KU LEUVEN

FACULTY OF
SOCIAL SCIENCES

Community Currencies in a Development Context

The case of the Sarafu-Credit in Kenya

Thibaud Dezyn
S0180981

Masters' thesis submitted to obtain
the degree of

MASTER OF CULTURAL ANTHROPOLOGY
AND DEVELOPMENT STUDIES

Supervisor: Prof. Dr. Mark Breussers
Second reader: Prof Dr. Ann Cassiman

Academic year 2017-2018

Table of Contents

List of tables

List of figures

Acknowledgements

I wish to express my gratitude to different persons and organisations for their support and guidance in making this thesis.
First of all, I want to thank the employees of Grassroots Economics for hosting me as an intern, as well as taking care of me during my stay in Kenya. Most importantly, I want to thank Will Ruddick and his family for hosting me in their lovely house and making sure I had a comfortable stay in Mombasa. The nine weeks of my stay have been truly wonderful, and I have made some friends for life. My gratitude goes also to Dama, Lydia, Martin and Charlotte for guiding me around in Mombasa and making sure I was always safe. I also want to thank the different members of the Sarafu-Credit programs that welcomed me in their communities, and shared their thoughts with me.
Next to that, I want to thank my supervisor Mark Breussers for his inspiring vision and insightful comments. I am proud to be one of his last thesis students.
I should also thank the KU Leuven and VLIR for making this thesis practically possible and for supporting me financially.
Last but not least, I want to thank especially Anneleen Keppens for her practical and mental support during my internship and subsequent writing process, as well as my friends (especially my fellow CADES students) and family for the continuous support.

Introduction

This thesis expounds on community currencies and addresses the challenges they face when applied in practice. Monetary alternatives like community currencies have always had my full attention, and I strongly believe that they need to be included in the conversation on the current economic system. It used to be difficult for me to grasp how citizens can create their own money, but community currencies soon revealed themselves to me as a powerful model with a lot of potentials. During my development studies in the CADES program, I took the opportunity to investigate those potentials in situations where economic and social conditions are of the worst imaginable. Much has been written about Bancos Palmas in Brazil (see for example Fare et al. (2015)) and the Argentinian Redes de Trueque (see for example Gomez (2010) for a good overview and history) that have tried to address the economic challenges their respective areas were facing. In Kenya, a small non-profit organisation called Grassroots Economics (GE) has taken up the challenge of piloting the creation of community currencies (under its 'Sarafu-Credit' programs) in areas of specific economic and social hardship, namely in slums/informal settlement areas of big cities. My first encounter with GE was through a Flemish television documentary about the organisation's founder and director, Will Ruddick[1]. His motivation for launching the currencies was compelling; he aimed to activate the economic and social potentials of the participating communities through a local currency. During my 3-months stay in Mombasa, I studied the organisation, its programs and the working environments. My research focuses on two pertinent questions:

- Firstly, is GE responding to its main claim in that it is making a sustainable and significant positive change in the livelihoods of the participants of its community currency programs?
- Secondly, does GE achieve its goals regarding shared ownership of its programs? In this respect, downward accountability will be an important theme.

[1] See: https://youtu.be/ojFPrVvpraU

I will critically assess GE's main model and its organisational practices and formulate recommendations for the future that can enhance the programs' effectiveness.

This thesis draws primarily upon insights of development studies. I will draw however from time to time on anthropology, especially concerning group dynamics and alternative conceptions of money. I will evaluate a concrete development project, GE in Kenya, based on my experience as a critical economist and on the knowledge and critical outlook I have gained during my year at CADES. I will question certain institutions that have been created by governments over recent decades. They are often taken for granted, while they are not adequately tackling the problems of our time. In a previous paper that I wrote for the course *Development: Actors & Paradigms,* I focused on cash transfers and basic incomes and how they could complement social security systems. This thesis is exactly about that: questioning different actors and prevailing paradigms in the development sector. I hope that the outcome of this thesis will contribute to the domain of community currencies, as well as to alternatives for the infinite economic growth-model. My inspiration herein draws upon many writers: Bernard Lietaer, Thomas Piketty, Kate Raworth, Anthony Atkinson, etc. The popularity of their books convinces me that mainstream economics are more than ever criticised, from within, but also by citizens that have come to the conclusion that the current system is not sustainable. I strongly believe that the process of how money is created is central to this discussion.

This thesis is structured as follows: I will begin by establishing the importance of creating a monetary alternative. I will try to uncover the veil of confusion around modern money, and reveal how 'modern money' is created. More specifically, I will demonstrate how community currencies, such as Sarafu-Credit in Kenya, come closer to more sustainable conceptions of money. Then, I will delineate the different methodological tools used for my research and provide a thorough contextual description of the field research area. Next, I will discuss the results of the inline survey done by GE and contrast them with my own field research. Finally, I will assess the two research

questions as described above, identify key issues of the organisation and formulate some recommendations as a response to those issues.

1. The current economic and monetary system and its inequalities

1.1. The power of mainstream economics

A veil of confusion surrounds economic science. The knowledge of most people stops at the well-known law of supply and demand, but few people fully understand the basic dynamics of the economy. When you ask more specific questions, for example what the role is of inflation or interest, or how modern money is created, not many people will be able to tell you the answer. Politicians do not necessarily possess this knowledge either; for example, Positive Money, a UK not-for-profit organisation that seeks to increase awareness about our banking system, published a recent study claiming that only 15% of British MP's know exactly how modern money is created (Clarke, 2017). Such a study has not been done in Belgium, but we can assume that the knowledge of Belgian politicians on the subject is not any better. People, ordinary citizens, that do not grasp the basic workings of the economy, lay their fate in the hands of politicians and central banks. But ultimately, it is only a small group of economists that truly understand and control the economic system.

Economics play a powerful role in our current society. Especially 'mainstream' economics, which is continuously trying to establish itself as a true, empirical science, has an undeniable impact on government policies and public opinion. The endeavour of mainstream economics to establish itself as an empirical science dates back to the pioneers of economic theory of the 18th century, who wanted to emulate the scientific progress that was being made in physics (Lietaer, Arnsperger, Goerner, & Brunnhuber, 2012). Later, 20th century economists such as Kuznets were crucial in developing economics into an empirical science (Raworth, 2017). Kuznets established some of the most powerful tools for economic policy; i.e. the Gross National Product (GNP) and the Kuznets Curve. The GNP (or GDP) and its annual growth soon became the primary indicator of the progress of a country. And the GNP should always go up, which it is still the economic mantra of today.

An equally powerful image, the Kuznets Curve, argues that while a country experiences economic growth, inequality first rises but then reaches a top to subsequently fall down again. The model justifies high levels of inequality as an 'intermediary point' in the economic development of a country, promising lower inequality in later stages (Raworth, 2017). Published in 1953, in the middle of the Cold War, Kuznets' tools also served politically to keep developing countries within the influence of the 'free world' (Piketty, 2013).

Kuznets was the first economist to use big masses of quantitative data. Piketty (2013) has shown that these data contained a lot of errors. In order to demonstrate the failings and inaccuracy of the Kuznets Curve, we can easily compare two more recent examples: South-Korea, one of the 'East-Asian tigers', that witnessed strong economic growth combined with a growth in equality (Stiglitz, 1996), and Kenya, where the two last decennia of economic growth mainly led to an increase in inequality (World Bank, 2008). It is not a coincidence that these evolutions run parallel with government policies; in South-Korea, the government actively pursued egalitarian policies that complemented the market (Stiglitz, 1996), while the government of Kenya was forced to roll back its policies in accordance with the 'Structural Adjustment Programs' (SAPs), imposed by international financial institutions such as the IMF (Rono, 2002). We can thus conclude that the foundations of certain economic policies are shaky.

1.2. The creation of modern money, inflation and interest

If we want to explore monetary alternatives, we have to start by understanding how 'modern' state money (also called fiat money) - the printed notes and minted coins in our pockets, and the digits on our bank accounts - is created. But first, it is important to make a distinction between *currencies* and *money*. Money (or monetary) is more conceptual, e.g. the modern monetary system or different 'types' of money, while currencies are a concrete realisation of money, e.g. the 'euro' as a currency. This thesis considers the use of *money* in itself, and focusses specifically on a concrete realisation of money in community *currencies*.

Contrary to popular belief, the majority of euros, dollars or pounds that we use is not money that has been created by the central bank, but originates in the activities of commercial banks. For example, the Bank of England estimates that for pounds, 97% of the total money in circulation is bank-created money and only 3% is physical currency[2] (McLeay, Radia, & Thomas, 2014). To be more specific, banks do not create this money themselves, rather, they *enable* people to create money by giving out loans to them (Riegel, 2003/1978; Greco, 2001). When a bank issues a loan to a client, money is not yet created, but the loan only represents an increase on both sides of the balance sheet of the bank. On the passive side of the bank's balance, the money is deposited on the client's bank account (a liability for the bank), while on the active side, the increase represents a loan issued to the client (an asset for the bank). It is only when the client uses this money to pay for goods and services, that money is 'created' and enters the real economy. Inversely, when this client repays his loan, money is subsequently destructed. This repayment can be done instantaneously (but mostly is not), leaving the total money in circulation practically unchanged, or it can be delayed, where the economic actors pass around the so-called 'hot potato' (McLeay, Radia, & Thomas, 2014). In the latter case, people might use this money to consume more, since they have excess money, spurring prices up and thus creating inflation in the process. This simple mechanism shows a priori no problematic issues. As people (especially companies) take loans from banks, they use this money to buy goods and services, offering their own goods and services in return (in order to pay back their loan). As a consequence, money is a product of exchange and not the other way around.

Cycles of money creation might seem limitless, but they are not. Banks often operate in competitive markets, which reduces yields but also increases risks (McLeay, Radia, & Thomas, 2014). In a competitive market, it is up to the bank to assess its liquidity risk. But with the creation of bigger banking networks and more specialised

[2] Printed notes are basically printed IOU's from the central bank. But in reality, no direct claim on the central bank assets can be made anymore by the holder of the note.

products, risks have often been underestimated (as the focus lies on yields). The last financial crisis that started with the fall of Lehman Brothers in 2007 proves why government regulation in the banking sector is necessary. Regulation forces banks to keep an adequate amount of reserves in order to cope with potential risks.

But ultimately, the biggest constraint on money creation by banks is central banks and their monetary policies. (McLeay, Radia, & Thomas, 2014). The central bank's most important tool is the interest rate, which operates as a sort of 'magic wand' that central bankers use to lead our economies to 'prosperity'. The principal interest rate is the interest rate that commercial banks earn by putting their reserves on a central bank account (banks prefer to have these reserves since they are immediately available) (McLeay, Radia, & Thomas, 2014). The lower the interest rate, the less reserves commercial banks will hold, and the more money is available for money creation. Each time when banks order printed money from the central bank, their reserve accounts get debited, and the printed money is delivered. Starting with the monetary policies of central banks, the base interest rate cascades down into the economy and determines for example to a large extent the interest that consumers' pay on their loans.

Central banks control the money supply in order to generate a stable, growing economy. But if the amount of money in circulation in an economy grows more than the value of goods and services being traded in the market, inflation is created (Riegel, 2003/1978). Contrary to popular belief, inflation is not a general increase in prices of goods in services, but rather a continuous decline of value of a currency (Greco, 2001). During the last century, most currencies lost much of their value; for example, the US dollar lost more than 96 % of its value between 1913 and 2017 (U.S. Bureau of Labor Statistics, sd). This means that the increase in prices is not due to goods and services being worth more but rather to money being worth less. There is in other words too much money in circulation, but it is artificially scarce in certain areas because it is unequally distributed (Greco, 2001). Inflation can be considered as a 'hidden tax', because it decreases the purchasing power of citizens.

Most economists do not see inflation as a bad thing, rather, a small inflation of 2% is deemed an ideal rate. At the one end of the spectrum, high inflation is bad in the sense that it reduces credit given by companies to each other (as inflation decreases the value of credit over time) (Riegel, 2003/1978), slowly reducing trade and leading to an economic downturn. Also, citizens see their purchasing power diminished, which reduces legitimacy of government policies. But why keeping a positive inflation, and not for example, zero? This is mainly because of the perceived risk of low or even negative inflation, leading to less consumption, which is then of course harmful for economic growth.

1.3. The growth imperative

Governments and central banks haven't been too successful in managing the monetary system. Since the abandonment of the Bretton-Woods system (which used fixed currency exchange rates and permitted foreign holders of dollars to convert U.S. dollars into gold), central banks gradually lost their tight grip on the monetary system. A system of floating currencies and global capital (what Chris Gregory (1997) has called 'savage money') has replaced the Bretton Woods system. The track record of central banks since this shift has not been fantastic, to say the least: the IMF recorded 425 systemic crises[3] in the world between 1970 and 2010 (Lietaer, Arnsperger, Goerner, & Brunnhuber, 2012). But what exactly causes this instability?

Following the money-creating logic described above, in an economy where money is created by interest-bearing loans, the mass of (public as well as private) debt has a natural tendency to continuously grow[4]. Greco (2001) summarizes this as the "debt imperative", which forces our whole economy into a "growth imperative" – as the growth of the economy has to follow in order to repay these debts. Governments at

[3] A systemic crisis is the combination of a bank, monetary and government crisis at the same time (Lietaer et al., 2012).

[4] Only in exceptional situations the money supply shrinks, e.g. during the Great Depression of the 1930s, when the total money in circulation decreased by 35%.

their turn conduct debt-financed policies to create economic growth. Policies where ordinary citizens bear most of the debt burden, as exemplified in Greece or in a lot of developing countries, where high government debts and related interest payments put a considerable strain on social expenditures of governments. Clearly, this is debt-growth-cycle is spinning out of control. The growth imperative is unsustainable in a finite, resource-constrained world[5].

In this complex process, periodical crises are inevitable, as the growth imperative encourages actors to take high risks. There is a mutual dependence of governments, central banks and commercial banks and this has an enormous impact on the process of money-creation. This high interdependence explains why far-reaching reform measures of the bank system were not effectuated after the financial crisis of 2007 (and after). According to Greco (2001), you could conceive of this interdependence as a deal that has been made between both parties, where banks, in exchange for their monopoly on money creation, help to finance government debts, allowing governments to spend it as they desire. "If governments were required first to come to the people to obtain the money to fight, there would be few if any wars," concludes Greco (2001).

