Social Capital and the Use of ICTs by Small-Scale Entrepreneurs in Soweto, South Africa

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Abstract: Information and Communication Technologies (ICTs) play a key role in starting and operating small-scale businesses. In Soweto, South Africa, mobile phones have sparked the creation of new business models and strategies among entrepreneurs. Their use is shown to help maintain relationships and build trust between businesses and clients, thus contributing to individuals' social capital.
Key words: social capital, South Africa, Soweto, mobile phones, strategies.

T he relationship between access to ICTs and economic development has been explored by a number of researchers (KELLY et al., 2009; ROLLER & WAVERMAN, 2001; MILEK, STORK & GILLWALD, 2011). In South Africa, a high cellular penetration level coupled with increasing availability of handsets with Internet browsing capability suggest that "mobile technology could offer Internet potential to South African users not offered by computer based technologies" (HYDE-CARK & VAN TONDER, 2011, p. 264), thus increasing the positive potential economic effects of investments in telecommunications infrastructure. Given that in 2008 less than 15% of South African households had a computer, and less than 9 inhabitants per 100 were using the Internet (ITU, 2009), mobile devices are expected to provide small and micro-scale entrepreneurs with the ability to access the Internet without costly initial investments in PCs and broadband service.

Several papers have contributed to the quantitative discussion of mobile connectivity in South Africa, particularly regarding the substitutive nature of mobile devices, fixed line infrastructure, and the digital divide (GRAY, 2006, FUCHS & HORAK, 2008; JAMES & VERSTEEG, 2007; JAMES, 2009). This paper adds to the conversation by considering the ways in which individual small and micro-scale entrepreneurs in the tourism industry strategize their use, payment, and ownership of ICTs to network with other entrepreneurs and maintain relationships with customers. Mobile phones were chosen as

the unit of analysis because they both substitute and complement fixed line telephony, and in some cases, take the place of home or office-based Internet access. Entrepreneurs' use of the devices can be usefully related to the concepts of social capital proposed by PUTNAM (2000) and BOURDIEU (1986).

More than 50 small and micro-scale entrepreneurs in the tourism sector based in Soweto participated in interviews, focus groups, and observation prior to and following the FIFA World Cup held in South Africa in June and July of 2010. During this event, these entrepreneurs were seeking a share of what was expected to be R11 billion, or about $1.4 billion in visitor spending [1] (van GASS, 2006, Oct. 25). Participants included bed and breakfast (B & B) owners, tavern or shebeen [2] owners, commercial sex workers, and tour operators. Soweto was chosen as the site of this study because of its historic and social importance to South Africans and to foreign visitors, as well as the high expectations for increased revenue among Sowetan business owners during the World Cup. Over a period of eight weeks prior to and three weeks after the event, participants shared with the researcher their use of ICTs including mobile phones, fixed-line phones, and PCs and related communication technologies such as email.

■ Theoretical context

Social capital

Social capital is "connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them" (PUTNAM, 2000, p. 19). Social capital can be bridging, which refers to connections individuals maintain to those outside their usual networks, or bonding, which serves to reinforce existing connections between individuals who share particular characteristics (PUTNAM, 2000). Bridging capital connects individuals with diverse experiences and views and is considered beneficial to society, while bonding capital can have either positive or negative societal

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[1] Actual visitor spending turned out to be about a third of original predictions (Malan, 2010, Jul. 10).

[2] A shebeen is an informal drinking establishment that may be located in a home or in another place of business.

effects, depending on the characteristics within the group it reinforces. Bridging capital is often more difficult to develop. Participants in this study tended to form bonds more easily with other businesses or organizations in their economic sector, their geographic subdivision, or within their ethnic group, and sometimes struggled to extend a productive network outside Soweto.

BOURDIEU (1986) describes social capital as "the aggregate of the actual or potential resources which are linked to possession of a durable network of [...] institutionalized relationships of mutual acquaintance and recognition" (p. 248). These resources represent the connections individual entrepreneurs have to each other, facilitated by familial ties and by membership in organizations. Bourdieu also notes that "the volume of the social capital possessed by a given agent thus depends on the size of the network of connections he [sic] can mobilize and on the volume of the capital (economic, cultural, or symbolic) possessed in his own right by each of those to whom he [sic] is connected" (1986, p. 249). Therefore, the amount of social capital an individual possesses depends on the social capital possessed by those in their network. Finally, Bourdieu states "[the] network of relationships is the product of investment strategies, individual or collective, consciously or unconsciously aimed at establishing or reproducing social relationships that are directly usable in the short or long term" (1986, p. 249), suggesting that strategically investing in social connections may influence future business performance.

