

The Relevance of Information and Knowledge Management to Implementation of Environmental Practices in Nigerian SMEs

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Abstract

The objective of this study is to investigate information and knowledge availability as a factor affecting the implementation of sustainable environmental practices of Micro Small and Medium Enterprises (MSMEs) in Nigeria. In particular it explores the MSMEs implementation of sustainable environmental practices as pollution prevention, recycling, waste management, and energy conservation, incorporation of strategies for environmental protection, procedures and processes of environmental management and the minimization of their impact on the environment. The global environment has been faced with degradation due to man's damaging activities. The list of environmental challenges are enormous and include greenhouse gas emissions, global climate change ozone depletion, polluted waterways, also global warming, depleting resources, increasing desertification, drought have contributed to food shortages, floods in the United States, the United Kingdom, Brazil, parts of Africa, Nigeria and the world over. In the United Kingdom air pollution is reputed to have reduced life expectancy by eight months. The 1992 Rio Summit Agenda 21 was an important milestone with an action plan to protect the future of mankind and ensure sustainability. The United Nations General Assembly recognized the globality of environmental problems and determined that it is in the common interest of nations to take positive steps to ensure that there is a balance. Agenda 21 is the global plans from the Rio Summit of 1992 to ensure sustainable development by among other things adopting good Sustainable environmental practices. Sustainable development refers to the development that meets the needs of current generations without compromising on the ability of future generations to meet their own needs. The idea behind sustainability is that firms must take cognizance of not only the economic but the social and importantly the environmental. Many environmental issues confronting man are traceable to business.

Keywords: *knowledge Acquisition, Knowledge Storage, Knowledge Creation, Knowledge Sharing and Knowledge Implementation*

Background to the study

The focus on knowledge management (KM) is a critical area for small and medium sized enterprises (SMEs). In particular, the management of knowledge assets may provide small firms new tools for survival and growth. (Omerzel and Antoncic, 2008). There is a general consensus in business practices and academia on the fact that SMEs are falling behind large companies in developing KM practices and benefits of KM has not been fully exploited by these firms. Current definitions of knowledge reflect a range of standpoints. This definition contains a comparatively broad approach because it includes a range of phenomena such as values, insight, and information “Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms” (Davenport and Prusak, 1998).

KM involves valuable processes which can influence the productivity, financial performance, staff performance, innovation, work relationships, customer satisfaction and organizational performance. SMEs can achieve a higher degree of productivity, innovation, efficiency, customer satisfaction and competitive advantage with the use of KM practices, with the result finally of improvement in organizational performance. KM practices are theoretical elements for promoting the performance of SMEs. When knowledge is recognized, acquired, and stored, SMEs can implement this knowledge to explore problems and create solutions, producing a structure for facilitating efficiency and effectiveness. In the modern dynamic and complex environment, SMEs need to acquire, create, share, save and implement new knowledge in order to make strategic decisions that can lead to improvements in productivity, financial and staff performance, innovation, work relationships, and customer satisfaction.

Thus, SME managers should be committed to providing a supportive climate and culture, one that motivates employees and supervisors to implement the mentioned KM practices, in order to foster the SMEs results. SMEs could easily collect information from their customers, suppliers and other stakeholders, organize the collected knowledge through modern informational technologies or even traditional means, share the organized knowledge throughout all organizational levels, and finally implement the shared knowledge to overcome challenges and improve performance. KM is a perspective on management of the firm as a whole, encompassing activities in all relevant managerial areas. SMEs need to have access to adequate information to enhance productivity and to facilitate market access. The establishment of an active SMEs sector and the effective utilisation of quality business information have been identified as crucial in attaining long-term and sustainable economic growth for developed and developing countries, alike (Corps 2005).). The SMEs need tailor-made information solutions - i.e., business information services that assess, verify and apply information to a specific business problem (Okello-Obura... et tal 2008).