1.4. Glocal inequalities

In the global economic and financial system, developing countries are mostly on the losing side. Heavily dependent on imports from European and Asian countries, most African countries have a negative trading balance (i.e. when a country imports more than it exports) – a situation that can only be sustained by increasing (public and private) debt to pay for these imports, or by exporting natural resources (of which some countries have an abundance), providing them with hard-needed foreign currency. The interest paid on these debts leads to a continuous distribution of wealth from the poorest in our world to the richest. On a global level, it shows that there is a constant flow of

[5] Kate Raworth (2017) makes an excellent case for an alternative model of a sustainable economy which she calls 'doughnut economics'.

capital from the poorest 95 percent to the richest few percent (Toxopeus & Van Arkel, 2014).

From the 1980s onwards, countries that wanted to borrow money from the international financial institutions such as the IMF and the World Bank, were forced to introduce liberalisation policies in return (Davis, 2006). In the example of Kenya, Structural Adjustment Programs (SAPs) were introduced as of the beginning of the 1980s, in exchange for loans of international financial institutions (Rono, 2002). These SAPs focused on private ownership, market competition and the opening up of the domestic market towards foreign trade. According to Rono (2002), when taking stock of the SAPs implemented in Kenya, it shows a mainly negative image, as they led to a general decline in government spending, but also subjected local producers and farmers to highly competitive international markets. For example, the thriving textile industry in Mombasa, Kenya, could not compete with cheap imports and therefore disappeared to a large extent (Rakodi, Gatabaki-Kamau, & Devas, 2000). Liberalisation policies in developing countries have in general led to a steady withdrawal of governmental services to their citizens, forcing people to diversify their sources of income (Davis, 2006).

The steady withdrawal of governmental services is most exemplified in the informal settlements that have emerged in many developing countries during the second half of the 20th century (Marx, Stoker, & Suri, 2013). Increasingly unable to support their population, rural areas have witnessed a continuous outflow of people towards the urban areas – where they engaged mostly in informal activities to make ends meet. Many economists saw the creation of slums (analogous to the Kuznets curve mentioned above) as a 'negative externality' of a temporary 'in-between' situation that developing countries had to go through on their path to economic prosperity (according to the 'economic modernisation theory' (Marx, Stoker, & Suri, 2013)). Recent studies however have shown that these informal settlements are mostly there to stay and that in general social mobility within these settlements is very low. The settlements are more of a 'poverty trap' than an intermediary step to prosperity (Marx, Stoker, & Suri, 2013). Governments have been inconsistent in their policies

towards informal settlements, from the total neglecting (hoping that the market would deal with it – the 'benign method'), to the acknowledgement of property rights in the hope that these would form collaterals for the much-needed credit for the inhabitants, to even total demolishment (as happened in Harare, Zimbabwe (Muchadenyika, 2015)). In one of Kenya's biggest slums in the heart of Nairobi, Kibera, living conditions have in general stagnated or even worsened in the last decades (despite Kenya's economic growth – see below) (Marx, Stoker, & Suri, 2013).

Keith Hart (1973) was one of the first to identify the informal sector in developing countries not as a by-product but rather as a distinct social sector with its own mechanisms and functions. 'Informal', a term that is of course inversely linked to our own conceptions of formality, represents an irregular set of activities helping people according to their daily needs. 40 years later, the informal sector remains one of biggest and most rapidly growing sectors in the world (Myers, 2011). This fact challenges the economic transition narrative and development strategies that have been used by donor countries and international financial institutions alike (Li, 2009). As of 2011, 64% of labour market employment in Kenya is situated in the informal sector, which rises up to 85% when small-scale agriculture is included (ILO, 2013).

Currently, Kenya's general economic and monetary situation is very unstable. Between 2010 and 2016, Kenya entered a period of high economic growth (of real GDP, in Kenyan Shilling) of on average 6% a year, after two decades of slow and inconsistent growth (World Bank, 2017). But at the same time, inflation amounted to a yearly average of 7.6%. Also, the Kenyan Shilling (KSh) lost 26% of its value over time (compared to the Euro), making imports, on which the country depends heavily, much costlier. Public debt (both external and internal, in KSh) rose more than three times in the same period (Central Bank of Kenya, n.b.), spurred upwards by big infrastructure works, such as the new Mombasa-Nairobi railway. This debt is somewhat eased by the high economic growth the country experienced (the ratio debt/GDP only rose by 25%). As of 2017, public debt has further increased strongly (Amadala, 2017), driven by costly general

elections (the organisation of the first round costed about 500 million dollars (Dahir, 2017)) and a general drought, which forced the Kenyan government to import more food (Njini, 2017), and led to rising food prices (a high of 12% inflation) (Okiror, 2017). At the same time, inequality has risen to high numbers. For example, looking at consumption patterns in Kenya between 1997 and 2005/6, average consumption increased, but inequality did as well, thus the "per capita expenditures of the richest 40% of the population grew much faster than average, whereas the lower quintiles did not experience much, if any, improvement" (World Bank, 2008: p. 96). An often-mentioned figure is that a mere 10,000 persons own 62% of the nation's wealth (Gakii, 2015).

The negative outcomes of growth policies are felt strongest by the poorest of the nation: inflation decreases their real incomes, while high interest rates make it very risky for people to go into debt and thus impede small and medium enterprises in their daily business.

This is the context and the reality from which new economic and social thinking arises, driven by the hope for alternatives, in the global North and in the global South. One example of this new economic thinking is the developing of money from within communities, which will be the topic of the coming chapters.

2. Creating new monetary alternatives: community currencies

2.1. Money as split barter and community currencies

As described in the above chapter, modern money is created by commercial banks' main activity: the issuing of loans. Consider again the example of a person getting a loan from a bank (without taking into account central bank's policies). The actual money is only created when this person uses it to buy goods and services. If the seller of goods and services uses that money directly to pay back his or her loan (if he or she has one), the money gets destroyed again. In order for the original buyer to pay back his loan, he or she has to offer his goods and services. In between the buying and the selling of his goods and services there may be a long cycle of people using the same money (passing around the 'hot potato'), which Riegel (2003/1978) calls 'split barter'. Thus, the actual money in circulation is mainly determined by the savings (or the amount of potatoes) kept by people in this cycle. Following this idea, only exchange using paper money constitutes complete split barter, while exchange using gold or silver doesn't, as there is always a portion of pure barter in a transaction using gold or silver. Paper money has no value in itself, the only value resides in the goods and services that are offered in return. There is neither any value that is generated or destroyed in the process of exchange. Money is thus only a medium of accounting. "(…) the essence of money", Riegel (2003/1978) concludes, "is an agreement (a consensus) to accept something that in itself may have no fundamental utility to us, but that we are assured can be exchanged in the market for something that does."

Riegel's ideas of monetary exchange as split barter and money as a medium of accounting influenced the development of 'mutual credit clearing circles' such as LETS (Local Exchange and Trading System) some decades later in the 1980s (Greco, 2001). LETS and other community currencies create their own alternative means of payment, that are outside of the conventional banking system. In return for buying someone's goods and services, a person offers his or her own goods and services. This is not done in a pure barter fashion, but by a split barter instrument created through the community currency

system. In LETS-systems or commercial barter systems, the means of exchange gets created whenever a transaction takes place (Bowring, 1998). The seller's account gets credited, the buyer's account gets debited. In community currency terms this is accordingly called 'mutual credit' (or 'collaborative credit'), since the currency is created on the extension of credit to each other. The total amount of community money is equal to the sum of all debts, and gets destroyed when transactions cancel out debts. In most cases, no interest is charged on this debt. Contrary to fiat money, the mutual credit is purely based on the individual's capacities to sell his or her goods and services. In this way, the total money supply always equals the total money demand (within the network), an equilibrium that is never achieved in the modern money system, and causes no artificial inflation (Bendell, Slater, & Ruddick, 2015).

It is thanks to the work of Graeber (2011) and others that we have come to understand that credit preceded and co-existed with money in the more traditional sense of the word (gold coins, etc.). Subsequently, we could argue that community currencies (based on credit) go back to older conceptions of exchange. Summarized, "mutual credit can be viewed as an extension of the long-established practice of the trade credit that businesses offer to one another in the normal course of business" (Greco, 2001).

The idea that the total amount of community money is equal to the sum of debts is crucial for mutual credit systems. Different systems exist where a local backed fiat (i.e. backed by the local authority rather than the users) is created (Kennedy, Lietaer, & Rogers, 2012). Different typologies of community currencies are available, I gladly refer to Kennedy, Lietaer and Rogers (2012) and Seyfang and Longhurst (2013) for some good examples.

2.2. Potentials and limitations of community currencies.

The different potentials and advantages of community currencies can be grouped into two categories: economic and social.

From an economic perspective, they can offer an impetus for growth

of local trade and wealth. Since local trade is favoured, the use of community currencies produces a 'demand-multiplier', where the created wealth diffuses more evenly across the community, and 'losses' towards the outside of the community are limited (Fare, 2011). This form of local 'protectionism' can be important in strengthening communities before and while they are subjected to trade from outside the community. Secondly, community currencies are often used in a countercyclical way. In times of less economic growth, companies can switch to the alternative currency. I will show below how the Sarafu-Credit model is based on the same principle in the case of an informal settlement in Kenya. Thirdly, especially when the currencies are not directly pegged to the national currency, they are less inflation prone (see above) and can offer a stable means of exchange in unsecure economic times. Lastly, in a development context, they offer a means for communities to develop their own financial institutions.

Socially, because of the spatial confinement of the currency, it can lead to a change of local practices and preferences (Fare, 2011). Many systems work specifically on the recognition of informal work and the valuation of different skills (Michel & Hudon, 2015), incorporating different values in the currency rather than purely utilitarian ones (Fare, 2011). Not surprisingly, community currencies are often used for community building, serving different social and environmental programs (Michel & Hudon, 2015). As a result, in different systems, trust has increased and relationships have been fostered. Through the community currency, people have also been able to expand their social networks.

Lastly and most importantly, as already mentioned above, a community currency puts the management of a monetary system back into the hands of citizens. It acts thus as a democratic tool (Fare, 2013), compared to the current monetary system where management is in the hands of central banks, which are governed by economists and politicians. Money is not neutral, as mainstream economics tends to put it, but is rather the result of social relations. It is thus more than logical to put the management of money into the hands of those who use it.

There have been different critiques towards community currencies as well. Firstly, they often copy existing economic and social inequalities into the system. Research has shown that the above-mentioned Redes de Trueque in Argentina were mainly a middle-class club, that did not involve the poorest of the poor (Gomez, 2010). Due to their often-unrealistic projected economic benefits, lower-class people tend to fall out after a certain time whenever these benefits do not play out (Evans, 2009). Secondly, mutual credit systems between citizens are often confronted with free-riders, or people that do not know what to offer in return. Taking and giving however are crucial and will determine the sustainability of the system. Naturally, currencies that have operated as mutual credit associations between companies (assuming that companies offer goods and services in return, and that free-riding is made more difficult by judicial action), also called commercial barter networks, have proved to be the most successful. One of the most famous examples is the Swiss nationwide Wir-network, that has proved to act countercyclical and has contributed to the stabilisation of the Swiss economy (Stodder, 2009). Thirdly, a certain level of active members is needed in order to maintain the system running, and a diverse set of goods and services has to be offered in order for a dynamic local exchange to be sustained (Kennedy, Lietaer, & Rogers, 2012). Projects often come to a complete stop whenever expected benefits are not met, or when certain key leaders or networkers drop out (Kennedy, Lietaer, & Rogers, 2012).

The currency will often be regulated by a number of rules, in order to increase trust into the currency (Schraven, 2001). If there is no continuing consensus on what the system represents, it will be prone to failures (Greco, 2001). For example, LETS networks do not operate very long: of the eighty-two community currencies that have been started in the US from 1991 to 2004, a mere seventeen (or 20.7%) was still active as of 2004 (Collom, 2005). Lastly, currencies that are directly pegged to the national currency (not necessarily 1-to-1, e.g. one Ithaca Hour corresponds to 10 dollars) also copy the instabilities of the national money system, and can thus lose their value in situations of high inflation (Bowring, 1998). This direct convertibility also leads to the inconvenient fact that people keep converting the currency into dollars in everyday transactions, which means that the alternative currency fails to act as an independent means of exchange

in the minds and hearts of people (Maurer, 2005). Maurer (2005) concludes that community currencies are "haunted by a transcendental value, at the same their greatest failings as true alternatives and their greatest mystery".

Most of these deficiencies are related to the small scale of community currency networks (Michel & Hudon, 2015). Studies on the economic impacts have been scarce, but in general, community currencies have not produced the same economic growth that occurs in a stable national currency regime (Evans, 2009). Much depends on the credibility of the system (Schraven, 2001). Holding different currencies also entails different costs (transaction, information, exchange rate risk, etc.) (Schraven, 2001). These costs are however projected to decrease in the future as new currency technologies are developing quite rapidly.

Although this thesis does not deal with digital currencies based on blockchain technology such as Bitcoin, it is worth mentioning that these have had a big influence on people's perception of money, by suggesting that money doesn't necessarily have to be managed by a central authority. Bitcoin is basically a decentralised (i.e. a network of computers is working together to validate the transactions and to maintain the blockchain history) ledger system, that records accounting transactions between different people. Although the Bitcoin has many flaws (most importantly (1) the unequal distribution of bitcoins, and (2) the fact that it acts as an instrument of speculation rather than as a means of exchange), the community currency movement should take the historical opportunity of increased interest in these types of currencies.

The community currency movement has been growing fast since the 1980s, starting with LETS and time banks (that focus on community dynamics). New projects focus on local economic growth (e.g. the different local backed fiats, such as the Bristol Pounds) and growing community identity. Grassroots Economics (GE) pilots community currencies in Kenya following the same principles of mutual credit networks.