■ Research questions, methodology, and participants

Prior to the start of the study, the following research questions were proposed:

- RQ1: What are the main uses of ICTs among entrepreneurs in Soweto?

- RQ2: How do the uses of ICTs by participants rely on and increase their stocks of social capital?

The relationship between the use of ICTs and social capital is defined qualitatively as the ways in which participants' use of mobile devices facilitates connections to other members of the community with whom they are able to develop or maintain a mutually beneficial business relationship.

Table 1 - Participants' pseudonym, type of business, gender, location, and status

Contact	Business	Gender	Location	Business status
Sobukwe	Restaurant	M	Orlando West	Formal
Londi	Restaurant	M	Orlando West	Formal
Kwanele	Restaurant	M	Orlando West	Formal
William	Restaurant	M	Dube	Formal
John	Restaurant	M	Orlando East	Formal
Jabu	Accomodation	M	Orlando East	Formal
Simosihle	Accomodation	F	Orlando East	Formal
Sandile	Restaurant/nightclub	M	Meadowlands	Formal
Phila	Restaurant/nightclub	M	Meadowlands	Formal
Hlengiwe	Construction	F	El Dorado Park	Formal
Nabeela	Transport	F	El Dorado Park	NGO
Vuyiswa	Transport	F	El Dorado Park	NGO
Thulani	Accomodation	M	Kliptown	Formal
Richard	Pub/tavern/nightclub	M	Pimville	Formal
Jonah	Tour operator	M	Protea South	Formal
Sela	Tour operator	F	Protea South	Formal
Titus	Tour operator	M	Protea South	Formal
Adam	Accomodation	M	Pimville	Formal
Gary	Pub/tavern/nightclub	M	Meadowlands	Formal
Lindiwe	Restaurant	F	Diepkloof	Formal
Franklin	DSTV installer	M	Protea	Formal
Isabelle	Accomodation	F	Pimville	Formal
Grace	Pub/tavern/nightclub	F	Westcliff	Formal
Nandi	Accomodation	F	Pimville	Formal
Lindani	Tour operator	M	Orlando West	Formal
Gavin	Restaurant	M	Orlando West	Formal
Duduzile	Accomodation	F	Pimville	Formal
Fikile	Accomodation	F	Pimville	Formal
Ntombazi	Accomodation	F	Orlando West	Formal
Stanley	Tele services	M	Orlando East	Formal
Happiness	Tele services	M	Orlando East	Formal
Shep	Tele services	M	Orlando East	Informal
Gerald	Tele services	M	Orlando East	Informal
Thoko	Tele services	F	Orlando East	Formal
Ronald	Tour operator	M	Kliptown	Formal
Geraldine	Accomodation	F	Orlando East	Formal
Precious	Accomodation	F	Diepkloof	Formal
Davis	Pub/tavern/nightclub	M	Pimville	Formal
Oswald	Tour operator	M	Orlando West	Formal
Paris	Commercial sex work	F	Joburg North	Informal
Emma	Restaurant	F	Orlando West	Formal
Reggie	Pub/tavern/nightclub	M	Tladi	Formal
Jack	Television	M	Orlando West	ommunity
Kevin	Pub/tavern/nightclub	M	Diepkloof	Formal
Don	Pub/Tavern/nightclub	M	Diepkloof	Formal
Sampson	Artist	M	Diepkloof	Informal
Msizi	Commercial sex work	M	Joburg Center	Informal
Penelope	NGO	M	Rosettenville	NGO
Jeremy	Tour Operator	M	Joburg South	Formal
Nhlaka	Accomodation	M	Orlando East	Formal
Justin	Tour Operator	M	Joburg	Formal
Sibusisiwe	Commercial sex work	F	Joburg Center	Informal
Zanele	Commercial sex work	F	Joburg Center	Informal
Busi	Commercial sex work	F	Joburg Center	Informal
Zake	Commercial sex work	M	Joburg Center	Informal
Jacob	Commercial sex work	M	Joburg Center	Informal
Sifiso	Restaurant	M	Diepkloof	Formal

Once such a relationship has been established, participants may increase their stock of social capital by referring clients to others, and may spend social capital by, for example, asking for logistical assistance such as transportation arrangement, referrals from others when business is slow, or direct assistance with money or airtime.

