

## Unlocking Social Value at the BOP: Building a Knowledge Transfer Platform for Nigerian Apiculturists

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### Abstract

*Few studies examine the prospects for businesses within BOP markets to deliver social value. In the context of Nigerian apiculture, which has the potential to provide employment and alleviate poverty for BOP farmers, this paper explores the knowledge transfer mechanisms used by beekeepers in Nigeria, with a view to improving productivity and unlocking social value. Drawing on responses from thirty-one Nigerian beekeepers, this research shows that beekeepers in Nigeria largely continue to use traditional production and harvesting methods. The findings also further highlight the willingness of the beekeepers to adopt mobile apps in sourcing/sharing information about beekeeping, of which a ready platform exists given the rapid penetration of mobile phone ownership among social entrepreneurs at the BOP. Consequently, to help unlock social value via the operationalization of small-scale apiculture, greater integration and social cooperation with upstream partners are called for. Moreover, improved communication reporting around the social impact of the sector is crucial to secure a sustainable apiculture industry.*

**Keywords:** *Social Value, Knowledge Transfer, Apiculture, Bottom of the Pyramid*

### Introduction

Marketing academics have recently acknowledged the prevalence and significance of the bottom of the pyramid (BOP) markets (e.g. Pitta et al., 2008; Prahalad & Hammond, 2002; Prahalad, 2012; Mason et al., 2013). However, the majority of these studies provide expertise and knowledge for companies that operate outside the BOP (Sinkovics et al., 2014), thus ignoring the substantial potential for businesses within BOP markets to deliver social value. Despite official statistics showing Nigeria as an emerging market, the improvement in social welfare, poverty reduction and job creation has been insignificant in relation to the rapid GDP growth figures (World Bank, 2013). Moreover, as over 60% of the Nigerian population live on less than \$1-2 per capita, they predominantly reside in rural to semi-urban areas where apiculture<sup>3</sup> has the social and economic potential to thrive. This raises the following research objectives that we seek to explore in this study around the context of Nigerian apiculture: to explore the nuances around Nigerian apicultural production practices; to identify if potential knowledge transfer opportunities exist for BOP social entrepreneurs; and to understand how networks can successfully impact stakeholders and unlock social value opportunities?

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The authors would like to acknowledge the research assistance and guidance provided by Dr Rana Tassabehji, Bradford University School of Management.

3 Apiculture is also known as beekeeping and/or the art of rearing bees.

## The Social Value of Apiculture

Social business is a recently growing form of business which provides an avenue for accessing economic opportunities for the poor and underprivileged populace (e.g. Yunus, 2011). This is an innovative approach geared towards the provision of goods and services, as well as capital and technology to the poor (Rahman & Hussain, 2012). Yunus (2010) divides the concept of social business into two types: Type 1 is described as a non-loss non-dividend company which is specifically dedicated to resolving a social problem such as poverty and unemployment; while Type 2 refers to the profit-making businesses usually owned by the underprivileged or poor (Yunus, 2011). Although some consider the social business model restrictive and over-reliant on access to microcredit and finance (Baker, 2011), Olowe et al. (2013) suggest that funds obtained from micro-finance banks have a compelling effect on the improvement of small businesses in Nigeria, not to mention the positive effects of microcredits on poverty alleviation (Vatta, 2003). In fact, apiculture has been found to be a low cost start-up business, hence providing employment and alleviating poverty through the development of entrepreneurs in the long run (Babarinde et al., 2011; Oyerinde and Ande, 2009). As the production of honey itself is an important product of natural processes that does not require further human processing before consumption (Abere & Lameed, 2012), it is considered as an advantageous enterprise route for BOP subsistence beekeepers.

