Trust and Spending of Community Currencies in Kenya

http://socialcurrency.sciencesconf.org/ Theme: Impact and results of social and complementary currencies Format: Scientific Article

Author

William O. Ruddick, Doctoral Candidate will@grassrootseconomics.org Affiliation: University of Cape Town

Keywords

sustainable development, trust, Africa

Abstract

Six Community Currencies (CCs) have been implemented for sustainable development purposes in Kenya since 2010. These CCs focus on empowering local schools and businesses to issue a medium of exchange while supplying a funding mechanism for environmental and social programs. The scope and utility of these CCs is still being explored and preliminary results from these CCs are reported on in this paper. This paper seeks to both describe the experiences and challenges of implementing such currencies and also report on empirical results following the usage of CCs. Results indicate that 5%-10% of local food purchases are being done using the CCs among members and that CC usage is positively correlated to increasing levels of community trust. Finally, the systems, implementations and governance models for these programs are detailed with the aim of improving upon the model for future sustainable development programs.

1. Introduction

Community Currencies (CCs) have been used as financial tools to aid in sustainable development in Kenya since 2010. They are described by the implementers¹ of the programs as a regionally based means of exchange that does not replace but rather supplements the national currency system. Through increasing trade by matching unmet local needs with under utilized local resources community currencies enable more trade and direction of excess capacity toward sustainable environmental and social development programs. Community Currencies are distinct from the wider field of Complementary Currencies because they are set up with the involvement and backing of the people and organizations that will ultimately use them. Furthermore, the Community Currencies studied here are currently active in five communities in Kenya are backed by goods and services of members, groups of guarantors and issued using paper vouchers. Five of these currencies began in 2015 alone, while the oldest Bangla-Pesa started in May 2013. Given their rapid spread it is important to fully understand current circulation, determinants for usage, as well as the various challenges these programs have.

Academically the CC field is being developed as a discipline with an increasing amount of studies discussing the matter. Sefang (2013) estimates over 2000 CCs are being used worldwide while according to Michel (2015) research on CCs in Africa represents only 0.9% of that done worldwide. This paper will describe the implementations, organization, impacts and challenges of community currency programs in Kenya. The Kenyan programs include, Eco-Pesa (no longer in circulation), Bangla-Pesa, Gatina-Pesa, Kangemi-Pesa, Lindi-Pesa and Ng'ombeni-Pesa. Quantitative results will focus primarily on those currencies that have been in operation for over 4 months, namely Bangla-Pesa (2 years), Kangemi-Pesa (4 months), and Gatina-Pesa (9 months). Key to understanding and synthesizing the various issues effecting usage of African CCs, we present empirical evidence that social capital in the form of trust is a key determinant of CC uptake and usage, and that in turn, CC usage itself alters the social make-up of communities by increasing trust among users. Also mentioned are several secondary programs that have served to increase acceptance of CCs by giving users non-trade based benefits to membership. These secondary programs include: increased business marketing, savings and loan programs, community events,

¹ See <u>http://grassrootseconomics.org/community-currencies</u> from more details from implementers. Trust and Spending of Community Currencies in Kenya (Ruddick and Visser 2015)

business trainings and networking for members.

2 Theoretical Context

As suggested in Ruddick et. al. (2015) the existence of excess capacity goods and services matching unmet demand, was the cornerstone of theorized CC utility, as a stop-gap, filling in for a missing or lacking medium of exchange. The assumption that people in marginalized communities have excess goods and services to offer and others in those communities desire to purchase these goods and services but because of a lack of national currency, prompted the creation of the, now replicated severally, *Bangla-Pesa model*. A second theory that also prompted this transition was suggested by Stodder (2000), in that Complementary Currencies could form a counter-cyclic local buffer against external market variations.

While the continued but varied usage of CC in Kenya, as shown in our quantitative results, suggest that these theories have merit, various aspects of, and challenges to, the programs have caused some rethinking of the social capital components and structures that allow for the usage of CCs. Over the course of several years of implementation, maintenance and monitoring the usage of CCs in Kenya, social capital, namely trust, is suggested to be a key determinate. These results are in line with Turvey 2008, who argues that a *no-collateral* lending, incentive mechanisms such as self-help groups that embolden trust, have proven to be successful.

Important challenges for usage of the CCs studied here revolve around requirements for accountability and collateral in issuance of CCs. Indeed, the current Bangla-Pesa model of CC usage in Kenya can be described as an uncollateralized or no-collateral, zero-interest loan given by the CC trading community with mutual backing among members. Each new member of the network must go through an audit and approval process whereby the member must be endorsed and guarenteed by four other members of the network. After acceptance, 400 CC are allotted to the member at no charge, and are used as vouchers among members (on parity with the National Currency²).

² The membership rules and various CC usage guidelines are given at: <u>http://grassrootseconomics.org/community-currency-user-guide-and-quiz</u>

CCs as a kind of no-collateral loan have many similarities with the very common microcredit or micro-finance schemes in Kenya, which can in general be defined as extending small loans for income generating activities to the poor in pre-dominantly developing countries. Expanding on this notion that CCs are indeed a form of community-driven microcredit allows us to draw on research surrounding the importance of social capital and microcredit.

The idea that trust can substitute or augment more conventional metrics such as profitability and leverage found in conventional credit scoring (e.g., Turvey 1991; Turvey and Brown 1990) is generally foreign to conventional lenders. Yet in microcredit and CCs alike trust between group members is potentially much more important. Cassar (2006) suggests that social capital in the form of trust between group members in target communities is more important to group loan repayment than general societal trust.

In terms of social capital the key distinction between microcredit and CCs may be that while loan repayments and CC usage may both be effected primarily by trust between members, CCs may be more adept at increasing trust levels while microfinance may decrease them. The historic uptake and current decline of micro-finance loans in Africa, we believe could match well with the future uptake of CCs. Banerjee et. al. (2013) used randomized control trials to study the impacts of micro-finance and found the current results to be negative compared to those reported in the previous decade. In order to avoid a decline of CC usage, and as CCs are increasingly adopted in Africa, it is important to compare the methodologies of no-collateral lending employed by micro-finance institutions and Community Currencies.