Investigating the linkages between ICTs and social capital suggests the use of qualitative research methods, including participant observation, semi-structured interviews, and group discussions (COOK, FINE & HOUSE, 1995; DARLINGTON & SCOTT, 2002; LOFLAND & LOFLAND, 1995).

Participants were recruited through a combination of purposive and network sampling; three well-known entrepreneurs in the community were chosen as a starting point. Most were formally registered with the government and operated in a fixed location. Many have the ability to supplement the income from their formal business with informal earnings, through, for example, the sale of pre-paid phone cards, pre-paid Internet access, or other ICT-related services like the preparation of documents such as resumes or CVs. Table 1 indicates the pseudonyms, gender, type of business, location, and status of participants in the study.

In order to gain entry into the community, four individuals were engaged and contributed to the study as "subject matter experts" or "key informants" (FINE & SANDSTROM, 1988, p. 51). The experiences and contacts of these individuals assisted in making contacts with small and micro-scale entrepreneurs. The guides were two men and two women, all originally from Soweto. Concurrently and following the research, interview and focus group transcripts, field notes from observations, and other materials were analyzed using iterative, grounded theory methods (GLASER & STRAUSS, 1967), with Atlas.ti qualitative data management software. Details of ICT-related strategies for the use of mobile devices, payment for airtime or cellular network access, and ownership and their connection to social capital are presented through the use of illustrative examples and quotations from participants. While the focus in this paper is on mobile communication, other uses of ICTs often intersect the use of mobile devices.

■ Results

The role of mobile communication in starting businesses

Several participants discussed the role of the mobile phone in launching their business. For example, Jeremy, a tour operator, described how he used a mobile device to start his company:

> "[…] when I started, I had nothing. I managed to get myself a laptop, and I was always moving around with [it]. Calling a friend…pick me up there, drop me there. With the laptop, I had a SIM card, so that I could connect to Internet […] what I needed, when I started, was to connect to Internet, because people send emails. And what I needed was a cell phone. And at that time I was not getting any income. It was a bit, very hard for me. And my Mom used to say to me, go look for a job. She was getting angry as I'm always, calling and saying, please load me airtime. And when she would give me money, before I would go buy food I must first buy airtime. So, if I've got, 30 rand, to buy food, I'd rather go to sleep without eating but have airtime, because I believe that if I miss a call, I should return the call, because it could be potential business."

A pay-as-you-go phone with a removable SIM card that can be tethered [3] to a laptop allows entrepreneurs like Jeremy to avoid investing in expensive telecommunications infrastructure and still access essential services like email and phone. For many, the pay-as-you go mobile phone is the common denominator communications device and is adequate for many if not most business functions.

Use of mobile communication: strategies

The rapid rise in availability of mobile phones and the ITU statistics suggesting a greater than 100% penetration rate of the devices in South Africa (ITU, 2007), coupled with the associated business opportunities for micro-scale entrepreneurs, make mobile phones a development success story in South Africa, changing expectations for South Africans and foreign visitors alike. For example, Justin, a tour operator who has been in business since 1984, reported that since he started using a cell phone, customers

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[3] Tethering refers the process of connecting a cellular phone to a laptop and using the phone as a modem.

developed a greater expectation of speaking to him personally. He noted that "people feel better when they speak to the owner of the business […] I am not objecting, because once I'm done I know the job is in the bank. When they talk to [my booking agent], it could have been the same quotation, but it's the third party. That's where cell phones have improved my business." As a strategy, use of mobile devices allows the development and maintenance of relationships with customers, something that previously did not happen easily when a tour operator was on the road with other clients.

Tour operators in particular benefit from the ability to "hyper-coordinate" their activities (LING & YTTRI, 2002, p. 139) using mobile phones. Because of the large distances between Johannesburg's airport and hotels or other lodging in the city and Soweto, which is at least 35 km from the airport, it is important to make sure that drivers are meeting clients when they promised to. Prior to the mobile phone, this was done using public phones, whenever a driver could stop and check in with the office. Justin said:

> "All I could do [before I had the cell phone], wherever I was on tour, go, quickly there, pay phone, yes, what's up, how far are we? No, there's another four, they need to be picked up at the airport, so that tells me, make a quick job with the others […] one thirty, two, a quarter to 2, I'm picking those in Sandton and I'm moving straight to Soweto."

