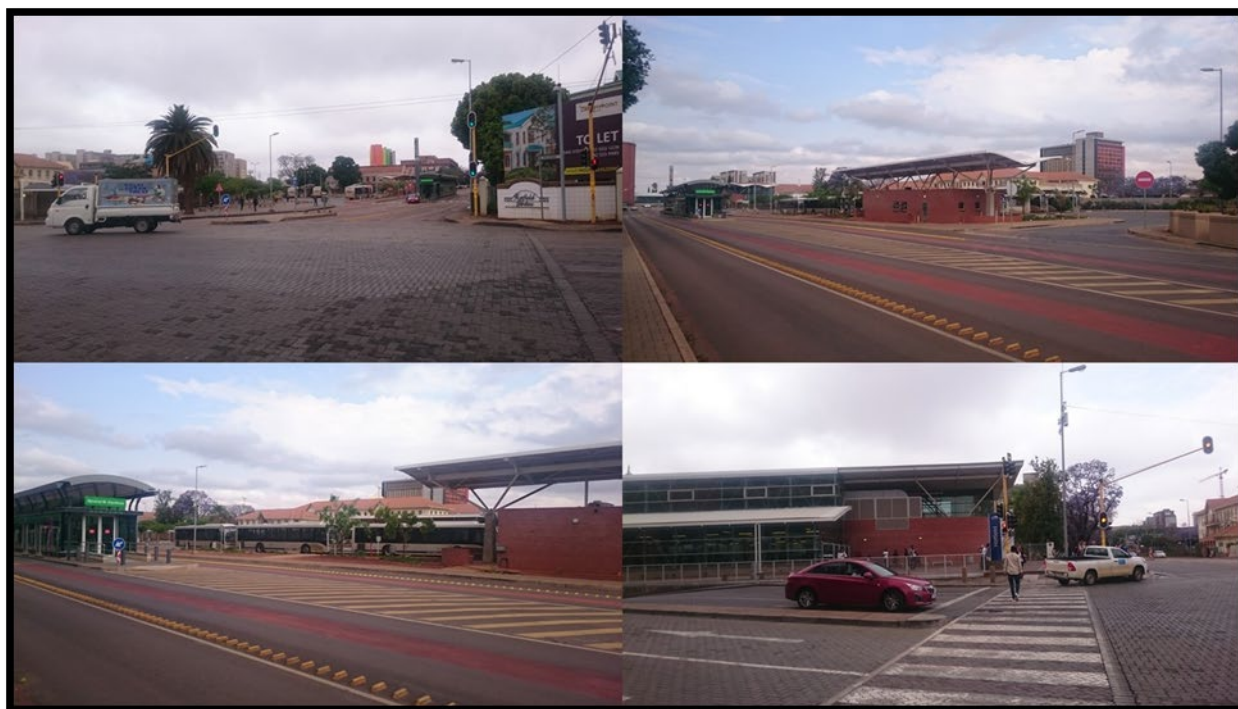


Figure 2: Spatial form around Gautrain and A Re Yeng stations in Hatfield (Source: Author’s illustration based on field observations)

The A Re Yeng and Gautrain stations are closer to each other in Hatfield than it is the case in Bosman (Pretoria Central). Though aspects of informal trading are not fully evident in the Bosman Gautrain station, at least a glimpse of it is evident, and a precedent has been set for a potential future expansion. This is hardly the case at the Hatfield station as there is ample space which is underutilized which could be used for a mixed-use zone or platform for socio-economic vibrancy innovative hub for small scale business opportunities in the form of an activity node with the two stations so close to each other. Such considerations can be made for other stations with further implementation of innovative urban public transport systems. This will translate into integrated efforts for socio-economic transformation and innovative urban public transport planning systems implementation.

