My city, my food: Examining the potential impact of the MyCiTi bus system on food security in Khayelitsha, Cape Town

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Abstract

Transportation, food security, and technology are key to the sustainable development of today's cities, but few studies have been done on the intersection these issues, especially in sub-Saharan Africa. This paper addresses the intersection of transportation, food security, and technology with a special focus on Cape Town's MyCiTi bus system. By examining this transit system, I argue that the city has the potential to address the serious urban challenge of food insecurity in the city's Khayelitsha Township, but so far its technological features have hampered the township's food security and thus its economic sustainability. Khayelitsha faces alarming levels of poverty and food insecurity, exacerbated by its far distance from the city center. MyCiTi recently added routes to Khayelitsha to correct for the past spatial inequalities of apartheid, and even boasts a fare card that can act as a debit card for a small fee, thus offering customers a way to purchase food through their fares. Armed with the weapons of potential spatial and economic access, MyCiTi could improve the state of food security in Khayelitsha. However, MyCiTi's technological system does not meet the needs of many of its customers: the township's food retail environment is dominated by the informal sector, rendering the debit card feature useless. Informal traders do not accept debit cards; with few fee-free fare outlets available in the township, residents in Khayelitsha are stuck with expensive transit and little access to healthy food. For Cape Town to achieve the Sustainable Development Goals, it is vital that the city make note of the realities of its various locales and incorporate such insights into its system design. Without reform, Khayelitsha residents will continue to face a double urban challenge: high transport costs and high food insecurity. Other cities around the world can learn from Cape Town's successes and challenges for their own pursuits of the Sustainable Development Goals.

Introduction

Transportation, food security, and technology are key to the sustainable development of today's cities. Transportation and urban food systems are intimately connected: transportation systems are the means by which urban residents move through cities, purchase, and transport food. An urban transportation system may have a significant impact upon urban food security; depending on its spatial location, fares, and other considerations, it may help or hinder households from accessing food quickly and efficiently.

This paper seeks to understand the potential impact of Cape Town's MyCiTi bus system on food security in the city's Khayelitsha Township. Khayelitsha faces alarming levels of food insecurity. Cape Town's new bus system has sought to create a system that tries to correct for the past structural inequalities of apartheid, and even offers a way for customers to purchase food through their fares. Armed with the weapons of potential spatial and economic access, is MyCiTi able to make any improvements in the state of food security in Khayelitsha?

6 MyCiTi (d), Your guide to MyCiTi, 2016.
Through this study’s evaluation of the MyCiTi system and the state of food retail in Khayelitsha today, this study has found that while the MyCiTi system has the potential to improve food security in Khayelitsha, its current strategies to do so do not match the realities of Khayelitsha’s food system, and thus are ineffective at combating food insecurity in the township. However, MyCiTi has the potential to positively impact the food security of Khayelitsha residents. The bus system may be more helpful if it instead focuses on expanding its fare services in Khayelitsha and by connecting the township to other areas nearby rather than solely to the city center.

For the purposes of this study, food security is defined as a situation “when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.” The availability, accessibility, utilization, and stability of food in the urban system are crucial to maintaining food security in cities.

**Literature Review**

An expanding body of academic literature highlights the connections between food and transportation. An area of particular relevance is that of transportation equity. Transportation scholars highlight the need for transportation equity, or justice, in cities across the world. Transportation equity or justice may be defined as “a more fair, equitable distribution of the benefits and disadvantages of transportation interventions.” The greater literature on transportation equity is small yet growing. Much research has focused on particular dimensions of disadvantage, such as gender, socioeconomic class, and age in order to highlight the need for transportation equity in cities across the globe.

In South Africa, the concept of transportation equity is particularly salient, as it provides a theoretical framework with which to contend with transportation disadvantage (a state of lacking transport equity), which has been intensified by the urban spatial makeup inherited from apartheid policies, and from great distances between work and home for low-income households. To move towards transport equity in South Africa, transportation disadvantage must be addressed through “improved ‘accessibility’ and that reduction of poverty and transport-related social exclusion.” As the idea of transportation equity grows, now is an ideal time to evaluate the equity of Cape Town’s MyCiTi BRT system.

Transportation and food security have a close connection: transportation provides the means by which to access and transport food. As transportation scholar Gail Jennings points out, “transport disadvantage has been associated with an inability to access the goods and services necessary to live ones daily life, and the consequences are many ... [including] poor access to healthy, affordable food.” Other scholars have pointed out another key link: in their study of Cape Town’s supermarkets, Battersby and Peyton explain that supermarkets strategically choose to do business near arterial roads or by transportation hubs, in order to secure the business of people in transit nearby. Furthermore, many poor households in South Africa tend to “outshop” (shop outside their area of residence), and require resources for a transit fare (and thus a transit system) in order to do purchase food for their households.

