Construction Project Management in Developing Countries: The Case of International Construction Projects In Kenya

Kimani Thomas Njuguna
(Department of Construction Management, JKUAT, Nairobi, Kenya)
aalkizim@gmail.com

Ahmad Omar Alkizim
(Department of Construction Management, JKUAT, Nairobi, Kenya)
kimani.thomas.n@gmail.com

Mugwima Njuguna
(Center for Urban Studies, JKUAT, Nairobi, Kenya)
mugwima@gmail.com

Abstract
The aim of this paper is to investigate the applicability and relevance of various project management approaches, tools and techniques in international construction projects in developing countries. It uses Kenya as a case study. Kenya is planned for intense development of roads, railways, ports, airports, water and sanitation facilities. Construction projects have become international affairs with multi-cultural teams located in multiple countries. The unqualified adoption of indigenous or western project management practices is strongly discouraged. The cultural and political aspects need careful consideration along with other factors such as technology transfer, skilled labor disparities, size, novelty and type of the projects to ensure the project's success. Understanding and successfully managing cultural differences can bring several advantages to the projects. On the other hand, problems arising from cultural differences can cause conflicts, wastage of resources and delay of construction. The project management approaches to be used must reflect global realities and provide local solutions. The paper gives a theoretical basis and recommendations to construction project managers for a harmonious working environment.

Keywords
Developing countries, Culture, Management techniques, Expatriate, Globalization, Performance

1. Introduction

The globalization of the construction project management profession is following the globalization of the economy. The growing weight of empirical evidence from cross cultural management research also suggests that western management concepts may be wholly or partially inapplicable in some cultures (Crawford, 2003)**.** Developing countries face a number of social, political and economic problems unique to them although their impact on construction projects differs from country to country. In times of tight budgets, there's even more pressure to lead projects to success, so the qualification of the project managers becomes even more crucial and important. Project success in developing countries is not solely based on economic rationality. Assessing project success is a complex task and project construction performance is different for different people and organizations. Performance in this paper is described in

terms of economic, social and environmental impacts in a cultural context. Project teams are currently hired from anywhere in the world, depending on where skilled people are available (Raybould, 2007). So when a project takes place in Kenya, the project manager might have to deal with a multicultural team. The need to recognize and manage other cultures is an important component in this era of globalization. When the contractor, the lead consultant, or the employer in a project do not come from the same country, and at least one of them is working outside his or her own country, the project is an international construction project (Stebblings, 1998). In international construction projects, no company or government can afford to miss their project goals on grounds of cultural differences and misunderstandings. These trends will lead to more projects being implemented on a regional or global scale with ever increasing demands for skilled project managers.

International construction creates opportunities to develop products using the most up-to-date expertise and knowledge in a cost-effective manner through strategic pooling of resources and expertise for rewards on risks. Thus greater cultural understanding and sensitivity in terms of personnel management by the parties involved in international construction projects is critical to the successful undertaking of such projects. Culture in the construction industry is considered to be about the characteristics of the industry, approaches to construction, competence of craftsmen and people who work in the industry, and the goals, values and strategies of the organizations they work in (Abeysekera, 2003). Culture has several properties which have also been widely accepted (Barthorpe, 2000, Loosemore, 1999). It is shared, learned, symbolic, a tradition, shapes behavior and can change over time (Arsan, 2008). Culture is considered personal, business, or societal. The reason is that each layer of culture modifies the others and depends upon the intelligence, experience, and genetic make-up of each person. As different researchers hold different views towards cross cultural management, there is not an agreed definition available (Fontaine, 2007). According to Soderberg (2002), cross cultural management focuses on cultural encounters between different entities: the organizations and the nation-states, as well as helping to deal with cultural differences which would be sources of conflicts or miscommunication. The definition given by Adler (1991)**,** states that cross cultural management mainly cares about organizational behaviours, which is describing and comparing organizational behaviour within and across countries and cultures, as well as seeking to "understand and improve the inte raction of co-workers, clients, suppliers, and alliance partners from different countries and cultures".

Global markets are increasingly taking advantage of the strength and economic advantages of a diverse global workforce. It is common on international projects to find multi-cultural teams located in multiple countries. It is also common to find such projects led by Project Managers who come from many different countries. So having a person raised in India managing a project in Kenya, with a design team in the United Kingdom, procurement teams in China and South Africa, and a drafting team in India is not unusual. Even in historically monolithic markets like Kenya. In addition, the pressure on the industry to increase productivity and reduce costs is unrelenting. This leads to flatter project structures, and the need for proper cross-cultural management at multiple levels (Grisham, 2006).

