



Critical review

Mobile phones and safety in developing countries: Evidence from Sub-Saharan Africa



Jeffrey James

Tilburg University, The Netherlands

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ABSTRACT

This paper is concerned with the relationship between safety and mobile phones with particular reference to Sub-Saharan Africa; and looks at a range of geographical contexts: non-violent, conflict and post-conflict situations. The main part of the paper reports on recent findings of extensive field-work into the use of mobile phones in 11 countries in Sub-Saharan Africa. The findings are important partly because from a welfare view, it is use rather than mere adoption that generates actual benefits to consumers. What the survey finds is that use of the mobile phone is mainly for safety-related purposes and that the countries that fare highest in terms of usage are drawn from the richest and poorest members of the sample. In explaining these results I draw heavily on the relationships and interactions between poverty, inequality and crime. For example, the dominance of Southern African countries is ascribed to their exceptionally high levels of inequality, which, in turn, are due partly to the unequal effects of resource abundance.

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1. Introduction

The pursuit of safety seldom appears in then existing literature on the use of mobile phones in developing countries; nor is it to be found among the most important uses of this technology in developed countries. However according to detailed new evidence for 11 African countries, it turns out that this need appears (on average) at the very top of a list of uses of mobile phones in the countries concerned (where the list runs into the twenties in terms of important uses). The survey data also enables countries to be ranked according to the safety mechanism in question. The purpose of this short intervention is to document, and where possible explain these novel findings. My main thesis is that the observed desire for safety via mobile phone use is strongly driven by the extent

of crime in a country, which, in turn, is closely related to existing levels of poverty and inequality.¹ For empirical support for this argument I rely heavily on relatively recent cross-country survey data compiled by the United Nations Office on Drugs and Crime (UNODC, 2011). First, though, before the method and results of the survey on mobile phone use in Africa are presented, I deal with other sources of information that link mobiles to safety.

2. Non-conflict situations and safety

Sreekumar (2011) argues, using the context of fishing in Kerala, that there is a connection between mobile phone usage and safety even in non-conflict situations: “The possibility of actualizing the

¹ Safety is raised in James (2014) but not explained in terms of poverty and inequality.

E-mail address: m.jjames@uvt.nl

collectivist logic in a community's appropriation of a new technology has been overlooked in cultural studies on mobile phones" (Sreekumar, 2011, p. 175). Accordingly, he "examines how a sub-tern fishing community in Kerala, India, has appropriated the cell phone in ways that are in keeping with its traditional collectivist ethos. Within this context of collectivist appropriation, the cell phone has helped enhance their working and living conditions" (2011, p. 173).

More specifically, Sreekumar (2011) studies how mobile phones contribute to the safety of fishermen during extreme weather conditions and emergencies. The importance of mobile phones in these conditions is reflected in the seriousness with which the safety of the technology is ensured while at sea. Many fishermen, for example, described that the phone is kept safely in a polythene sheet inside a box that is tied to the bottom of the engine. His main finding is that the "primary narrative that defines the discourse of fish workers when they mention mobile phones has to do with its utility during emergency situations" (2011, p. 178).

On rare occasions, however, even fishing can turn into a conflict situation. In West Africa, for example, pirates have sometimes resorted to violence against local fishermen who, as a result, became fearful of taking mobiles to the local seas. The problem was dealt with by distributing mobile phones equipped with GPS-enabled cameras, which were then used to report the presence of pirates to government and other institutions that are charged with following-up on the illegal fishing vessels.

3. Civil wars and post-conflict situations

The security use of mobile phones in conflict and post-conflict situations is rather similar in that diminished safety is a hallmark of both these circumstances and the need to check on the safety of friends and families is ubiquitous. Best (2011), for example, speaking of post-conflict Liberia points to a "consistent prevalence of security and emergency uses" (p. 24). Moreover, Monrovia data suggest "a distinct factor emphasizing security, while rural data revealed security as an item of consensus" (Best, 2011, p. 24). It was clear that the safety and security of self, of loved ones, and of personal property is also still a concern in Liberia.

An operator in Liberia provided one of the most interesting ways in which mobile technology contributes to safety. The operator recounted that after his company had announced its intention to remove free calling during the night hours, customers complained about their needs during emergency situations. Another operator suggested that many users night time safety was more important to them than conserving battery power (Best, 2011).

4. Survey method and results on safety – 11 African countries

The African survey in question was conducted in eleven countries in Sub-Saharan Africa by a South African research institution called 'Research ICT Africa'. The countries included range from some of the continent's most developed (eg. Botswana) to some of its most poverty stricken (eg. Ethiopia) and they are drawn from East, West and Southern Africa. The purpose of the survey was to examine use patterns of mobile phones because we hoped to use the results to fill an important gap in the literature on mobile phones in developing countries, which, to-date, heavily focus on adoption, and utility, rather than actual use and real benefits (see James, 2014).

Tables 1 and 2 show respectively the leading uses of mobile phones (averaging across countries) and the countries that rank highest according to the top use mechanism – the one, that is, which is concerned with the safety of family members (see Table 1). Table 1 shows that no fewer than 82.3% of mobile users

Table 1

Top use-mechanisms (cross-country average). Source: Research ICT Africa (2011).

Mechanism	%
% using a mobile phone to check on the safety of loved-ones	82.3
% beeping ^a	81.6
% using mobile phone to increase their contact with friends and family	78.5
% with savings on time and travel cost	76.2

^a Note: beeping is a popular process of calling without picking up to get someone to call back or to convey a message through a set number.

Table 2

Countries ranked according to safety use-mechanism (%).

Country	% ^a	Rank
Ethiopia	94.6	1
South Africa	92.1	2
Botswana	88.6	3
Namibia	87.8	4
Tanzania	85.7	5
Ghana	85.5	6
Uganda	81.5	7
Kenya	79.3	8
Nigeria	76.9	9
Cameroon	67.6	10
Rwanda	66.2	11

^a This refers to the percentage of people who agreed with the statement that 'I use my mobile phone to check on the safety of my loved ones and to see where they are'.

employ the technology for this purpose.² Evidently the ability to check on the safety of such persons is even more important than the familiar benefits of saving time and travel costs via mobile phones in environments where alternative modes of communication are meager, if not entirely absent. One key question for analysis therefore is why safety-related use is so important to so many respondents in the countries concerned.

Further analysis is suggested by the ranking of countries on the use mechanism in question, as shown in Table 2. Consider in particular that the four countries listed at the top of this table comprise an unlikely mixture. On the one hand, Ethiopia is the poorest country in the sample and the three others constitute the richest. Clearly, no simple explanation based on income (or variables that are closely related to it) will suffice. I cannot provide a fully satisfactory alternative, but suggest that it has something important to do with the relationship between crime, poverty and inequality.

5. Crime, poverty and inequality

Cross-country level data provided by UNODC (2011), show first that at this level there is a clear correlation between (violent) crime and per capita income. 'Higher levels of homicide are associated with low human and economic development. The largest share of homicides occur in countries with low levels of human development' (UNODC, 2011, p. 10). Furthermore, 'inequality is also a driver of high levels of homicide. Homicide rates plotted against the Gini Index ... show that at global level countries with large income disparities ... has a homicide rate almost four times higher than more equal societies' (UNODC, 2011, p. 30). The correlative evidence just described also holds for Africa, in whose poorer regions one third of the world's homicides occur.

Southern Africa suffers from particularly acute levels of violent crime (noting that South Africa, Botswana and Namibia all come

² Several other safety-related mechanisms are also covered by the survey but I do not deal with them here.

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