In order to respond to the specific needs of the SMEs, business information services should create value by bringing together information from different sources - both local and international. This enables the integration of the SMEs into national and global value chains (UNIDO 2005). The specific research question is: What is the extent of the influence of information and knowledge on MSMEs implementation of sustainable environmental practices in Nigeria?

Statement of Problem

Many SMEs owner/managers and employee are not sensitive to the impact of their firm to the environment and as matters of fact are not even aware of the environmental ethical debate and do not understand the concept of environmental management. In a study by Weerasiri and Zhengang (2012) many are unaware of the benefit of environmental responsible behaviours. They behave that it is expensive and would cut their profits. However, in most developing countries, the SMEs sector suffers from inadequacies in the provision of business information which is only available from stand-alone institutions; it is often slow and cumbersome to access; is limited in scope; and is not provided in an integrated manner (UNIDO 2005 A study conducted in northern Uganda by Okello-Obura ... et tal (2008) shows that the SMEs depend, mostly, on informal institutions as they lack an awareness of important business information provision agencies or institutions.. This is inconsistent with the requirement for effective competition in global market.)

Theoretical and Conceptual Framework

A theory is a set of systematically interrelated concepts, definitions and propositions advanced to explain and predict phenomena (Cooper & Schindler 2008: Robbins and Judge 2007). They serve as guiding principles and provide a framework and scope within which a study is conducted. (Nukpezah 2010). The conceptual framework below demonstrates the relationship between the variables of the study.

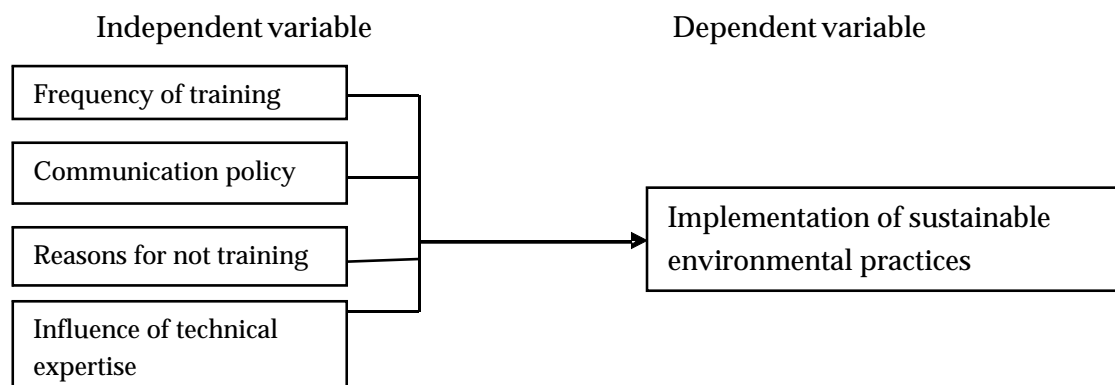


Fig.1 Theoretical Framework

Methodology

The research design and methodological approaches that will be used to investigate information and knowledge availability as a determinant of implementation of Sustainable environmental practices for sustainable entrepreneurship of MSMEs in Nigeria. The data used will be both quantitative and qualitative so as to investigate the patterns that will emerge in order to obtain answers to the research questions and the research hypotheses (Cooper & Schindler, 2008). The sampling frame consists of all the MSMEs population. Thus a workable frame of MSMEs in Kaduna metropolis has been obtained from the Manufactures Association of Nigeria, National Association of Small and Medium Enterprises, National Association of Small Scale industrialists. A Triangulation method will be used to collect data. A variety of instruments will be employed to collect data. This is to facilitate the collection of a wide range of data for analysis of the variables of the study.