Currently, in Kenya, there is a vision (Vision 2030) that aims at transforming Kenya into a newly industrializing middle income country that is safe, secure, prosperous, and globally competitive in Africa and beyond and that provides a high quality life to all its citizens by the year 2030. The implementation of the large infrastructure projects is ongoing with projects having a mixed team of professionals from all over the world with different educational and cultural backgrounds. However, most of the projects are managed by native personnel even though the project management profession can be said to be at its nascent stage. Therefore, in an attempt to address cross cultural competencies for construction project managers in developing countries, two questions arise: (1) Is project management equally applicable to all projects in developing countries or are certain skills required for management of international construction projects? (2) If it is applicable, what form of project management would be recommended and what competencies are required?

This is because cultures vary from country to country, and within countries. As a result, values at work and in social settings will vary accordingly. Personal choices and work values are culturally dependent

(Crawford, 2003). This study therefore draws upon aspects of cultural history in its approach to construction projects and involves a close reading of these texts. Central to validity of cross-cultural management concepts is the hypothesis that these variations can be measured or at the very least represented.

2. Cross Cultural Aspects in Construction

Culture and cultural differences are important issues for every organization in every industry. As Ankrah (2004) stated, these concepts become more critical in construction due to the nature of contracting, internationalization of procurement, joint venturing, and partnering in this industry. Like in other industries, the increase in strategic alliances in construction also increases the significance of cultural differences due to the interaction of people from different cultures (Cross, 2005). The advantages of managing cultural differences successfully have been addressed by many researchers. Fatehi (1996), shows that it can enhance organizational effectiveness and give an organization a strong competitive advantage. On the other hand, failure to manage cultural differences can cause serious problems such as delay of construction and decrease in productivity.

One of the most referenced pieces of research into cross cultural differences and their influence on work related value patterns is Hofstede's work. In researching national cultures, Hofstede (1984), identified four dimensions of culture. These extensively used and well known dimensions are; power distribution, tolerance for uncertainty, individualism/collectivism and harmony/assertion. The four dimensions provide a framework for considering the effects of cultural differences on management and organizations. Hofstede has been criticized for making generalizations about cultures but his work is unarguably useful for predicting how a group of people from a given culture may react in a given scenario.

Hofstede's four dimensions were considered in this study;

TABLE I
HOFSTEDE'S CULTURAL DIMENSIONS

Dimension	Research Question
Power Distribution	Are significant power disparities accepted? Or is the society more egalitarian?
Tolerance for Uncertainty	How comfortable are people with uncertainty or unstructured situations?
Individualism-Collectivism	Is the society organized around individuals or the group?
Harmony-Assertion	Does the society emphasize interpersonal harmony or assertiveness?

Many authors have found Hofstede's cultural dimensions to be a useful tool to explore the implications of culture (Low, 2001, Furber, 2012). His extensive empirical grounding makes it very easy to get a quick read of the central tendencies he found by country of interest. For example, according to Hofstede's rankings, those from countries with high power disparities like Singapore and Malaysia are more comfortable with highly defined structures or more centralized authority. Hofstede found the Japanese to be extremely risk averse. The United states and Great Britain ranked highest on the independence scale and relatively high as countries whose citizens display a competitive nature. See the table below selected regions/ countries rankings of cultures using Hofstede's classification.

TABLE II
RANKINGS OF 10 NATIONAL/ REGIONAL CULTURE'S USING HOFSTEDE'S CLASSIFICATION

Country	Power Distribution (1=Accept Authority, 53=Egalitarian)	Tolerance for Uncertainty (1=Risk Averse, 53=Not Risk Averse)	Individualism -Collectivism (1=Individualistic, 53=Collectivist)	Harmony-Assertion (1=Seeks Harmony, 53=Assertive)
East Africa	22	36	34	39
Great Britain	43	47	3	9
Arab Countries	7	27	26	23
China	15	49	37	18
India	10	45	21	20
Japan	33	7	22	1
South Africa	35	39	16	13
West Africa	10	34	40	30
U.S.	38	43	1	15

Even though this study is based on Hofstede's model, it attempts to go beyond the generalized conclusions typical of such studies in that it attempts to sensitize on the development of cross cultural thinking and find innovative solutions for organizational problems in developing countries. Therefore, this study implies a conceptual framework as shown in figure 1 below through which appropriate approaches to cross cultural construction project management in developing countries can be proposed.