2.4. Grassroots Economics: context and model

2.4.1. Initial set-up of the Sarafu-Credit model

Grassroots Economics (GE), a non-profit organisation based in Mombasa and Nairobi, was founded and is co-directed by Will Ruddick, an American national living in Kenya for over ten years. After setting up the Eco-Pesa program in the Kongowea area of Mombasa (Ruddick, 2011), a new program was started in Bangladesh, a part of the Mikindani estate in the outskirts of Mombasa (Ruddick, Richards & Bendell, 2014). Although successful, the Eco-Pesa encountered a number of issues. The Eco-Pesa's main focus was on ecological community action, but there were too few businesses involved in the program, so that only a limited variety of goods and services was being offered. Also, the program was very donor-dependent. Eco-Pesa's that circulated within the community could at all times be exchanged for KSh. The moment when all donor funds had been used to exchange the Eco-Pesa's, the program had to stop. Will Ruddick used this experience to start a new program that was more based on the mutual trading capacities of small businesses, rather than on external donor money.

At the basis of the Sarafu-Credit (SC) model lies the idea that there is an untapped abundance in communities: people have goods and services on offer, but also their time and skills. Very often in impoverished communities, like in the informal settlements of urban Kenya, national money is scarce and especially unevenly distributed over time (see section 'field description' below), hampering a smooth and functional market exchange. The amount of KSh available for trade depends on a number of factors; some count for an outflow of money in the community, some for an inflow (Dissaux, 2017). When residents go and work outside of the community, they bring back salary money, that is often only paid at the end of the week or month. Some people apply for and receive a microcredit, which counts for an initial inflow, reversing the flow when the loan is due to be paid back. At the same time, goods that are not produced within the community must be imported, often by larger shops. These imports constitute a net outflow of KSh. Informal urban settlements are often inhabited by

people that have their origins in other parts of the country. In Bangladesh for example, the majority of people are from Luo descent, who have their traditional base in the west of the country around Kisumu. It is quite common for people with a migratory background to periodically send money to their homesteads (remittances)[6]. Logically, these remittances also form a net outflow of money. Other outflows are school fees and house rents. Taken together, we can argue that more money is leaving the settlement than entering it, contributing to a cyclical and absolute scarcity of KSh.

According to Ruddick, Richards and Bendell (2015), this cyclical availability of KSh in the community leads to variable sales of small-scale businesses. In their baseline study of Bangladesh in 2014, daily sales differed on average between 310 and 1,600 KSh. By subtracting maximum sales with average sales, GE identified an 'excess capacity' of businesses of about 144%, meaning businesses could on average sell 144% more[7]. This excess capacity often goes to waste, especially in the case of food commodities. Informal credit arrangements or even direct barter partly compensate for the volatility of the local economy, but because of trust issues within informal settlements, these instruments do not always offer a workable solution (Dissaux, 2017). In general, the unpredictability of sales makes it very difficult for a small business to buy the adequate amount of stock and make investments – equally, demand of consumers is often unmet as stocks are not large enough, leading to missed sales.

The goal of a community currency such as Sarafu-Credit (SC) is to tap into that abundance of the community, by creating a mutual credit, backed by the members' goods and services. These credits are physically printed (called 'vouchers') and are usable by any person in the community (thus also by not-members), making it a not fully mutual 'mutual credit' (Bendell, Slater, & Ruddick, 2015). The mutual credit's biggest advantage is that it offers businesses the opportunity

[6] Mobile money systems such as M-Pesa (of Safaricom) have greatly contributed to an easy and safe transfer of remittance money (Morawczynski, 2009).

[7] In the 2017 inline survey, this is however much less. See below.

to trade their excess capacity. The idea is to 'monetise' this excess capacity by "introducing a structured means of exchange that allows businesses to exchange a voucher representing their excess goods and services" (Ruddick, Richards, & Bendell, 2015, p. 15). As in a mutual credit or split barter system, this physical voucher represents an IOU issued by each member with the promise to offer his or her own goods and services in return. In other words, members extend credit (as promises of future value) in a mutual or collaborative way. Consider a small example of the organisation (Ruddick, Richards, & Bendell, 2015, p. 16):

> "Now, imagine a collaborative credit is introduced (…). You use this voucher to purchase maize flour. This voucher is essentially a promissory note (IOU) promising to pay an amount in peanuts or other goods and services equal to the value of the flour. The person selling maize flour can then use the voucher to buy well water. The water vendor can use the voucher to buy vegetables, and the vegetable dealer can use the voucher to buy charcoal for cooking. The women selling charcoal can then return to you and exchange the voucher for the peanuts you promised to repay when you used the voucher to purchase maize flour."

Logically, only 'prosumers', i.e. people that also have actual goods and services on offer, are offered a credit, making the system more stable. However, non-members can also receive the SC by contributing to community services (i.e. environmental and social development), e.g. street clean-up days, tree-planting events, etc. In this way, it also taps into the abundance of time of unemployed people (Ruddick, Richards, & Bendell, 2015).
GE aims to realise different goals with the community currencies: on the one hand, increasing sales and incomes of its currency network members and on the other, improving the situation of the community as a whole, by e.g. improving environmental conditions (through the community service events mentioned above) or helping people pay the tuition fees of their children.

The introduction of the program in Bangladesh (initiated with a local youth group) comprised a series of community events, including

discussions and mutual credit workshops, after which the Bangladesh Business Network (BBN) was created with about 200 members. The network decided on the participation rules, the denominations and visuals of the 'Bangla-Pesa' and elected a committee charged with the daily operation of the network. By joining the BBN, a business receives an initial credit of 400 SC (representing approximately the average amount a family typically spends on food a day), which it can spend at fellow businesses, but at the same time agrees to accept at least the same amount back as he or she spends. Part of the credit was assembled into a community pot, that serves to finance Bangla-Pesa community events. Each member also had to be signed for by four guarantors, who in case of non-acceptance of Bangla-Pesa of the guaranteed person have to step in to settle the problem. Continued training is offered, as well as support by employees of GE to the BBN and its members, for example in showing how to price goods using a combination of SC and KSh. New SC network members (in Bangladesh 3 a month) automatically become member of BBN.

Each voucher also has a yearly expiration date, which forces people to replace or renew their credit yearly. When a member is below his or her credit level during the renewal, he or she has to 'top up' the credit with KSh. The initial plan was to do this monthly in the community meetings, but this plan was never enforced by the committees.

The first vouchers were created and decided upon with the community, incorporating specific images and words on the voucher (see figure 1). For the acceptance of the money this is very important, as the community images account for a shared understanding of the value of the voucher (Gilbert, 2005).

Figure 1 - Old Sarafu-Credit bills (© Grassroots Economics)

The new type of vouchers however does not contain community-specific images, but only a mentioning of the respective currency network at the back of the voucher (see figure 2).

Figure 2 - New 2017 Sarafu-Credit bills (© Grassroots Economics)

The program was launched in May 2014 and a follow-up survey was held a week after. According to Ruddick, Richards and Bendell (2015), after one week, overall trade of all member businesses increased on average by 22% (for 83% of the participating businesses). If extrapolated to three months of usage, the extra amount

of trading would have compensated the start-up cost of 4,000 euros. Due to legal struggles (during which some of the collaborators, including Will Ruddick himself, were detained and charged with forgery – but later all charges were dropped) the program had to be stopped and relaunched in October 2014. It has been running ever since.

Figure 3 - Shop of a Sarafu-Credit member selling charcoal (my picture)

The initial success of the Bangla-Pesa (it was extensively covered in the media) inspired other communities. Five other currencies have been launched since then in Kenya, using the Bangla-Pesa model, now bundled under the general name Sarafu-Credit: two in the Mombasa area (Ngombeni-Pesa in Kwa N'gombe, late 2015; Miyani-Pesa in Miyani, August 2017) and three in Nairobi communities (Gatina-Pesa

in Kawangware, late 2014; Kangemi-Pesa in Kangemi, 2015; Lindi-Pesa in Kibera, 2015). While the Bangla-Pesa project was initiated by GE, other projects have been more 'demand-driven'. For example, initial interest for the Gatina network came from a group of school headmasters and teachers, and was supported by a German NGO. During my stay in Mombasa, I have only studied two programs (the N'gombeni Pesa and the Bangla-Pesa) and was involved in the launching of the Miyani program (see figure 7). As I experienced the introduction of the Miyani-Pesa first-hand, I can say that it was in my opinion clearly introduced in a more top-down way (see below).

2.4.2. Significant changes made to the model

The following years some smaller and bigger changes were made to the Bangla-Pesa model, in order to overcome some of the identified problems (which will be discussed later). The most important change being the gradual, and currently uncompleted, shift from the Bangla-Pesa model towards the Sarafu-Credit model that runs parallel with the shift from a purely mutual credit towards a local backed fiat (cooperatively owned by its members). This important shift and its repercussions will form a recurring theme throughout this thesis.

Savings and loans
Several of the business networks have opened up a banking account and started a savings-and-loans function for their members. This is actively supported by GE, as it responds to the often-expressed demand for credit. The grouped sum of savings could also serve as collateral for larger loans and to fund projects initiated by the networks/community.

Credit clearing
Initially, SC was not convertible into the national currency. To strengthen trust however, GE introduced the 'credit clearing' functionality, offering members with excess credit (in most cases +400 SC) the possibility to change SC back again to KSh. This is offered on a weekly basis and is done by a member of GE with GE funds.

Weekly markets
Weekly open markets for members are also organised, often combined with a community service event. Members with excess SC at the end of the day can make use of the credit clearing.

Cooperative shops and factories
In order to regulate trade and to increase trust (in the SC and in GE as an organisation) and to make the programs more self-sufficient, cooperative shops (see figure 5) were set up, where members can at any time use their (excess) SC. A percentage of the SC collected at the shops is put into the community pot and will be used for community service work. At the time of my internship however, most of the shops were not profitable enough to cover all costs. Nor were they really 'cooperative' as they were still more or less property of GE (but would be handed over fully when profitable). In order to raise profits, business managers have been employed to professionalise the shops. During my stay in Mombasa, most of the shops were not functional for a number of weeks, due to general elections. In Miyani, a maize mill (see figure 6) was installed by GE, of which the profits will be used to finance the Miyani-pesa program.
A summary of the Sarafu-Credit model can be found in figure 4 below.

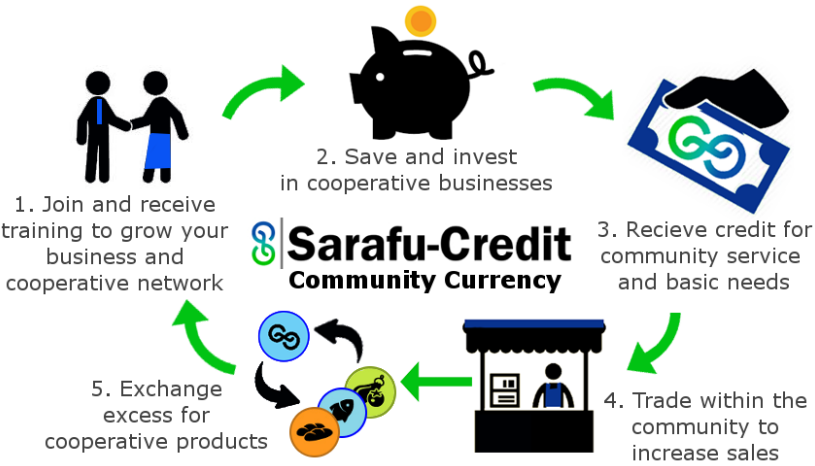

Figure 4 - The Sarafu-Credit model (© Grassroots Economics)

Figure 5 - Sarafu-Credit shop in Kwa N'gombe (my picture)

Figure 6 - Miyani maize mill (my picture)

3. Methodology & field description

3.1. Methodology

This thesis is the result of a preliminary literature study and an internship that I completed in July-August-September 2017 in Mombasa, Kenya. I was hosted by Will Ruddick, founder and co-director of Grassroots Economics, and his family in the Likoni suburb of Mombasa. As an intern, I wanted to make sure that I made a substantial contribution to the organisation. In return, Will and his colleagues offered me access to the data of the latest inline survey GE has done, and introduced me to the communities in Mombasa (Bangladesh and Kwa N'gombe) where GE has its programs.

During my stay, I conducted different interviews, of which seven were formal. On the one hand, I had numerous interviews/conversations with employees of GE. These were necessary to increase my knowledge of the history and the workings of the Sarafu-Credit (SC) programs. On the other hand, I made several field visits to the communities of Bangladesh and Kwa N'gombe (and sub-area Owino Huru), where I talked to different people. Naturally, these conversations were at first very explorative and open, and only later I conducted more formal interviews. Contact with community members was always through a middle person (an employee or ex-employee of GE), because of their knowledge of the communities and for translating purposes (I do not master Swahili, which is the lingua franca of most Kenyans). During my visits, the two local GE employees (and managers of the GE shops) also often acted as gatekeepers to the community, leading us around. The selection of people I interviewed was done on the basis of a snowball selection method, where the person I interviewed would introduce me to another user he or she knows. As a result, the selection of people I've talked to was very biased.

I conducted seven semi-structured interviews with SC users in the area of Owino Huru (part of Kwa N'gombe). My main goal was to get to know their relationship with the SC and the organising committee, if

and how frequent they use SC, as well as determinants of trust and social capital. In return for their valuable time (30-45 minutes), I offered them 50 KSh, or bought something from their shop. Generally, it took a while before people opened up, not always sure of what they should or could share. During these interviews, I experienced a certain 'researcher-fatigue'. Respondents actively asked what was going to be done with their input, and on different occasions, I was mistaken for a previous researcher. Names of people mentioned in this paper are standardly anonymised, except for those of GE employees.

I attended different community meetings in Miyani, where a new currency was launched in August 2017 (see figure 7). These were however difficult for me to follow, as they were done in Swahili or a different local language, and translation of the main points was only done to me afterwards.

Figure 7 - Image from the Miyani-Pesa launching event (my picture)

Next to the use of these interview data, I will analyse the results of the latest inline survey of GE that was made between April and June 2017.

