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# Does quality matter for innovations in low income markets? The case of the Kenyan mobile phone sector



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## ABSTRACT

Growing interest in lower income groups as consumers in emerging and developing markets has led to discussion on the issue of product quality, but so far work has generally focussed on simple goods rather than technology and innovations. However with innovations, one would expect that product quality would be more crucial in order to push trust of complex products amongst inexperienced users. Thus, this paper seeks to build understanding around issues around quality of innovations; focussing on what quality declines mean for vulnerable low income groups, and the types of policy approach that can be undertaken to improve quality.

Research was undertaken in the mobile phone sector in Kenya where firms have increasingly focussed on diffusion amongst low income consumers. Here it was found that quality has become an increasing contested and problematic terrain. In the short term, decline in quality is often acceptable for inexperienced low income users, but in the longer term this becomes detrimental to innovations both in terms of trust and expense amongst consumers, as well as effecting the livelihoods of informal entrepreneurs who are often part of delivery of innovations to low income groups.

Policy around quality was found to be present, but was limited by two key tenets. First, where implementation actors were unclear, public standards on quality tended to collapse into private standards followed only by diligent firms. Second, standards were often applied at a firm level which missed out on issues emerging amongst downstream diffusion actors often involved in adaptations which linked to quality variability.

Undertaken and focussed correctly, policy on product quality drives diffusion of innovation and supports a level playing field, which in the long term supports more inclusive innovations. A lack of focussed policy can lead to the risk of rejection of innovation and 'big bang' policy interventions that are detrimental to the trust in innovations amongst low income groups.

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## 1. Introduction

There is an awareness of the growing role that emerging and developing countries are playing as final markets for products and services [1,2]. Further, given income

distributions in such countries, low income groups often become a central focus as firms look to scale [3,4]. With limited disposable income and potential vulnerability of these groups, one key concern has been to examine the quality of products which are focussed towards these new markets, analysing how quality varies with a cursory examination of policy and standards [2,5–8].

However, such work has mainly explored this question peripherally as part of wider discussions of changing markets. In addition work has typically focussed on simpler

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goods – basic products, staple foods and commodities – where quality and the impact of quality variability are clearer. For instance, poor seed quality lead to yield decline, raw material failure have a knock on effect on downchain businesses.

What of the growth of innovations focussed on low income groups, such as those that revolve around ICTs, which have been argued to be a key foundation to growth of dynamism, and interest in these groups as viable markets [3,9]? With innovation, less is known about how product quality varies or the effects that quality variation has in such markets. Yet intuitively one might imagine that quality be a more crucial element to the efficacy of innovations in such markets. As Lundvall's [10] work suggests, quality declines in complex innovations may be more difficult to discern amongst consumers. The negative impact is also likely to be exacerbated amongst vulnerable users who are encountering these innovations for the first time and with lower resources to rectify problems.

Thus, this paper seeks to look more closely at these issues around low income final markets in developing countries, and innovation quality. It looks to provide knowledge around how quality of innovations vary when they are focussed on low income final markets. Moreover, this work seeks to make an expanded analysis of the potential effects that quality variability might have amongst these markets. Drawing on this analysis, policy implications are outlined, covering existing and potential future policy structures that link into these quality concerns.

Beyond contributing to this growing debate around quality in these final markets, this research seeks to link innovation quality into debates around 'bottom-of-the-pyramid innovation' and 'inclusive innovation'. Firms and policy makers have articulated that such innovations need to not only drive firm profit but have positive social impact upon the groups of focus [2]. Such literature has focussed on impact stemming from the 'first steps' of user *acceptance*, as innovations are diffused to low income users and scaled by firms in markets [4,11]. Yet, with the growing number of scaled innovations focussing on such groups, research on quality can enhance these analyses to bring greater understanding around longer term impacts of these innovations.

The paper is structured as follows. In section two, the literature around quality is examined in three key directions. The literature on innovation in low income markets provides insight into innovation processes; the emerging literature on quality and developing country markets highlights some of the diverging positions on quality; finally work on policy and standards provides a perspective to analyse relevant policy implications. Thus, these three core pillars provide a clear pathway to conceptualise innovation, processes around quality, and policy making found in this case.

The research issues are explored drawing on qualitative research undertaken within the mobile phone sector in Kenya, outlined in section three. This sector provides a suitable setting to analyse these issues, where innovations can be seen to have scaled and grown in acceptance amongst low income groups. In particular, three specific case studies are compared and contrasted: mobile phone

handset supply, mobile communication services, and emerging mobile money services, with empirical results around quality in these cases outlined in section four.

In section five, the implications of these findings are discussed. In all the examples, it was found, perhaps surprisingly, that issues around innovation quality have become a key issue as they scale to low income users. In line with other quality literature, quality variability can be linked to the increased price sensitivity of low income users, where firms seek to minimise costs and compromise on quality. To users unclear about the expected utility of new innovations, these quality differentials seem like small annoyances during early adoption of innovations, but in the medium term these often become detrimental – in terms of ongoing costs and trust – with some users even later rejecting innovation that they have already adopted. Standards linked to product quality were found to be present in these examples, but there was a tendency for them to be poorly focussed or implemented, leading to slow decline in the quality of innovations which affects users. In one case, quality decline eventually led to more radical 'big bang' policy change that has been strongly detrimental to the impact of innovations.

In summary, in section six, it is argued that maintaining quality is a core element in how low income market innovations are 'inclusive'. It is argued that there is a rationale for policy to support improved quality, but as highlighted in the analysis, such policy will need to be appropriately implemented and include consideration of the shape of low income innovation systems if it is to be fully effective.

## 2. Innovations and quality

### 2.1. Low income markets and innovation

Recent years have seen growing discussions that examine developing and emerging countries, and specifically low income citizens within these countries as the final markets for goods and innovations.

Where such trends have been identified, a number of underlying drivers have been identified, the saturation and sluggish growth of developed markets for multinationals [12]; growing demand in emerging and developing countries [7]; the reducing cost of sophisticated technologies [2]; and the growth of emerging market producers of innovation (e.g. China and India), who often focus on developing country markets as a core strategy [13]. Whatever the foundation it is likely that in current conditions, such markets will accelerate as the focus of firms seeking new markets and profits.

In this context, the notion of 'innovation' is used to denote the novel goods and services that reach such markets, and conceivably enable progress amongst such groups. These innovations may not necessarily be new to the world, those new to the nation or even the community can have as much of an effect [1]. Further, goods pushed in such markets often tend to encompass a whole slew of technical adaptations, socio-technical processes and business model changes and one needs to consider these new

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