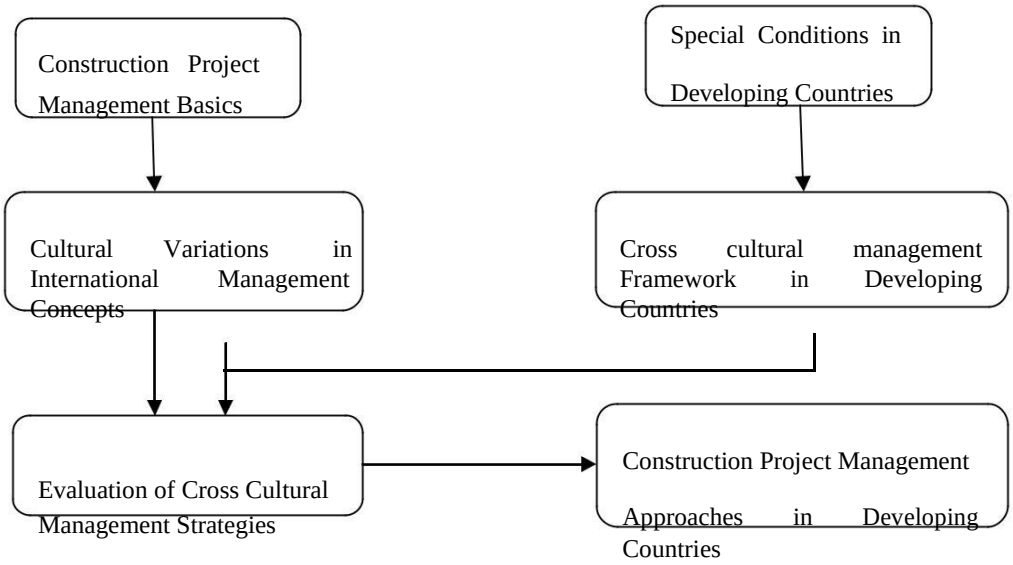

Figure 1. Conceptual Framework

3. Project Management in Developing Countries

The construction industry is one of the biggest industries in the world. It continues to shape people's lives in various unique and different ways. The output from construction industry is also a major and integral part of the national output, accounting for a sizeable proportion in the Gross Domestic Product (GDP) of both developed and underdeveloped countries (Ball, 1996; Crosthwaite, 2000; Drewer, 1980; Tse, 1997; Strassmann, 1970; Tsangyao, 2004). The Kenyan construction industry is a key economic growth driver, accounting for 7% of the Kenyan GDP (KNBS, 2016). Despite the global construction industry's significant contribution, its development and efficiency is relatively low compared to other industries, especially those in developing countries (Long, 2004). This is partly attributed to inferior management as Guangshe et al (2008), state that "the construction industry's large scale scope and its use of huge capital is in sharp contrast with the low benefit and inferior management". Project management in

developing countries is also facing many challenging problems such as shift of funding sources, frequent change of government policies, governments political priorities and corruption. Some projects in such countries end up incomplete, abandoned or unsustainable (Andersen, 2008). According to Chartered Institute of Building (CIB) (2008), the major task of project management in construction is to coordinate professionals in the project team to enable them make their best possible contribution to the project efficiency.

It is important to study international construction project management practices in the context of developing countries to better understand and manage the projects successfully. Even if the project is being implemented with a widely accepted standard, its nature, location, purpose and objectives can have a significant impact on the form of project management to be used. As Linn and Stuckenbruck (1987), stated, the form of project management should only be chosen after careful analysis of the governmental, political, social and cultural situation. Therefore, the strategy for implementing project management in international construction projects in developing countries should be consistent with the cultures involved and the characteristics of the particular society. In the past, efforts to promote project management in developing countries mainly dealt with how the forms of project management should be made adaptable and favourable to them (Crawford, 2003 & Z., 1987), now the focus has shifted on the need for cross cultural competencies in international construction projects for native construction managers.