In comparison to other business models, Yunus et al.'s (2010) vision of social businesses also encompasses the notion of sustainability. Therefore, the contextual emphasis on apiculture is seen as fitting for this study, as it not only contributes to social and rural development but is also useful in the mitigation of the effects of climate change while preserving landscapes and rivers (Ványi et al., 2011). Phillips (2014, p.149) emphasises the significance of apiculture further by stating that both human and non-human "futures are entangled". Considering the Nigerian tropical climate, which favours beekeeping, honey consumption trends suggest there is a significant international market (Fintrac, 2012). As adverse weather has affected a number of large honey-producing countries such as Mexico, Australia and Canada (Fintrac, 2012), with honey consumption trends around the world, there is

a market that can be successfully occupied by the African market, especially in Nigeria, if efforts are made to increase the quality and quantity of the honey/hive products that are being produced. However, to achieve more sustainable levels of co-production within the confines of the Nigerian marketplace, there is a need for greater knowledge transfer between producers.

## Knowledge Creation & Transfer

Knowledge has been established as one of the most important properties of a business (Randeree, 2006). In fact, the accrual of knowledge is thought to influence business productivity, and therefore industries, irrespective of adjustments happening in the macro-environment (Gao et al., 2008). Available agricultural information in most developing countries is characterized by out of date and inappropriate information that are mostly useless and not suitable to farmers' needs, resulting in a deficiency of resources crucial to improvement and increased productivity in agricultural produce, thereby reducing income (Shalendra et al., 2011). In addition, middlemen often take advantage of farmers' lack of information to exploit them further (Adamides & Stylianou, 2013). Therefore, combatting insufficient and ineffective dissemination of suitable information to the agricultural sector should be at the crux of agricultural productivity.

As the rate of mobile phone coverage and usage in Africa has increased substantially over the last decade (ITU, 2014), the relative affordability in comparison to other technologies can provide a higher degree of information accessibility, not to mention access to financial services for both social entrepreneurs and consumers at the BOP, especially those in rural areas. With Nigeria specifically having the highest number of mobile phone subscriptions in Africa (Agwu & Carter, 2014), the use of mobile phones gives farmers access to a pool of relevant information relating to their farm practices, weather forecasts and reports, agricultural trends and techniques, and transport information, not to mention improved social connectivity to other farmers (Aker, 2011). Hence, there exists significant value in determining the networking role of mobile technology in bridging the knowledge transfer gap of modern apiculture practices and market trends to Nigerian apiculture practitioners at the BOP.

## Adopted Methodology

As an exploratory study, this research incorporates elements of both positivism and interpretivism, as pragmatism is considered the most important factor for determining the research philosophy (Holden & Lynch, 2004). Therefore, due to the scattered location of the target population, a semi-structured interview survey was selected, using both postal and telephone formats, depending on participant preference and level of education. The process began with an initial screening telephone call to potential participants to determine their interest in being involved in the study. Snowballing was then used as a tactic to identify and engage further participants. Interested and willing participants were then asked whether they would like to receive the semi-structured interview survey and complete it themselves or whether they would prefer to arrange a subsequent telephone call to conduct the interview personally. Prior to conducting the interviews, a pilot study was conducted with five participants to ascertain whether the questions would be clearly understood by all respondents. This stage was especially critical given that some participants would be involved via a self-completion interview process. After modification of some of the questions, a variety of closed and open-ended questions were posed to ensure relevant data was collected regarding farmer demographics; production practices; involvement in local networks; and how knowledge availability influences the efficiency of their beekeeping endeavours. The quality of completed surveys was enhanced by a cover letter, the use of clear instructions and carefully designed questions, and comprehensive pre-testing and piloting (Kumar & Phrommathed, 2005). Those participants who chose the self-completion option, were allowed a period of two weeks to complete and return the questionnaires.

The population of respondents for this research was made up of beekeepers in Ogun State, Nigeria. Due to the non-existence of any Nigerian apicultural database, we employed purposive sampling through personal contacts. Ogun State is located in the South-western region of Nigeria on a land area of about 16400 sq. kilometres, and the majority of residents are engaged in subsistent farming as their primary source of employment or as a supplement (Ogunstate, 2013). The selection of Ogun State was chosen due to the availability of contacts within the beekeeping community. The overall sample comprised of thirty-

one beekeepers with varying experiences and apiary sizes. A total of sixteen surveys were received from those who chose the self-administered route, and fifteen respondents were surveyed by phone.

