Theoretical Examination of Sustainability on Low Cost Affordable Housing and Corporate Governance

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Abstract

One of the constraints faced by low cost housing projects is poor governance, hence the examination of corporate governance and sustainability on low cost housing. Literature is the main method used to investigate the research problem. Published, unpublished papers and journals were accurately reviewed to find solutions to the subject matter. The study revealed that it is a prerequisite in terms of the National Environmental Management Act for National and provincial department to formulate an Environmental Implementation Plan for any building construction activities that will have an impact on the environment. Green and sustainable are the terms congested on yearly reports of companies, but the question is whether the Corporate Social Responsibility is valued. The paper will assist the industry to realise that: the achievement of companies does not rely on compliance of legislation and standards only, but also by a broad series of economic, environment and social problem in a manner that is useful to the whole society globally. Organisational sustainability enforces environmental standards to be adhered and ISO 14001 standard help companies to improve environmental performance by reducing waste, efficient use of resources, receive integrity of partner and be successful.

Keywords

Compliance, Corporate Social Responsibility, Environment.

1. INTRODUCTION

Principles of corporate governance requires companies to satisfy their commitments to the holistic society on which they work and being accountable for their activity in the general public. Companies are required to think beyond generating profit to the way on which their conduct impact the community in which they work (Naidoo, 2009). The prosperity of a company must reflect the transition from unsustainable to sustainable development by eliminating waste and pollution while using less resources and producing more products and services. This simply means that the success of a company does not solely depend on short and long term capital but also a lengthy period ecosystem and social capital (Rothaus, N.D). Lately companies are recognised as the primary source of social, economic and environmental issues. They are broadly noticed to be successful by compromising the need of the society at large (Porter & Kramer 2011). An incredible challenge to regular business strategies with its attention on shareholder returns have developed movements like globalisation, climate change, societal unfairness and demographic transition (Wales, 2013). CSR is a methodology that stimulate corporate governance which bring about sustainability, hence the social responsibility of a company raises financial income (Blaga, 2013). Low cost affordable housing is a lengthy investment cycle that must be advantageous to its beneficiaries as far as comfort, quality, and life expectancy is concerned (Jenkin et al 2007). A financially effective construction industry improves environmental sustainability by ensuring low cost techniques of development that support best distribution of resources and minimise losses. Economically viable within the construction business requires that: social and ecological cost are approved and registered in the final cost of an item, (du Plessis & Landman 2002).

2. CORPORATE GOVERNANCE

Corporate governance is the process and structure by which the business and affairs of the company are directed and managed as to enhance long term shareholder value through enhancing corporate performance and accountability, whilst taking into account the interest of other stakeholders (Khan 2011). According to Okeahalam &Akinboande (2003), corporate governance is the system by which a business corporations are directed and controlled. Therefore, corporate governance structure specifies the distribution of rights and responsibilities among different participant in the organisation and spells out the rules and procedures for making decision on corporate affairs. By doing this it provides the company structure through which the company objectives are set, and the means of attaining those objectives and monitoring performance (Khan, 2011). According to King v (2016), corporate governance is the exercise of ethical and effective leadership towards the achievement of ethical culture, good performance, effective control, legitimacy. Ethical and effective leadership should complement and reinforced each other.

Good corporate governance ensures that large corporations are well run and earn the confidence of investors and leaders (Okeahalam &Akinboande, 2003). The quality of governance is of absolute importance to shareholders as it provides them with a level of assurance that the business of the company is being conducted in a manner that adds value and safeguards its assets. Therefore, if a company adopt and implement good corporate governance practices, shareholders are retained and new investors are attracted, because their investment will be secure and efficiently managed, and in a transparent and accountable process. Also creates competitiveness and efficient companies and business enterprise and effective use of limited resources. Furthermore, it enhance the accountability and performance of those entrusted to manage corporations (Okeahalam &Akinboande, 2003). Corporate governance has implications for the economic development especially in helping to increase the flow of financial capital to firms in developing countries. Hence its quite important for policy makers in Africa who are concerned with attaining high long term growth rates of about 7% per annum within the framework of the new partnership for Africa development (Okeahalam &Akinboande, 2003).