The database consists of 868 business[8] owners, of which 527 users – not necessarily members - (of five communities: Bangladesh (BAN), Kwa N'gombe (KWA), Kawangware (KAW), Kangemi (KAN) and Kibera (KIB)); and 84 respondents of the rural community of Miyani (MIY, Kwale County). In Miyani, the program had not been started at the time of the survey, and thus in practice acts as a baseline survey. Data from Miyani will only be used from time to time to contrast demographic characteristics of urban and rural areas. Survey questions can be categorised into three broad themes: (1) descriptive statistics of the respondents (demographics, trade and credit data, social capital and trust), (2) users' own assessment of the impact of the programs, and (3) SC usage data (daily and monthly expenditure and sales patterns of users). Three quarters of respondents is under 40 years old; 54% is female; 46% is male; family sizes range between 2.5 people (Bangladesh) and 4.8 people (Miyani) per household; 75% of respondents are married or are legally living together.

Each community was covered by different surveyors; some by employees of GE, some by contractors. In my opinion, some of the questions offered room for interpretation. Thus answers were probably influenced by the surveyor.

I will also build on the research of other students (Hannes Anagrius, Robin Gerbaux and Tristan Dissaux) who have studied GE's activities:

- Robin Gerbaux, field research in Kawangware and Kangemi (Nairobi) between 2nd of April 2015 to the 31st of July 2015.
- Tristan Dissaux, field research in Bangladesh and Kangemi between July and October 2015.
- Hannes Anagrius, field research in Bangladesh and Kwa N'gombe in November and December 2016.

My residence in Mombasa offered me the opportunity to critically assess the programs and to get to know the practicalities of starting a new, community-based, currency. Nine weeks is however quite short

[8] Operating a *bota-bota* or motorcycle is for example also considered to be a 'business', as it necessitates an independent functioning of the person.

to perform a thorough study. Only near the end of my stay did the complexities of the groups' trading and social dynamics start to unfold themselves. More time is required in order to get a multi-sided view on the workings of the programs and the communities.

During this internship, I experienced several difficulties. Most importantly, the Kenyan general elections made it unsafe for me to travel during a number of weeks. On top of this safety issue, intracommunity trade was in general low as many people closed down their shop and moved to a different part in Kenya to vote in their own constituency. During the election weeks, all GE shops had to be closed for safety reasons (especially those in Nairobi, where election violence was most frequent). Together with general trade, trade in community currency came to a complete standstill in most areas. Prolonged election protests have made a restart of trade in the informal settlements of Kenya difficult.

3.2. Field description

Author's note: as mentioned, I only visited the program areas in Mombasa: Bangladesh and Kwa N'gombe (with subarea Owino Huru). Therefore, the field description mostly deals with the context of these areas, since I only have second-hand information on the Nairobi program areas.

Bangladesh, an informal settlement[9] in the suburbs of Mombasa located next to the main Nairobi-Mombasa road, is surrounded by an industrial zone. The legend goes that the land once belonged to a person that left for the country Bangladesh – hence the name. Throughout the decades following independence, many Kenyan migrants from different regions (for example from Kisumu, people belonging to the ethnic Luo group) settled in the area, attracted by the different economic opportunities of the city (Brueckner & Lall, 2015), that are often port related activities. Recent polls estimate the population in Bangladesh somewhere between 10,000 and 15,000 (Gilbertson, 2015)[10]. People live densely together in small half-open houses. Bangladesh also has some open spaces, for example a large square used for football or community gatherings, next to two schools. Kwa N'gombe is quite similar in structure. Located just next to Mikindani, it is less densely concentrated than Bangladesh. Especially in the subarea of Owino Huru (at the border of Kwa N'gombe) there are more open spaces, e.g. fields for farming or fish-ponds. Landownership in Bangladesh is now divided between government and citizens, which often makes permanent settlement an uncertain business. For example, Emma, one of the local leaders of the Bangladesh Business Network (BBN), explained to me how she and

[9] Often called 'slum' (its inhabitants, slum 'dwellers'). I prefer not to use this word, as it is often used in a pejorative way. 'Informality' also stresses the lack of government services in the settlement. Contrary to popular belief are inhabitants of informal settlements not necessarily are poor, but are attracted by the central and cheap accommodation that settlements such as Kibera (Nairobi) have to offer.

[10] According to the World Bank, population in urban areas in Kenya increases by 4 to 5% a year (World Bank, 2017).

her neighbours are in a constant danger of eviction, as their houses are built on government land (below high-voltage power lines). Only 34% of survey respondents in Bangladesh and 39% in Kwa N'gombe own their house. House ownership seemed to be more guaranteed in Owino Huru, where several of the people I interviewed said they owned the land or that their title deed (needed to prove your property) was on the way[11]. Most people, although often born in the settlement, still have families and networks in other counties[12] and support them in different ways, e.g. by sending periodical remittances but also by bringing along gifts while visiting.

Figure 8 - View on Owino Huru and its surroundings (my picture)

Informal settlements in Nairobi have been studied far more often than those in Mombasa. Kibera for example is one of the oldest settlements

[11] Title deeds are often of high symbolic value, acknowledging the land ownership of people that have been living at a certain place for a long time, and also allow access to financial services.

[12] With the new 2010 constitution, Kenya is administratively divided in 47 counties (Wikipedia, 2017).

of Kenya and also the most studied, probably stimulated by a number of international institutions that are close by, e.g. UN-HABITAT, the United Nations Human Settlements Programme (The Economist, 2012). This is reflected in the survey data – in Kibera respondents have on average been living much longer in the community than other areas (especially in Kwa N'gombe where 90% of survey respondents have been living only between 0 and 9 years in the community).

Inhabitants of informal settlements are more than often confronted with a multitude of problems in their neighbourhood. Houses do not offer the basic sanitary amenities, and waste management is not efficiently organised (Muniafu & Otiato, 2010). Dust is omnipresent in the air, aggravated by the burning of waste, and enters people's houses. Social problems are omnipresent: poverty, unemployment, alcohol and drug abuse and crime are most frequently reported by survey respondents across all communities. These social problems appear to be the worst in Kibera and the least in Miyani, a rural community. We can conclude that urban areas experience many more social difficulties.

	BAN	KAN	KAW	KIB	KWA	MIY
never have enough food	1%	16%	7%	22%	20%	0%
often do not have enough food	3%	23%	18%	14%	7%	46%
food is enough most of the time	96%	53%	59%	51%	73%	52%
food always is enough	0%	7%	16%	13%	0%	1%

Table 1 - Food Security

People living in these informal settlements are continuously in search for food security (see table 1) or attempt to enhance their welfare in other ways (see for example Gilbertson (2015) for Bangladesh). In Kibera for example, 25% of survey respondents say that they often don't have enough food or even never have enough food, while only 13% says that they always have enough food. In a rural community

such as Miyani more than double (46%) often don't have enough food or never have enough food, probably because they are more dependent on agricultural cycles. In many cases in Mombasa, men have different jobs within the community or go to work in the factories nearby (mostly casual work with a day contract), while women tend to the family and open a shop ("micro-enterprises")[13]. People mostly resell items that they have bought in large quantities in bigger shops, like beans, flour, rice, fish, different sorts of fruits and vegetables, detergent, clothes, bleach, charcoal, mats, *omena* (dried little fish), etc. But some people also cook food such as boiled meat, beans and chapattis. Often people combine these different economic activities to make ends meet. Most activities do not offer a stable income, which can lead to intra-household conflicts (Gilbertson, 2015).

Figure 9 - A woman in Bangladesh selling chapattis and cooked beans (my picture)

[13] There is a certain danger in classifying poor people in informal settlements as 'micro-entrepreneurs'. Microfinance has for example relied too much on the idea that most people on the 'bottom of the pyramid' are entrepreneurial by nature (Jackson & Young, 2016).

	BAN	KAN	KAW	KIB	KWA	MIY
Average	12,543	17,140	13,081	13,767	6,166	20,021
Daily	418	571	436	459	206	667
Daily PP	159	191	137	117	63	139

Table 2 - Average Incomes, in KSh

Incomes are generally very low: between 6,000 and 20,000 KSh on average (see table 2). Kwa N'gombe has the lowest average income of respondents and Miyani the highest. The household income calculated per person per day ranges between 63 KSh (Kwa N'gombe) and 191 KSh (Kangemi) – all of which is below the international poverty line of 1.9 U.S. dollar (using an exchange rate of 103 Ksh for one dollar). Available income is often cyclical (see above), being at its highest when salaries are paid, but is also influenced by the yearly agricultural cycles (Ruddick, Richards, & Bendell, 2015). For business owners, this is clearly exemplified in table 3, which reports on average and median sales. In the areas of Nairobi and Miyani, sales in a good month are more than double than those in a bad month, while in Mombasa this dynamic plays out less.

	BAN	KAN	KAW	KIB	KWA	MIY
Normal sales						
Average	13,266	15,205	15,218	12,334	5,206	13,219
Median	9,000	10,000	9,000	7,000	5,000	8,000
Good sales						
Average	13,402	20,213	19,908	18,912	5,819	20,462
Median	10,000	15,000	12,000	10,000	5,000	12,000
Bad sales						
Average	11,111	11,285	11,141	7,732	4,446	6,705
Median	8,000	6,800	6,000	5,000	4,500	4,000

Table 3 - Average and Median Monthly Sales, Normal/Good/Bad month, in KSh

In this context, we can speak of 'livelihood strategies' of the settlement inhabitants, who engage in different activities to make ends

meet (Kristjanson, Mango, Krishna, Radeny, & Johnson, 2010). In the language of young people and urban slang in Kenya, this is often called 'hustling' (Thieme, 2015). What I've encountered during my interviews in the informal settlements of Mombasa is that people generally desire to move upwards and leave the settlement, as they do not see it as their desired place of living[14]. This 'forward-looking' strategy provides an impetus for 'hustling'.

The need for credit is quite high among businesses in the communities: a big majority of the survey respondents answered that they would spend the money on increasing business stocks or purchasing equipment. However, according to Dissaux (2017), 90% of microenterprises in Bangladesh do not have access to a bank account. Bank accounts are often difficult to get access to, as banks impose different conditions: guarantors from the same bank, a title deed, etc. But Kenyans manage to get access to credit in different ways. Between friends, neighbours and relatives it is quite common to come together each week or month to save collectively in a merry-go-round. Each week one person receives the total sum and can spend it on whatever he or she likes. Typical amounts are for example 100 KSh (less than 1 euro) per person per week, assembled by e.g. 7 people, which amounts to 700 KSh a week or about 5,8 euros. People also assemble in more formal ways through *chama's*, which are bigger in size and often institutionally regulated (with elected boards, a common bank account, etc.). These chama's extend loans to members, normally charging interest. Officially regulated cooperatives, called SACCO's (Savings and Credit Cooperative Organisation), often invest in business activities such as *matatu's* (the cheapest way of collective transport in Kenya) or motorcycles. Survey results show that in the urban communities more than 90% of respondents are part of some form of a savings group. Those savings institutions are however usually not sufficient for businesses, who need larger amounts of money to invest with, on average 115,000 KSh (Dissaux, 2017).

[14] Or as Dissaux (2017: p. 61) puts it in French: "(…) le bidonville est vu comme un lieu de passage".

Microfinance institutions (MFIs) seem to be present as well in Mombasa, but most of my interviewees expressed that they did not have access to them. M-Pesa, the mobile money system developed by government-owned Safaricom and Vodafone, is a very common means to pay larger amounts or remittances. Thanks to their rapidly extending network (currently 19 million users on a population of an estimated 49 million[15] (Ochieng, 2016)), Safaricom has also created savings- and credit functions through M-Pesa, called *M-Shwari*, which allows a person to get a small loan that increases incrementally based on the person's creditworthiness (the loan can increase each month). Monthly interest rates depend on the length of the loan period, but vary between 2 and 4% a month (Safaricom, sd) - if one would borrow each month 100 KSh at 4%, this would correspond to a yearly cost of around 60%. Loans are thus offered 'cheaply' but hide a high cost due to their monthly pay-back rate. One person I interviewed used the system and had a current level of 14,000 KSh, on which he paid 1,500 KSh interest.

[15] GE's survey results show that almost 100% of all business owners have an M-Pesa account, even in rural areas.

4. Analysis

In this part, I aim to answer the two research questions of this thesis:

1. Is GE making a sustainable and significant positive change in the livelihoods of the participants of its community currency programs?
2. Does GE achieve its goals regarding shared ownership and downward accountability of its programs?

To this end, I will analyse the results of the 2017 inline survey, which will be followed by a discussion based on my field research and personal interviews. At the same time, I will identify the current challenges of the SC programs that complicate the activities of GE.

4.1. Survey results

4.1.1. Impact

General Impact

In the survey, each SC user was asked to identify the main positive impact of the SC program for him or her personally (see figure 10).

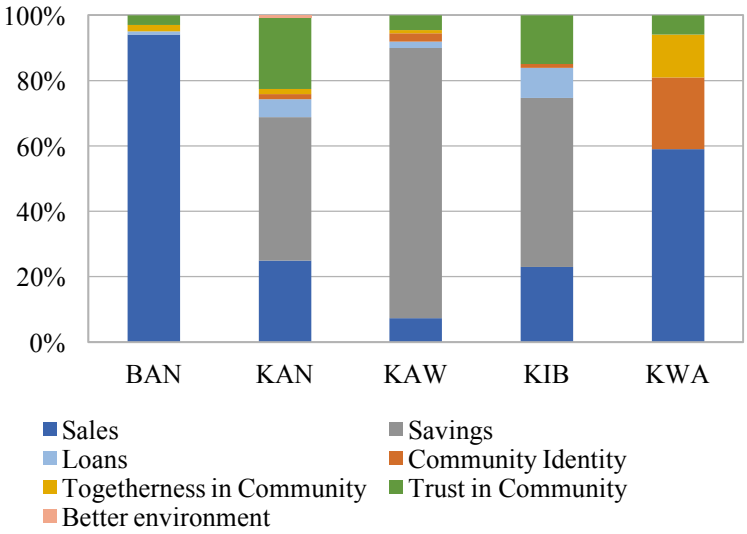

Figure 10 - Main Impacts Reported by SC Users

While in Bangladesh and Kwa N'gombe people value the increased sales the most, it is the increased savings that are more important in the three other communities. The main positive impacts reported by SC users are thus of economic nature (see table 4), but for Kwa N'gombe the social impacts are also important; the combination of community identity, togetherness in the community and trust account for more than 40% of respondents' answers.

