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Article Reviews

**Article 01**

Drivers Militating Against the Pricing of Sustainable Construction Materials: The Ghanaian Quantity Surveyors’ Perspective

Sustainable construction material is very costly, and the purpose of this research is to inspect the factors which influence the costs. The construction industry has a great impact on the economy of any country. Thus, the integration of sustainable practices in every process is of great significance. The significance of this research is unquestionable as the awareness of such substantial challenges will aid in decisions related to pricing of the sustainable construction materials. The objectives were clearly mentioned with an in-depth review of the literature, interview survey, and the questionnaire.

The literature review seems thorough and includes research on articles and books from the last ten years. The vigilant analysis of past studies related to pricing sustainable construction materials barriers has provided 23 factors that were identified which proved to be helpful for the study.

The research uses a conceptual model based on interviews and questionnaires which was developed for surveyors working in field. The model provides useful and suitable data for the research.

For the data, ten professionals with a minimum of ten years of experience in the industry were interviewed. Secondly, a Questionnaire was designed for the surveyors who have worked on sustainable and integrated construction projects in the past five years. The inclusion, as well as extraction criteria, were mentioned in the study. For any variable that had extraction value less than 0.5, it was neglected. Majority of the factors were sufficient as only a few were discarded. The study followed the Kaiser criterion which suggested that factors that have eigen value equal to or more than 1, should be considered. The model also implemented Rotation as suggested by Dogbegah to achieve a simpler structure which can be comprehended easily. The sample was ample for factor analysis and variables were important. Thus, it proves the validity and essence of the study. There was no selection bias apparent in the research.

The study format of the research is well-designed as it directly obtains data from the experienced people working in this industry. The research and procedure of study are based on the interviews and Questionnaire and thus it provides more accurate findings and understanding of the phenomenon. The Questionnaire and surveyors were informed about the purpose of the research.

The research methodology adopted the Non-parametric statistical testing using Principal Component Analysis as a statistical tool. Selection of these appears to be fitting for data analysis because it was reliant on the inclusive evaluation of accessible analytical and statistical tools. The only aim is the reduction of numerous variables into the improved and comprehensive framework. This data analysis provides valuable information which pricing specialists can use while pricing the materials.

           The findings of the study include several drivers which influence cost of sustainable construction materials. The highlighted drivers include information challenge (IC), sustainability measurement tools challenge (SMTC), awareness challenge (AC), and economic challenge (EC). The results and findings are presented clearly which will help several groups involved in the industry counting policymakers, researchers, and practitioners. The authors assessed the views and experience stated by the subjects and interpreted them as the factors which drive the prices eventually. The only limitation is that the study is restricted to geographical aspects and samples.

The study provides useful data for those who decide the prices for the materials. They can use the analysis and factors to adjust the prices in the future. The study significantly contributes to the body of knowledge as it helps people who are concerned with the pricing issues. The study can be replicated by expanding the frontiers which cover the developing countries. The study does not raise any additional questions (Kissi et al.).

**Article Review 02**

Building Environmental Assessment Methods: Applications and Development Trends

This study is based on application of potential market of systems and comparison multiple chief environmental assessment methods. In past ten years, substantial developments in environmental assessment approaches has been made. Though, significant effort is required for tools to aid environmental assessment methods. Existing as well as emerging LCA tools and EIA tools should perform well with evaluation methods.

The literature review of the study is recent, and it serves its purpose. The literature review is linked to the subject as it is also based on similar assessments.

The framework of the study follows a theoretical as well as a conceptual model. The authors utilized the past studies and also their own experience. For this purpose, two basic methodological frameworks are discussed for evaluating environmental effects. These frameworks include Life Cycle Assessment (LCA) and Environmental Impact Assessment (EIA). In this scenario, building is considered as the focus object around which the study is based. All the buildings are encompassed among firm scopes of LCA and EIA.

Basically, Environmental Impact Assessment (EIA) and Life Cycle Assessment (LCA) have purpose of accurately inventorying and evaluating environmental effects of their specified objects of study. The focus of EIA is to assess the factual environmental effects of an object at a site. On the other hand, LCA is framed to evaluate the specific potential environmental impacts of a product other than on the site. These two assessments involve methods like BREEAM, BEPAC, LEED, and GBA. The data is sufficient enough to discuss the potential application as well as compare the different assessment methods. The appropriate comaprison of applications and extent of assessment is provided for the most used assessment approaches.

This study is appropriate and comprehensive as it first discusses the applications for environmental assessment in the building sector. Secondly, it also compares the existing assessment methods. Lastly, it also provides future development paths that can help improve assessment methods. The research was conducted through a literature review and by critically analyzing the assessment methods. All these methods are fairly compared and contrasted.

The data was taken from the literature review and experience of the authors. It was critically analyzed and used to compare the different assessment models for the buildings. The statistical analysis and the comparison seem to be fitting with the theme of the study. The results were significant and useful to provide the guideline for the future.