Primary data will be collected using questionnaires, the questions will be open and close ended to enable respondents express themselves and give the most accurate information. Interviews and observation will be used to obtain primary data from the field. Secondary data will be obtained from books, library, and internet, through intensive recovery of theoretical and empirical studies from academic journals, electronic media and books. The secondary data would enrich the study greatly. Research assistants will be trained to administer and obtain responses from the respondents. There is always the need to validate instruments to make sure that they measure exactly what they are supposed to measure. Validity of the instrument means the ability of the questionnaire to capture exactly the data it was designed to collect (Cooper & Schindler, 2008 Imosili Imonite 1996). In this case, the content of the questionnaires, will be validated by relevant experts in statistics measurement and evaluation to ensure that content, construct and face validity are achieved in the instruments. After scrutiny by the relevant experts, positive comments or criticism would be implemented thereby modifying the instrument and ensuring that they are suitable and valid.

Results

The following tables show the results from the field concerning whether frequency of training and communication policy, influence of training and reasons for not training affects the implementation of sustainable environmental practices.

Table 1
Frequency of training

Comment	Frequency	Percent
Once in a year	6	5.3
Twice in a year	6	5.3
Three times in a year	5	4.3
Four times in a year	4	3.2
Five times in a year	3	2.1
Monthly	1	1.1
Regularly	8	6.4
NIL	87	72.3

Table 2
Communication policy

Comment	Frequency	Percent
NIL	6	5.3
No	46	38.3
Yes	68	56.4

Table 3
Influence of technical expertise in the firm

Comment	Frequency	Percent
Increased patronage	1.3	1.1
It makes them more conscious about a clean environment	1.3	1.1
It has brought about effective waste management method	1.3	1.1
Increased sense of morality	2.6	2.1
It has brought about creativity	2.6	2.1
Increased output	7.7	6.4
Increased technical-know-how	9	7.4
NIL	94.4	78.7

Table 4
Reasons for not training

Comment	Frequency	Percent
Business size is small	1	1.1
Insufficient time	3	2.1
No employees	3	2.1
Lack of interest	3	2.1
I have no idea about environmental management	6	5.3
No reason	8	6.4
No money/ lack of finance	9	7.4
Lack of proper awareness	10	8.5
No need for environmental management	20	17.0
NIL	57	47.9

From the results in Table 1, 6% indicated that their firms conduct training on a regular basis, 5% indicated that training is conducted once a year, another 5% denoted that their firms conduct training twice a year, 3% showed that they carry out training four times in a year and 2% revealed that they conduct training five times in a year. However 73% did not indicate how many times training was done in their firms which is an indication that this group is among the majority of firms that do not conduct any form of environmental education or training.

Table 2 on the other hand shows fifty six (56%) of the respondents stated that they had communication policy, 38% indicated that they did not have a communication policy and 5% did not respond at all.

On the influence of training as depicted in Table 3, About 7% of the firms reported that staff with technical expertise on environmental management improved the performance of individuals by increasing output, about 6% said it has brought about creativity, 1% each specified that it increased patronage, it makes them more conscious about a clean environment, brought about effective waste management method. 2% each said that it increased sense of environmental morality, and brought about creativity in their firm. The remaining 79% did not state how technical expertise impact on their firm. This may not be surprising if they do not understand what is required.

Table 4 shows the reason why firm do not conduct training on environmental management. 1 % of the respondents stated that they do not conduct training because of their small size which may be attributed to insufficiency of resources among which is finance and personnel(Revell 2008) 2 % each have stated insufficiency of time 2% assert that the number of employees they have is not enough hence they consider it as a waste of time and resources, 2% just do not have interest in environmental training, 5 % have no inkling about what environmental training is, 6 % do not have any reason whatsoever for not conducting training in their firms, this is a similar view which still implies just like

other items a lack of awareness on environmental issues similar to 8.5 % of respondents who attribute it to lack of awareness. 17 % admitted that they had no need for the implementation of sustainable environmental practices as their business processes does not really pose any threat to the environment. The picture this paints is still that of lack of awareness on environmental issues. About 48 % ignored writing any reason for their not conducting training in their firms.