4. Hypothesis

While actual or perceived economic gains or lack thereof through CC program membership may have a strong effect on CC adoption and usage, we can theorize that trust in the community and between members also holds a key role in membership and usage. Simply joining a CC exchange network requires an amount of trust between the local coordinators, committees and members. Usage levels may depend greatly on how much members trust that their CC will be later accepted by fellow members. Besides trust between CC users, being a possible key determinate in CC adoption and usage, it may also increase or decrease *due to* CC usage. Given a propensity for strong group driven dynamics in informal settlements (Huchzermeyer 2006), we would expect CC usage to create in-groups where trust is increased, as well as out-groups where CC is accepted less and trust is reduced.

The null hypothesis would suggest that there should be no distinction of trust levels between members with different levels of CC usage. In other words the frequent CC users should have no different perceived levels of trust than those using it less frequently or not at all.

5. Research Methodology

5.1 Baseline and Follow-Up Surveys

Baseline data sought to capture the socio-economic status of 90% or more of community members owning small businesses before any CC was implemented. Of the baseline group there were respondents that did not join the CC exchange networks and those that joined and didn't use the CC and those who left the network. All available respondents were latter contacted for a follow-up survey. Note that respondents were not chosen randomly and were often connected with each other or the committees of the trading networks. This study does not seek to generalize findings to the entire business community, but rather compare characteristics of businesses pre and post CC introduction, while also comparing the trading networks against each other.

Trained surveyors interviewed business men and women on their business, personal, and family characteristics. The interview schedule was written in English, Swahili (Kenya), Afrikaans (SA) and Xhosa (SA) and the interview language varied from respondent to respondent. While local

languages such as Dholuo were used when needed, most surveys were done in an official language of the respective country. Both the enumerators and respondents were compensated for their time according to local rates. Each survey was individually checked for missing or illogical data and some participants were re-contacted to resolve these inconsistencies. When these errors could not be resolved, the data was coded as missing.

The only follow-up surveys done so far are for Bangla-Pesa, Kangemi-Pesa and Gatina-Pesa. Follow-up surveys were attempted on all the original baseline respondents. In some cases respondents had left the network or community, while in others the respondent could not be met at a convenient time. The time between baseline and follow-up varied widely and is a large potential source of error when comparing results between networks.

Besides baseline and follow-up surveys external researchers³ also conducted interviews with member and non-member businesses in the communities. Also note that the baseline data use for Bangla-Pesa and Gatina-Pesa did not contain all the variables used in the follow-up surveys, while in Kangemi-Pesa the baseline and follow-up surveys match – hence tables KP(A-E) are only avaliable for Kangemi. Lindi-Pesa, Ng'ombeni-Pesa, as well as B-Rand and K'Mali are less than 2 months since launching and have yet to complete follow-up surveys and will not be mentioned in the results.

³ Robin Gerbaux is a Masters Degree student at the Université Joseph Fourier, in Grenoble, France studying International Development Studies. He trained and oversaw data collection in Nairobi's Lindi-Pesa, Gatina-Pesa and Kangemi-Pesa. Tristan Dissaux is a PhD student from the Université Lumière Lyon, France. He trained and oversaw data collection in Mombasa's Bangla-Pesa, and Ng'ombeni-Pesa. Mr. Gerbaux and Mr. Dissaux also conducted interviews on all CC users they could find, in person and over the phone using local translators. Trust and Spending of Community Currencies in Kenya (Ruddick and Visser 2015)

6. Results

6.1 Qualitative Results

6.1.1 Implementing Organisations

In Kenya, Grassroots Economics Foundation (GE) (http://grassrootseconomics.org), formerly known as Koru-Kenya (Koru – a Community Based Organization) is a non-profit organization whose purpose is to grow marginalized communities' ability to access their own abundance. Primarily, the organization facilitates local Community Based Organizations in informal settlements to develop and operate Community Currency programs. While each CC is locally managed and operated independently, GE maintains oversight and assists with facilitation of various activities, such as training, yearly auditing and renewals described in the CC Implementation Stages section below.

6.1.2 Implementations in Kenya

The first Complimentary Currency Implementation in Kenya, Eco-Pesa is well documented in Ruddick(2011 and 2015). The program in the Kongowea informal settlements near Mombasa incorporated a model similar to what Seyfang (2014) calls a 'backed' local currency, while stimulating currency usage through environmental activities. The national-currency 'backed' model did not prove to have sufficient economic benefits to users and the program ended after funding for environmental activities was exhausted.

Seeking another approach toward more sustainable currency usage, local ownership and development objectives, the *Bangla-Pesa model* was developed in the Bangladesh informal settlement of Mombasa in 2012. Community Currency issuance to local businesses was tied to group guarantors. As with Eco-Pesa the CC was valued on-par with the National currency and labelled as a voucher.

In Bangladesh schools began to accept the currency for various fees and act as stabilizers for general usage. While the general model of Bangla-Pesa has remained intact several changes to implementation ensued, notably a focus on schools and adoption of an expiration date. In 2014 Gatina-Pesa was launched in Nairobi's Kawangware Informal Settlement. The CBO responsible for this currency was formed by and centred around a local school called Sifa Children's centre. The

currency spread through parents of school children and nearby shops. The same model focusing on scholls was replicated in Kangemi (Kangemi-Pesa) and Kibera (Lindi-Pesa) two of Nairobi's large informal settlements. In late 2015 a neighbouring informal settlement to Bangladesh called Kwa Ng'ombe launched Ng'ombeni-Pesa centred around parents of a local Patent Teachers Association. In all Kenyan programs parents my pay a portion of school fees or private tuition fees in the CC. These CC payments are then used to top-up teacher salaries, or serve as advances against future salaries.

6.1.3 CC Implementation Stages

These implementation stages and programming elements are found in all the Kenyan CC programs.