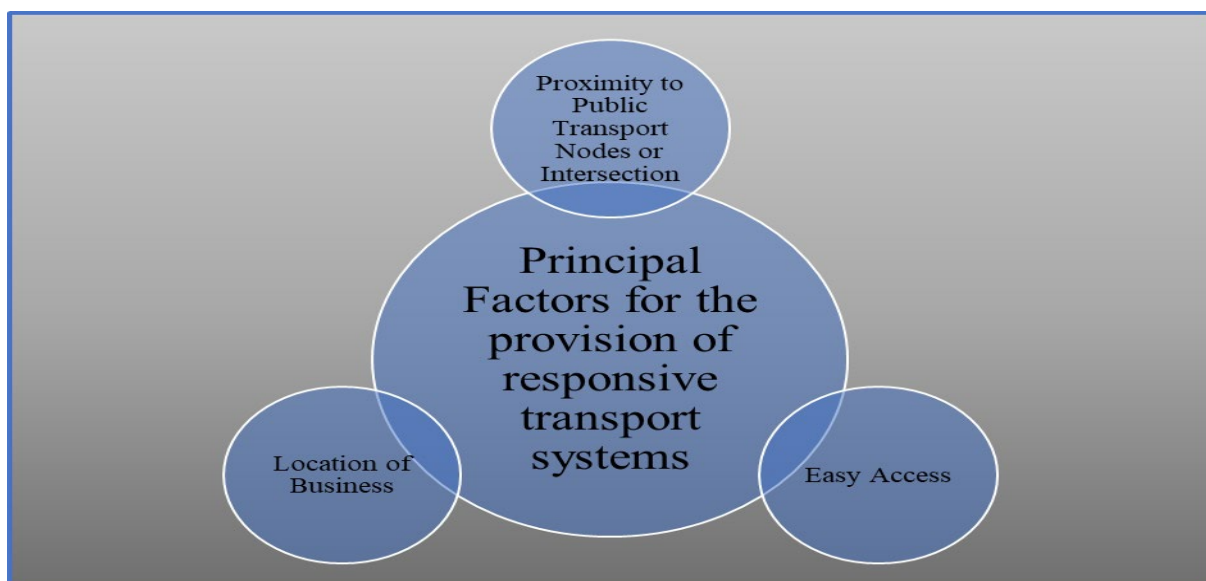
6.2 Components Promoting Business Growth

The case of the City of Linz in Austria, suggest that stations for innovative urban public transport systems can be designed as activity nodes for economic and social activities (Vougioukas, Sammer, Monzon, Evans, Ambrosino, 2008). While conducting key informant interviews, it became evident that there is a limited effort to design stations as activity nodes to act as socio-economic benefits for the local community, rather more focus on densification along the A Re Yeng (BRT) corridors. This can be considered as an area of improvement to ensure that public transport infrastructure investments go beyond improving mobility and connectivity and becomes a catalyst for socio-economic transformation. To attain socio-economic transformation, an enabling environment for growth of small-scale entrepreneurship and employment creation should be created as part of public transport infrastructure investments. Thus, place-making through designing stations as vibrant socio-economic hubs is essential to create an enabling environment for small-scale entrepreneurs is essential. This will help counter the challenges of poverty, unemployment and inequality while also promoting social cohesion with such vibrant socio-economic spaces. Notably, the study findings reveal that there is minimal improvement in business operations and limited opportunities for upcoming entrepreneurs through the introduction of innovative urban public transport systems. This further emphasises the need to strengthen the local economy through designing station precincts as activity nodes or vibrant social-economic urban spaces and social upliftment. Despite no signs of small-scale economic activities at the Hatfield economic node stations, there were economic activities noted at Pretoria Central economic node station, though limited.

Consistent with lessons drawn from the City of Linz it was essential to identify Principal Factors as areas of consideration when designing activity nodes in and around public transport precincts and take advantage of missed opportunities in the evidently dull urban spaces. Such Principal Factors were identified by way of examining similarities and patterns through Chi square test for relational analysis between public transport infrastructure and business growth (small-scale entrepreneurship and informal economy) towards vibrant economic spaces and social upliftment. Accordingly, the following Principal Factors were identified using SPSS statistical software:

- Proximity to Public Transport nodes or Intersections
- Business Location
- Easy Access

Figure 3 below illustrates the interdependent nature of the identified Principal Factors, which suggest that to design station precincts as vibrant urban spaces for social and economic interaction, proximity public transport nodes, business location and accessibility of small businesses within the station precincts are should collectively form the core of design guidelines given their prominent significance for small scale entrepreneurship growth.



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Figure 3: Principal Components for transformative public transport systems (Sources: Author’s illustration)

As illustrated in figure 3 above, proximity to public transport nodes is directly linked creation of an enabling environment where small scale entrepreneurs are strategically positioned at the convenience of commuters who might be travelling for different reasons but need products or services provided by small-scale entrepreneurs within public transport nodes. Proximity is directly linked location and easy access as public transport nodes are a strategic business location where customers can easy access at a convenient location thereby reducing number of trips travelled by commuters to obtain essential household needs and services. Undoubtable, proximity to public transport nodes and intersection, strategic business location and easy access are collectively essential for economic innovations through investments in public transport infrastructure.

