

Applying Knowledge Management Strategies for Economic Development and Sustainability in the Caribbean

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***Abstract:** Sustainability looks to achieve best outcomes for human and natural environments both now and in the indefinite future. It relates to the continuity of economic, social, institutional and environmental aspects of human society, as well as the non-human environment. This paper examines economic development as one aspect of sustainability with a focus on knowledge management as an economic development strategy. The predicate of the paper is that productive capability is no longer completely dependent on capital and equipment; information and knowledge assets are increasingly important. In this information economy, success comes from harnessing the information and knowledge of a community especially as it relates to “indigenous knowledge”—that local, often tacit knowledge, which exists in every community, every region and every country. This knowledge is useful in identifying new entrepreneurial opportunities as well as for sustaining and advancing local businesses. The region examined in the paper is the underdeveloped Caribbean Islands.*

Keywords: Economic Development, Sustainability, Knowledge Management, Caribbean Nations

Introduction

Unless developing countries improve their productivity and shift to the production of goods – both of which involve acquiring new knowledge – they will face declining standards of living relative to the rest of the world. This is even truer within the context of the current global economic downturn (Stiglitz, 2011). These nations must move up the value-added chain to produce goods that typically require and embody higher levels of technology. To do this they must not just close the knowledge gap; they must also create knowledge and increase their capacity for using it (Friedman, 2005).

Economic development is furthermore one aspect of sustainability and is necessary for the creation of economic wealth for all citizens within the diverse and complex layers of society. The focus of this paper is to examine economic development as one aspect of sustainability, with a focus on knowledge management as an economic development strategy. Using Grey’s categories of knowledge management, the authors address sustainable economic development in the context of the under developed Caribbean nations. Economic development and sustainability issues in this region will be discussed in the first section of the paper.

The second section will be framed in terms of knowledge management practices which offer guidance to established practical strategies. An overview of these practices can be found in Denham Grey’s compendium of knowledge management methods, tools, and resources (Grey, 1999). They include: knowledge discovery, knowledge sharing, knowledge innovation, and knowledge structuring.

The third part of the paper includes a general discussion of what knowledge is needed in the Caribbean and how it might best be managed. The final section of the paper contains a summary and conclusion that contextualize this discussion and provide recommendations for knowledge management practices in the Caribbean.

Overall the paper will address how to adapt Grey’s practices for the benefit of economic

development in the region. The overarching presumptions are 1) that the creation and discovery of “relevant” knowledge fosters economic development and 2) that effective knowledge management is the mechanism by which to gain a competitive economic advantage.

Sustainable Economic Development

Sustainable development is not a new concept, but one with many applications and issues. In the last few years, sustainable development has received renewed attention due to the growing awareness of global warming, as well as of the negative impact of development on both humans and the environment (Edwards, 2005; Friedman, 2009). Sustainable development is an ambiguous notion defined from many angles and viewpoints. Based on our human history, cultures do not prevail indefinitely. In defining sustainability, we opt therefore to define the term rather as a process of moving towards sustainability, or of becoming more sustainable. This implies a long-term commitment by all main stake holders not only to make resources necessary for sustainable growth available, but also to commit morally to what we produce and how we consume. In the context of the Caribbean, the sustainable development issue includes not only economics, but also values, value judgments and accountability for the human race and nature (Gustafson, 1995). Poor sustainability is most likely to happen in those societies in which there is no moral accountability for the agendas for development and economic growth (Sen, 1993).

Global Economic Development

If we then talk about sustainable development in the Caribbean we need to start with a much larger issue, namely: Is there still room for more economic growth in this world? From an environmental perspective it can indeed be stated that the future of the earth is at stake if such growth is not managed well. Asia, which represents more than two-thirds of the world’s population, is experiencing massive economic growth. Sachs (2005) makes the point that many poor nations work towards accelerated wealth creation, while the rich nations are still fully committed to their own growth agendas.