- Stakeholder Discussions The initial discussions bring together local leaders, and organizations to support and help aim the direction and ownership of the final program. These discussion are primarily focused around schools in the area.
- Training & Discussion Stakeholders mobilize groups of businesses and schools to attend training and discussion workshops. Simulations and games of CC usage are used as an educational tool.
- 3. Formalizing the Exchange Network After training and talking with as well as surveying at least 90% of the target community's informal businesses an interim committee is formed to register an official local organization (business network), to take the program on. This includes writing a constitution and operating rules.
- Building Membership & Training Potential members must be trained and have four other local businesses back their membership. They must also fill out a questionnaire and be vetted by the committee.
- 5. Branding and Marketing Marches and other events are held to mobilize members and developed community awareness and understanding. The physical community currency itself is designed and vetted with the community. The premises of businesses that join the network are labelled as accepting CC via stickers or wall painting. Business are also added to a directory that is given to all members.

- 6. Launching After roughly 3-6 months from Stakeholder Discussions and the registration of roughly 100 potential members, a publicly held launch is done together with local government officials. After which, the community currency is allocated to members and member pay a contribution in their CC to the community fund held by the business network.
- Community Events Community funds are used to support local activities such as trash collection, elderly care, sports and market days.
 - a) Market Days Active Members are invited to a central location (generally a member school) to sell their wares. The general public is also invited to purchase CC (from the community fund) at a discounted rate for National Currency. The amount purchased in National Currency is then given to the members as they put the same amount of CC back into the community fund.
 - b) Sport events Generally local schools that are members come with students and teachers to do sporting events and competitions with rewards in the CC.
 - c) Trash Collections Members together with youth groups target specific areas to collect waste.
 - d) Networking Lunches Members come together for a shared lunch, trade goods and services and discuss plans.
 - e) Disabled and Elderly Care Members make food together buying ingredients with CC and bring it to those in need.
- 8. Savings and Loans Exchange groups open a bank account and members put in various amount in National Currency per month as a savings. This savings is then loaned back out to members by the business network with interest depending on how active they are using the CC. The interest is collected by the group and used for further loans. Groups are also using this savings a collateral for larger loans from local banks. Included with these loaning programs is training for developing and running better businesses.
- Continued Training Weekly information booths are set-up and manned by volunteers to increase members and train people. Yearly retreats are held with committees and members to increase training, make roles and responsibilities clear.
- 10. Yearly Renewal Before the expiration date on the vouchers, each community currency exchange network does an assessment of members in good standing. At the renewal event each active member may return up to 400 expired CC to be exchanged for 400 CC with new

expiration stickers or dates. The total of 400 CC minus the amount of old CC they exchange goes directly into the community fund.

6.1.4 Implementation Challenges and Solutions

The below challenges and solutions come from the observations of implementers as well as volunteers and external researchers after two years of programming. The challenges are not seen by all CC exchange groups and certain solutions have been applied by some groups and not others. Some solutions are also in progress while others are planned or completed.

- 1. **Chain-Refusal** There is a strong 'group effect whereby a occasional refusal to accept the CC causes subsequent refusals throughout whole sections of a trading network.
 - a) While the introduction of schools as part of the program has been an effective stabilizer for the community currencies in Kenya, in general anchor tenants (described below) or larger, more stable, businesses have helped in increasing general acceptance.
- Currency Dumping Smaller shops have been shown to spend their currency at larger shops and not accept it back and the repercussions for spending and not accepting back the currency have had little enforcement.
 - a) According the trade network constitutions these members who spend but don't accept back the currency should be expelled and their four guarantors held accountable. Stronger measures have been put in place to remove members who spend but don't accept the CC.
 - b) Monthly events and the annual renewal automatically select for the more active members to continue in activities and as a member.
- 3. **Inactive and Uncommitted Local Committees** The CC programs had focused on the local committees as the leaders and owners of the program. Some found little motivation or time to care for or promote the programs, while others have had problems with infighting and power dynamics.
 - a) In Kenya annual trainings with committee members are being held as well as reelections.
- 4. **Unstable Members** Awarding CC to inappropriate members using the available Community Fund. Committees had decided to add more members to the network without proper backers or stable businesses, resulting in increased *currency dumping*.

- a) These members are being removed as complaints arise and are also removed during the annual renewal events.
- 5. Lack of business network density Members found themselves isolated, or didn't know where to use their CC, or didn't find customers.
 - a) Focusing membership support around developing regional sub-networks of 5 members has helped to solidify trading groups.
- 6. Lack of Understanding and Training Issues such as how to price items, how much to accept, and what to expect have not been communicated clearly. As local committees accept new members into the network they have been using their community fund to credit those new members without giving them proper training.
 - a) Each new member is now asked to complete a test before joining. This test is found at the end of the user guide (See Appendix 1.).
- 7. Lack of Anchor Tenants The committee members, schools and larger businesses acceptance of CC varies a lot depending on the time of year. In some cases a lack of strong anchor tenants has caused a reduction in general acceptance and trade.
 - a) Increasing anchors for the CCs have been actively sought by the local groups. These include schools, baby-schools, retail stores, local government and religious institutions.
- 8. **Waiting for Loans -** Members who joined the network as a way to access loans have been impatient in waiting for group savings and loan programs to start.
 - a) The process for issuing loans in Kenya has begun with local banking partners. Members have begun to save Kenyan Shillings together and have now started receiving loans in the Gatina-Pesa group.
- 9. Dependence on Imported Goods The profit margins on retail shops is such that the majority of sales revenue goes toward restocking costs. If no stock can be purchased with the CC, acceptance of CC must be limited to a small percentage of profits and used for other in-network purchases, like paying for school fees.
 - a) Helping members find local sources for stock when possible is one of the tasks of local committee members. As business loans are beginning – priority is given toward import replacing businesses to help provide stock for other members.
- 10. **Donor mentality** Both committees and members has a propensity to agree to development programs because of a history of aid funding coming in with little local

commitment. Hence when members first join the program they are often expecting hangouts and may see the CC as a handout – using it to purchase but not accepting it back later.

- a) Increased training and networking events generally solves this problem. A User Guide and Quiz (See Appendix 1.) as well as a Field Guide have been developed as part of training new members.
- b) This effect seems to also fade over time as members feel more ownership of the programs and community currencies.
- c) Increased activities, such as local markets and savings and loan programs have created a lot of secondary benefits linked to CC usage.
- 11. Lack of Government or Larger Business Support While the Bangla-Pesa program was allowed to be relaunched, there has been no tangible support for these programs from government or neighbouring large businesses other than local schools.