Transportation systems, especially equitable transportation systems, are therefore a crucial component of household food security. Food scholars must thus consider the important role of transportation as way of accessing healthy and affordable food. Likewise, transportation scholars must be cognizant of the ways in

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12 Jennings 2015, 765.
13 Ibid., 766.
which transport systems link to the food system, and how transportation may help or hurt households’ food access.

Several studies have been done of the MyCiTi IRT in Cape Town. Gauthier and Weinstock\textsuperscript{16} note MyCiTi’s intention to correct for apartheid spatial planning that put citizens of color at a severe disadvantage. Others describe the complicated politics of public transport that MyCiTi has entered, particularly as concerns tension in market competition with local minibus taxi routes.\textsuperscript{17,18,19} Others still have evaluated other dimensions of MyCiTi’s services. Bartels et al.\textsuperscript{20} found that MyCiTi riders perform more physical activity than non-bus system users, and thus decrease their chances of developing non-communicable diseases. Ugo\textsuperscript{21} surveyed MyCiTi riders and found that most MyCiTi commuters are dissatisfied with the system’s fares and the availability of fare retail outlets.

Such literature demonstrates that MyCiTi’s attempt to correct for Cape Town’s spatial inequalities inherited from apartheid is a salient and overdue action. It also shows that MyCiTi has an important role to play in urban food security across the city, and that its position in the city’s politics and customers’ hearts is complicated.

**Methods**

In order to answer the research question, the researcher reviewed the MyCiTi website and published literature was undertaken to understand the MyCiTi bus system in Khayelitsha and Cape Town more broadly. Attention was paid to bus routes, information about fares, and the types of stops and stations that exist in Khayelitsha. The researcher also rode the MyCiTi’s Khayelitsha bus (D02 route) to the Kuyasa station to observe the usage of the bus service and the appearance of the food system near bus stops today. The researcher was also a frequent rider of the MyCiTi bus system within the Cape Town City Bowl. Their understanding of the system’s set up and special quirks was used to further understand how MyCiTi operates in Khayelitsha.

Data collected by the African Food Security Urban Network (AFSUN) in their 2008 study of food security in Cape Town was used to clarify the current state of food insecurity in Khayelitsha.\textsuperscript{22} In 2008, AFSUN conducted a baseline food security survey in 11 cities in nine countries in southern Africa. Several surveys were used in this study: the Household Food Insecurity Access Scale (HFIAS); the Household Food Insecurity Access Prevalence Indicator (HFIAP); the Household Dietary Diversity Scale (HDDS); and the Months of Adequate Household Provisioning Indicator (MAHFP). The Cape Town study surveyed food security in three areas of the city: Ocean View, Brown’s Farm in Philippi, and Enkanini and Kuyasa in Khayelitsha. Where possible, the researcher used findings specific to Khayelitsha to inform this essay. The study surveyed 1,060 households across the three study sites, including 394 households in Khayelitsha.

**Context**

**MyCiTi**

MyCiTi is Cape Town’s public transportation system of buses that has served the city’s citizens since 2010. The first MyCiTi buses ran to serve the crowds of the 2010 World Cup, but the first routes were launched in 2011.\textsuperscript{23} The routes first linked the Cape Town city center with the northern suburbs of Table

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\textsuperscript{16} Gauthier and Weinstock, 2010.
\textsuperscript{18} Gauthier and Weinstock, 2010.
\textsuperscript{22} Battersby, 2011.
View, Blaauwberg, and Parklands. The decision to make Atlantis—a Coloured township relegated to the fringes of the city by apartheid spatial planning—a key station in the MyCiTi network was a key demonstration that MyCiTi is serious about correcting the spatial inequality that still scars the city.

Subsequent MyCiTi routes have spread the bus network across much of the city. In 2013, the service spread to the southern areas of District Six, Walmer Estate, Salt River, and to the Atlantic seaboard and City Bowl areas of Hout Bay, Camps Bay, Sea Point, Tamboerskloof, and Oranjezicht.

MyCiTi is now in its second phase of expansion, reaching Mitchells Plain and Khayelitsha. The third phase is planned to extend services to Belville, Delft, the rest of the northern suburbs, and Stellenbosch. The fourth phase will reach the Greater Helderberg area. MyCiTi aims to “eventually build a reliable, safe, and cost-effective transport network within 500m of 75% of the homes in the city.”

MyCiTi has coined its system as an Integrated Rapid Transit (IRT) system, instead of a Bus Rapid Transit (BRT) system, as is more common around the world. This distinction is to emphasize the intention to integrate MyCiTi’s services with other forms of transit across the city.