Having access to a mobile phone has made Justin's and other tour operators' lives much easier, in addition to improving clients' experience when visiting South Africa. Since referrals are an important part of tourism industry business models, building these relationships builds future business.

For other types of entrepreneurs, particularly commercial sex workers (CSWs), the mobile phone functions as a tool for building relationships and hypercoordinating, but also for disguising identity. Jacob reported: "My main approach, my friend, has been the cell phone. With my cell phone I do wonders […] I connect, even there, on the net, I connect." In addition to finding new clients and strengthening relationships with existing clients, mobile devices can also allow communication with other CSWs for protection and information. Msizi reported that:

> "[W]e communicate within ourselves for our safety and protection […] so that, if there is a violent client in Yeoville, I can inform my fellow sex workers in Braamfontein that hey, there is this guy who's driving in this car […] registration number is this and this, don't go out with that guy, you know? So that, you know, we cannot be exposed to violence and exploitation of clients."

In this example bonding social capital is increased, as a group of CSWs shares information of immediate importance within the group.

These experiences with mobile voice communication illustrate not only the necessity of the devices in the day-to-day operation of businesses, but variation in the ways they are used. Those entrepreneurs who draw on network resources for information are able to take advantage of opportunities or, in some cases, to avoid authorities.

Mobile messaging and SMS

Business owners use SMS to inform their clients about special events and promotions at their establishments. Broadcasting a short, tailored message to a list of regulars is effective because every mobile user in South Africa can receive such messages whether or not their phone has airtime, thanks to the Calling Party Pays (CPP) system, which means that the user who initiates a cellular interaction bears the entire cost of that interaction. At approximately 22.5 SA cents per SMS, this is some of the least expensive, most targeted marketing a business owner can do. John, a restaurant owner in Orlando East, collects mobile numbers and other information such as preferred drink, favorite music, and age from jazz fans across Gauteng province. Partnering with liquor suppliers, John subsequently targets the appropriate segment of his market when he has arranged, for example, a whisky tasting or an appearance by a favorite jazz artist. He reports that this type of market segmentation has been very effective in increasing visits from regulars and in bringing new customers into the business. At the time of our discussion, John had more than 1000 people in his database.

Commercial sex workers also use SMS messages to communicate amongst themselves and with clients. Several female sex workers who prefer to work on the street suggested that using SMS is a more secure way to communicate within their network. Zanele and Busi reported the following:

> Busi: "Mostly we do SMS, because it's dangerous to pick up the phone at night."
>
> Zanele: "Yeah".
>
> Busi: "You can kind of hide".
>
> Researcher: "So if you were to look at your SMSs, would they be mostly to other sex workers, or to clients, or mixed?"
>
> Zanele: "To sex workers".

> Busi: "Mostly, ah, sex workers and clients both. Both. Because we are so connected. We are working, we are working in Sandton, and they are, we have friends downtown, we have friends here in Hillbrow because, sometimes we work here in Hillbrow."

In general, the use of SMS messaging to connect with customers and with each other is a key component of marketing strategies, and also strengthens social networks by providing an alternative mode of communication without the need for another device. Sending SMS messages is quick, minimally intrusive and obtrusive, and the use of the technique was well understood among participants.

Mobile Internet

A mobile phone may be the key component of an entrepreneur's Internet access strategy, either by tethering or direct access using a mobile browser. Following DONNER & GITAU's (2009) classification of mobile Internet users, the majority of participants in this study are PC-primary users, who in rare cases use their mobile devices to access the Internet. For example, although he has access to the Internet in his restaurant, Sobukwe does use one of his mobile devices, an iPhone, to access the Internet prior to meetings with important officials. When I asked him how he used the device, he provided the following example:

> "Sometimes I have to go and meet government officials, we need business from them, because other government departments they come and dine here. So, while I am waiting for the government official to see me, I normally Google the guy."