6.2 Quantitative Results

6.2.1 Usage Summary

The table below gives a general overview on the number of members and amounts of CC issued in each of the CC programs in Kenya, as well as launch dates (baseline data was taken roughly a month before these dates) and follow-up survey dates.

CC Summary	Launch Date	Follow-Up Date	# Members*	# Directory**	In Circu.+	EUR++				
Bangla-Pesa*+	Nov 2013	Sep 2015	223	92	89,200	750€				
Gatina-Pesa	Oct 2014	Aug 2015	87	62	34,800	292€				
Kangemi-Pesa	Apr 2015	Jul 2015	104	65	41,600	350€				
Lindi-Pesa	Aug 2015	Aug 2015	61	120*++	24,400	205€				
Ng'ombeni-Pesa	Aug 2015	Aug 2015	65	51	26,000	218€				
*	#Members are the people who have registered and received the CC to date									
**	# Directory are those members that wish to advertise in the local directory									
+	In Circulation is the total amount issued to the members:									
	hence an upper limit of 400 x # Members									
++	Given the CCs are pegged to the Kenyan respective National Currency									
	119 EUR to KSH									
*+	The original launch of Bangla-Pesa was May 2013 followed by court battles									
*++	Lindi-Pesa has yet to issue CC to all directory sign-ups									

Table 1. Gives the launching dates as well as follow-up data collection for seven active CCs.

6.2.3 Daily CC Usage on Food

The table below compares the three CCs that have done follow-up surveys, based on the amount of food purchased daily by respondents.

Amt. KSH spent on food daily	Bangla-Pesa	Gatina-Pesa	Kangemi-Pesa	
Mean	318.3	272	261.6	
Std. Dev.	157.1	205.7	165.7	
Min	50	10	40	
Max	1000	1000	700	
Amt. CC spent on food daily	Bangla-Pesa	Gatina-Pesa	Kangemi-Pesa	
Mean	32.9	16.9	14.5	
Std. Dev.	42	30.1	22.6	
Min	0	5	5	
Max	200	200	150	
Months in Circulation	22	11	4	
Sample Size	78	80	92	

Table 2: Shows the about of Kenyan Shillings and CC spent on food daily.

Variable definitions: **Money spent on Food daily:** How much do you spend on food and drink daily in [National Currency]? **CC spent on Food daily:** How much in [CC] do you spend on food and drink daily?

6.2.2 Effects of CC Usage

The following table looks at respondents' answers to questions about how the CC has impacted their lives. On the left shows the results from all respondents and on the right are the results from those more active users, using 10 or more CC daily on food purchases (See table 2).