6.2.1 Proximity

To determine the significance of business proximity to public transport nodes or intersection, the P-value of 0.05 was used as the significance level. The null hypothesis was that there is no relationship between business growth and proximity to public transport nodes or corridors and the alternative hypothesis being that there is a relationship between proximity to public transport corridors and business growth. For a significance level, less than or equals to 0.05, the null hypothesis was rejected in favour of the alternative hypothesis (Table 1).

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	12.403 ^a	1	.000		
Continuity Correction	10.601	1	.001		
Likelihood Ratio	11.504	1	.001		
Fisher's Exact Test				.001	.001
Linear-by-Linear Association	12.279	1	.000		
N of Valid Cases	100				
a. 0 cells (0%) have expected count less than 5. The minimum expected count is 6, 38.					
b. Computed only for a 2x2 table					

Table 1: Significance level of Proximity to Public Transport nodes or Intersection; Source: Author’s SPSS analysis using Hypothesis Testing (P-value approach)

As depicted in table 1 above, the P-value highlighted in green is less than 0.05 which suggest that there is a strong relationship between proximity to business growth and proximity to public transport infrastructure nodes. This affirms that designing public transport nodes as hotbeds for socio-economic transformation through an integrated approach to public transport infrastructure investments and local economic development is essential to promote small-scale entrepreneurship and social upliftment. Thus, innovations should incorporate proximity to public transport nodes as a core principle for designing vibrant socio-economic spaces.

6.2.2 Location

As already alluded that business location is directly linked to proximity to public transport nodes, to determine the significance of business location in relation to the proximity to high concentration of business activities and clients, the P-value of 0.05 was also used as the significance level. The null hypothesis was that there is no relationship between preferred business location and proximity to the market or clients and the alternative hypothesis being that there is a relationship between preferred business location and proximity to clients or market. For the significance level less than or equals to 0.05, the null hypothesis was rejected in favour of the alternative hypothesis (Table 2).

Chi-Square Tests					
	Value	df	Asymptotic Significance (2- sided)	Exact Sig. (2-sided)	Exact Sig. (1- sided)
Pearson Chi-Square	8.101 ^a	1	.004		
Continuity Correction	6.915	1	.009		
Likelihood Ratio	8.389	1	.004		
Fisher's Exact Test				.005	.004
Linear-by-Linear Association	8.020	1	.005		
N of Valid Cases	100				
a. 0 cells (0%) have expected count less than 5. The minimum expected count is 14, 57.					
b. Computed only for a 2x2 table					

Table 2: Significance level of Business Location; Source: Author's SPSS analysis using Hypothesis Testing (P-value approach)

Table 2 above depicts that the significance level is exactly 0.005 which affirms that the null hypothesis must be rejected in favour of the alternative hypothesis that proximity to clients or market is significant in identifying business location. Thus, all the business that have the potential to thrive within public transport infrastructure precincts should be accommodated through a public transport node or intersection precinct plan.

6.2.3 Access

The significance of easy access to a business establishment in relation to the concentration of businesses within public transport nodes, where people can have easy access to business establishment through public transport was determined using P-value of significance level of 0.05. The null hypothesis was that there is no relationship between business accessibility and accessibility through public transport, while the alternative hypothesis was that there is a relationship between business accessibility and public transport infrastructure ability to provide access. For the significance level, less than or equals to 0.05, the null hypothesis was rejected in favour of the alternative hypothesis.

Chi-Square Tests				
Value	df	Asymptotic Significance (2- sided)	Exact Sig. (2- sided)	Exact Sig. (1- sided)

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Pearson Chi-Square	7.700 ^a	1	.006	
Continuity Correction	6.500	1	.011	
Likelihood Ratio	8.349	1	.004	
Fisher's Exact Test				.007
Linear-by-Linear Association	7.623	1	.006	
N of Valid Cases	100			

a. 0 cells (0%) have expected count less than 5. The minimum expected count is 11, 16.

b. Computed only for a 2x2 table

Table 3: Significance level of Easy Access; Source: Author’s SPSS analysis using Hypothesis Testing (P-value approach)

Table 3 above depicts that the significance level is exactly 0.007 which clearly depicts that businesses, especially small business will grow and have more clientele if they are easily accessible through public transport infrastructure. The overall indication is that there is a close relationship between public transport infrastructure investments and business growth to the benefit of the local community within a city or town. Thus, all business establishments should be easily accessible through public transport infrastructure to enhance trade and socio-economic vibrancy.