3. CHALLENGES OF COMPANIES FOR NOT IMPLEMENTING CORPORATE GOVERNANCE

Small medium enterprise in Africa which are family owned and managed faces challenges to practice corporate governance and following are the challenges that most companies face in executing corporate governance (Okeahalam & Akinboande, 2003):

- The preponderance of small firms in Africa;
- Informal Nature of Enterprise;
- Restricted competition in markets for goods and services;
- Frim financing in Africa;
- Capital market development;
- Prevalence of corrupt practices;

4. SUSTAINABLE DEVELOPMENT

Sustainable development is economic development that is conducted without depletion of natural resources. According to OECD (2008), sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. The world Commission on Environment and development, sought to draw the worlds attention to the accelerating deterioration of human environment and natural resources and the consequence of that deterioration for economic and social development. Sustainable development involves co-operation on global scale. Its about integration: for instance developing in a way that benefits the widest possible range of sectors, across borders and even between generations. Furthermore, our decision today should take into consideration potential impact on society, the environment and the economy (OECD, 2008).

The concept of sustainable development has been used to articulate several essential shifts of perspective in how we relate to the world around us, and consequently, how we expect government to make policies that supports the world view. The government face the complex challenges of finding the right balance between the competing demands on natural and social resources, without sacrificing economic progress (Sustainable crisis, ND). Firstly the realisation that economic growth alone is not enough, the economic, social and environmental aspect of any nation are interconnected. Considering only one of these at time leads to errors in judgement and unsustainable outcomes. Furthermore, the fact of the matter is that we depend on ecosystems and the services they provide in order to do what we do such as running a business, build communities, feed our populations and much more.

5. AFFORDABLE LOW COST HOUSING

5.1 HOUSING

Housing is one of the most important elements in our lives and community. It is both a shelter and a link to neighbourhood and larger community, it's a necessity and a basic need (Mashwama, Aigbavboa &Thwala, 2018). Housing also refers to both the physical product and the process of its attainment. Housing is mostly perceived according to its performance, and its usefulness varies with the level of comfort and hygine it provides. Housing also means privacy and is an expression of ways of life, aspiration and social relationship (Aigbavboa, 2014). According to Li (2002) housing is a hectogenous, durable and essential consumer good; and indirect indicator of status and income differences between consumers; a map of social relations within the city; an important facet of residential structure; a source of bargaining and conflict between various power groupings and a source of profit to different institutions and agents involved in the production consumption and exchange of housing.

5.2 ENVIRONMENTAL SUSTAINABLE AFFORDABLE HOUSING

The awareness of climate protection has increase hence the reduction of carbon footprint is a must on most government policies in the world. The pairing of green building from niche to mainstream is still work in progress especially low cost affordable housing. Therefore, the construction of green affordable housing project, should have clear goals from the onset and the goals must be developed throughout the construction since, it very expensive to add green elements later in the process of the construction of the low cost housing project and less likely to achieve the energy efficiency and reduction in carbon emission desired (Urban Land Institute, 2007). However, the challenges for green building include the need for lower cost; competitive product, skilled professional with expertise in green development and improved technologies. Furthermore, sustainable low cost houses is still ongoing and being explored to reduce the carbon foot print.

The construction and operation of buildings are prime source of demand for oil, natural gas, coal for heating, cooling and lighting, which increase the production of global greenhouse gases. Furthermore, all new building, developments and major renovations shall be designed to meet a fossil fuel, greenhouse gas emitting, and energy consumption performance standard of 50% of the regional or national average for that building type (Urban Land Institute 2017).

According to ULB, (2017), for the development of green affordable housing to be viable the following should be considered:

> Public policy commitment to green building;

Public policy commitment have the effect of levelling the playing field for developers. Moreover, facilitating green construction, considerations that are central to the production of cost – effective affordable housing, such as site location and density, also require public policy support such as: providing for protection of solar access by limiting the amount of permitted shading by new construction; mandating recycling of construction site waste for projects and revising the state utility regulation to allow net metering.