							Respo	ndents	using i		e more	dally.
ts Increased		No Change		Decreased			Increased		No Change		Decreased	
frq	%	frq	%	frq	%		frq	%	frq	%	frq	%
41	51.9	17	21.5	21	26.6		26	49.1	12	22.6	15	28.3
42	53.2	18	22.8	19	24.1		28	52.8	12	22.6	13	24.5
50	63.3	16	20.3	13	16.5		31	58.5	14	26.4	8	15.1
45	57.0	17	21.5	17	21.5		28	52.8	13	24.5	12	22.6
71	89.9	7	8.9	1	1.3		46	86.8	6	11.3	1	1.9
	1	1	Bangla	a-Pesa	Circulat	tior	Period	l 22 Mo	nths pr	ior to fo	llow-up	
Increased No Chang		hange	Decre	creased Increased		ased	No Change		Decreased			
frq	%	frq	%	frq	%		frq	%	frq	%	frq	%
20	25.0	47	58.8	13	16.3		19	73.1	5	19.2	2	7.7
17	21.3	51	63.8	12	15.0		17	60.7	8	28.6	3	10.7
27	33.8	42	52.5	11	13.8		18	66.7	7	25.9	2	7.4
17	21.3	51	63.8	12	15.0		15	55.6	10	37.0	2	7.4
37	46.3	31	38.8	12	15.0		17	63.0	8	29.6	2	7.4
			Gatina	-Pesa (Circulati	ion	Period	11 Mor	nths pri	or to fol	low-up	
Increased		No Change Decre		eased		Increased		No Change		Decreased		
frq	%	frq	%	frq	%		frq	%	freq	%	frq	%
15	16.3	75	81.5	2	2.2		7	29.2	15	62.5	2	8.3
16	17.4	75	81.5	1	1.1		9	37.5	14	58.3	1	4.2
25	27.2	65	70.7	2	2.2		13	54.2	9	37.5	2	8.3
10	10.9	79	85.9	3	3.3		5	20.8	16	66.7	3	12.5
27	29.3	65	70.7	0	0.0		13	54.2	11	45.8	0	0.0
	frq 41 42 50 45 71 Incre frq 20 17 27 17 37 17 37 Incre frq 15 16 25 10	frq % 41 51.9 42 53.2 50 63.3 45 57.0 71 89.9 Incresed frq % 20 25.0 17 21.3 27 33.8 17 21.3 37 46.3 Incresed frq % 15 16.3 16 17.4 25 27.2 10 10.9	frq % frq 41 51.9 17 42 53.2 18 50 63.3 16 45 57.0 17 71 89.9 7 Incresed No Cl frq % frq 20 25.0 47 17 21.3 51 27 33.8 42 17 21.3 51 37 46.3 31 17 21.3 51 37 46.3 31 17 21.3 51 37 46.3 31 15 16.3 75 16 17.4 75 25 27.2 65 10 10.9 79	frq % frq % 41 51.9 17 21.5 42 53.2 18 22.8 50 63.3 16 20.3 45 57.0 17 21.5 71 89.9 7 8.9 rt 89.9 7 8.9 resed No C→nge frq % frq % 20 25.0 47 58.8 17 21.3 51 63.8 27 33.8 42 52.5 17 21.3 51 63.8 37 46.3 31 38.8 37 46.3 31 38.8 37 46.3 31 38.8 161 16.3 75 81.5 16 17.4 75 81.5 25 27.2 65 70.7 10 10.9 79 85.9	frq % frq % frq 41 51.9 17 21.5 21 42 53.2 18 22.8 19 50 63.3 16 20.3 13 45 57.0 17 21.5 17 71 89.9 7 8.9 1 Bangla-Pesa Increased No Change Decreased frq % frq % frq 20 25.0 47 58.8 13 17 21.3 51 63.8 12 27 33.8 42 52.5 11 17 21.3 51 63.8 12 37 46.3 31 38.8 12 37 46.3 31 38.8 12 37 46.3 31 38.8 12 161 16.3 75 81.5 2 16	frq % frq % frq % 41 51.9 17 21.5 21 26.6 42 53.2 18 22.8 19 24.1 50 63.3 16 20.3 13 16.5 45 57.0 17 21.5 17 21.5 71 89.9 7 8.9 1 1.3 Bangla-Pesa Circulat Incresed No Change Decresed frq % frq % 20 25.0 47 58.8 13 16.3 17 21.3 51 63.8 12 15.0 27 33.8 42 52.5 11 13.8 17 21.3 51 63.8 12 15.0 37 46.3 31 38.8 12 15.0 37 46.3 31 38.8 12 15.0 37 46.3 </td <td>frq % frq % frq % 41 51.9 17 21.5 21 26.6 42 53.2 18 22.8 19 24.1 50 63.3 16 20.3 13 16.5 45 57.0 17 21.5 17 21.5 71 89.9 7 8.9 1 1.3 Bangla-Pesa Circulator Increased No Charge Decreased frq % frq % 20 25.0 47 58.8 13 16.3 17 21.3 51 63.8 12 15.0 27 33.8 42 52.5 11 13.8 17 21.3 51 63.8 12 15.0 37 46.3 31 38.8 12 15.0 37 46.3 31 38.8 12 15.0 15 16</td> <td>frq % frq % frq % 41 51.9 17 21.5 21 26.6 26 42 53.2 18 22.8 19 24.1 31 50 63.3 16 20.3 13 16.5 31 45 57.0 17 21.5 17 21.5 28 71 89.9 7 8.9 1 1.3 46 Bangla-Pesa Circulation Period Increased No Change Decreased Increased frq % frq % frq % 17 20 25.0 47 58.8 13 16.3 19 17 21.3 51 63.8 12 15.0 17 27 33.8 42 52.5 11 13.8 18 18 17 21.3 51 63.8 12 15.0 17 37 46.3 31 38.8 12 15.0 17 16</td> <td>frq % frq % frq % 41 51.9 17 21.5 21 26.6 26 49.1 42 53.2 18 22.8 19 24.1 28 52.8 50 63.3 16 20.3 13 16.5 31 58.5 45 57.0 17 21.5 17 21.5 28 52.8 71 89.9 7 8.9 1 1.3 46 86.8 Bangla-Pesa Circulation Increased No Change Decreased Increased frq % 17 21.3 51 63.8 12 15.0 17 60.7 27 33.8 42 52.5 11 13.8 18 66.7 17 21.3 51 63.8 12 15.0 17 63.0 37 46.3 31 38.8 12 15.0 17 63.0<!--</td--><td>frq % frq % frq % 41 51.9 17 21.5 21 26.6 26 49.1 12 42 53.2 18 22.8 19 24.1 28 52.8 12 50 63.3 16 20.3 13 16.5 31 58.5 14 45 57.0 17 21.5 17 21.5 28 52.8 13 71 89.9 7 8.9 1 1.3 46 86.8 6 Increased No Change Decreased Increased No Class 17 21.3 16 38 12 15.0 17 21.3 51 63.8 12 15.0 17 60.7 8 27 33.8 42 52.5 11 13.8 18 66.7 7 17 21.3 51 63.8 12 15.0 17 63.0 8 27 33.8 42 52.5 11 13.8 18 66.7</td><td>frq % frq %<</td><td>frq % frq % % frq % % frq % % % frq % % % % % % % % % % % % % % % % <th< td=""></th<></td></td>	frq % frq % frq % 41 51.9 17 21.5 21 26.6 42 53.2 18 22.8 19 24.1 50 63.3 16 20.3 13 16.5 45 57.0 17 21.5 17 21.5 71 89.9 7 8.9 1 1.3 Bangla-Pesa Circulator Increased No Charge Decreased frq % frq % 20 25.0 47 58.8 13 16.3 17 21.3 51 63.8 12 15.0 27 33.8 42 52.5 11 13.8 17 21.3 51 63.8 12 15.0 37 46.3 31 38.8 12 15.0 37 46.3 31 38.8 12 15.0 15 16	frq % frq % frq % 41 51.9 17 21.5 21 26.6 26 42 53.2 18 22.8 19 24.1 31 50 63.3 16 20.3 13 16.5 31 45 57.0 17 21.5 17 21.5 28 71 89.9 7 8.9 1 1.3 46 Bangla-Pesa Circulation Period Increased No Change Decreased Increased frq % frq % frq % 17 20 25.0 47 58.8 13 16.3 19 17 21.3 51 63.8 12 15.0 17 27 33.8 42 52.5 11 13.8 18 18 17 21.3 51 63.8 12 15.0 17 37 46.3 31 38.8 12 15.0 17 16	frq % frq % frq % 41 51.9 17 21.5 21 26.6 26 49.1 42 53.2 18 22.8 19 24.1 28 52.8 50 63.3 16 20.3 13 16.5 31 58.5 45 57.0 17 21.5 17 21.5 28 52.8 71 89.9 7 8.9 1 1.3 46 86.8 Bangla-Pesa Circulation Increased No Change Decreased Increased frq % 17 21.3 51 63.8 12 15.0 17 60.7 27 33.8 42 52.5 11 13.8 18 66.7 17 21.3 51 63.8 12 15.0 17 63.0 37 46.3 31 38.8 12 15.0 17 63.0 </td <td>frq % frq % frq % 41 51.9 17 21.5 21 26.6 26 49.1 12 42 53.2 18 22.8 19 24.1 28 52.8 12 50 63.3 16 20.3 13 16.5 31 58.5 14 45 57.0 17 21.5 17 21.5 28 52.8 13 71 89.9 7 8.9 1 1.3 46 86.8 6 Increased No Change Decreased Increased No Class 17 21.3 16 38 12 15.0 17 21.3 51 63.8 12 15.0 17 60.7 8 27 33.8 42 52.5 11 13.8 18 66.7 7 17 21.3 51 63.8 12 15.0 17 63.0 8 27 33.8 42 52.5 11 13.8 18 66.7</td> <td>frq % frq %<</td> <td>frq % frq % % frq % % frq % % % frq % % % % % % % % % % % % % % % % <th< td=""></th<></td>	frq % frq % frq % 41 51.9 17 21.5 21 26.6 26 49.1 12 42 53.2 18 22.8 19 24.1 28 52.8 12 50 63.3 16 20.3 13 16.5 31 58.5 14 45 57.0 17 21.5 17 21.5 28 52.8 13 71 89.9 7 8.9 1 1.3 46 86.8 6 Increased No Change Decreased Increased No Class 17 21.3 16 38 12 15.0 17 21.3 51 63.8 12 15.0 17 60.7 8 27 33.8 42 52.5 11 13.8 18 66.7 7 17 21.3 51 63.8 12 15.0 17 63.0 8 27 33.8 42 52.5 11 13.8 18 66.7	frq % frq %<	frq % % frq % % frq % % % frq % % % % % % % % % % % % % % % % <th< td=""></th<>