	BAN	KAN	KAW	KIB	KWA
Social Impact	5%	25%	8%	16%	41%
Economic Impact	95%	74%	92%	84%	59%

Table 4 - Main Impacts Reported by SC Users, per category

When asked what should happen with the amount of SC in the community, results are also mixed (see table 5). While in Bangladesh and Kibera a strong majority wants the amount of SC to be increased, in Kangemi, Kawangware and Kwa N'gombe a large group of users prefers the amount to stay the same. In Kwa N'gombe 19% of respondents even want it to be reduced. This might suggest that people generally have too much of it, or are not able to spend it (see discussion).

	BAN	KAN	KAW	KIB	KWA
Stayed the same	18%	41%	47%	8%	43%
Reduced	13%	1%	3%	0%	19%
Improved	69%	58%	50%	92%	38%

Table 5 - What should happen to the amount of SC in the community?

It is important to note that there was no survey question on the main perceived negative impact of the SC program.

Sales and Customers

Respondents were also asked specifically if sales had increased or decreased since the introduction of the SC (see figure 11). Except for Kangemi, where a small majority reports having no extra sales nor customers, all other communities experienced higher sales. In

Bangladesh this effect was the strongest; 90%. In Kwa N'gombe, 34% experienced a reduction in sales. In Kangemi, 17% perceived lower sales as well. Mitigating these negative numbers is of course crucial for the programs to be sustained in the longer term.

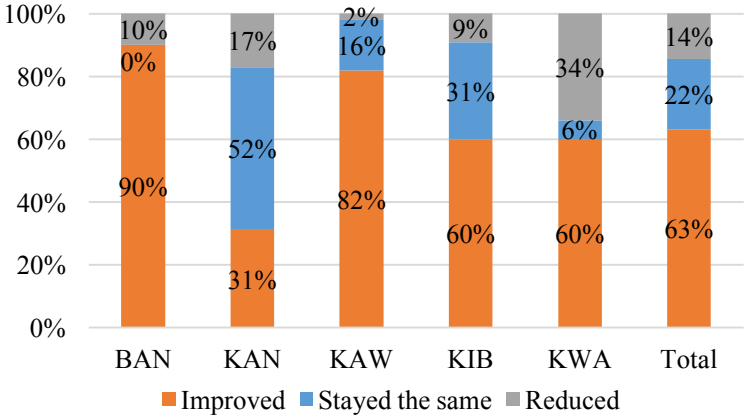

Figure 11 - What has been the effect of using SC on sales?

In number of customers, positive outcomes are generally less outspoken, except for in Kawangware.

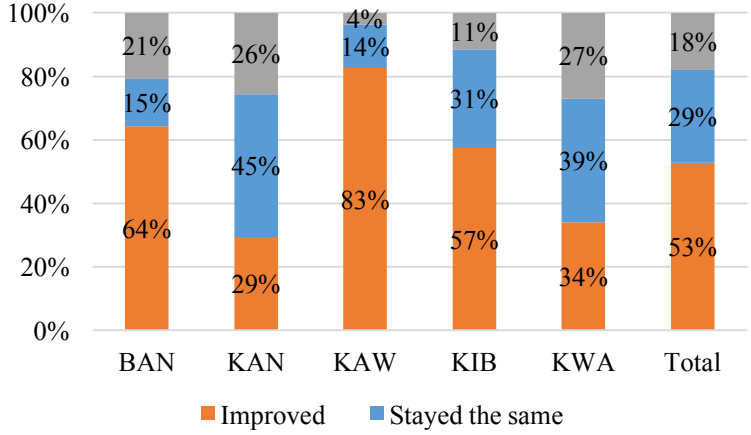

Figure 12 - What has been the effect of using SC on your number of customers?

Based on these results, it can be argued that, for the other communities, extra sales are not necessarily the result of extra customers, but rather of the same number of customers buying larger quantities and/or more frequently at the same businesses.

Environmental impact

GE aims to have a positive impact on the environment of the communities where it is active (see figure 13). This is done through community service events, where participants are rewarded for their contribution to SC, which they can subsequently spend at the participating businesses. Practically none of the respondents reported the environmental impact on the community as the main positive impact of the SC program (see figure 10). People in Bangladesh, Kawangware and Kibera are none the less positive. In Kawangware, more than 80 per cent of people report a positive contribution to the environment. In Kangemi and Kwa-N'gombe people responded in a more neutral way.

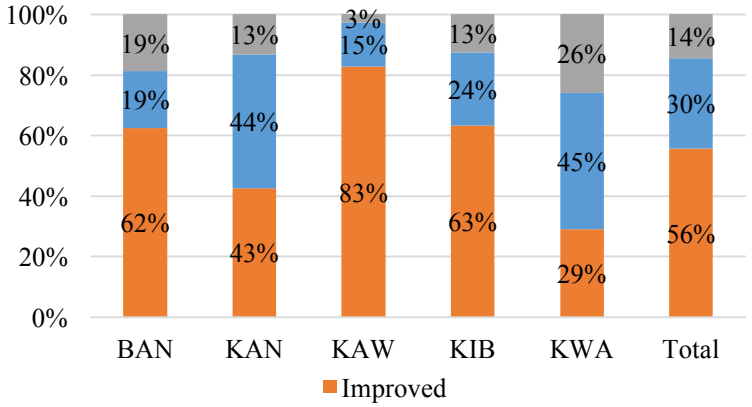

Figure 13 - What has been the effect of using SC on your environment?

Trust

In a recent paper (Ruddick, 2015), GE identified trust within a community as one of the key elements for a functioning SC network, acting in two ways. One the one hand, trust is an important condition

for the members' motivation for using the SC and on the other, the SC can influence the trust within a community.

Members will only accept the voucher in return for their goods and services when they trust that there will be enough other shops at which they will be able to use the money. For national currencies this trust is more inherent to the currency, because it is guaranteed by the government, that will always accept it as a means of payment for taxes. Only in cases of high inflation people might abandon this means of payment as risk factors might exceed the trust factors. Tables 6, 7 and 8 shed a light on the amount of trust within the communities. As a comparison, the results for the rural community Miyani have been added.

	BAN	KAN	KAW	KIB	KWA	MIY
No	19%	3%	4%	3%	33%	0%
Sometimes	63%	73%	77%	84%	55%	8%
Yes	19%	23%	19%	13%	12%	92%

Table 6 - Generally speaking, would you say that most people in your community can be trusted?

In the urban communities, trust is relatively low. In all of them, a majority of survey respondents only sometimes trust other people in their neighbourhood. In Bangladesh (19%), and most strongly in Kwa N'gombe (33%), a good part of survey respondents doesn't trust their fellow community members at all. This is sharply contrasted with Miyani, where 92% trust the other people in the community, and another 8% sometimes. This could suggest that in urban informal settlements trust levels are far lower than in rural communities.

Table 7 analyses more in depth the trust levels between business owners. Here, the proportion of people that do not trust their fellow traders is even higher, especially in Bangladesh (43%) and Kwa N'gombe (54%). Trust levels between business members seems to be a big issue in these two communities. In the other communities, the highest proportions are within the categories "a little" and "somewhat". In the communities of Bangladesh (25%), Kawangware

(34%) and Kibera (45%) the total distrust towards the local government seems to be the worst (see table 8).

	BAN	KAN	KAW	KIB	KWA	MIY
Not at all	43%	8%	4%	7%	54%	0%
A little	13%	45%	34%	26%	30%	0%
Somewhat	34%	39%	53%	57%	13%	1%
A lot	5%	7%	6%	8%	3%	99%
Completely	5%	0%	4%	2%	0%	0%

Table 7 - How much do you trust people in your community that you have business dealing with?

	BAN	KAN	KAW	KIB	KWA	MIY
Not at all	25%	14%	34%	45%	4%	0%
A little	27%	55%	59%	43%	52%	0%
Somewhat	36%	23%	6%	10%	37%	0%
A lot	7%	8%	1%	1%	5%	95%
Completely	5%	0%	0%	1%	2%	5%

Table 8 - How much do you trust the local government?

Inversely, the use of SC and its related activities also influences the trust within the community (Ruddick, 2015) in different ways: through positive or negative experiences of the use of SC and through group dynamics in the business network that manages the currency. In most communities however this effect has been positive, while in Kwa N'gombe 42% of respondents report a lessening in trust because of the SC program (see figure 14). Summarised, we could argue that in most communities, trust issues were already present but have been reduced by the SC program, while in Kwa N'gombe trust issues have worsened.

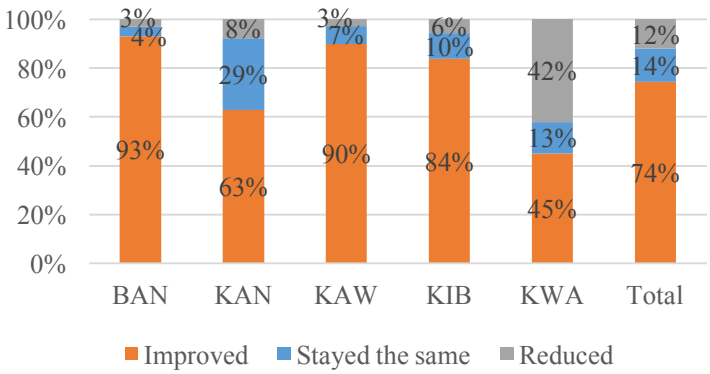

Figure 14 - What has been the effect of using SC on trust among people in your community?

4.1.2. Use

Next to the relative impressions of the respondents on the impacts of the SC program on their sales, customers, the environment and the trust within the communities, the inline survey also gauged their monthly income and expenditure patterns, daily food purchase and monthly sales, both in KSh and SC.
Before analysing these results, I would like to make a couple of remarks regarding the interpretation of these data: (1) it is in general difficult for people to estimate their income or expenditure in a currency that is far less used than the national currency, and that is also rather new; (2) the full recording of actual trade will only be achieved when the printed currency is exchanged for a digital one. Because of these reasons, data errors might amount to a couple of percentage points.

Income / expenditure

Table 9 and 10 show the distribution of monthly incomes and expenditures in SC, as well as averages (that are calculated without taking into account people that do not use SC) per community. Most strikingly, in Bangladesh and Kwa N'gombe respectively 97% and 83% of survey respondents say they do not have any monthly income

nor monthly expenditures in SC. This would mean that at the time of the survey the networks in those communities had not been operative for at least a month.

	BAN	KAN	KAW	KIB	KWA	Total
N/A	98	28	19	8	83	236
0 – 5		15	13	18	8	54
5 – 10		10	1	17		28
10 – 20		19	2	7	1	29
20 – 50		14	6	9	1	30
50 – 100		25	9	8	4	46
100 – 200		9	14	9		32
200 – 300	1	3	24	5	2	35
300 – 400		1	8	3		12
400 – 500		1	4			5
500 – 1,000	1	2	6	2	1	12
1,000 – 2,000	1		4	1		6
5,000 – 10,000		1				1
10,000 – 20,000		1				1
Total	**101**	**129**	**110**	**87**	**100**	**527**
Average	438	146	242	93	99	166
% of avg income	3.5%	0.9%	1.9%	0.7%	1.6%	0.8%

Table 9 - Total income in SC, frequency per category and averages

A different picture is drawn in the Nairobi programs. For example, in Kangemi, 78% of respondents actively use the SC, although for most of them trade in SC is only marginal, between 0,7% (Kibera) and 1,9% (Kawangware) for incomes, and between 1,3% (Kibera) and 2,2% (Kangemi) for expenditures. There is also no certainty that these SC proportions amount for an increase of income or expenditures, or simply replaced a part of trade done in KSh. It could also be that the introduction of SC increased trading in general (as many users perceived), and not necessarily in SC, but there is no way to quantify

this with the existing data. Summarized, considering these low figures and the high probability of error percentages, we can conclude that most respondents in the Nairobi networks are active within the network but the actual use is however small.

	BAN	KAN	KAW	KIB	KWA	Total
Not Applicable	97	29	11	8	84	229
0 – 5	2	23	14	14	8	61
5 – 10		8	3	19		30
10 – 20		21	6	11	1	39
20 – 50		24	12	15	1	52
50 – 100		14	18	4	2	38
100 – 200		6	21	11	1	39
200 – 300		1	18	2		21
300 – 400	1		2	1		4
400 – 500		1	1		1	3
500 – 1,000			4		1	5
1,000 – 2,000	1				1	2
2,000 – 3,000				1		1
3,000 – 5,000		1				1
5,000 – 10,000				1		1
20,000 – 40,000		1				1
Total	**101**	**129**	**110**	**87**	**100**	**527**
Averages	464	379	139	173	192	236
% of avg income	3.7%	2.2%	1.1%	1.3%	3.1%	1.2%

Table 10 - Total expenditure in SC, frequency per category and averages

Cyclical use of Sarafu-Credit

To investigate cyclicality of SC usage, respondents were asked for their sales in SC in normal, good and bad months. Following the numbers in table 11, we can state that respondents use more SC in good months, and less in bad months. The SC programs thus appear

to be reinforced by the monthly cycles of economic activity, rather than acting countercyclical. This of course doesn't take into account intra-month sales cycles, on which the SC focuses most.

	BAN	KAN	KAW	KIB	KWA
Average Normal Sales SC Proportion	2.8%	1.4%	5.7%	3.7%	1.6%
Average Good Sales SC Proportion	3.2%	1.6%	6.0%	3.1%	1.7%
Average Bad Sales SC Proportion	1.4%	1.0%	5.1%	3.4%	1,2%

Table 11 - Proportion of SC in Total KSh Sales, averages

Daily food spending

Survey respondents were also inquired about their daily food spending patterns. Table 12 provides more detail. We can see that daily food spending is quite different between the communities of the two different cities. Although average incomes are in general higher in Nairobi, this doesn't fully account for the difference. Higher food prices in Nairobi might be one of the explanations.
In Bangladesh (88%), Kangemi (90%) and Kwa N'gombe (82%) a large majority of respondents spend only between 0 and 5 SC a day on food, while proportions of SC spending in terms of total KSh are very low too, between 0,2% (Kangemi) and 5,2% (Kwa N'gombe).