The aspirations of the poor nations in the Caribbean, as well as the possible consequences that this will have on the global eco-system, certainly cannot be ignored. It is our prediction that economic growth in the Caribbean will continue on its current track and that the living conditions in Caribbean will improve. The challenge will be how to manage the sustainability of this growth and how to develop economic strategies that can accommodate for both growth and sustainability. Most economic strategies dealing with sustainable development are in agreement that the mere increase in the production of goods and in the export of raw materials is simply not a viable option for sustainable economic growth (Stiglitz, 2003). Technology is also not the panacea. Although modern ICTs (Information and Communication Technologies) are powerful tools for communicating information, they cannot solve the underlying socio-economic and political problems associated with development processes (Servaes, 2008, p. 206).

There can be no sustainable development without human development and economic growth built on a critical mass of knowledge workers with entrepreneurial and managerial capabilities (Servaes, 2008, p. 142). The reality is that the Caribbean, as part of the global knowledge economy, operates in a totally new and fundamentally different global environment. In this setting, knowledge has become the key economic commodity within which development and sustainable growth occur (Friedman, 2005). Knowledge has become the critical success factor for sustainable development, and a well-developed, maintained and affordable information

infrastructure supported by an investment in human capital has become the core ingredient of sustainable development.

Challenges for Sustainable Development in the Caribbean

The Caribbean is composed of over 7,000 islands home to a plethora of world-famous nature reserves, coral reefs, rivers and lakes, mountain ranges, well as active volcanoes, and beautiful rainforests, national parks and other world heritage sites (Downing-Cantwell, n.d.; UNESCO, 1998; Marshall, n.d.). Its richness and geographical diversity makes the Caribbean nations very attractive to tourism (Thacker & Acevedo, 2010); in addition to this, mining exports, natural energy, construction (Andrian et al., 2013), oil (IMF, 2011) and banana production and exports (Mlachila et al., 2013) form the majority of the industry for the region. Unfortunately, the Caribbean nations are also some of the most highly indebted countries worldwide (Thacker & Acevedo, 2010) and the public debt is one of the strongest limitations to their fiscal growth (Yartey et al., 2012),

A further limitation to human and economic development is the low educational achievement of adolescent boys in the Caribbean (Figueroa, 2010; Jha et al., 2012), which has been linked to high levels of violent crime (UNDP, 2012). This effect harms social cohesion and tourism, in addition to having a negative economic impact—costing between 2.8 and 4% of the GDP in the region (UN News Service, 2012), this is roughly between \$5.4 and \$7.7b distributed over 24 island nations (CIA, 2009).

Finally, the limited connectivity between the nations worsens the aforementioned challenges to development; both physically and virtually (Growth, 2013). Although radio, television and cellular penetration are found in a vast majority of Caribbean households, at 84, 85, and 89 percent respectively, the penetration of hardwired phone lines, internet access and computers within the home fall far behind, estimated at 42, 46 and 43 percent respectively (ITU, 2013). Caribbean economic recovery will be gradual and it will take a comprehensive approach to closing the gaps in telecommunication infrastructure, inconsistencies in tourism, addressing reduction in foreign investment (Gold et al., 2010), and reducing oil dependency (IMF, 2011).

Knowledge and Knowledge Management

Knowledge can be the most valuable resource in any society. It empowers us to think, evaluate, analyse and act. Without knowledge development, the potential for progress is greatly limited. People must therefore be innovative in creating and sharing knowledge with one another, through knowledge management practices that recognize the value of knowledge in various forms. Knowledge is also key to economic development and sustainability (Rooney et al., 2008). The knowledge management trend has developed into a discipline with many applications, including the areas of sustainability and economic development. As such, it is considered in terms of both a business practice and a theoretical field of study (McInerney, 2000, p. 1009). Both the theory and the practical applications are still in the development stage, with many different descriptions and working definitions of knowledge management (Dalkir, 2005). According to the authors, McInerney provides the best working definition of knowledge management: “Knowledge management is an effort to increase useful knowledge within the organization. Ways to do this include encouraging communication, offer[ing] opportunities to learn, and promoting the sharing of appropriate knowledge artifacts” (2000, p. 1014)

Based on this working definition, it is possible to demarcate the following main variables within knowledge management discourse and analysis:

- The use of knowledge within a business environment
- The application of knowledge to gain economic advantages
- The importance of creating and sharing knowledge to increase organizational effectiveness and efficiency.