4. Methods

A qualitative approach was used to provide for an enhanced understanding and generate rich descriptions of the concept of cultural diversity in the Kenyan construction industry. Since there was no prior hypothesis that was to be tested, an exploratory study was used to inform the research, exploratory Interviews were conducted to collect data from the perspectives of different Construction industry players (Architects, Engineers, Quantity Surveyors and contractors) in Nairobi, Kenya. 15 semi-structured face to face interviews were conducted. Materials from previous desk studies were used to prepare for the interviews, all interviews were approximately 1 hour in length for each. The respondents had at least 10 years experience in International Construction projects and their suggestions were not only based on specific projects but also on their working experience in different countries. The data was then analyzed by the authors using the technique of context mapping.

5. Results and Discussion

During the interviews, the participants were asked for their opinions about the possible challenges, barriers and difficulties they encountered during the different project execution stages, the effects of culture on project outcomes, effects of cultural differences on management practices and the relationship between cultural differences and construction projects success. All the interviewees acknowledged that there were cross cultural barriers in international projects. Besides the barriers, other factors affecting project success were also noted by the participants which are technology transfer, experience in international construction projects, benchmarking, learning and having an effective management system. Some management practices were also highlighted in the interviews, these are human resource management, communication management, safety management, time management and negotiation. The authors also attempted to explore whether the use of Hofstede's cultural dimensions could elucidate any understanding of the cultural differences.

5.1. Barriers Caused by Cross Cultural Differences

5.1.1. Language Barrier

The respondents reported that language barrier influenced the projects in a number of ways. For example, one Kenyan project manager experienced challenges communicating with companies which english is their secondary language especially chinese firms. For contractor x, a Chinese contractor, most of his Chinese workers do not understand english while his local employees only understood english making daily communication very difficult. The time and resources spent on translations from time to time were a lot in some cases, bad translations could invalidate relationships between two entities and could further disrupt the relationships within the project.

5.1.2. Business Etiquette

Business etiquette is a barrier because culture differences arise in rules of proper behavior, such as greetings, dining, and dressing. Schaffer et al (1993), define business etiquette as "the behavior, ma nners, and protocol established by convention as acceptable or required in a business or profession". Under t his, one of the biggest problem expatriate workers encountered was corruption. Most contractors complained that local government officials would not let them do anything until they had given them enough money, otherwise the contractors would face the risk of huge penalties or site closure. Another critical aspect that came up was when two experts from two cultural backgrounds differed on ways of implementing a project. Engineer k who works as a supervising consultant in a major project in Kenya stated that at some point, they were forced to suspend works on the basis that the contractor was working without drawings approved by themselves and the local authorities, lacked consistency in the implementation of the works and submitted drawings without proper design codes. The suspension resulted in delays and additional costs to the project.

5.1.3. Religious Differences

British architect l noted that religious differences can hardly be solved and thus companies should always take ways to avoid possible cultural conflicts caused by these. For example in design, the architect stated that he had to carefully consider religious values in all his international designs. Chinese contractor g also suggested that cultural values, in this case religious values of confucianism had a significant impact on their economic behavior.

5.1.4. Skilled Labor Disparities

Contractor Z, a Chinese corporation with a major infrastructure project in Kenya stated that even though he was contractually obligated to use as much Kenyan expertise as possible for the job, he found that the Kenyan employees lacked sufficient experience in specialized construction. The reasons for the disparity being historical coupled with training gaps in tertiary institutions. This barrier resulted in additional training and technology transfer costs.

5.1.5. Goods and Materials

The impact of this barrier can be regarded as highly critical. One case example was by an engineer involved in a major infrastructure project in Kenya which had a huge cement demand and the governments guideline's were that 40% of the cement to be used was to be sourced from local producers. However, the contractor on the project imported cement and other materials in contravention of an earlier

contract citing poor quality of local materials. This resulted in a conflict between Kenyan cement producers and the contractor and had the potential of resulting in a substantial cost to the project.

- **Explanation of the Barriers based on Hofstede's Cultural Dimensions**

Power Distribution

The Chinese community belongs to a culture that scores higher on hofstede's power distribution index compared to other communities (East Africans, British, Americans, Japanese and South Africans) working in Kenya. According to hofstede, superiors in cultures with high power distance scores are accustomed saying what to do and are less familiar with the more democratic ways that are common place with cultures with small power distances. Conversely, Kenyans belong to a culture (Kenya is part of east africa which includes Uganda and Tanzania) with a lower power distance index and are used to flatter structures of power where subordinates and authority work together on more equal terms and subordinates expect to be consulted. Perhaps this explains the need for Kenyan engineers to be involved in design and approval while the Chinese didn't see any need for consultation.