7 RESEARCH CONTRIBUTION

The paper advocates for inclusive Place Making and Socio-Economic Sustainability as one of the core principles of public transport infrastructure investments where connector points within a multi-modal public transport network are used innovation hubs for the growth of socio-economic transformation. The paper calls for collective strategy formulation in Transit Orientated Development by moving beyond evident skewed focus on public transport infrastructure rollout. Place making through designing connector points as vibrant socio-economic spaces complemented by human capacity development (necessary entrepreneurial skills, knowledge and expertise) for those from previously disadvantaged communities were identified as interdependent components to enhance socio-economic transformation as trickle-down effects of public transport infrastructure investments.

8 RESEARCH LIMITATIONS

The study focused mainly on innovative public transport systems in form of Gautrain and A Re Yeng BRT systems which are receiving most of the government findings for public transport infrastructure under the IRTPN initiative. As such, other mode of public transport like mini-bus taxis, Metrorail trains and various bus services were not investigated as part of the primary data collection to get a holistic picture of public transport network in the City of Tshwane. However, this study to a large extent tried to obtain respondents views of other modes of public transport in comparisons to innovative urban public. The need for a holistic integrated public transport systems where all public transport providers work together towards a common goal was then identified in the process.

9 DISCUSSIONS AND CONCLUDING REMARKS

There are limited innovations for socio-economic prosperity in the design of stations and main intersections, hence dull urban spaces due to skewed focus on public transport infrastructure rollout, coupled with limited practical focus on trickle down effects as socio-economic benefits. This was observed as the main obstacle hindering creation of vibrant socio-economic spaces as part of public transport infrastructure investments. The often overlooked component of designing stations (connector points) as vibrant socio-economic spaces for the benefit of small-scale entrepreneurs was apparent. Findings reveal limited improvement on business operations or formations, especially integration of small-scale entrepreneurs from previously disadvantaged communities and informal traders. Even for the few opportunities created, limited entrepreneurial skills,

knowledge and expertise amongst people previously disadvantaged, systematically excluding them from taking advantage of such opportunities.

Most people who continue to be marginalised and are subjected to poverty and poor living conditions are also characterized by low literacy skills and limited tertiary education. Negative self-esteem and the poverty is thus the major obstacle that needs to be overcome to enable people to take full advantage of opportunities being created. The youth also form township families also lack the zeal for education and skills development. Notably, self-determination is lacking amongst previously disadvantaged communities and rather a dependency culture and lack of skills development deepens socio-economic disparities. The need for human rehabilitation to enable people to become small-scale entrepreneurs concurrent with creation of opportunities as part of public transport infrastructure investments is evident. Thus, investment in human capacity development and skills development should form an integral part of socio-economic transformation policy interventions. In line with other democratic dispensation policy documents, the National Development Plan, Vision 2030, skills development is an essential area of intervention for socio-economic transformation and redressing past imbalances manifesting in the polarised business sector and labour market. Evidently, there is a need to create an enabling environment for small-scale entrepreneurs to thrive. The previously disadvantaged can be trained for possible Small, Medium and Micro-sized Enterprises (SMMEs) opportunities (trickle-down effects) from public transport infrastructure investments.

9.1 Designing connector points as activity nodes for social and economic vibrancy

This work recommends the creation of activity nodes through designing of connector points as vibrant urban spaces for social and economic interactions to the benefit of the local economy and residents. To complement such, human capacity development and entrepreneurial skills development amongst the previously disadvantaged group is supported to enable people to take full advantage of opportunities created. Other than government tender business opportunities, small-scale formal and informal businesses can be encouraged by creation of activity nodes for economic and social activities consistent with public transport infrastructure investments. If stations do not incorporate small scale business opportunities, they become dull places with missed opportunities that could strengthen local economy.

Government, in collaboration with other stakeholders, should invest in human capacity development to ensure that people take advantage of opportunities created. Government must also see to it that already established businesses mentor small businesses through mandatory skills transfer programmes on government tender projects. There can be a service level agreement that each beneficiary of the government tender incorporates a skills transfer component to mentor and actively involve one or two upcoming entrepreneurs from previously disadvantaged communities. This will ensure that upcoming entrepreneurs acquire credible experience, making them eligible to properly tender for future projects.

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