The study finds that four methods successfully deal with issues related to resource utilization. However, in addition to consumption, these differ in motivation and that is why the scope and possible applicability also varies. For the building sector, the applications for environmental assessment are compared which include BREEAM, LEED, GBA, and BEPAC. The contrast is discussed based on the experience of the authors. The results are presented in a comprehensible way and the authors interpreted the results into the contrast of the approaches and on this basis provided future development paths. The limitations discussed is that the tools and existing approaches for assessment of numerous important features of building performance like indoor climate are not developed presently to the degree whch would allow practical as well as strictly performance-based assessments to be made.

The study provides four development plans which are essential for environmental assessment of buildings and can be used for future work. This study provides grounds to any researcher or practitioner who is working on these methods or similar projects. The study helps one to understand different methods of assessment without much effort. This study now serves as valid and helpful literature for current progress. The limitation described is that ample efforts and work is required so that the methods deliver an impartial evaluation of the environmental performance of designs of new building and potential of the existing building. This study can be replicated when the assessment method to discuss improved or new applications developed. The study did not raise any additional questions (Crawley and Aho).

**Article Review 03**

Improved access to integrated biodiversity data for science, practice, and policy - the European Biodiversity Observation Network (EU BON)

It is a well-known fact that biodiversity is endangered on a global level. To reduce the losses, one of the significant roles is to collect, assimilate and analyze the huge disintegrated and assorted biodiversity data. It is important to evaluate the present standing and inclinations of biodiversity so that decision and policymakers can consider the important facts. The research paper mainly focused on the European Biodiversity Observation Network (EU BON) which also promotes the wider worldwide initiative, known as Group on Earth Observations Biodiversity Observation Network (GEO BON). The objective of the research is to determine if EU BON will integrate appropriate biodiversity data from on-site results to remote sensing data, including terrestrial, marine and freshwater territories. The research paper clearly outlines the framework and strategies for the implementation of these networks.

The literature reviews are based on researches and studies conducted within the last 6 years. Through literature reviews presents valuable insights for the study.

The research uses a theoretical model to analyze the EU BON. The research covers the theoretical as well as the conceptual framework of Biodiversity Observation Networks. The outline of the paper seems adequate and fitting for the subject.

## The subject of this study is how EU BON is improving the tools and approaches for better data analysis. The data that will be incorporated includes remote sensing products and data like land cover, species profile data, genetic sequences, and genomics information, ecological data, habitation data and also land usage intensity, examination and supervising data or some specificsed organisms, taxonomic backbone data with nomenclatural data, estimates of water quality and climate substitutions and statistics provided by bio-repositories.

The study encompasses the model, need, approach, collection and analysis of data, drivers, testing and future prospects of EU BON. It provides a detailed overview of EU BON so that one can easily understand and extract the required information. The research was conducted by analyzing past studies and analyzing the model and results of the EU BON. The data was collected through the implementation of the model on test sites. The data is unbiased and provides a clear view of the data.

The study states that the project is funded by the European Commission however, this paper reflects the authors’ views. For any violation or misinterpretation, EC will not be held accountable.

The study is based on the EU BON and a gap analysis is performed on obtainable data sources. Also, robust efforts are required for assembling fragmented or concealed but valued data. The data integration and analytic design of the EU BON are tested and validated on actual ground situations. The tests are essential as they play a significant role to change the concept into real applications. These tests provide more technical evidence and act like a reality check. Three test sites are chosen in Spain, Germany, and Greece and a few more are planned in Spain, Israel, and Brazil. The results are significant as the understanding and practice with the test sites will help develop an approach for long-standing supervision and observatory data synchronization as well as a business strategy to gain and manage essential financial and more resources.

The study concluded that EU BON can potentially alter relations among public, science and the strategy for biodiversity. The decision and policy makers can utilize the biodiversity information at distinct levels, according to their own requirement. For supervision and estimation of different parameters at distinct spatial and time-based measures, dissimilar and unrelated databases will be combined. However, robust efforts for technical synchronization among the model, databases and visualization tools, as well as an exchange among the associated social network will also be required. The authors clearly explained the working and implications of the EU BON in detail. There are no specific limitations other than the inability to forecast the prospect of biodiversity and interface with anthroposphere.

Through this research, the authors explained the impacts and features of EU BON which will be helpful in understanding and implementing it. The study also provides their vision for the future which can even further enhance the usability of EU BON. The improvements include a citation, extensive data publishing and usage strategy which include license issues and IPR. The most significant output will be achieved when completely integrated data publishing and dissemination toolbox is developed. It will help the data providers to discover the most suitable ways to publish those biodiversity data which are structurally different. Moreover, it will assimilate workflows into data journals, principal aggregators, and repositories. The study can be replicated discussing the successful application of EU BON in the future. A need arises that in what way a user-friendly interface for masses of data sources and facilities of Europe and around the world can be united with GEOSS Common Infrastructure should be studied comprehensively (Hoffmann et al.).

**Work Cited:**

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