	BAN	KAN	KAW	KIB	KWA
In KSh	156	378	377	271	109
In SC	5	4	9	12	9
0-5 SC daily	88%	90%	58%	52%	82%
SC Proportion of KSh	2.2%	0.2%	1.4%	2.9%	5.2%

Table 12 – Average daily food spending, per community, in KSh and SC

4.2. Discussion and practical issues

The survey results show that people are generally quite happy about the programs and perceive them as beneficial on different levels, although the data suggest only a very limited use of SC. It can be said that the survey has its weaknesses, as it is difficult to quantify the actual increases in sales and incomes of the users and as questions about potential negative impacts of the SC were not asked. In this chapter, I will discuss the survey results using the data of my field research and complement them with research from other students. This latter part is crucial, since they did their respective research before me, which enables me to create a rough timeline. Based on these data, I decided to focus in depth on four practical aspects:
(1) general happiness about the program,
(2) trade in SC,
(3) managing the SC money supply,
(4) social capital and trust.

Two aspects that are more related to the practice of development will also be problematized in section 4.3:
(1) ownership and downward accountability,
(2) the model in itself.

4.2.1. General happiness

It is difficult to assess the overall satisfaction with the programs based on the survey data. People report increases in sales, trust and impact on their environment because of the programs, and in general identify economic impacts as the most significant. Positive impacts are however not shared by everyone, and in some communities, such as Kwa N'gombe, the number of people reporting stability or even regression is substantial and represent a significant minority. What are the causes of these mixed results? Next to the relative use of the SC in trading, different issues regarding the organisation of the SC (both on the level of the committees and of GE) can be identified.

Many of the people I interviewed in Owino Huru were satisfied with using SC itself. Some of them use SC so they can save more KSh, for

others it is the other way around: they save SC for when they run out of KSh, so they can use it then (money of a last resort – to not go to bed hungry). Among the other benefits that were reported are: the fact that being in the registry of the network increases popularity and thus the number of customers, the way that complex barter trade is enabled between neighbours, slightly higher incomes, the stabilisation of the variability in selling and the reinforcement of group dynamics and trust levels. One person said she was better able to pay the school fees of her kids. Especially the enabling of the barter trade was deemed positive, as older methods were deemed not to be secure enough for my interviewees.

The small sub trade network of Owino Huru, where members live closely to each other and seem to know each other quite well, is in sharp contrast with the general situation in Bangladesh and Kwa N'gombe. When I first visited the communities of Bangladesh and Kwa N'gombe, members took the opportunity to express their discontent about the current state of the program. In their opinion, certain promises that GE had made had not been met, and since a long time the program experienced a standstill. Market days, which the members deemed successful and useful, had been temporarily suspended by GE, as they accounted for a high monthly cost. Also, the decision had been made to close down the shops (which were kept open by two leaders within the network – the decision was afterwards reversed), which caused more anger. The networks seemed not to have had any meetings in several months.

But still, people in Bangladesh seemed enthusiastic about the program on the whole. Members gave different suggestions on how to improve the network, wanting to use the trade network as a channel for different community projects: investing in a water tank, offering micro-loans, opening up a shop (that would offer wholesale goods at cheaper prices and also jobs) and improving the local school. They also wanted GE to fund the network's general meetings, as a big room had to be rented and cooked food had to be provided for the participants. In Owino Huru several of the people I interviewed stressed the need for prolonged education on the programs for users that haven't been active, and for attracting new businesses. People also asked for the

SACCO that was described to them in a meeting. The process of how these promises and/or expectations have been created is unclear to me, but it is certain that people were in general disappointed that GE did not step in to realise these projects. When I presented these questions to Will Ruddick, the GE director, his standpoint was that these types of initiatives should rather come from the communities themselves. But, upon further inquiry in the community, I came to understand that the people's discontent went beyond these specific expectations: they wanted to know the vision of the project and where it is leading to.

For the Gatina-Pesa network in Kangemi, Gerbaux (2015) argues that the main part of the users does not experience any substantial impacts, which negatively influences their active participation in the program. Once these members stop their activity, it is difficult to activate them again.

Dissaux (2017) indicates bad management of the committee and members that do not accept SC as two of the most reported problems.

4.2.2. Trade

The survey data suggests a low trade (receiving as well as spending) in SC. The majority of survey respondents (except for Kwa N'gombe) however reported an increase in trade, while for a number of customers the results are more mixed. We can thus argue that SC has increased trade in the communities, but that the actual increase is in general low, despite the hypothesis of the program that businesses have a lot of excess trading capacities that can be tapped into with the SC.

Within certain groups of users however, trade in SC is still vivid. It is especially active in the area of Owino Huru, where several of the people I interviewed told me that they use the SC to trade on different occasions a day, or a week. Most of my interviewees in Owino Huru thought of SC as a secure means of payment. Trade in SC was between 15/20 (spending/receiving), 30/50 or even 150/100 a day, often between a small club of fellow traders (but not necessarily only members of the network).

Different impediments to a smooth trade were already identified by GE (Ruddick, 2015), which I will complement with those identified by myself and other research students (mentioned above). First of all, a refusal to accept SC by one member may cause a chain reaction of refusals from other members. One or two bad experiences can deter a member from using SC permanently. This is what different non-active users also described to Gerbaux (2015). Secondly, smaller businesses have been more reluctant to accept SC, while bigger shops can't accept too much of it, as they are more dependent on imports (on which they can't use SC). As Gerbaux (2015) has shown, the smallest shops also run the biggest risk in accepting SC – not being able to spend it can bring them deeper into trouble. So, paradoxically, the (smaller) businesses that could benefit relatively the most from the programs, also run the most risk. Bigger shops naturally only accept a fraction of their total sales in SC, the amount they deem possible to use in the network again. Both bigger and smaller shops thus act as 'potential' bottlenecks in the network. Also, the general limitation of using the SC only locally, impedes a growth of the local SC usage. Including more businesses with a bigger variety of products might partially solve this issue. Thirdly, many new users have been introduced without being properly checked for solvability as well as not being trained enough to learn the main principles of the programs. In Kwa N'gombe, members were added that had not any business activity whatsoever. The networks have used SC available in the community funds (see above) to issue new credits, although it is not clear if this is the goal of the community fund. A lot of members also have wrong expectations of the program, especially those who think it was designed to get access to credit. Fourthly, some members have dropped out because they did not know where to spend the SC – it seems that usage of SC is strongly benefited by the existing social capital of the member in question (see section on trust and social capital below). Fifthly, more active and visible users, preferably institutions such as schools and larger businesses, are lacking. This was one of the reasons to start community shops. However, the shops are subjected to the same issues of not being able to use the SC for restocking outside of the community.

Several of the institutions that were envisaged to ensure a smoothening function of the network have not been effectuated or have been difficult to enforce. For example, members who have spent most of their SC without accepting SC back (who are thus 'in debt' to the network/community), do not show up in monthly meetings, in which only the most active members participate. Next to that, the system with guarantors that have to step in whenever a person 'defaults' does not work and only results in time-consuming discussions. One other way for people to repay their debt is through community work, but these events are not frequently organised.

Although traders in Owino Huru complained to me about the fact that a lot of members in other areas had just spent their SC without accepting any SC back, I did not have the chance to talk with one of those members. For the active users, it was clear that these drop-outs were not adequately trained and informed about the program.

Dissaux (2017), during his fieldwork in Bangladesh between July and October 2015, already identified a recent decrease in the use of the Bangla-Pesa. Many members he interviewed had a clear feeling of 'before', when things went smoothly, and 'after', marked as a period of lower SC trade. The exact turning point is individually determined, but probably the initial period of the program was marked by a rapidly increasing supply of SC, which caused an initial growth of sales, but, because of a culmination of the different factors mentioned above, more and more users dropped out, making it hard to identify the primary and originating cause. By the time I arrived (see above) the networks in Bangladesh and Kwa N'gombe had largely not been active anymore for a substantial period of time. Gerbaux (2015) also reported a rapid decline in the number of members attending the meetings in the communities of Kibera and Kangemi in the first year of the programs, which shows that members quickly dropped out or had less interest in the program.

As with modern money, the constant circulation of SC is important for it to be able to "act as a medium of exchange and means of payment" (Gilbert, 2005). This is also what Simmel (cited in Gilbert, 2005) observed: "The meaning of money lies in the fact that it will be given

away. When money stands still, it is no longer money according to its specific value and significance". For the SC programs to work, a constant stimulation of trade in SC is thus needed – which requires one or more fulltime equivalent networkers per community. Finding ways to decrease the risks for the smallest traders, while stimulating them to use SC, is also essential for the maintenance of the programs. GE's initial objective was for the SC programs to eventually become self-reliant, but the reality in the communities clearly shows that the programs need permanent stimulation and monitoring.

4.2.3. Managing the money supply

One interviewee, a 50-year-old man from Owino Huru, boils and fries meat for selling. He accepts a lot of SC and accumulates up to 2,000 SC every two weeks, assured that Lydia, the GE officer, will do a 'credit clearing' on his excess SC when she visits the area. He also clears excess SC for other members. Another person, who sells clothes, detergent and bleach receives 50 SC a day and uses only 30 SC, in this way accumulating SC over time, and performing credit clearing every 2 months or so. A third interviewee, who grows vegetables and trades in SC, only holds a constant amount of 100 SC, and will probably never return to her initial credit of 400 SC. Clearly, the 300 SC difference for the third person is held by someone else or has been cleared by GE. These three examples from Owino Huru show that even though these members actively trade in SC, there are issues of liquidity and general distribution of SC throughout the network.

Crucial for the smooth functioning of a currency network is the availability of the currency, or in economic terms the 'money supply'. In a community currency network such as SC, the money supply originates from the mutual indebtedness of the members (Dissaux & Ruddick, 2017). As a result, SC can only be spread when these debts are frequently settled and renewed.

How does the amount of SC in the system grow? First of all, when new members are accepted. These members have the potential to create a debt of 400 SC and thus create liquidity. Secondly, when the credit levels of members are raised. Thirdly, when GE occasionally

puts extra money into the system, for example by rewarding members for attending network meetings. When members default (spend all their SC without accepting SC back), their debts are not renewed which strongly affects liquidity.

How much can the supply of SC grow? As long as a new credit is linked to the capabilities of the member to offer his or her goods and services in return, there is no risk of devaluation of the currency. But when members don't accept SC or default, others end up with too much SC, limiting them to use it themselves. For example, the survey results show that in Kwa N'gombe, a considerable number of users wants the amount of SC to be reduced, which is probably an indication that a lot of these users have too much of it and are not able to spend it.

In order to ease the pressure on some of the users who have accumulated too much SC, the 'credit clearing' function was introduced, where members with an excess amount of SC can convert this amount back to KSh. This reinforces the trust of members that they will be able to convert SC back to KSh at any time. The goal of this new function is to increase use, but its main drawback is that while some members constantly accumulate SC and get their excess credit cleared, they indirectly impede other members (that end up with too little SC) to regain their credit, as the function allows a constant extraction of SC out of the network. To further increase trust, cooperative shops have been introduced where members can at any time use their SC.

Both the introduction of credit clearing and shops mark a shift of the model from a mutual credit towards a local backed fiat. In the case of the shop, excess SC is subsequently reinserted in the community through community service or new members. Credit clearing functions in the same way: excess money is cleared by GE on a continuous basis and the resulting shortage of money is compensated with ad-hoc injections. SC is thus less directly created by the mutual indebtedness of users. I will discuss this more thoroughly in the section on the model.

During my internship, GE itself did not fully monitor how much SC entered and exited the system. GE also puts SC into the system in other ways, through its field officers, e.g. by rewarding members for attending meetings. This confuses the image that the SC is foremost issued by the community itself. A confusion that is not beneficial for the programs (see 'model' below).

Clearly defined rules and rewards could aid the management of the money supply. More frequent, but realistic, renewals or top-ups of debt could be performed, for example quarterly. Perhaps the top-up could even be rewarded. At the same time, credit clearing should be limited. These rules and rewards can provide insight for the members on what is considered trading, and what is problematic. Going digital would of course solve a lot of these problems as it would add more clarity and traceability to the system.

4.2.4. Social capital and trust

In Owino Huru, trust between users is generally high and my interviewees mentioned a lot of cooperation and support. This is probably because this community is more close-knit than the others. Friends and relatives help each other, come together, issue loans to each other (not always with interest) and give gifts (also to non-members). Each person reported to also be engaged in a different chama than the Kwa N'gombe Business Network. For me, it was not always clear who was in which group, and how formal these groups were. Some people I interviewed called these groups 'self-help groups': they have a common savings account, based on which individual loans were granted (interest charged between 10 and 20%). Members act as guarantors but also help each other when someone cannot pay. The people managing this account live in the area and own a house there, so there is substantial trust that they wouldn't take advantage of it. In this group, people are offered advice from an officer on how to manage the borrowed money. But this altruism should not be overstated: in the same area, some interviewees also expressed their discontent. When in times of need, friends seemed to have let them down.

Contrary to Owino Huru, members in the other communities reported several trust issues – and these seem to be especially problematic in Kwa N'gombe. I have identified multiple events that are responsible for the lack of trust between members of the trade network. Trust issues were already present in the existing chama's of Kwa N'gombe that preceded the trading network. But trust is also lower in Kwa N'gombe because businesses are more spread out in distance and people know each other less. Through the trading network, some leaders of the Kwa N'gombe network had applied for a government project, and were awarded 3,000 worth of euros, part of it in cash and the rest in goods. But different contact details were mentioned on the application form and certain people walked away with the profit. Several accusations and confrontations followed (everyone knows who did it) and trust within the network seems not to have been restored since. In the case of Bangladesh, I was told of a savings group that was managed by one of the local leaders' mother. At a certain point, someone stepped up, (falsely) accusing her of embezzlement of the funds. As a result, the mother stopped managing the money and brought it back to the members, as she felt she wasn't trusted by them anymore. Trust is thus a big issue, which is articulated most strongly in the organisations where most people are active: the trade networks.