Regarding data analysis, a common generic approach to analysing qualitative data was adopted (Kumar & Phrommathed, 2005). This process began by categorizing or coding the data and recognizing relationships, and testing propositions, patterns and relationships among the collected data. Several 'passes' (see Huberman & Miles, 1994) were then made through each of the completed surveys, revealing a number of key themes and apicultural practices.

## Summary of Findings

The majority of participant farmers were male, had varying levels of education and originated from contrasting types of locality (rural; semi-rural; urban). The majority of participants had been involved in keeping bees for about a decade, with a few participants describing their beekeeping experience as relatively new (i.e. between 1 and 5 years). Consequently, the number of colonies was highly interconnected with experience, as most farmers had an apiary strength of between 5 to 20 colonies. Only a minority kept bee colonies of up to 20 and above in strength. Most of the respondents had their apiary sites on farmlands/cultivated gardens, with others having their colonies sited in forests or their backyard.

The majority of participants relied on traditional production techniques, such as the use of wooden frame hives. With regard to the products harvested by participants, most harvested beeswax as an additional by-product of beekeeping and a few harvested Propolis but for most, no other product was harvested other than honey. The preferred methods of honey extraction was either by smoking the hives and squeezing the honey with bare hands or extracting the honey from the hives by grinding the combs and sieving, with just a few making use of centrifugal extractors. This is despite the use of centrifugal extractors being the best method to extract honey in an unadulterated form. One participant farmer was aware that grinding reduces the quality and monetary value of her product but she was unable to afford a centrifugal extractor on her own.

Almost all of the participant farmers derived a supplementary income from beekeeping, selling just over half of their production and retaining the remainder for their own consumption. Consequently, most participants were considering ways of scaling-up their enterprise. However, there appeared to be a lack of advisory support to help increase the scale of apiculture in this area. As perhaps expected, farmers who owned larger enterprises had more involvement with beekeeping associations, but networking and enterprise support for the majority appeared to be gained via informal associations and/or friendships with other local beekeepers. Thus, many participant farmers relied on 'word of mouth' as a channel for obtaining and dispersing information.

As highlighted by ITU (2014) and Agwu and Carter (2014) earlier, mobile phone ownership was popular among farmer participants. Primarily, all respondents with access to mobile phones used them for calling and texting, while only some used their phones regularly for browsing the Internet and instant messaging. Although information relating to modern production practices was available to some via the Internet, many complained that it was neither relevant to their terrain and/or their situation (e.g. advice for small-scale, rural farmers). As a result, most participants indicated that they obtained necessary information regarding their beekeeping business from reading books, magazines and other printed materials. Therefore, unsurprisingly, most participants were enthusiastic and receptive about exploring the use of mobile computing and mobile apps as a source of information, provided the information available was relevant and specific to their circumstances.

## Conclusions

In light of these findings, it is clear that for beekeepers to benefit optimally from their apiaries, there needs to be greater adoption of modern practices in all stages of the production processes, as well as access to regionally-specific information. The openness of Nigerian beekeepers to utilise mobile technology suggests that there is a willingness to learn and improve production skills, but there is a void with regards to either government or NGO leadership within the apiculture sector.

To help upscale production for both local and international markets, ensure a sustainable Nigerian apiculture supply chain, and unlock social value via the operationalization of small-scale apiculture, greater

integration and social cooperation with upstream partners is called for. This could involve the creation of a local database, with details of local beekeepers and their production methods, etc. In addition, greater progression of the sector could be achieved via further training and access to processing facilities.

Moreover, improved communication reporting around the impact of the sector is crucial. Such information could be potentially shared via local radio/mobile to disseminate the benefits of apiculture. This could entail not just the benefits from a social perspective but also its environmental impact, with a view to providing an overview of the sustainable benefits of the sector to Nigeria's rural population.

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