Khayelitsha

Khayelitsha was built in 1983 under apartheid, which set up the township for black Africans on the far outskirts of Cape Town. Khayelitsha today hosts a population of 391,749 residents according to the 2011 census. The township includes both formal and informal dwellings, with 44.6% of the area’s dwellings deemed as formal. Khayelitsha is a popular destination for migrants arriving in Cape Town from the Eastern Cape. The township faces a milieu of challenges, including high rates of unemployment and poverty. Further, Khayelitsha is notorious for violent crime.

MyCiTi System

MyConnect Card

In order to ride the MyCiTi bus, all passengers must use a MyConnect card. Fares are deducted from the passenger’s MyConnect card total. Passengers tap in and out with their MyConnect cards on validators located by entrances and exits on the bus or in the bus station. Fares are charged based on the distance travelled in bands of 5 km. Fares are reduced during “saver” periods, while “peak” periods (6:45 AM – 8:00 AM and 4:15 PM – 5:30 PM on weekdays) are charged higher fares.

MyConnect cards cost R30 (roughly USD 2) and may be purchased at stations with MyConnect services (usually larger stations at important junctions) or at participating retailers. Load fees are deducted from the purchase total if purchased with a private retailer. Passengers have two options for using the MyConnect card: either load money as a Standard fare or as a Mover package. The Standard fare is used

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26 MyCiTi (a), 2016.
27 MyCiTi (a), 2016.
28 Ibid.
30 Ibid.
34 Battersby, 2011.
37 MyCiTi (d), Your guide to MyCiTi, 2016.
38 Unless otherwise specified, all information regarding MyCiTi services in the “MyCiTi System” section of this paper is sourced from: MyCiTi (d), Your guide to MyCiTi: Valid from September 2016, Cape Town: Transport for Cape Town, 2016.
as bus fare, but also allows the MyConnect card to be used as a debit card to make purchases of up to R200 (roughly USD 15). The Mover package can only be purchased at stations with MyConnect services, and not from retailers. Mover packages are automatically 30% cheaper than Standard, regardless of the time of day. Mover packages cannot be used to make purchases in shops.

**Khayelitsha Routes**

There are two MyCiTi bus routes that serve Khayelitsha. Both connect Khayelitsha to the major Civic Centre station in the Cape Town city center. The D01 Khayelitsha East route serves the eastern part of Khayelitsha, while the D02 Khayelitsha West route serves the western part of Khayelitsha. Both the D01 and D02 routes overlap at the last stop, creating a large ring through the township. There is no direct connection via MyCiTi to other nearby communities. A map of the MyCiTi Khayelitsha routes is presented in Figure A below.


There are no official MyCiTi bus stations in Khayelitsha, only stops. The last stop on both routes, Kuyasa, does have a MyCiTi Kiosk, which may sell Mover packages. Otherwise, there are no MyConnect service access points in Khayelitsha; only Standard fares can be purchased at selected shops within the township. The Civic Centre station in Cape Town does offer MyConnect services, although the queues to access these services are notoriously long. During peak times in the morning and evening on weekdays, the bus runs about every ten minutes. On weekends and during less busy times, the bus runs only every hour. The bus runs from 4:55 AM until 10:30 PM.

**Khayelitsha Food Security**

The AFSUN study of Khayelitsha revealed that there is a serious state of food insecurity in Khayelitsha. The study found that an alarming 89% of Khayelitsha households are either moderately or severely food insecure according to the Household Food Insecurity Scale (HFIS).\(^\text{39}\) Dietary diversity in Khayelitsha is also poor – households reported primarily eating foods made with oils and/or fats, sugar

\(^{39}\) Battersby, 2011.
and/or honey, or other foods (which most often means coffee or tea).\textsuperscript{40} Even if persons in Khayelitsha households are able to consume enough calories to sustain themselves, these calories are often not nutritious.\textsuperscript{41} Over time, such a diet may lead to the development of diabetes, hypertension, and other non-communicable diseases.

**Khayelitsha Food Retail**

Informal trade dominates food retail in Khayelitsha. The areas near MyCiTi bus stops feature a strong presence of informal food retail. Many shops and spazas are also present, and many have remained present in their area for at least five years. The stops by the train stations (Khwezi and Kuyasa) are significant economic hubs, Khwezi especially. Khwezi features a vibrant array of informal retailers at work.

**Discussion**

As detailed, MyCiTi has incorporated measures in its system that could aid food security. The very nature of a transit system allows customers to transport themselves to other areas that may offer greater access to food. MyCiTi's measures also include the MyConnect card that can act as a debit card, which allows customers to easily purchase goods and also allows customers to enter the formal economy without having to go through the bureaucracy and fees of opening a formal bank account.