Kangemi-Pesa Circulation Period 4 Months prior to follow-up

Comparing those users using less then 10CC Daily and those using more than 10CC Daily

using a single-tailed Wilcoxon Test, yields P-Values of:

Bangla-Pesa 9.17%, Gatina-Pesa 0.08% and Kangemi-Pesa < 0.01%

Table 3. Respondents were asked to asses the impacts of CC usage on Sales. See variable

descriptions below:

- Sales: What has been the effect of using [CC] on sales?: Increased, Decreased, Stayed the Same
- **Num. Customers:** What has been the effect of using [CC] on your number of customers?: Increased, Decreased, Stayed the Same
- **Trust in People:** What has been the effect of using [CC] on trust among people in [your community]?: Increased, Decreased, Stayed the Same
- Market Stability: What has been the effect of using [CC] on market stability?: Increased, Decreased, Stayed the Same
- Wants CC to -: What should happen to the amount of [CC] in [your community]? It should .. Increase, Decrease, Stay the Same

7. Discussion

Table 1 gives us an overview of the amount of CC in circulation. Food purchases in Table 2, using CC range from 5.5% of daily spending in Kangemi-Pesa (after 4 months of circulation), 6.2% in Gatina-Pesa (after 11 months in circulation) to 10.3% in Bangla-Pesa (after 22 months of circulation). While food purchases are only a subset of total purchases in CC these results give us reason to believe that there is indeed daily spending and the amount of which correlates positively to the time of circulation.

After roughly 22 months of CC usage Bangla-Pesa is the oldest running Community Currency in Kenya, yet in May 2015 there was infighting among the local committee and members wanted to change the local committee leadership. This created a lack of strong 'anchor tenants' which in turn created a group effect where some members stuck with their trading partners and continued to circulate the CC and others ceased to accept CC. At it's peak the Bangla-Pesa local committee reported a total of 223 active users, this has reduced dramatically using the number of users advertising using the directory in Table 1.

For Bangla-Pesa Table 3 shows that respondents generally believe the CC has increased sales, customers, stability, trust and roughly 90% would like to to see CC usage increase. To the right of Table 3 we have limited these results to those members who are using 10+ CC per day on food *(active users)*. Looking at a P-Value (Wilcoxon Ranked-Sum Test) of 9.17% we see that there is not enough statistical significance (at 95% accuracy levels) to differentiate respondents using 10CC or more daily and those using less. This suggests that the results of the survey are not heavily correlated to CC usage. Indeed, on Table 3 we can see that 51.9% of all respondents indicated that their sales had increased because of the program, while 26.6% indicated a decrease; while those respondents who reported using 10CCC or more daily, 49.1 claimed an increase of sales while 28.3% claimed a decrease.

Again in Table 3 when we compare the 3 CCs for all respondents, we can see that the longer the CC has been in use there is a gradual increase to the reported benefits. This matches the correlation to use of CC for daily food purchases in Table2. In Table 3 for Gatina-Pesa and Kangemi-Pesa with those respondents using 10CC or more daily for food *(active users)*, they

report significant increases in all categories. As with Gatina-Pesa, if we only look at those *active users* of the CC we see that well over 50% of users see increases in sales, customers, trust, stability and desire to see more CC in usage, while less than 10% or less see any decline in the same categories.

With Kangemi-Pesa and Gatina-Pesa the difference between more active members and less active members is much more stark; with 33.8% of all respondents indicating an increase of Trust compared to 66.7% of active users seeing more Trust in the case of Gatina-Pesa. Similarly with Kangemi-Pesa we see 27.2% of all respondents indicating an increase of Trust and 54.2% of active users seeing more Trust. With P-Values of 0.08% and <0.01% for Gatina-Pesa and Kangemi-Pesa respectively we can be sure that the differences between less active and more active users are not due to statistical error.

8. Conclusions

The majority of the respondents that claim changes due to CC usage report that they see benefits in sales, customers, local trust, market stability and would desire to see CC usage increase. Hence there is support for the hypothesis that the CCs are helping increase overall sales but the mechanism for such an increase (e.g. by matching underutilized capacity and unmet demand) is not testable using the data given. Furthermore, respondents across all 3 CCs surveyed are using CCs for 5%-10% of their food purchases. This is a significant amount of purchases in each community to indicate that CC usage is providing some kind of benefit.

Our hypothesis that CC usage increases trust is supported by the results, and the theory that more CC usage would result in increased trust holds statistical significance in Kangemi-Pesa and Gatina-Pesa. The case of variation across the data from the Mombasa and Nairobi CC programs may be attributed to the times of year the data was taken, specific market conditions for the localities, as well as factors mentioned in the Implementation Challenges and Solutions.