> Strong leadership and skilled professionals

To have a successful green development project, all members of the development team should be involved in the planning process from the start. Hence members are to work toward one common goal or vision that meet the desired green criteria for the project while maintaining the cost- efficiency considerations for affordable housing. Furthermore, subcontractors or small medium companies (SME) should be well informed and trained about green design and construction because they may not be familiar with the green building techniques (ULI, 2017)

> Underwriters to factor green into affordability

Affordable green housing simply means energy efficient and significantly reduce the amount of electrical and natural gas consumes by the house occupants. In addition home owners can afford to pay more for the energy efficiency material since it cost less to operate them. According to ULI (2017), the payback period of the green units is between seven to ten years.

Clear vision and benefits of end products;

The rehabilitating of existing building in cities to green affordable buildings helps to conserve development cost by removing demolition expenses from the budget. Since tearing down an old building can take about 20 to 30 years of energy savings and constructing a new one.

> Property managers, residents and professionals should be educated about combining green and affordability.

Education in green technologies is essential for the built environment professionals in the construction industry in order to make green building mainstream practice. Including the maintenance stuff and tenants to be educated about the proper maintenance of green buildings

6. THE CONSTITUTION

The South African constitution is said to be modern and international acceptable as it is one of the few constitution that incorporates the right for clean and protected environment (CSR Print ND). Furthermore, the Constitution of Republic of South Africa Act No. 106 of 1996 in terms of section 24 is the primary obligatory Act pertaining the environment right, and it states that everyone has a right to an environment that is not harmful to their health and well-being. The Act further declares that in order to accomplish this right the Constitution must also make provision to take reasonable statutory and other means in terms of section 24 (b) to: Promote conservation, secure ecologically sustainable development, Use natural resources, Prevent pollution and ecological degradation while supporting substantial social and economic development (South African Government, 2018).

7. THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (NO. 107 OF 1998) (NEMA)

It is a prerequisite in terms of the National Environmental Management Act (NEMA) for National and provincial department to formulate an Environmental Implementation Plan (EIP) for any building construction activities that will have an influence on the environment. NEMA is a regulation established in South Africa to enforce environmental rights, contains the notion of sustainable development, it describes the incorporation of social, economic and environmental components into organisation to secure the development that serve today and generation to come (South African Government, 2018).

Table 1: Sustainable Low Cost Programmes and Projects	
Programmes	
A green financing feasibility study which examines	
the development of a financing system to enhance	
environmentally efficient housing development.	
A Cabinet resolution to promote energy efficiency in	
the housing sector.	
Green Professional Programme of Sustainable	
Homes Initiative - Impacting the design of round 60	
000 planned housing units nationwide to promote energy efficiency.	

A National Sustainable Housing Training Course and other capacity building initiatives by the Sustainable Energy Environment and Development (SEED) programme.

Sowing round 57 000 trees with new subsidised homes through the Trees for Homes programme and the establishment of a National.

Urban Greening Fund which will proceed to assist residential greening projects.

Source: Author literature review

8. THE ENVIRONMENTAL STANDARD

The standard assists companies to enhance environmental performance by minimising waste, effective utilisation of resources, acquiring credibility of associates and competitive benefit (International Organization for Standardization, 2015). ISO 14001 standard is an accepted standard globally which outline obligations for Environmental Management System. A significantly determined Environmental Management System is voluntarily accepted by companies under the ISO 14001 standard that incorporates effective reduction of environmental impacts (Hakim, N.D). The system gets audited on an ongoing intervals to give the public a reasonable assurance that companies comply with the environmental standards. The ISO14001 standard made a significant contribution which led to enhancement in water and air quality in Europe. The areas that were prominent leading contaminators of natural environment in Germany are the now good examples of clean environments. It is prerequisite for global businesses to fulfil the obligation of the standard (Ferguson 2014). The primary point in the Production of South African Standards and regulations is sustainable development, exceptionally incorporated particularly in planning and housing policy (RSA, 1994). Currently, organisational sustainability is an established requirements with various mandatory prerequisites through survey enforcing environmental standards to be adhered to (Oke & Aigbavboa, 2017).