Defining Knowledge

In order to apply knowledge management, it is furthermore important to understand the notion of knowledge. McInerney (2000, p. 1009) defines it as "... the awareness of what one know[s] through study, reasoning, experience or association or through various other types of learning". Since knowledge is bound to human nature, it is active, subject to change, and dynamic. Prusak and Davenport (1998, pp. 2-20) describe this active nature of knowledge as a person's experience, truth, judgment and rule of thumb. As such, knowledge is used to make decisions, overcome obstacles, and solve problems. From an organizational perspective O'Dell and Hubert (2011) argues that knowledge management is a systematic effort to enable information and knowledge to flow more effectively and to add value in decision making thereby helping organizations to achieve their goals. Although knowledge management is important in all societies, the creation and sharing of knowledge remains especially imperative for developing communities and countries.

Challenges to small business development in the Caribbean

Many new information and communication technologies, such as the mobile telephone and email via the Internet, have been introduced in the Caribbean. Much of the literature evaluating telecommunications infrastructure in the Caribbean, reports that many governmental projects and privatized projects extend telecommunications in the main cities and in rural areas. These ICT technologies provide the infrastructure for small businesses in the Caribbean to share their knowledge more effectively than ever. As Nath (2000, p. 3) states: "...ICT breaks all the natural, social, cultural and hierarchical barriers to knowledge-sharing in an unprecedented manner". This openly available information can give small businesses access to foreign markets, such North American and Western Europe.

Businesses as learning organizations

For knowledge management to be applied effectively in small businesses in the Caribbean, it is imperative for these businesses to become learning organizations (Skryme & Amidon, 2002). There must be a continuous process of knowledge creation and sharing which ensures that these businesses stay innovative and healthy. This requires a commitment to creating opportunities for knowledge sharing, as well as a commitment to fostering a culture of open communication. People must learn to become learners and work together. Learning organizations must furthermore be able to adapt to change and be resilient enough to weather socio-political and economic uncertainties. Without such a commitment to adaptation and learning, knowledge management cannot be successfully implemented.

Conclusion

As the Caribbean region moves forward with development initiatives to compete in the global marketplace, sustainable economic development presents strategies and challenges that must be addressed. Given that there is no universal model for sustainability, the Caribbean's sustainable development strategies require human capacity building through research and development activities. Challenges for human capacity building in the Caribbean include: a high incidence of violent crime related to low educational attainment in male youth, a weak communication infrastructure, and underdeveloped research and development activities. The growing discipline of knowledge management, which McInerney defines as increasing useful

knowledge within an organization, provides strategies to address these challenges and encourage sustainable economic development in the Caribbean.

Knowledge management will vary depending on the goals of individual small businesses. However, harnessing the information and communication technologies infrastructure in conjunction with knowledge management practices provide a roadmap for economic development. To improve the implementation of such strategies in the Caribbean, the authors provide the following suggestions:

1. Promote ICT literacy through training programs that teach people to locate and evaluate the quality of information, store and retrieve information, make effective use and ethical use of inform and apply information to create and communicate knowledge (UNESCO, 2008).
2. Utilize Internet and e-mail technologies to foster community and communication via discussion groups, mailing lists, interactive websites and live chats.
3. Invest more financial resources in R & D activities, which would positively diversify the Caribbean's wealth creation beyond the export of its raw materials.
4. Develop metrics for outcome assessment of knowledge management practices Sample measurement tools include the British Standards Institution approach (BSI, 2003), Sveiby's Intangible Assets Monitor (2002), and the KM Reference Model (Botha & Fouché, 2002).

We conclude that the Caribbean's most underused and untapped resource is indeed its wealth of knowledge the value of this paper is to address specific knowledge management needs in the Caribbean for sustainable small business development. Implementing sustainable economic development practices will aid the region in gaining a competitive advantage in the global marketplace and position small businesses to compete in the 21st century knowledge economy.

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