5.2.2. Tolerance for Uncertainty

Expatriate experts working in Kenya have a higher uncertainty avoidance index compared to their local counterparts. Perhaps this is clearly indicated by British Architect L in his designs by avoiding religious conflicts. It's also illustrated by The Chinese corporation training it's Kenyan workers to ensure consistency in quality and avoiding future risks of poor workmanship.

5.2.3. Individualism Vs Collectivism

The Kenyan and Chinese communities are more collectively oriented compared to other communities working in Kenya. The collectivist cultures tend to present the opinions and interests of the group rather their own interests. It is likely that the training of the Kenyan employees by the Chinese Corporation indicates that the company was looking out for all its employees.

5.2.4. Harmony Vs Assertion

The Kenyan community is more assertive compared to other communities working in International construction projects in Kenya. Perhaps this is well captured in the Cement row involving Kenyan cement companies and an expatriate major contractor. Even though the materials qualities might not have met the required standards, the Kenyans showed a forceful personality even though the local cement might have affected the project quality.

From the above, and based on the project life cycle for construction projects in Kenya, the following is suggested: (1) During initiation, the power distance should be high because the project manager should give priority to the client or government and the financing institutions as they take up a major role in firming up the scope of the project. Uncertainty should be extremely low as innovative solutions are encouraged to guarantee project success. (2) During the design and implementation phases, the power distance should be low to allow for development using the most up-to-date expertise and knowledge in a cost-effective manner through strategic pooling of resources and expertise. Other cultural dimensions should be balanced appropriately this is because the team members should be encouraged to work together rather than compete. (3) During termination, hand over and use, power distance should be moderate, as the top management terminates and hands over, it's the middle and lower level management

that will operate the facilities. Other cultural dimensions should be moderate as there should be a delicate balance between the project aspects.

Nevertheless, project management has many variations and the use of pure project management is encouraged, it can be varied to incorporate cross cultural aspects. The pure project organization has been defined as consisting of a new empire created solely for the purpose of accomplishing a unique, one of a kind task (Linn & Asghar, 1987). This is especially vital where (1) Projects are large, technically complex and must draw upon the expertise of a diverse workforce with differing skills and experiences.
(2) Projects involve considerable negotiation and interaction with globally diverse consultants, contractors, suppliers, financiers and a single point of organizational contact with cross cultural competencies is needed (3) Projects need to be successfully executed and completed with the allocated resources and (4) The client and financier needs a single point of indepedent responsibility and accountability in a project. This will very useful for projects of national importance and need to be seperated from bureaucratic control.

6. Conclusions and Recommendations

As illustrated in the discussion, any project aspect is subject to interpretation against a cultural background and could result to potential misunderstanding or disagreement within the project which could affect the triple constraints (cost, schedule and scope) of construction projects. As a construction project manager deals with all the nine areas of project management (Integration management, scope management, time management, human resource management, procurement management, cost management, communications management, quality management and risk management), he needs to understand that all the areas are influenced by cultural factors to a substantial extent. The specific tasks project managers have to perform within all these knowledge areas such as negotiations, conflict resolution and problem solving all take place within a cultural context. Having experience in International construction projects and being familiar with the national cultures of other project participants are considered as important issues to overcome the barriers caused by cultural differences. Moreover, effective knowledge sharing with people having different cultural backgrounds was seen as one of the key aspects that bring more advantages to the project. The results support findings of previous studies. Future studies will be carried out to investigate the relationship between cultural differences and construction projects success in Kenya. Mtsumo and Juang (2012), once stated "*our ignorance of languages other than english, and the unfortunate ethnocentrism that often accompanies this ignorance, may be the root of our future downfall*". They refer to business in the United States of America, but their statement might just hold as true for Kenya or other countries, as well as for organizations, project teams or even individuals.

6. References

Abeysekera, V. (2003). Understanding Culture in an International Construction Context, Perspectives of Culture in Construction. *CIB Publication* , 275, 39-51.

Andersen, S. W. (2008). Can project management support poverty reduction in Africa. *PMI Global Congress 2008 Proceedings.* Project Management Institute (PMI).

Ankrah, N. a. (2004). Treading the softer areas of construction management: a critical review of culture. *Association of Researchers in Construction Management* , Vol 1. 551-8.