Other participants access the Internet through a specific cellular Internet access protocol. Sampson, who is a freelance artist, uses his mobile device exclusively to update his Facebook status and access the Internet. For others, maintaining a boundary between a work identity and personal identity is facilitated by the use of a mobile device for Internet access.

> Jacob (CSW): "Anybody can use [the office computer] and, I mean, I'm aware that people know me and some idea of the work that we are doing. But it's kept under the carpet, also, it's not something spoken, unless if you see me doing it."

Using a mobile device for email and Internet access solves this problem as individuals maintain complete control over who sees and uses the device. For some participants, getting access to a private computer is expensive and

logistically challenging, which is also solved by using a cell phone to access the Internet.

Despite these advantages, participants in this study were generally more interested in having the Internet available on a PC in their home or business and did not typically report using their mobile device for Internet access. While mobile Internet access has been reported as a significant feature in the communication strategies of young people (KREUTZER, 2009) and among low-income urban South Africans (CHIGONA et al., 2009), in this study, it was not often mentioned and its use was limited to younger male participants. Furthermore, mobile or fixed Internet was something some participants rarely or never used, suggesting both an opportunity to create connections to a wider network and a digital divide between certain types of business owners.

Payment for mobile services: strategies

Another strategy adopted by participants revolves around paying for access. The relatively low cost of a cellular handset, coupled with the ability of the user to "top up" the minutes on a pay-as-you-go phone almost anywhere in South Africa, made participants in this study more likely to prefer to use the pay-as-you-go method of buying airtime as opposed to a monthly contract. One of the reasons mobile customers are able to use prepaid phones so effectively is the structure of cellular charges in South Africa.

The CPP (Calling Party Pays) convention in South Africa allows users to create communication strategies that exploit certain characteristics of the system, thus increasing the usefulness of pre-paid airtime. Users without airtime can send "please call me" messages, five to seven of which are given free by the cellular provider each day and can be personalized, allowing the user to share a few characters of information at no cost. In addition, it is possible for third parties to send airtime to another cellular phone, and some participants use this as part of their business model. Most cell phone users in South Africa exploit the characteristics of the CPP system to their advantage and either ignore or tolerate the disadvantages, such as receiving "please call me messages" from their contacts without airtime.

Several participants use multiple mobile phones, at least one of which is on a contract, to assure their ability to be in contact with customers. For

example, although he generally uses a contract phone, Jeremy explained that he keeps a pre-paid phone in addition to a contract phone for the following reasons.

> "Because, contract, business maybe goes down, I didn't pay, I still must be reached […] I must still be able to make calls. It happened a lot that I didn't pay the bill, they suspend outgoing calls. And when they do that, I'll buy airtime, I load in the other phone and still make calls."

For some entrepreneurs, the cost of a cellular contract can easily be rolled into the operation of their business. For others, whose businesses are smaller or have less income, it is more important to control the cost of telecommunications carefully, and they tend therefore to choose to use prepaid cellular phones. In addition to use strategies and payment strategies, many entrepreneurs have more than one handset or SIM card, each of which they use for specific purposes.

Mobile devices: ownership strategies

Nearly all mobile phones in South Africa are "unlocked;" in other words, not tied to a particular service provider's network. By changing SIM cards, a user may access any of the country's networks with the same handset. Entrepreneurs have many reasons for owning or using multiple mobile devices. In the case of commercial sex workers, multiple devices help to conceal their work from their families or friends. Busi and Zanele, commercial sex workers, explained why they each used two mobile phones:

> Zanele: "Because, I have a lot of clients […] and my phone can ring anytime, right now, that the client needs me. And then the other one, is because we are attending school, actually, we joined the program, that they are training us for skills […] so, the other one is for school and for family."

> Busi: "Yes. Because sometimes my brother can call me and he'll be […] joking, and then I'll be thinking that I'm talking to a client, when I'm talking to my brother."

Although some commercial sex workers carry or use multiple handsets, others carry multiple SIM cards and exchange them in the same handset. In addition to providing camouflage, this strategy also allows a commercial sex worker to sever ties with clients who are considered undesirable.

> Zake: "I've got just, two, two SIM cards."

> Msizi: "[…] SIM cards, numbers, I can change anytime. If you are
> having boring clients, you know, sometimes there's those clients […]"

> Zake: "You just change the SIM card, then you change the number.
> You just cancel them, change the SIM card."