The target groups of development programs are often local 'communities'. One thing that I have learned during my internship is that there is no such thing as a community. The GE programs only target a particular group of the population, namely business owners (and their families). Even in a rural 'community' such as Miyani, different power dynamics play out. Each person has a certain amount of social capital, of which trust is one of the elements (Dissaux, 2017). Contrary to national money, where the identity and relative position of traders do not impact their exchange possibilities, a community currency requires a pre-existing familiarity for the traders. The actual backing of the mutual credit is not the goods and services offered by the member, but rather his or her social capital in the form of trust. According to Dissaux and Ruddick (2017), the success of SC for an individual is determined greatly by his or her existing integration in the community, meaning his or her social capital. For users with a high social capital, it is less difficult to create exchange relations with the

rest of the community. This is similar for more informal credit-giving, where a preliminary existing trust is also necessary. In other words, the different links between people form a social network that acts as a form of social capital, providing a wide array of value for the people within these networks (Jackson & Young, 2016). Unsurprisingly, these social networks overlap with the currency network.

Based on the four guarantors that each individual has to be signed for, Dissaux (2017) has done the great work of visualising the links between the Bangladesh members graphically (figure 15). Each node represents a BBN member, and increases in size per connection, while each line represents a guarantor-guarantee relation. This relation is an indication of high trust between those two people. Through the use of colours, several sub-communities in the BBN are identified. This confirms my experience with Owino Huru, a subgroup that operates on its own.

Figure 15 - Visualising links between members in Bangladesh (© Tristan Dissaux)

A node that is big shows a high amount of social capital of a person. These people often connect different subgroups. For example, as visualised in figure 16, a community elder that I met during my visits, is guarantor for many people, and connects 6 different subgroups. These people are important for leading the network.

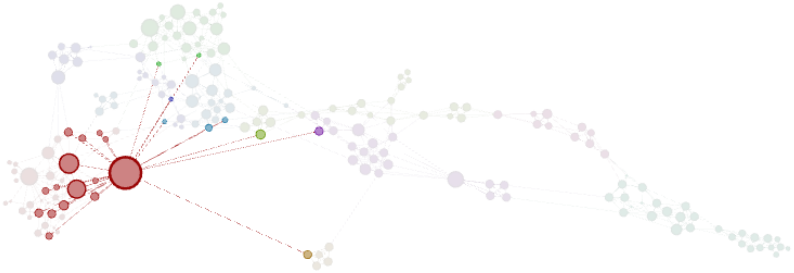

Figure 16 - Visualising community leaders in Bangladesh (© Tristan Dissaux)

According to Dissaux (2017), the relative social position of an individual in the community is crucial for his or her integration in the currency network. This is visualised in figure 17. People that are well-known in the community, and trusted by the other members, are more able to use SC in transactions, and will as a consequence accept more SC. These people form vital connections in the functioning of the network.

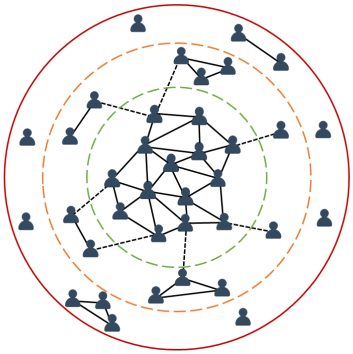

Figure 17 - Social capital as a determinant of SC usage (© Tristan Dissaux)

Following the same logic, people with low social capital will be less able to use their SC in the network. According to Dissaux (2017), the SC program thus strengthens the already existing social positions of its members.

As mentioned above, GE tries to increase trust between its users. On such as large scale however this is difficult to achieve and demands great persistence. Whereas for modern state money, trust lies mostly between the users and the currency network (Dodd, 1994), small currency networks rather depend on trust between the users themselves and thus each transaction entails much more uncertainty.

4.3. Grassroots Economics' programs from a development perspective

In this chapter, I will address two specific issues that are more related to the practice of development: ownership and downward accountability, as well as critically assess the Sarafu-Credit model (as a community currency) from a development perspective.

4.3.1. Ownership and downward accountability

Ownership

The initial vision for the programs was to place the ownership and leadership of the SC in the communities, in the form of the local committees managing the networks (Ruddick, 2015). The organisation believes that the communities have the potential to eventually manage their own development.

In practice however, GE has taken up many strategic and daily tasks of the programs. For most networks, GE brought in the expertise, provided part of the initial capital and has funded the sustaining of the networks ever since. The networks thus remain 'donor-dependent'. Several daily tasks and activities are done by or coordinated at the level of GE. For example, Lydia, GE's officer in Mombasa, performs a series of tasks when she visits the communities: dispute management, giving advice to individual members (for example on pricing), and helping out when someone has too much SC. She also hosts most of the BBN and KBN meetings.

This partial takeover is the direct result of the organisational issues that all committees and their leaders have experienced up to now (Ruddick, 2015). Most of the leaders have developed a lack of motivation and are unable to devote enough time to the daily management. Furthermore, internal power dynamics frequently lead to temporary standstills. For most of the leaders, their work is on a voluntary basis, while at the same time they have to manage their businesses and tend to their own families. Yearly elections for the

committee are mostly not held. This all results in frequent problems linked to the committee. During his stay, Gerbaux (2015) has attended different meetings in Gatina and Kangemi, where he noted different issues: (1) the committee leaders did not comprehend the model fully, (2) the secretary of the Kangemi Business Network was in practice also the chairman and treasurer, (3) funds were managed by one person who did not offer any transparency, which led to mistrust from the other members, (4) members did not report their problems during these meetings, or even lied whenever he or she was in debt. In Kwa N'gombe, the leader of the committee did not invite members anymore, since she felt that there was nothing new to communicate, with as a result that some members thought that the project had stopped (Anagrius, 2017).

Ruddick (2015) links the lack of ownership to a 'donor mentality' – a result of different experiences with aid money as a handout with little responsibilities from the side of the community. This might be true for members who dropped out quickly, but is not necessarily what I experienced with some of the active members that I interviewed in Bangladesh and Kwa N'gombe, who see the program as a channel through which further growth of the community could be realised: by issuing microloans, helping to rebuild the school, organising market days, cleaning the neighbourhood, etc. They are also clearly proud of what 'they' have realised with the SC (it gave them national fame). In Bangladesh, people often expressed their expectation of leadership from the director and I repeatedly got the question: "Where's Will?", followed by a number of issues that they wanted me to discuss with him. The idea that he has 'moved on' and is managing the programs from outside of the community lives strongly among different members. There is thus a complex dialogical relationship between the active members and GE, which has evolved and become more complicated over time.

There are plans to hand over the networks completely. Currently, a cooperative or SACCO (with open membership) is being set up by GE, where members will be responsible themselves for the issuance of credit for community work, funded by the community factories/shops which will be owned, in the future, by the SACCO.

There is no certainty however that this new legal form of organisation will result in actual change of practices.

Accountability

Questions of (downward) accountability are vivid within the development sector (Berghmans, Simons, & Vandenabeele, 2017). What do we mean by accountability? Different definitions for accountability exist. According to the constructivist perspective, accountability is "a process of negotiation and deliberation between the INGO and a multiplicity of stakeholders who have different accountability demands" (Berghmans, Simons, & Vandenabeele, 2017, p. 1531). This theory of accountability is in contrast with the conventional 'principal-agent' view, where accountability is "a mechanism of control between a principal who has delegated responsibilities to an agent", a view that doesn't always grasp the realities of NGOs (Berghmans, Simons, & Vandenabeele, 2017, p. 1532). But accountability is a difficult thing to achieve, and the constructivist view might not always fully acknowledge the complex negotiation dynamics that exist between NGOs and beneficiaries, which often lead to conflicts. Accountability is a conversation, which eventually leads to more or less defined agreements about the relationship but also to shared expectations, and assumes a continuous commitment of both parties to those rules and expectations (Berghmans, Simons, & Vandenabeele, 2017).

How does GE deal with questions of accountability? As mentioned above, GE is a non-profit foundation, but in reality acts as a NGO, attracting funds from donors and using them for development projects. When a community currency program is launched, GE and the business networks sign a contract with the principal stipulations of the cooperation agreement, but as we saw above, in practice the division of tasks is less clear or doesn't happen in accordance with the contract. This leads to false expectations from all parties involved, and ultimately, to conflict.

Although the programs work with members, GE itself is not a membership-based organisation; members of the networks only have

their say within their respective network, and there are no direct channels of participation or decision-taking to GE. A direct accountability thus only exists from GE to the networks, but indirectly different other actors can be identified, namely the individual members and the community as a whole. How far does GE's downward accountability go? If the organisational committees, as a partner, have managed the programs in a bad way, to what extent can GE be held accountable for that? It is a fact that all business networks, so all committees, were started with the creation of the payment networks. These business networks were mostly lacking initial institutional capacities to manage membership-based organisations of that size. Following an accountability-logic, it could be argued that GE remains responsible for assisting these committees in their endogenous capacity-building processes. Answers to these questions of accountability are not clearly provided in GE's description of its activities and in its description of its place in the Kenyan civil society.

GE could definitely strengthen its accountability lines. Accountability doesn't lead to direct control of the organisation of the beneficiaries (Berghmans, Simons, & Vandenabeele, 2017). The organisation can share its information in a more consequent way, participatory channels can be set up, through which complaints of the individual members can be shared. In this way, some sort of "power with" can be incorporated into the activities, and increase ownership. An insight into the (financial, organisational) position and the vision of GE, would lead to less conflict.

Following my lengthy discussions with Will Ruddick, I have come to understand that he prefers to think of GE as a non-profit organisation that supports communities in setting up the network, and that also does yearly audits to make sure the communities still adhere to the same principles of GE, but the support doesn't go further than that, as he wishes for the communities to be self-sufficient. To give another, conflicting, example, Ruddick decided to launch the Miyani currency in mid-August, despite questions about readiness of the community from my part and from the part of his employees, and despite any direct participation of the community. Paradoxically, he did not want to be present at the launching event, to prevent the project from

appearing as a 'white man's project. In my opinion, the community members in Miyani are however well aware that he is the decision-maker. There seems to be a conflict between Ruddick's desire for the communities to be self-reliant and the reality of the dependence of the communities on external expertise and leadership. Ruddick's firm belief in the capacities of the communities seems to be the force that creates the programs as well as obstructs them.

4.3.2. Community Currencies

In a development context, it is also necessary to critically asses the main service the organisation provides: in this instance, the community currency. Alternative notions of money are sometimes difficult to grasp, and thus the project is often explained in a very practical way to its participants: what is its basic functionality and what are its benefits? The greater vision, which I found very strong and vivid within GE, is however not shared with the communities. For example, while the whole Sarafu-Credit model is anchored in the concept of interest-free credit to each other, it is conflicting that the committees use the trade networks as a tool to extend interest-bearing loans to its members.

The complexity of SC is exemplified in the different (and sometimes confusing) used notations: (1) 'Bangla-*Pesa'*, money in Swahili, (2) *Sarafu-Credit,* containing a money element (sarafu means coin in Swahili), but also an element of credit/debt, (3) printed on a physical 'voucher', (4) worth a certain amount of goods or services. The combined use of money, coin, credit and voucher is, to say the least, very confusing, and leads to the question of who is in debt to who. Consider this example: a business owner becomes member and receives a credit of 400 SC (denominated in vouchers), issued by the Business Network (but printed by GE). At the training session, it is explained to him that he must accept as much SC as he spends, because when he goes below the amount of 400 SC, he is in debt to the community, and when he is above 400 SC, he credits the community. Most of the people I interviewed were not aware anymore (or never knew) that going back periodically to the level of 400 SC is necessary for the system to remain healthy, so it is doubtable that users are aware

of any debt-relation whatsoever. People that have 'defaulted' have not been prosecuted in any way, partly because the loaned amount is too low to begin prosecution. Members that default, and are thus in debt towards the network, are not aware that they are in debt towards the whole community, because they do not feel that ownership. Most members do not see the project as 'theirs' and thus are not treating the currency network as a sort of 'commons'. As a contrast, when working digitally (as most mutual credit systems do), you could go below zero while spending – making it very visible and clear that you 'owe the community'.

Being conscious of the absence of ownership among the SC users, GE has shifted its model from the 'Bangla-Pesa' model (based on a mutual credit) towards the 'Sarafu-Credit' model (a local backed fiat, with the shops functioning as backing assets) (Dissaux & Ruddick, 2017). The hope is that the 'common resource' (the currency) will be 'institutionalised', to reduce free-riders and increase compliance of the members toward the local institution (the currency). Currently however, there remains an ambiguity between theory and practice, between a purely mutual credit and a local backed fiat.

From a development perspective, the preferred model is the one that generates the most positive aspects in the most efficient way. The ambition of GE to create mutual credit systems is admirable, but taking into account the challenges that the organisation has encountered so far and the efforts it has made to deal with them, the question remains: could a donor-backed local fiat generate the same results in a more efficient way, and 'plant' in the minds of people the idea that generating their own means of exchange is indeed possible? In that scenario, the first step is more donor-led. This could be done in cooperation with other donors, in order to make the funds more effective. The next step in this scenario could be a mutual credit system, where a number of businesses are selected that are convinced and well aware of the benefits of such a system, and that feel ready to take the currency to the next level. In this gradual way, a stronger and more functional chain could be formed for the exchange.

I am well aware that this proposal marks an ideological shift, and reduces the 'alternative' element of the programs. But development is a complex process, that involves various actors who contribute to the process and are inherently part of the contextual reality. Instead of focusing only on direct impacts (sales/income increases), GE could benefit from focussing as well on the behavioural change of the direct partners involved, in this case, the businesses in the informal settlements and the members of the programs. The marrying of economic knowledge and statistical projections with cultural knowledge and community history is challenging and time consuming, but would, from a development perspective, greatly enhance the program's potential.

5. Conclusion

With this thesis, I aimed to assess the practices and impacts of a community currency in a development context. I started off by demonstrating that mainstream economics and the current monetary system reinforce inequalities in the world, not in the least between the global North and the global South. People living in developing countries such as Kenya are subjected to a wide array of risks that impede their economic emancipation and prevent them from building a better life. Due to high inflation, high interest rates and a continuous scarcity of money, poor people's economic and social opportunities are relentlessly diminished. It is in this context that the organisation GE, active in informal settlements both in Nairobi and Mombasa, pilots community currencies, a local means of exchange that is backed by the individual member's capacity to offer goods and services. The goal of the currency is to reinforce local trade, and thus to increase family incomes. The organisation hopes that the currencies have additional 'soft' impacts, such as the strengthening of intra-community trust and the creation of a healthier living environment.