Arsan, G. (2008). Effects Of Cultural Differences In Construction Projects. *International Conference On Multi-National Construction Projects* , 1-11.

Ball, M. &. (1996). Does building investment affect economic growth? *Journal of Property Research* , 13(2),99-114.

Barthorpe, S. D. (2000). The Pluralistic Facets Of Culture and It's Impact On Construction. *Property Management* , 18(5), 335-351.

Building, C. I. (2008). *Code of practice for project management for construction and development (3 rd ed.).* Blackwell Publishing.

Crawford, N. M. (2003). Approaches to project management in Africa: Implications for international development projects. *International Journal of Project Management* , 309-319.

Cross, S. a. (2005). Exploring the role of national culture in the management of large-scale international science projects. *International Journal of Project Mnagement* , 23, 55-64.
Crosthwaite, D. (2000). The global construction market: A cross-sectional analysis. *Construction Management* , 18, 619–627.
Drewer, S. (1980). Construction and development: A new perspective. *Habitat International* , 5(4), 395–428.
Fatehi. (1996). *International Management-A Cross Cultural and Functional Perspective.* New Jersey: Prentice-Hall.
Fontaine. (2007). Cross cultural management: six perspectives. *Cross Cultural Management : An International Journal, Vol. 14, No. 2* , 125-135.
Furber, A. ,. (2012). A case study of the impact of cultural differences during a construction project in Ghana. *ARCOM* , 553-562.
Government Of Kenya. (2007). *KENYA VISION 2030 POPULAR VERSION.* NAIROBI: VISION 2030.
Grisham. (2006). *Cross-Cultural Leadership.*
Grisham, T. (2006). *Cross-Cultural Leadership* .
Guangshe, J. J. (2008). Application of Organizational Project Management Maturity Model (OPM3) to construction in China: An Empirical study. *International Conference on Information Management, Innovation Management and Industrial Engineering*, (pp. 56-62). Taipei.
Hofstede. (1984). *Cultures Consequences: International Differences in Work Related Values.* London: Sage.
J., A. N. (1991). *International Dimensions of Organizational Behavior.* Cincinnati, OH.: South-Western College Publishing.
KNBS. (2016). *Economic Survey 2016, The Popular Version.* Nairobi: Kenya National Bureau of Statistics.
Long, N. D. (2004). Large construction projects in developing coutries : A case study from Vietnam. *nternational Journal of Project Management* , 553-561.Loosemore, M. a. (1999). Construction Project Management In The Persian Gulf: Inter-Cultural Communication. *International Journal Of Project Management* , 17,95-100.
Low, P. &. (2001). Cultural Influences on Organizational processes in International Projects: Two Case Studies. *Work Study* , 50(7), 276-285.
Mtsumoto, D. /. (2012). *Culture & Psychology.* Belmont: Wadsworth.
Nguyen. (2009). *The Globalization of Project Management*. Retrieved Jan 12, 2016, from www.ndv-projectmanagement.com: www.ndv-projectmanagement.com/pdf/Globalization_PM.pdf
Raybould, M. L. (2007). Impacts of Globalisation for Project Management. *aipm* , 383-390.
Schaffer, B. F. (1993). Education in business etiquette: attitudes of marketing professionals. *Journal of Education for Business* , Vol. 68, no. 6, pp. 330-333.
Søderberg A.M., H. N. (2002). Rethinking cross cult ural management in a globalizing business world. *International Journal of Cross Cultural Management* , 103-121.
Stebblings. (1998). Dispute resolution in major projects. *International Dispute Resolution Conf., Hong Kong International Arbitration Centre, Hong Kong SAR.*
Strassmann, P. (1970). The construction sector in economic development. *the Scottish Journal of Political* , 17(3), 390–410.
Tsangyao, C. &.-C. (2004). A note on testing the casual link between construction activity and economic growth in Taiwan. *Journal of Asian Economics* , 15, 591-598.
Tse, R. Y. (1997). Causal relationship between construction flows and GDP: Evidence from.
Construction Management and Economics , 15, 371–376.
VISION 2030. (2007, MARCH 5TH). *Lamu Port and New Transport Corridor Development to Southern Sudan and Ethiopia*. Retrieved SEPTEMBER 6TH, 2014, from VISION 2030: http://www.lapsset.go.ke
WTO. (2013). http://www.wto.org/.
Z., L. C. (1987). Project Management: The Promise for Developing Countries. Vol 5 No 3.