For commercial sex workers, the ability to use multiple handsets or multiple SIM cards is an essential component of preserving the division between their work and personal lives.

Most business owners do not report swapping SIM cards; instead, they have two or more handsets. Lindani, who runs a hostel and bicycle tour company in Orlando West, has two mobiles that he uses to connect to two different groups of people. His company also has two landlines in the office, and as a business that primarily caters to international tourists, the land lines are the main method for his customers to make bookings. He described the reasons for having two phones as follows:

> Lindani: "So we try also to make sure that when it's more like family
> and stuff we can give that line, but when it's friends…you'd rather not
> let them have another cell phone number that they can [call]. So that
> when I have a phone with me I don't have to have people who are just
> gonna, speak about something [not business related]."

Entrepreneurs generally maintain a particular cell phone number for regular clients. A recently passed law in South Africa allows cell phone users to carry their number if they change service providers. [4]

For those entrepreneurs who own phone shops, a second mobile phone performs a specific business function. In many such shops, there are four to five handsets available for customers to make calls at reduced rates. The devices are actually cellular, but to the user appear as fixed-line telephones. Because each of these phones is pre-paid, owners of these businesses use their second handset to send airtime to them. Shep, who owns an informal phone shop on a busy corner in Orlando East, also uses the business phone to transfer airtime to customers who need credit but are unable to buy a recharge voucher. He gave the following example:

> Shep: "[…] you are working far away, you are needing airtime
> desperately. You send me SMS, please give me […] 30 rands. I know
> you are far away with a job, you see. I use that [phone], I transfer

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[4] Number portability was introduced into the South African cellular marketplace in late 2006. (www.cellular.co.za. - 2007, January 23. *Number portability in South Africa takes off*. http://www.cellular.co.za/news_2007/jan/230107-number_portability_in_south_afri.htm)

airtime to you […] and after all when you're coming to the location [5] you give my money back. You see. It's like I'm saving, from that airtime, you see?"

Shep reports that he has around 80 customers who use this service, and while he sometimes experiences problems with payment, customers eventually pay him. An informal entrepreneur like Shep has the ability to use his ties to loyal customers to provide a useful service that functions almost solely on trust. The strategy is facilitated by the prevalence of SMS messaging among participants, South Africa's pre-paid structures, and expectations and use habits among cellular users.

Social capital: connecting mobile communication and word of mouth

Participants tend to use mobile voice communication within their networks as a complement to face-to-face contact. Fikile, a B & B owner, described the importance of word of mouth in this process:

> "One thing that is very powerful, word of mouth… if I had money, I would definitely have sales people. People who can go to people and talk to them about my business […] face to face […] with technology, I just think that, OK, technology's good, but only for the person that is looking for something […] it cannot surprise you. Whereas word of mouth can surprise you."

Fikile's comment regarding the ability of technology to surprise the user reflects the state of Internet use in South Africa. Unlike the typical user in, for example, the United States, who has practically unlimited access to data, most South African users are charged per byte. What is missing from the experiences of these users is serendipity, which MISLOVE, GUMMADI & DRUSCHEL (2006) describe: "while browsing the Web, users often discover interesting information by accident, clicking on links that they had not intended to query for" (p. 83). The inability of most participants to benefit from serendipity in their browsing experience means that those who do use the Internet regularly, such as Precious, Sela, or Jeremy, are less likely to have new information from their browsing to share with members of their networks. How far new information travels among members of the network then depends on the strength of connections to other members.

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[5] Former townships like Soweto are sometimes referred to by residents as the "location," the "lokshion," or "lokasie," which is the Afrikaans translation.

Several participants spoke about the strength of connections to other entrepreneurs in the area. Lindani noted:

> "We have connections to other B n Bs, to other businesses, to other service providers, and to community police forums, to our police stations, to […] our hospitals, you need to have all the connection there, so that people know what you are doing. That's your security […] the more people know, the more people understand that your business is about developing the community, not just developing an individual […] they will support you."

Although operating a business in Soweto is competitive, participants do form alliances that do not appear to contribute to economic capital but support previously established relationships. Similar to what OVERÅ (2006) reports in the Ghanian context, these relationships are facilitated by face-to-face communication and maintained through the use of communication technology, particularly voice communication. Others, such as commercial sex workers, have different challenges and have developed different mechanisms to strengthen networks, such as the use of SMS to share information at night and by interacting with NGOs and other institutions that provide training on issues such as HIV/AIDS prevention.

