Chapter 10
Green Finance for Sustainable Global Growth:
Costs and Benefits of Green Buildings Compared With Conventional Buildings

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ABSTRACT

Green buildings have become one of the most famous and fastest growing construction concepts. As the world is becoming environmentally viable, all investors and contractual workers will need to know the figures of green financing and if the dangers of contributing are justified regardless of the arrival sum. This chapter aims to compare green building and conventional building using the cost differences and economy impact to ascertain the benefits of green building over the conventional building of green building. Data was collected through questionnaire survey from 50 construction professionals. The result of this chapter shows that green buildings are more expensive than conventional buildings; however, the benefits accrue from green building makes green building cheaper in the long run.

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INTRODUCTION

With increasing environmental concerns globally, it has become important for the finance sector to become responsive to environmental issues which give rise to the Green finance (Goel, 2016) Green Finance thus involves making investments in environmentally sustainable products and projects which aims at reducing or avoiding greenhouse gas emissions, controlling industrial pollution, water sanitation, waste management and overall biodiversity protection. It also includes green investments. Green building is part of green investments.

As cited in Hwang et al., 2017, the green building revolution is sweeping across most of the world. The goal of a green building is to take responsibility for achieving energy and resource efficiency, realizing long-term economic, environmental and social health (Sahamir & Zakari 2013, Yoon, Zhao, Hwang & Lee 2016). The development of green building is often discouraged by the perceived higher costs compared to traditional buildings; despite the fact tht green building have economic, social and environmental benefits (Dodge Data & Analytical, 2016).

In South Africa, operation of the building sector accounts for 23% of greenhouse gas emissions, while emissions from the manufacture of the major materials for the building sector amounts to around 18mtCO2 per year, or around 4% of total CO2 emissions (CIDB, 2009). Although buildings are a large contributor of greenhouse gases, they have received little attention in international global warming protocols and initiatives, which tend to focus on industry and transport (GSBSA, 2009). Dodge Data and Analytics (2016) reported that the green expansion would continue in developed countries such as the United States, Germany, and the United Kingdom. However, in South Africa this is still a relatively new concept, although awareness has dramatically increased (GSBSA, 2009). The world Green Building Council has a mission to achieve green building for everyone. To achieve this, it is imperative for construcion professionals and all stakeholders to know the cost implications and benefis of Green building. In the light of this perception this study investigates the green finance of green building, the benefits of green building and compare the cost of green building to conventional building in Johannesburg, Gauteng, South Africa.

BACKGROUND

It seems that green building has reached a tipping point. Any dabble into the real estate world will yield articles advertisements and discussion about green products and designs, as well as the stories about the latest green building. Yet the financing of green building is seldom discussed (Environmental Design & Construction 2007).