9. CORPORATE SOCIAL RESPONSIBILITY AND ECONOMIC PROSPERITY

Green and sustainable are the terminologies congested on yearly reports of companies, but the question is whether the Corporate Social Responsibility is valued or well thought of or highly regarded. If the answer is positive, about five hundred organisations phase illustrating directorship in carbon disclosure produced two times the median profit as an overall index (O'Mara *et al* 2012). The achievement of the organisation does not only rely on compliance of legislation and standards, but also by a broad series of economic, environment and social problem in a manner that is useful to the whole community and society internationally. An extensive illustrative model stated three definitions (triple bottom line or 3p – model) which can be recognized as people, planet and profit (Elkington 1998). The three P's in the context of Corporate Social Responsibility refers to combination of social, environmental and economic factors into business model and strategic management (Jones et al 2006).

Social sustainability does not rely on high ecological quality alone. All things should be considered including differences which are brought together in areas of poor environmental quality may go as reactants for social support connection (Dempsey *et al* 2011), bringing the community together to examine and strongly express their rights (Carrasco & Bilal, 2016). Where members of the community join together, activate and campaign around such issues and make their own accumulative voices heard. They develop social capital in their own attempt to address unfairness (Kwon & Addler, 2014) and enhance their quality of life and the environment on which they live. At the point when residents unite against issues such as restricted access to services, for instance, regional equity might be served when access to services are corresponding equally (Dempsy *et al* 2011).

10. METHODOLOGY

The study is a theoretical examination of corporate governance and sustainability on low cost housing. It was conducted with reference to existing theoretical literature review. Published, unpublished, online journals and magazines by other researchers on similar research were critically examined. The study adopted qualitative approach to gather and assess relevant information on corporate governance and sustainability on low cost housing. Qualitative research design is concerned with individuals" own accounts of their attitudes, motivations and behavior. It offers richly descriptive reports of individuals" perceptions, attitudes, beliefs, views and feelings, the meanings and

interpretations given to events and things, as well as their behavior The qualitative approach provides perceptions to social components of the procedures amongst agencies (Mashwama, Aigbavboa &Thwala, 2017).

11. LESSON LEARNT FROM LITERATURE

From literature we have deduce that for the development of environmental sustainable green affordable housing in cities can be viable if there is a strong leadership and skilled professional regarding the subject matter; A vision of the end product and its benefits; a public policy commitment to green building; the need for underwriters willing to factor green into affordability; and education for professionals, residents and property managers, maintance staff so as to learn how to take care of the materials. Low cost housing is a long term investment which must benefit beneficiaries in terms of comfort, quality and life expectancy (Jenkin *et al* 2007). Businesses are currently viewed as the main causes of social, economic and environmental problems. Companies are prosperous hence neglecting the need of the broader society (Porter & Kramer 2011). The main idea of sustainable development in the Production of South African Standards and regulations is extraordinarily included in planning and housing policy (RSA, 1994). According to Department of Housing 2001 – 2002, various sustainable low cost housing projects and programmes were undertaken through Environmental Implementation Plan as an initiative, measure and compliance to impact lives of beneficiaries of low cost housing by: Influencing designs of about 60 000 houses to promote energy efficiency; Developing a financial system to enhance environmentally efficient and green low cost housing projects; Planting trees to newly subsidised houses and Providing training courses on sustainable housing.