When entrepreneurs draw on social capital, they often use mobile communication to access extended networks. Gary, who owns a pub/restaurant, describes how the connections his friends possess allow him to capitalize on one phone call.

> Gary: "[…] you know, the way I push it, is because people around here chill in groups. You know, the groupies. Like I know when I call Mungu, for instance, Mungu will bring her friend […] I know Mungu definitely will bring Pheti […] will bring Victor. If I can just give you one call, hi Pheti, how are you, fine, ah, what's up, no, I'm here, I'm chilling, you know? They will say, ai, I'm gonna come and pass through, you know? That's how they bring people around."

Use of mobile communication, either voice or SMS, allows Gary to reach more than one potential customer. The "groupies" who are with the individual who receives the message are essentially "weak ties" to Gary from the perspective of their communication with the message receiver, even though he may have a previously established relationship with them.

One well-known tavern in the Pimville subdivision was consistently mentioned by participants as being an important resource for their businesses. This tavern has been in operation since 2002, and through its prominence in the area, often attracts tour buses. In addition, the owner

Richard often sends people to other restaurants when he does not have the capacity to serve them. About sharing information he said:

> "I must be honest, eh, we do share, information but not the complete information […] I refer people to Duduzile, I refer people to Sobukwe, ah, a bus will come and say Richard we want food, I say no, let's make a booking. Then I will phone William I say William, there's a bus here you know I just took up the booking."

Other participants expressed frustration regarding their ability to exploit social capital and access information that would benefit their businesses. For example, Hlengiwe reported her perceptions of the importance of economic and social status on others' willingness to share resources:

> "If I drive the best car, I've got the best home, I've got the best of this, the best of that. Somebody [who is] low, is nobody, in my eyes […] and even if you've got the information that can help them, the next person, you don't want to let it go. Because now that person might overtake you."

In a competitive business arena, social capital can both help and hinder the development of new businesses. Many entrepreneurs are willing to share information and customers with those just getting started if they have an already-established connection based on proximity, a previous relationship, or membership in an organization. Those who are outside such a network find it challenging to access the resources within the network and the use of ICTs does not contribute significantly to solving this problem.

Final thoughts: social capital and mobile communication strategies

The examples presented in this paper are illustrative of the ways small and micro-scale entrepreneurs in Soweto strategize the use, payment for, and ownership of mobile devices. Considering these strategies in the context of social capital suggests that connectedness to a social network is improved through innovative strategies for payment and ownership of multiple devices, which in turn facilitate the use of mobile communication via voice and SMS. The structural characteristics of South Africa's CPP and pay-as-you-go system also provide opportunities for novel business practices that are based on relationships between individuals, such as providing airtime on credit to a remotely located customer. Participants in this study reported that social capital can be the basis for sharing customers and information, but these stocks of social capital often come from geographic proximity and personal history rather than from relationships

developed in the context of the use of ICTs. A phone call can facilitate a meeting, but it is word of mouth that allows an entrepreneur to benefit from an extended network of connections.

It is evident from the experiences of participants that while mobile devices, in particular, and ICTs, generally, have the potential to help start and operate businesses and connect to new customers and clients, they function primarily to maintain relationships created in the physical world rather than increase the size of an individual's network. However, the invention of novel strategies for providing airtime to remotely located customers is a clear example of the ways in which mobile devices and the associated structures in the South African telecommunications system can support increases in reciprocity and trust between entrepreneurs and their clients, thus adding to social capital as defined by PUTNAM (2000). In addition, as entrepreneurs increasingly adopt smartphones with enhanced social networking capabilities, new forms of useful social capital may emerge in Soweto, such as the number of Facebook friends and followers on Twitter. Social networking tools could allow entrepreneurs to interact more effectively in virtual space and facilitate increasing the size of their networks without meeting face to face with clients or business acquaintances.

Opportunities for further research

This study is intended to provide a framework for theorizing about the development and maintenance of social capital among a population of entrepreneurs in only one part of the South African business landscape. While this paper has identified a number of important ICT-related strategies in use among participants, more research needs to be done to connect ICT use to opportunities to start and maintain existing businesses and relationships within and outside entrepreneurial communities.

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