After independence in the 1960s, in most African countries, higher education has experienced a prosperous period marked by a lightning development of universities and graduates who easily got top jobs, given the acute shortage of highly skilled staff. This remarkable growth of universities has seen university research developed based on the individual initiatives, usually in continuity with various PhD research areas.

With the crisis of the 1980s, the African continent faced many social, economic and political issues that led to increased poverty. While one would have expected, as in other continents, investment in research for the mobilization of science and technology, on the contrary the continent has faced drastic reduction or in some cases no research funding in universities. The explanation of this paradox is probably enshrined in the way scientific research was planned and conducted in universities. Problems, often unrelated with social issues or societal needs served as theoretical basis for research work in laboratory, and results mainly led to reviews and publications. This was/is further exacerbated by the fact that, the publications or the final outcome for researchers are mainly used for applications to gain promotions. Nevertheless research aimed at solving a societal problem was carried out. For example, although not widely cited the work of the distinguished chemists and pharmacists, at that of the first Cameroonian Dean of the Faculty of Sciences of the University of Yaoundé I, Professor Jacques Kamsu Kom, led to proven effective drugs for use by the society.

The traditional practice by university research institutes largely justifies the fact that research was/is not at the heart of development strategies in African countries. Cognizance of lacuna development-led research in African universities, many resolutions have been taken at the highest level to address the situation. One of the most important resolutions that can be noted concern “Science, Technology and Innovation” that was central in Summit of Heads of State of the African Union in 2007. At that summit, it was agreed that a threshold of 1% of Gross Domestic Product should be used in fostering innovative technological research that meets the needs of the population.
Therefore, independent research institutes together with their researchers that constitute part of African universities must change current practices to embark on research paradigms geared towards solving societal problems. As a priority, research should be linked to major social issues and be developed in collaboration with non-academic actors including political authorities, stakeholders and civil society. This interaction is necessary in the early phase of research as well as the exploitation of results.

This contribution of Professor Chrispin Pettang and his team that includes architects, civil engineers and applied computer scientists, is in this perspective. In fact, the problem addressed is one of the main challenges of communities where access to housing is a major problem. The different chapters reveal the expertise of this team especially that of the lead author who has been working for almost 30 years on the issue of construction costing. This book brings together very diverse scientific tools ranging from civil engineering to computing that can be used in making decisions about affordable housing. Specifically, just to name a few, some of the decisions are aimed at addressing challenges or problems related to regulation, entrepreneurship, materials, quality control, and industrialization.

It is worth congratulating the authors for their skillful use of the decision support systems, which not only facilitate modeling and analysis, but also serve as a rich knowledge source and/or even innovative solutions vital for various actors in the construction sector. The use of these support systems for decision will certainly facilitate a desired effective interdisciplinary collaboration in this vast and important field of building in developing countries.

Readers will find this awesome piece of work very useful in practice. It is an example of high level applied research, including immediate valorization of results for the improvement of decision-making about housing, one of the priorities of governments in many developing countries, and particularly Cameroon. We thank the authors for this great contribution and encourage them to remain resolute in the face of challenges associated with research directly related to the needs of society, which often requires not only laboratory work but also ground expertise.

Maurice Tchuente
University of Buea, Cameroon