Furthermore, The South African constitution is said to be modern and international acceptable as it is one of the few constitution that incorporates the right for clean and protected environment. Constitution of the Republic of South Africa is the regulatory framework regarding environmental rights. It states that everybody has the right to the environment that is not dangerous to their health and well-being. The success of a business must reveal the evolution from unsustainable to sustainable development by reducing waste and contamination whereas utilising fewer assets and delivering more goods and services (Rothaus, N.D). It is mandatory requirement to comply with environmental principles through assessments presently in organisational sustainability (Oke & Aigbavboa, 2017). Terms which are often overfilled on businesses annual reports are green and sustainability, however the query is whether the Corporate Social Responsibility is treasured or well thought of or extremely considered (O'Mara *et al* 2012). The globally established standard which plans requirements for Environmental Management System is known as ISO 14001 to support businesses to improve environmental performance by reducing waste, effective use of resources, obtaining integrity of partners and competitive benefit (International Organization for Standardization, 2015).

Regions that were primary polluters of natural environment in Germany are the now good examples of clean environments through the substantial influence of ISO14001 standard which resulted to improvement in water and air quality in Europe (Ferguson 2014). The literature revealed that triple bottom model known as the people, planet and profit comprises the integration of social, environmental and economic attributes into business aspects and good practice (Jones et al, 2006). Social sustainability should consider all elements that contribute to poor environmental quality which may be a good response to promote social cohesion and not depend solely on ecological quality (Demsy et al 2011). According to Okeahalam &Akinboande (2003), the challenges faced by companies in implementing corporate governance as state above should be seriously addressed since it would be creating safeguards against corruption and mismanagement, promoting transparency in economic life and attracting more domestic and foreign investors. Furthermore, the development of capacity in firms, government and civil society to develop systems and effectively monitor compliance will be critical to achieving the goal of good corporate governance.

12. CONCLUSION

Currently, organizational sustainability is an established requirements with various mandatory prerequisites through survey enforcing environmental standards to be adhered to. Therefore it is highly recommended that construction companies are good corporate citizens, ensuring responsible business by incorporating Environmental, Sustainability and Governance into their businesses. Compliance to standards and legislative requirements forms the integral part of good corporate governance and sustainability on low cost and affordable green housing and companies. Construction companies are obliged in terms of the National Environmental Management Act for National and provincial department to formulate an Environmental Implementation Plan for any building construction activities that will have an influence on the environment and the constitution of the republic also enforces and regulates the rights of citizens

holistically and states that everyone has a right to an environment that is not harmful to their health and well-being. Internationally companies are required to disclose any project that will have an environmental impact under the Carbon Disclosure Project. The literature review revealed that the achievement of the organisation does not only rely on compliance of legislation and standards, but also by a broad series of economic, environment and social problem in a manner that is useful to the whole community and society internationally.