Discussions

According to Yacob and Moorthy (2012) when individuals are trained it helps them adopt positive attitude that will ensure that they engage in proactive environmental sustainability. Access to information enables organizations to keep abreast activities in their fields, latest technology and innovation to improve their products, processes and procedures. Information can give competitive advantage in adopting sustainable environmental practices (Holland 1997; Tilley 1999, Revell & Rutherford 2003). Education and training enhances MSMEs' awareness and knowledge (Tilbury, Adams, and Keogh, 2005; Katos and Nathan, 2004; Hilton, 2002; Yacob & Moorthy, 2012).

The place of effective communication policy in the implementation of sustainable environmental practices in MSMEs cannot be over emphasized according to (Hart, 1995) firms should ensure that they have a communication policy in place so as to increase firms ability to integrate perspectives from external stakeholders, involving coordination and communication not only within the firm but also across organizational boundaries. Also (Darnall & Edwards, 2006) stated that an important component of EMS adoption is also employee training and enhancing communication structures inside as well as outside of the organization. Of the 56% that that noted their firms have communication policy, the implementation of sustainable environmentally practices will be much easier as stated by (Bood, 1998) where the argued that from an internal perspective, communication and learning is vital to create employee commitment to environmental issues and foster a green organizational culture. Frequent dialogue between individuals or groups within the organization is crucial in the process of organizational learning. While the 38% of the respondents does not have communication policy in place probable because they do not have the required resources in place to set up the communication channels.

The result in table 3 is in accordance to the findings of (Arroyo & Preston, 2007). Where they noted that one of the prime catalyst for taking action on the implementation of sustainable environmental practices are potential cost savings that arise from making business more efficient. This is widely supported in the literature (e.g. Hart, 1995; Hart & Milstein, 2003; Hart & Dowell, 2011; Christmann, 2000; Marcus, 2005; Walls et al., 2011), who also ascertained that an increased focus on environmental sustainability can lead to a sustained competitive advantage due to lower costs and this tends to be in line with our findings where 6% of the respondents reported that they witnessed an increased level of output due to the implementation of sustainable environmental practices and also another 1% said it has brought about efficiency in waste management. The information

revealed in the in table 4 is affirmed by the findings of the study of Kostadinova (2013) where firms indicated that they were not interested on environmental issues. Redmond and Walker (2011) in their study observed that there was need to redirect environmental education from the usual focus of community, schools and large firms and rather to focus on small businesses that have great impact more on the environment. This creates the need for environmental education which revealed that majority of small business owners have no environmental training even when they consider such training to be relevant.

Environmental training courses have been found to cause a difference in the environmental behavior of individuals in their firms Koivisto (2008). Attitudes became more responsible among those that participated in environmental training over those that had not. Those that had received training felt more pressure to implement sustainable practices than those that had not had any form of training. For firms to manage their environmental issues properly, it is important for the firm to have someone in charge of that function, that has knowledge of environmental issues and regulations and understands how to deal with them (Labonne 2006).

Conclusion

It is evident from the study that information and knowledge availability is a factor that affects the implementation of sustainable environmental practices of Micro Small and Medium Enterprises (MSMEs) in Nigeria. Furthermore, the result of the study showed that there is a relationship between information and knowledge availability in the implementation of sustainable environmental practices of Micro Small and Medium Enterprises (MSMEs) in Nigeria.

Recommendations

1. There should be a premeditated attempt by firm owners to invest in human capacity building.
2. Firm owners should increase the frequency of their training, while those firms that are not conducting training yet should ensure that the necessary mechanisms needed for floating a training programme is put in place.
3. There should also be a good communication policy in place where information can flow freely.
4. The government should also ensure that firm owners are environmentally conscious of their environment in their course of production processes.
5. Government should also provide financial incentives to firm owners that conduct environmental training for their staff so as to motivate other firm owners towards the implementation of sustainable environmental practices.

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