Overall we are see that CC programs in Kenya are evolving to adjust to unique conditions and challenges while utilizing and expanding on community trust to provide a needed medium of

exchange. In order to fully understand the dynamics of these CCs we suggest more regular data collection (preferably monthly), to determine how the groups are effected by various conditions. Also important are more objective and verifiable measurements of trust in the community. Trust experiments such as those performed by Naef, M., & Schupp, J. (2009) done at regular monthly intervals may yield more nuanced results.

9 References

- Akay, A., Martinsson, P., Medhin, H., & Trautmann, S. T. (2012). Attitudes toward uncertainty among the poor: an experiment in rural Ethiopia. *Theory and Decision*, *73*(3), 453-464.
- Brick. K and Visser, M, 2015 Risk preferences, Technology Adoption and Insurance Uptake, (RFF Working paper) Recently accepted in Journal of Economic Behavior and Organization
- Cassar, A., Crowley, L., & Wydick, B. (2007). The effect of social capital on group loan repayment: Evidence from field experiments. The Economic Journal, 117(517), F85-F106.
- Coleman, James (1988) "Social capital in the creation of human capital" American Journal of Sociology, vol. 94, pp.95-120.
- Habitat, U. N. (2003). The Challenge of Slums: Global Report on Human Settlements 2003. London: Earthscan.
- Hughes, N., & Lonie, S. (2007). M-PESA: mobile money for the "unbanked" turning cellphones into 24-hour tellers in Kenya. Innovations: Technology, Governance, Globalization, 2(1-2), 63-81.
- Huchzermeyer, M., & Karam, A. (2006). *Informal settlements: a perpetual challenge?*. Juta and Company Ltd.
- Michel, A., & Hudon, M. (2015). *Community currencies and sustainable development: A systematic review.* Ecological Economics, 116, 160-171.
- Naef, M., & Schupp, J. (2009). Measuring trust: Experiments and surveys in contrast and combination.
- Ostrom, E. (2010) Analyzing collective action. *Agricultural Economics* 41 (s1) pp 155-166.
 Wiley Online.

- 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, <www.ijccr.net> ISSN 1325-9547
- Ruddick, W., Richards, M. and 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 <<u>www.ijccr.net</u>> ISSN 1325-9547
- Schechter, L. (2007). Traditional trust measurement and the risk confound: An experiment in rural Paraguay. *Journal of Economic Behavior & Organization*,62(2), 272-292.
- Seyfang, G. & Longhurst, N. (2013) "Growing Green Money?: Mapping Community Currencies for Sustainable Development", Ecological Economics, 86, pp.65-77.
- Seyfang, G., Longhurst, N.(2013) Desperately seeking niches: Grassroots innovations and niche development in the community currency field in Global Environmental Change, 23. pp. 881-891
- Seyfang, G. & Pearson, R. (2000) "Time for Change: International Experience in Community Currencies", Development, 43(4), pp.56-60.
- Seyfang, G. & Smith, A. (2007) "Grassroots innovations for sustainable development: Towards a new research and policy agenda", Environmental Politics, 16(4), pp.584-603.
- Stodder, J. (2000). Reciprocal exchange networks: implications for macroeconomic stability, Engineering Management Society, 2000. Proceedings of the 2000 IEEE, pp. 540-545.
- Turvey, C. G., & Kong, R. (2008). Vulnerability, trust and microcredit: The case of China's rural poor (No. 2008.52). Research paper/UNU-WIDER.

Appendix: 1 Kenyan CC User Guide

V.1 August 2015



What is the "Community Currency User Guide" for?

This document has been created to overcome the most common challenges you can face and to answer the common questions you can ask as a member of a Community Group using a Community Currency. If you can't find in this document the answer to the challenge you are facing or the question you are asking yourself about Community Currency, please contact your chama and share your issue with the committee or board members.

What are the questions answered in this document?

- . What is Community Currency?
- . What benefits can I expect from Community Currency as a member?
- . What is the directory and what are its benefits?
- . Who are my guarantors (backers)?
- . How much Community Currency should I keep in my pocket?
- . Why is it important to keep Community Currency moving?
- . How do I keep an average of 200 Community Currency on a weekly basis
- . Can I give Community Currency as change to customers?
- . What should I do if I have too much Community Currency (more than 400 on a weekly basis)?
- . What should I do if I have too little Community Currency (less than 200 on a weekly basis)?
- . If my supplier isn't a member, how can I buy my supplies and stock with Community Currency?
- . What should I do if other members are not accepting Community Currency?
- . How should I price my goods and services in Community Currency?
- . What should I do if a member comes to buy in my shop with only Community Currency?
- . How do I get a loan in Kenyan Shillings?

1. What is Community Currency?

Community Currencies like Bangla-Pesa, Ng'ombeni-Pesa, Kangemi-Pesa, Lindi-Pesa and Gatina-Pesa are local means of exchange that do not replace but rather supplements (tops-up) the Kenyan Shilling. Through increasing trade by matching unmet local needs with under-utilized local resources community currencies enable sustainable economic, environmental and social development programs. Community Currencies are distinct from the wider field of financial innovations because they are set up with the involvement and backing of the people and organizations that will ultimately use them.

Community Currency is worth the same amount in Kenyan Shillings of goods and services. As a voucher, Community Currency should not be exchanged for Kenyan Shillings.

2. What benefits can I expect from Community Currency as a member?

- To help you to meet your daily needs during the hard times of the month (food, rent, transport, school fees).

- To help the community through community events such as trash collection.

- Members are issued 400 Community Currency, 200 of which is kept for community services. This is your membership fee.

- To help you to increase your daily sales and costumers and to save more Kenyan Shillings. For instance a boda boda operator may have the capacity for 20 customers a day, but in general only has 10. Now he can give rides to those businesses in exchange for goods and services they have in excess, such as a woman who has extra tomatoes to sell. This increases the overall efficiency of the market and helps the community weather poor economic periods.

- To create a strong community network and market (allowing people to meet, share ideas, trade goods and services and to launch group programs and initiatives).

- If you are not a member, ask a network member to help you with an application form (you must be selling and buying

in the local area). You can also take part in community events to receive Community Currency and you can also ask

for change in Community Currency.

