

Chapter 8

Towards a Knowledge– Based Economy – the Case of Botswana: A Discussion Article

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ABSTRACT

Botswana is keen to position itself as a knowledge-based economy as early as 2016 due to the realisation that to compete on a global scale, efficient knowledge value chains must be put in place, which includes indigenous knowledge management systems. This realisation is primarily caused by falling demand in the price of diamonds (due to the world's recession), which is the country's current economic mainstay. Today, Botswana is pushing for further economic liberalisation and diversification by employing and encouraging novel frontiers of knowledge with emphasis placed on research and efficient knowledge management as a vital resource for national development. In Botswana, the role of scientific and technical knowledge is being emphasized as the main driver of sustainable development, but not forgetting the potential contribution of indigenous and mythological knowledge to this aim. Several initiatives have been devised or implemented by both the government and the public sector to position Botswana as a knowledge-based economy. This paper surveys the fundamental concepts on which this paradigm shift is based and brings out the different initiatives that have been undertaken while emphasizing the role of research and efficient knowledge management paradigms in shaping Botswana as a knowledge-based economy.

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BACKGROUND AND INTRODUCTION

The recent past has seen most advanced and nominal economies undergo significant structural changes. One of the key characteristics of the changes is the growing importance of knowledge in all sectors of socio-economic activities. In the African context, most countries have either solely depended on agriculture or mining in which land is the key resource, and have later transformed into industrial economies where natural resources and labour are the main resources. These countries are now transforming themselves into knowledge-based economies (KBE) where knowledge is the key resource. This assertion is further supported by Leung (2004) who states that for countries to thrive in this knowledge age, there is a need for transformation to knowledge-based economic concepts. To bring the topic of KBE into the limelight, it is necessary to look at several other attributes that need to be incorporated in such a programme such as encouraging the culture of innovation; efficient training programmes for the development of an appropriate human resource base; putting in place efficient knowledge distribution and dissemination channels; encouraging innovation and research; and through putting in place an enabling environment by having appropriate legal, institutional and regulatory frameworks, and so on.

Innovation is an expression of the productive use of knowledge. A formal definition of innovation is “the application in any organization of ideas new to it, whether they are embodied in products, processes, services, or in the systems of management and marketing through which the organization operates” (Maguire et al., 1994). Alternatively, innovation has also been defined as the creative process through which additional economic value is extracted from knowledge whereby this additional value is obtained through the transformation of knowledge into new products, processes, or services (OECD, 1997). To

fully understand the workings of the KBE, new economic concepts and measures are required which track phenomena beyond conventional market transactions. As suggested by the OECD, improved indicators for a KBE are needed for the following tasks: (i) measuring knowledge inputs; (ii) measuring knowledge stocks and flows; (iii) measuring knowledge outputs; (iv) measuring knowledge networks; and (v) measuring knowledge and learning” (OECD, 1997).

For KBE to be established there is also an issue of making sure that knowledge distribution channels are in place. This can be achieved through the establishment of formal and informal networks essential to economic performance and knowledge sharing as a public good. Another area that also needs attention is technological change as countries that do not move with these changes are left behind as far as development may be concerned. Technological change raises the relative marginal productivity of capital through the education and training of the labour force; investments in research and development; and the creation of new managerial structures and work organization. The UNECE Report of 2002 states that economic activities associated with the production and utilization of information and knowledge have become an engine of economic growth in the developed market economies, increasingly transforming all the other dimensions of development and the entire societal *modus Vivendi* and *modus operanti* of humanity.

This UNECE Report (ibid) further defines KBE as not just being the digital economy, which incorporates the production and use of computers and telecommunication equipment; and not quite the networked economy, which incorporates the telecommunication and networking growth during the last decades and its impact on human progress. It defines KBE as being a much complex and broader phenomenon and brings out the following dimensions of a KBE:

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