References

- Aigbavboa, CO. An integrated beneficiary centred satisfaction model for publicly funded housing scheme in South Africa. PhD IN Engineering Management [unpublished]: University of Johannesburg. Retrieved from: https://ujdigispace.uj.ac.za (Accessed: Date: 10-08-2018). 2014.
- Blaga S. Rethinking business sustainability, Review of Economic Studies and Research. 6(1), 5-21, 2013.
- Carrasco, M.A. & Bilal, U. A sign of the Times: To have or to be? Social Capital or Social Cohesion? Social Science & Medicine, 2016.
- Constitution of the Republic of South Africa Act No. 106 of 1996. Retrieved from www.gov.co.za on (20/04/2018).
- Corporate social responsibility (CSR) in South Africa as practiced by South African and German companies. South African German Chamber of Commerce and Industry.
- Dempsey, N., Bramley, G., Power, S. & Brown, C. The social Dimension of Sustainable Development: Defining Urban Social Sustainability. *Sustainable Development*, 2011.
- du Plessis, C. and Landman, K., Sustainability Analysis of Human Settlements in South Africa. Report Prepared for the Department of Housing by CSIR Building and Construction Technology, 2002.
- Elkington J. Partners from Cannibals with Forks: *The Triple Bottom line of the 21st Century Business Environmental Ouality Management*, 1998.
- Ferguson W. Environmental Compliance: Implications for South Africa Companies. Retrieved from http://m.engineeringnews.co.za/article/environmental-compliance-implications-for-south-africa-companies on 15 SEPTEMBER 2018, 2014.
- Green Building Council of South Africa. Improving life by greening low cost housing- case report of the Cato Manor Green street retrofit. April, 212
- Hakim c, Research design: successful Designs for Social economics, 2000. Directorate for Financial, Fiscal and Enterprise Affairs (Undated) Retrieved from https://www.oecd.org/daf/inv/corporateresponsibility/18269204.pdf on 20 March 2018.
- International Organization for Standardization. Retrieved from https://www.iso.org/files/live/sites/isoorg/files/archive/pdf/en/iso 14001 key benefits.pdf. On 20 April 2018.
- Jenkins, P., Smith, H., and Ping Wang, Y. Planning and Housing in the Rapidly Urbanizing World. In Housing, Planning and Design Series, London, 2007.
- Jones P, Comfort D & Hillier D, Corporate Social Responsibility and the UK Construction Industry, 2006.
- Khan, H (2011). A Literature Review of Corporate Governance. International Conference on E-business, Management and Economics. 25: 1-5
- King IV. Report on corporate governance for SouthAfrica. Institute of directors Southern Africa. 2016
- Kwon, S.W. & Adler, P. Special Capital: Maturation of a Field of Research. *Academy of Management Review*, 39(4):412-4, 2014.
- Li, Z. Development and contribution of wuhan's public housing system. Singapore: National University of Singapore. 2002.
- Mashwama, N.X, Aigbavboa, O.C & Thwala, D.W. "A theoretical assessment of the challenges of Public Private Partnership in Improving Infrastructure Service Delivery in Swaziland. *Proceedings of the 4th International Conference on Infrastructure Development and Investment Strategies for Africa. Livingstone, Zambia.20 August 1 September 2017*, pp 229-239, 2017.
- Mashwama, N.X, Aigbavboa, O.C & Thwala, D.W. "Challenges of Reconstruction and Development (RDP) Houses in South Africa, *Proceedings of the International Conference on Conference on Industrial Engineering and Operations Management Washington DC USA September 27-29*, pp 1695-1702, 2018.
- Naidoo R, Corporate Governance, An Essential Guide for African Companies, Second Edition, 2009.
- National Environmental Management Act (No. 107 of 1998) (NEMA) South African. Government, Retrieved from www.gov.co.za on 20 April 2018.
- National Department of Housing (NDH), Right to adequate housing, 2000 -2002.
- OECD Insights. Sustainable development, linking economy, society, environment. 2008

Proceedings of the International Conference on Industrial Engineering and Operations Management Bangkok, Thailand, March 5-7, 2019

- Oke, A. E., and Aigbavboa, C. O. Sustainable Value Management for Construction Projects. Springer, Switzerland, 2017.
- Okeahalam C & Akinboade O.A (2003). A review of Corporate Governance in Africa: Literature review, Issues and challenges. *Global Corporate Governance Forum*.
- O'Mara M, Bates S and LEED AP VP High Performance Green Buildings Solutions, Global Segment Lead Education & Smart Campus Solutions, Utilizing Smart Building to Reduce Environmental Impact, Ensure Occupant Satisfaction, Drive Better Business Outcomes, and Maximize Asset Value, Why Invest in High-Performance Green Buildings?, 2012.
- Porter, M. & Kramer, M. Creating shared value, Harvard Business Review, 89(1-2), 62-77, 2011.
- RSA. Department of Housing: White Paper, a New Housing Policy and Strategy for South Africa pp. 1-. 57, 1994 Rothaus R, Return on Sustainability: Workforce Housing for People, Planet and Profit (ND)
- Urban Land Institute Community catalyst report number 7. (2007). environmentally sustainable affordable housing. The 2007 ULI/ Charles H. Shaw Forum on urban community issues. October 4-5.
- Wales T, Organisational Sustainability: What Is It, and Why Does It Matter? *Review of Enterprise and Management Studies*, Vol. 1, No.1, 2013.

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