3. What is the directory and what are its benefits?

The Directory is the list of all active members using and accepting Community Currency. It helps members know each other and if you have too much Community Currency it is where you should be spending it; and if you have too little Community Currency, ...you should contact the people in the Directory to come to your shop.

4. Who are my guarantors (backers)?

- These are the four people who endorsed you to join the network.

- These four people are committed to buying from you with Community Currency on a regular basis.

- These four people are committed to selling to you with Community Currency on a regular basis.

- These should be the people you should trade with the most.

- If you refuse to accept a balance of at least 400 Community Currency, you and your guarantors (backers), can be expelled from the network including all group/chama activities such as events and loans.

5. How much Community Currency should I keep in my pocket?

- Since all members were given 400 Community Currency they should accept at least 400 Community Currency

- In one week, your balance may go from 0 to 400, back to 0 up to 400 again, but on average you should have 200 Community Currency.

- By accepting more than 400 Community Currency, you are giving a loan to your customers

6. Why is it important to keep Community Currency moving?

The faster Community Currency moves between members, the better the economy is. If it stops moving, it stops helping people trade.

7. How do I keep an average of 200 Community Currency on a weekly basis

- Try to buy using Community Currency each day and try to sell your goods with Community Currency each day.

- Use Community Currency to give change and accept Community Currency as change when you buy from members

8. Can I give Community Currency as change to customers?

- Yes. As long as they understand how to use it; by bringing back to your shop or the shops of other members.
- Show the customer the directory explain how and where to use the Community Currency.

9. What should I do if I have too much Community Currency (more than 400 on a weekly basis)?

If you receive more Community Currency than you spend you might end up with too much. You can easily solve this problem by:

- Using the directory to find new businesses to buy from using Community Currency.

- If you can't buy regularly from members, give Community Currency as change to your customers.

- If none of this solution is working, refuse to accept the Community Currency from the next members and contact your four backers and the committee to explain the situation.

- The network members owe you their services and goods.

10. What should I do if I have too little Community Currency (less than 200 on a weekly basis)?

<u>- You are in debt!</u> By spending your Community Currency you have received a loan of goods and/or services from other members. In order to repay this debt, you must accept up to a balance of 400 Community Currency for your goods and services. If you spend more than you receive you might end up without enough Community Currency. You can easily solve the problem:

- You need more customers with Community Currency. Advertise yourself to more members by contacting them through the directory.

- If no one is buying your goods and services using Community Currency: -

- a) Contact your four backers or guarantors
- b) Notify the committee and ensure that you're in the directory
- c) Buy goods and services from members and accept change in Community Currency

11. If my supplier isn't a member, how can I buy my supplies and stock with Community Currency?

- If your supplier isn't a member explain to them the benefits of the program and give then an application form and a directory.

- If your supplier refuses to become a member, you will make sure to accept as much Kenya Shillings as you need to buy your stock.

12. What should I do if other members are not accepting Community Currency?

- Make sure the member understands the program; they might not understand how to price their items using Community Currency

- Give the person a chance to explain why they are not accepting it and come back another day

- If the member has too much Community Currency already, help them find a way to use it (make sure they have a directory)

If all else fails, contact their guarantors (backers) and committee (they may need to be expelled from the network).

13. How should I price my goods and services in Community Currency?

- First, look at your profit on that good or service and charge half of that profit in Community Currency.

- For example, if you sell Unga for Ksh.100 and you're making Ksh.20 profit, half of the profit is Ksh.10; this is how much you would charge in Community Currency. The final price for the Unga is Ksh.90 and 10 Community Currency.

- In general, for every Ksh.100 you could accept 10 Community Currency.

- For every Ksh.50 you could accept 5 Community Currency

14. What should I do if a member comes to buy in my shop with only Community Currency?

- If someone comes to your shop with no Kenya Shillings tell them to come back when they have some Kenya Shillings.

15. How do I get a loan in Kenyan Shillings?

- Community Currency is a loan of goods and services which you pay back with your own goods and services.

- To get a Kenyan Shilling loan, you must save Kenyan Shilling in the group/chama account and apply for a loan from the group itself or the bank

- By using Community Currency more, your business should have more customers and more stability and hence more deserving of a loan.

Test your Knowledge with the Community Currency Quiz below

NOTE: Many answers may be correct; mark all that apply.

- 1. How much Community Currency were you first issued as a member? (a) 100 (b) 200 (c) 400 (d) 500
- 2. How much Community Currency did you pay to be a member? (a) 0 (b) 100 (c) 200 (d) 400
- 3. Can you exchange Community Currency for Kenya Shillings? (a) Yes (b) No (c) Sometimes
- 4. What is the value behind 100 Community Currency?
 - (a) Ksh.50 (b) Ksh.90 (c) Ksh.100
 (d) Ksh.100 of goods and services (e) Ksh.110
- 5. What does it mean if you have 400 Community Currency in your pocket at the end of the day?
 - (a) I have too much Community Currency
 - (b) I need to sell more products for Community Currency
 - (c) I have as much Community Currency as I was first issued
 - (d) I should be spending it as fast as possible
 - (e) I can buy Ksh.400 of goods and services with members of the network
- 6. What does it mean if you have 500 Community Currency in your pocket at the end of the day?
 - (a) I have too much Community Currency
 - (b) I need to sell more products for Community Currency
 - (c) I can exchange my 500 Community Currency for 500 ksh.
 - (d) I have 100 more than I was allocated and should spend it as soon as possible

7. What does it mean if you have 0 Community Currency in your pocket at the end of the day?

- (a) I have too little Community Currency
- (b) I should be spending it as fast as possible
- (c) I have received a profit of at least ksh.200 of goods and services from members for free and need to repay them.
- (d) I need to sell more products for Community Currency
- 8. How do non-members use Community Currency?
 - (a) Receive it for work done during community events
 - (b) Choose to accept it as change when buying things in Kenyan Shillings from members
 - (c) Never get to use it
 - (d) Can only use it once they become members

Quiz Answers: <u>1.) c 2.) c 3.) b 4.) d 5.) c, d, e 6.) a, d 7.) a, c, d 8.) a, b</u>