

論文審査の結果の要旨

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Urban development is increasingly becoming a major focus in Kenya and especially in the fight against urban sustainability problems. Kenya's urban population is rapidly increasing posing a big challenge to the diminishing available resources, environmental quality and human well-being. This increase is not accompanied by concomitant socio-economic growth and environmental development. The Kenyan population is highly concentrated in urban centers leading to increased social, economic and environmental strains, with a significant percentage of urban dwellers living in sprawling slums.

Today, although mainstream debates on sustainability especially in urban areas are full of literature on the importance of creating sustainable cities through involvement of different stakeholders in urban development, there is little practical orientation in the academic literature for the growing gap between the rich and poor. In addition, current literature is enormously concerned with resource use and environmental pressures and has very little mention about the nexus between urban sustainability and empowerment of the urban poor. This research attempted to remove the myths and open debates on the segment of urban population often referred to as "the bottom of the pyramid (BOP)" regarding how they are faring in the unfolding urban phenomenon. This was done through an analysis of the microfinance innovation following evaluation of the impacts of access to microfinance and financial training and the implications to urban sustainability.

The purpose of this research was to identify the socio-economic and environmental factors influencing the development of the urban BOP segment. It evaluated the impacts of access to microfinance and financial training on urban sustainability. In addition, it measured the implications of urban microfinance to sustainable urban development in Kenya. It also developed a microfinance collective investment model - comprehensive microfinance tool for urban poverty alleviation - that addresses sustainability problems in slums and promotes the BOP segment's active participation in urban development. The uniqueness and originality of this research is hinged in the promotion of microfinance for urban BOP development through collective investments to support active participation of the BOP segment in the process of development. Robustness and rigorousness is based on the use of multiple methods and perspectives - both quantitative and qualitative approaches - to support research outcomes of impact of microfinance on urban development and its implications to sustainability.

The core hypothesis in this research was that providing financial services and training to

poor urban residents will deliver real returns not just to the individuals but also to the whole urban community involved. The case examination of Nairobi's Kibera slum conducted as part of the present research showed clear evidence of the need to provide urban BOP segment with access to financial services and appropriate training for such returns to be realized.

The scope of this study covered rapid urbanization in Kenya and the place of the urban BOP segment in this development. It emphasizes the role of microfinance to empower the poor in slums through collective investment. This is because several microfinance approaches have been tried in different settings to support poverty alleviation practices but their impact to development has been minimal in most cases. These approaches have had a usual focus on rural development, leaving out the urban poor. This research proposes a new microfinance model for the urban BOP segment development - a model that has an inclusive financial structure especially befitting urban BOP environments.

The research methodology used both quantitative and qualitative methods. It employed empirical and iterative approaches based on sustainability measurements and microfinance indicators. For analysis, a new set of data derived from questionnaires successfully administered to 1,006 respondents in two villages in Kibera slum was used. The sample population was grouped into participants (treatment group) and non-participants (control group) who were followed for 18 months to track the impact of participation in microfinance.

To measure the impacts of microfinance services on urban BOP development, this research used non-randomized controlled trials - a combination of double difference and propensity score matching approaches. The results were used to gauge the impacts of access to microfinance and financial training services to households, businesses, microcredit institutions and to analyze subsequent impacts on urban sustainability in Kenya. The results were also used to provide scientific evidence to the applicability of the proposed new microfinance model.

The findings indicate a significant increase in per capita income of the urban slum population studied. In addition, the results show significant improvement in business skills. For microfinance institutional development, the results indicate a no impact on loan repayment and client retention rate. However, there is little or no evidence on spillover effects of access to microfinance services on equally important urban dwellers' concerns such as water and sanitation, solid waste management and alternative energy access especially for financial training. The results also show that group microfinance investments perform better than individual microfinance investments. Group investments perform better because partners put collective efforts in their businesses to ensure good performance. In addition, microfinance monitoring costs are lower. The proposed new collective investment model addresses the sustainability obstacles and challenges mentioned above better than the traditional model of microfinance. This new model will support collective investment and promote strong collective responsibility, sense of ownership, and peer support for business development. Further analysis on urban sustainability will strengthen the insights provided by this research and help evaluate fuller implications to sustainable urban development in Kenya.

The main conclusion reached is that microfinance has an instrumental role to play in

promoting sustainable urban development as it supports social welfare improvement and increases the livelihood of participants, business development and urban sustainability to a certain extent, thereby empowering the urban poor in contributing to poverty alleviation. The message to be derived is that there is need to make urban BOP segment take more active role in development through collaboration with the government and other stakeholders. Since group microfinance investments perform better than individual microfinance investments, this research concludes by proposing a new microfinance collective investment model that addresses the weaknesses of the current 'Grameen Bank' model. This model is set to empower the urban BOP segment so that they can take control of their destiny as the case of Kibera slum studied indicates.

The limitations of this study include the difficulty of getting access to reliable information and data on Kibera slum and other slums in Kenya. Though Kibera slum is well-known, not much has been written about the sustainability challenges it faces. In addition, available statistics of the slum's development are unreliable since different institutions give different figures due mainly to poor accounting standards as a result of the informal constitution of the slum community. Also, eliminating selection biases and disintegrating effects by other unmeasured factors is a major challenge in all social sciences research.

This research contributes to other research done on this subject. It exposes the challenges of rapid urbanization in Kenya with a keen focus on slums. It outlines the role of microfinance services and financial training in urban BOP development. It proposes a new microfinance model that promotes participation of the BOP segment in urban development. As a business strategy, the BOP segment should not be ignored as it provides economically significant business opportunities for sustainability. This is because the challenges inherent in the urban BOP are opportunities for microfinance institutions and other business actors. Also, business investment in slums should not only focus on micro small enterprises but also small and medium enterprises to support industrialization. As for policy implications, this research suggests that top down approaches to urban development should be complemented by bottom up approaches that involve all stakeholders in slums' development. Slum upgrading should be promoted as opposed to resettlement and eviction. In addition, the poor should be empowered to actively participate in the process of development. And for sustainability implications, the promotion of local community initiatives in slums incorporating stakeholder participation will support resilience in the urban sector. In addition, the use of multiple methods and transboundary perspectives supports the significance of this research to sustainability science.

This dissertation hereby has been approved for fulfilling the requirement for the degree of Ph.D. in Sustainability Science.

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