However, the MyConnect card is a quixotic strategy to promote food security in Khayelitsha, as it does not bear in mind the realities of the township’s food system. Khayelitsha’s food retail environment is dominated by informal food retail. Informal traders do not accept debit cards for payment; thus, a debit card does not help Khayelitsha residents make food purchases in their community. When Khayelitsha residents do attend retail outlets that accept debit cards, they are likely to be shopping in bulk, and thus are likely to spend far more than the R200 limit of the MyConnect card.\textsuperscript{42}

Furthermore, Khayelitsha has limited MyConnect services in the township, which would allow MyCiTi consumers to purchase the cheaper Mover points for their travel fare. The only points to purchase Mover points on the Khayelitsha route is at the MyCiTi kiosk at the Kuyasa stop, or in town at the Civic Centre. Customers could also purchase Mover points other major stations in the MyCiTi network, but these are very far from Khayelitsha and would require multiple bus rides to get to. The discounted Mover fare is thus inaccessible to most in Khayelitsha. A few private retailers spread across Khayelitsha sell Standard fare points, creating the greatest avenue of access to MyCiTi fares. Khayelitsha residents are thus forced to purchase more expensive Standard fares. However, they cannot use the associated debit card perk to purchase food, as their local food system primarily features informal retailers. Residents’ food security is thus jeopardized, as they pay more for transportation, reducing their economic means to make other purchases, and are unable to take advantage of the system’s supposed perks to buy food.

MyCiTi’s current design of the routes to Khayelitsha perpetuates apartheid’s designed spatial inequality in Cape Town, and this is likely to exacerbate food insecurity in the township. The bus routes to Khayelitsha currently only connect the township to the city center (and within the township in a simple ring). If customers in Khayelitsha wish to visit neighbouring Mitchell’s Plain via the MyCiTi bus, customers must first travel to the city center (a journey of nearly 40 minutes, traffic dependent) before catching another bus to Mitchell’s Plain (a journey of almost 1.5 hours, traffic dependent).\textsuperscript{43} The MyCiTi bus lines are thus not created with recreation or leisure in mind. Instead, they follow the apartheid focus on the transport of labor: the bus only runs from work to home, much like apartheid-era transportation routes for the city’s “non-white” laborers.\textsuperscript{44,45} This means that the idea of food is side-lined in the spatial planning of the MyCiTi system. MyCiTi has not yet completed all of its routes, so it is possible that in the future, Khayelitsha will be better served with a MyCiTi network that will provide better local access to its customers, and will bear the food system in mind. A route to connect Khayelitsha residents with the Philippi Horticultural Area or the Cape Town Market, for instance, would expand residents’ food access and access to neighbouring communities.

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\textsuperscript{40} Ibid.

\textsuperscript{41} Ibid.

\textsuperscript{42} Dr. Jane Battersby, personal communication with the author, November 2016.


\textsuperscript{44} Jennings, 2015.

Limitations

This study has several important limitations. Although the researcher observed the D02 route, research was otherwise not conducted in Khayelitsha. Without location-specific details, this paper’s insights are limited. Further, this study did not consider the connections available to food in the Cape Town city center. The city center is known for having a vibrant food scene, and it is possible that Khayelitsha residents purchase food in the city and transport it home via the MyCiTi bus line, rather than using the MyCiTi route to purchase food within the township. Finally, this study has ignored other forms of transport available, such as the Golden Arrow bus and the minibus taxis. It is likely that these other forms of transport impact Khayelitsha food security in significant ways, but this study was unable to ascertain is this is indeed the case.

Conclusion

On paper, the MyCiTi system has the potential to improve food security for households in Khayelitsha: the service connects households with sources of food in the township and in the city center, and features an easy way for households to have a debit card to purchase food. However, this study has shown that the ideals of the MyCiTi system do not match up to the realities of Khayelitsha’s food system. Informal trade dominates Khayelitsha, rendering the MyConnect card’s debit card feature as largely useless. When households use debit cards, they are most likely making bulk purchases larger than the card limit of R200 (roughly USD 15). MyCiTi’s card services are few in Khayelitsha, forcing residents to purchase Standard points, making transport much more expensive.

In order to seriously address food insecurity in Khayelitsha, MyCiTi should raise the limit of money allowed to be spent with the MyConnect debit cards; establish more card services in Khayelitsha so that more residents have access to cheaper Mover point fares; and build a bus network that links Khayelitsha to other areas, especially to food opportunities such as the Philippi Horticultural Area or the Cape Town Market (which features a substantial array of informal food traders). Only when MyCiTi considers the realities of Khayelitsha’s food system in light of its own bus system, will progress be made in improving food security in Khayelitsha and will Cape Town.

This essay has briefly considered the potential impact of Cape Town’s MyCiTi bus system on food security in Khayelitsha. It has demonstrated that systemic features of MyCiTi may help or hinder food security in particular ways. Future research should consider how other transportation systems across the world impact food security of their particular locales. Further research is also required to further explore the ways in which MyCiTi does indeed impact food security in Khayelitsha and other marginalized communities in Cape Town. As MyCiTi continues to expand its services across the city, such insights are imperative to ensure that food security is strengthened across Cape Town.
References