In order to assess whether GE is making a sustainable and significant positive change in the livelihoods of the participants of its community currency programs, I have thoroughly analysed GE's inline survey data and discussed them using the data of my field research, complemented by papers from other students. The combined data show that the majority of the community members perceive the programs as positive in terms of sales, savings and increased trust, but that there is generally a low usage of SC, except for in certain smaller subgroups, where a higher trust level was pre-existent.

The community currency programs of GE do not realise the potentials I identified in the beginning of this thesis. The initial period of the programs was marked by a rapidly increasing trade in SC, which has since then stagnated or decreased. Issues with the management of the local committees have hampered the proper functioning of the programs and a majority of users has dropped out, diminishing the scale effects necessary for a smoothly functioning currency network.

Another obstacle is GE's ambiguous position towards the dependency of the programs on external stimulation. It is of paramount importance for the programs that trade keeps flowing, which requires one or more fulltime equivalent networkers per community. Indeed, most community currency programs around the world experience the need for continuous stimulation of trade.

The distribution of SC within the network has not been well managed – leaving a lot of members in permanent debt, and the remainder with a surplus of SC that is frequently cleared by the organisation. In this way, the mutual credit aspect of the currency has deteriorated, shifting de facto towards a local backed fiat.

I have demonstrated that the SC programs strengthen the already existing social positions of its members. Members with the highest social capital are the most able to use and accept SC. This implies that members will not use the SC outside of their existing social network, thus the trust level between community members is not necessarily increased.

GE's vision of a self-reliant community appears to be an illusion. It would be more realistic to aim for a shared ownership of the programs, with permanent monitoring and support from GE to the communities. GE can increase its downward accountability and keep strengthening the institutional capacities of the business networks. I would suggest that the current theory of the programs is formally adapted in accordance with the reality in the communities.

I have questioned whether the mutual credit is the most preferable model for development purposes, as Sarafu-Credit has so far not overcome the problems that are standardly associated with community currencies and with mutual credit in particular. Changing the model towards a donor-backed local fiat would partially address the most pressing issues that the programs are facing at the moment. Introducing IT-technology would also greatly improve the functioning of the programs, but unfortunately this is currently unattainable as mobile phones and internet are a costly business for inhabitants of informal settlements in Kenya.

References

Amadala, V. (2017, September 18). *Each Kenyan to pay Sh97,000 in debt*. Retrieved November 10, 2017, from The Star Kenya: https://www.the-star.co.ke/news/2017/09/18/each-kenyan-to-pay-sh97000-in-debt_c1637115

Anagrius, H. (2017). The Case of Sarafu-Credits: Examining how a community currency can contribute to sustainable livelihood in informal settlements. *Master Thesis*.

Bendell, J., Slater, M., & Ruddick, W. (2015). Re-imagining Money to Broaden the Future of Development Finance. What Kenyan Community Currencies Reveal is Possible for Financing Development. *Working Paper 2015-10*. Geneva: UNRISD.

Berghmans, M., Simons, M., & Vandenabeele, J. (2017). What is Negotiated in Negotiated Accountability? The Case of INGOs. *Voluntas, 28*, 1529–1561, DOI: 10.1007/s11266-016-9759-3.

Bowring, F. (1998). LETS: an Eco-Socialist Alternative. *New Left Review, I*(232), 91-111.

Brueckner, J. K., & Lall, S. V. (2015). Cities in Developing Countries: Fueled by Rural-Urban Migration, Lacking in Tenure Security, and Short of Affordable Housing. In G. Duranton, J. Henderson, & W. Strange (Eds.), *Handbook of Regional and Urban Economics* (Vol. 5, pp. 1399-1455). Amsterdam: Elsevier.

Central Bank of Kenya. (n.b.). *Public Debt.* Retrieved November 2010, 2017, from Central Bank of Kenya: https://www.centralbank.go.ke/public-debt/

Clarke, D. (2017, October 27). *Poll shows 85% of MPs don't know where money comes from*. Retrieved November 25, 2017, from Positive Money: http://positivemoney.org/2017/10/mp-poll/

Collom, E. (2005). Community currency in the United States: the social environments in which it emerges and survives. *Environment and Planning, A*(37), 1565-1587.

Dahir, A. L. (2017, July 18). *Kenya is set to hold one of the most expensive elections in Africa*. Retrieved November 10, 2017,

from Quartz Africa: https://qz.com/1030958/kenyas-elections-will-cost-1-billion-in-government-and-campaign-spend/

Davis, M. (2006). *Planet of Slums*. London: Verso.

Dissaux, T. (2017). L'usage des monnaies complémentaires comme outils du développement : Etude de cas au Kenya. *Manuscrit « Working Paper » AFD*.

Dissaux, T., & Ruddick, W. (2017). Challenges of collective organization and institution building around community currencies in Kenyan slums. *IV Conferencia Internaticional Monedas Sociales Y Complementarias* (p. 9). Barcelona: Universitat Oberta de Catalunya.

Dodd, N. (1994). *The Sociology of Money: Economics, Reason and Contemporary Society*. New York: Continuum.

Evans, M. S. (2009). Zelizer's theory of money and the case of local currencies. *Environment and Planning, 46*, 1026-1041, DOI: 10.1068/a4144.

Fare, M. (2011). Les conditions monétaires d'un développement local soutenable: des systèmes d'échange complémentaire aux monnaies subsidiaires. *Thèse de doctorat en Sciences économiques*. Lyon: Université Lumière Lyon 2.

Fare, M. (2013). Les Monnaies Sociales et Complémentaires dans les Dynamiques Territoriales Potentialités, Impacts, Limites et Perspectives. *Potential and Limits of Social and Solidarity Economy*. Geneva: UNRISD.

Gakii, M. (2015, October 19). *Kenya's inequality alarming - report* . Retrieved December 5, 2017, from The Star Kenya: https://www.the-star.co.ke/news/2015/10/19/kenyas-inequality-alarming-report_c1226371

Gerbaux, R. (2015). Community Currencies in the slums of Nairobi, potentials and limitations of an alternative tool for development. *Master Thesis*.

Gilbert, E. (2005). Common cents: situating money in time and place. *Economy and Society, 34*(3), 357-388, DOI: 10.1080/03085140500111832.

Gilbertson, A. (2015). Food Security, Conjugal Conflict, and Uncertainty in 'Bangladesh', Mombasa, Kenya. In E. Cooper, & D. Pratten (Eds.), *Ethnographies of Uncertainty*

in Africa. Anthropology, Change and Development. (pp. 84-108). London: Palgrave Macmillan.
Graeber, D. (2011). *Debt: the First 5000 Years.* New York: Melville House Publishing.
Greco, T. H. (2001). *Understanding and Creating Alternatives to Legal Tender.* White River Junction: Chelsea Green Publishing Company.
Gregory, C. A. (1997). *Savage money: the anthropology and politics of commodity exchange.* Amsterdam: Harwood Academic.
Hart, K. (1973). Informal income opportunities and urban employment in Ghana. *Journal of Modern African Studies, 11*(1), 61-89.
ILO. (2013). *Kenya. Making Quality Employment The Driver Of Development.* Geneva: ILO Publications.
Jackson, L., & Young, L. (2016). When business networks "kill" social networks: A case study in Bangladesh. *Industrial Marketing Management, 58*, 148-161, DOI: https://doi.org/10.1016/j.indmarman.2016.05.022.
Kennedy, M., Lietaer, B., & Rogers, J. (2012). *People Money. The Promise of Regional Currencies.* Axminster: Triarchy Press.
Kristjanson, P., Mango, N., Krishna, A., Radeny, M., & Johnson, N. (2010). Understanding Poverty Dynamics in Kenya. *Journal of International Development, 22*, 978–996, DOI: 10.1002/jid.1598.
Li, T. M. (2009). To Make Live or Let Die? Rural Dispossession and the Protection of Surplus Populations. *Antipode, 41*(S1), 66–93, DOI: 10.1111/j.1467-8330.2009.00717.x.
Lietaer, B., Arnsperger, C., Goerner, S., & Brunnhuber, S. (2012). *Geld en duurzaamheid: van een falend geldsysteem naar een monetair ecosystem.* Utrecht: Van Arkel.
Marx, B., Stoker, T., & Suri, T. (2013). The Economics of Slums in the Developing World. *The Journal of Economic Perspectives, 27*(4), 187-210, DOI: http://dx.doi.org/10.1257/jep.27.4.187.
Maurer, B. (2005). *Mutual Life, Limited: Islamic Banking, Alternative Currencies, Lateral Reason.* Princeton: Princeton University Press.

McLeay, M., Radia, A., & Thomas, R. (2014). Money creation in the modern economy. *Bank of England Quarterly Bulletin, 54*(1), 14–27, available at www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2014/qb14q102.pdf.

Michel, A., & Hudon, M. (2015). Community currencies and sustainable development: A systematic review. *Ecological Economics, 116*, 160-171, DOI: http://dx.doi.org/10.1016/j.ecolecon.2015.04.023.

Morawczynski, O. (2009). Exploring the usage and impact of "transformational" mobile financial services: the case of M-PESA in Kenya. *Journal of Eastern African Studies, 3*(3), 509-525, DOI: http://dx.doi.org/10.1080/17531050903273768.

Muchadenyika, D. (2015). Slum upgrading and inclusive municipal governance in Harare, Zimbabwe: New perspectives for the urban poor. *Habitat International, 48*, 1-10, DOI: https://doi.org/10.1016/j.habitatint.2015.03.003. .

Muniafu, M., & Otiato, E. (2010). Solid Waste Management in Nairobi, Kenya. A case for emerging economies. . *The Journal of Language, Technology & Entrepreneurship in Africa, 2*(1), 342-350.

Myers, G. (2011). *African Cities: Alternative Visions of Urban Theory and Practice.* London: Zed.

Njini, F. (2017, Juli 18). *The Charts That Show Kenya's Economy After Four Years of Jubilee*. Retrieved November 10, 2017, from Bloomberg: https://www.bloomberg.com/news/articles/2017-07-18/the-charts-that-show-kenya-s-economy-after-four-years-of-jubilee

Ochieng, L. (2016, April 27). *M-Pesa reports 27 pc jump in global users to 25 million*. Retrieved November 5, 2017, from Daily Nation Kenya: http://www.nation.co.ke/business/M-Pesa-reports-27-pc-jump-in-global-users-to-25-million/996-3178018-5ykpjpz/index.html

Okiror, S. (2017, Juni 2). *Drought takes centre stage in Kenya's election campaign as food prices rise*. Retrieved November 5, 2017, from The Guardian:

https://www.theguardian.com/global-development/2017/jun/02/drought-centre-stage-kenya-election-campaign-food-prices-rise
Piketty, T. (2013). *Le Capital au XXIe Siècle.* Paris: Editions du Seuil.
Rakodi, C., Gatabaki-Kamau, R., & Devas, N. (2000). Poverty and political conflict in Mombasa. *Environment & Urbanization, 12*(1), 153-170.
Raworth, K. (2017). *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist.* London: Random House Business Books.
Riegel, E. C. (2003/1978). *Flight from Inflation: The Monetary Alternative.* Los Angeles: The Heather Foundation.
Rono, J. K. (2002). The impact of the structural adjustment programmes on Kenyan society. *Journal of Social Development in Africa, 17*(1), 81-98.
Ruddick, W. (2011). Eco-Pesa: An Evaluation Of A Complementary Currency Programme In Kenya's Informal Settlements. *International Journal of Community Currency Research, 15*(A), 1-12, DOI: http://dx.doi.org/10.15133/j.ijccr.2011.001.
Ruddick, W. (2015). Trust and Spending of Community Currencies. *3rd International Conference on Social and Complementary Currencies*, (p. 22). Salvador, Brazil.
Ruddick, W., Richards, M. A., & Bendell, J. (2015). Complementary Currencies For Sustainable Development In Kenya: The Case Of The Bangla-Pesa. *International Journal of Community Currency Research, 19*(D), 18-30.
Safaricom. (n.d.). *Loans and Savings*. Retrieved November 17, 2017, from Safaricom: https://www.safaricom.co.ke/personal/m-pesa/do-more-with-m-pesa/loans-and-savings
Schraven, J. (2001). *The Economics of Community Currencies: a Theoretical Perspective.* Retrieved April 3, 2017, from Jorim: http://www.jorim.nl/economicscommunitycurrencies.pdf
Seyfang, G., & Longhurst, N. (2013). Growing green money? Mapping community currencies for sustainable development. *Ecological Economics, 86*, 65-77.

Stiglitz, J. E. (1996). Some Lessons from the East Asian Miracle. *The World Bank Research Observer, 11*(2), 151-177.

Stodder, J. (2009). Complementary credit networks and macroeconomic stability: Switzerland's Wirtschaftsring. *Journal of Economic Behavior & Organization, 72*, 79-95, DOI: 10.1016/j.jebo.2009.06.002.

The Economist. (2012, December 22). *Boomtown slum. A day in the economic life of Africa's biggest shanty-town.* Retrieved November 26, 2017, from The Economist: http://www.economist.com/news/christmas/21568592-day-economic-life-africas-biggest-shanty-town-boomtown-slum

Thieme, T. A. (2015). Turning hustlers into entrepreneurs, and social needs into market demands: Corporate–community encounters in Nairobi, Kenya. *Geoforum, 59*, 228-239, DOI: https://doi.org/10.1016/j.geoforum.2014.11.010.

Toxopeus, H., & Van Arkel, H. (2014). *Een @nder soort geld helpt economie, milieu en euro. Naar een @nder soort geld. Met uw hulp nu de doorbraak.* Utrecht: STRO.

U.S. Bureau of Labor Statistics. (n.d.). *CPI Inflation Calculator*. Retrieved December 5, 2017, from Bureau of Labor Statistics: https://www.bls.gov/data/inflation_calculator.htm

Wikipedia. (2017). *Counties of Kenya*. Retrieved November 10, 2017, from Wikipedia: https://en.wikipedia.org/wiki/Counties_of_Kenya

World Bank. (2008). *Report No. 44190-KE. Kenya Poverty And Inequality Assessment Volume I: Synthesis Report.* Poverty Reduction and Economic Management Unit Africa Region. Washington: World Bank.

World Bank. (2017, October 18). *World Development Indicators.* Retrieved November 10, 2017, from World Bank: http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators