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CONSTRUCTION IN THE MUSLIM WORLD – A FACTUAL ANALYSIS AND POLICY IMPLICATIONS

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ABSTRACT

Widespread poverty, inadequacies in food, shelter and meaningful employment due to the lack of economic development, the lack of easy access to schools and education, the lack of freedom and political representation, etc in some of the least developed developing countries of the Muslim world are common knowledge. Attempts at developing and implementing appropriate strategies have been made and are continuing in effort to bring about economic development to these countries but the situation remained. In this paper the authors argued that one effort to bring about economic development is through the construction sector where construction delivers the much needed basic infrastructures. The latter would then enable economic activities to be carried out and therefore promote socio-economic growth and development. An examination on the size and contribution of the construction sectors of the countries of the Muslim world to their respective economies was carried out and the outcome formed a basis in considering policy implications on how construction could be used as a catalyst to bring about sustainable economic growth and development to these countries. The key results from the examination are: majority of the construction sectors of the countries of the Muslim world make small contribution to their GDP; at per capita level, most of the countries of the Muslim worlds' construction GDPs are very small; and per capita construction GDP is positively correlated to per capita GDP and GDP from the industrial sector but is negatively related to other sectoral GDPs. In terms of policy implications, topping the list include development of the countries of the Muslim world, in terms of enhancing per capita income or GDP, relies with the generation of construction and industrial sector GDPs and not with other sectoral GDPs and the countries of the Muslim world should promote active and mutual cooperation. In the paper the Muslim world refers to the member countries of the Organization of the Islamic Conference or OIC.

Keywords: Construction, Development, Muslim, OIC, Policy, Socio-economic.

CONTEXT

The Muslim World in this paper refers to the member countries of the Organization of the Islamic Conference or OIC. The OIC was established in 1972. Its current membership stood at 57 countries (see Table 1; countries have been classified in accordance to the Per Capita GDP).

Income Group	Countries
Group 1: Low income (less than US\$745 per capita)	Afghanistan, Bangladesh, Benin, Burkina Faso, Chad, Comoros, Gambia, Guinea, Guinea Bissau, Kyrgyz Republic, Mali, Mozambique, Niger, Sierra Leone, Somalia, Tajikistan, Togo, Uganda, Uzbekistan. (19 countries; 33.4%)
Group 2: Lower Middle Income (US\$746 – 2,975 per capita)	Cameroon, Cote d'Ivoire, Djibouti, Egypt, Lebanon, Mauritania, Morocco, Nigeria, Pakistan, Palestine, Senegal, Sudan, Syria, Turkmenistan, Yemen. (15 countries; 26.3%)
Group 3: Upper Middle Income (US\$2,976 – 9,205 per capita)	Albania, Algeria, Azerbaijan, Gabon, Guyana, Indonesia, Iran, Iraq, Jordan, Kazakhstan, Malaysia, Maldives, Suriname, Tunisia, Turkey. (15 countries; 26.3%)
Group 4: High Income (US\$9,206 & above per capita)	Bahrain, Brunei, Kuwait, Libya, Oman, Qatar, Saudi Arabia, UAE. (8 countries; 14.0%)

Table 1 Classification of the countries of the Muslim world by Per Capita GDP, 2007. Source: SESRIC, 2009.

The underlying reasons behind the setting-up of OIC was not only economic but partly historic and mainly ideological; namely the unity of the Muslim *Ummah*. Article II of the Charter of The Islamic Conference documents the objectives and principles of OIC. In order to make some initial steps and to give the idea of unity a first concrete shape, a number of institutions and organizations were set up within the OIC system with respect to the cooperation of the Islamic countries in limited sectorised projects and specific economic activities.ⁱ

A review of the performance of the OIC indicates that the stated objectives of the Charter have hardly been achieved.ⁱⁱ Although the OIC community has more potential in economic growth than the EEC (now EU) community, the OIC has not been able to foster similar economic cooperation among its member countries.ⁱⁱⁱ Despite member countries' efforts to create close economic cooperation, they failed to achieve satisfactory results because of a lack of political commitment.^{iv} There has been sporadic co-operation in political, economic, social, cultural and scientific fields.

Consequently, countries of the Muslim world are at various stages of development. This notion is confirmed when the World Bank's practice of classifying countries into groups based on their per capita income (World Bank, 2003) is applied to the countries of the Muslim world. The outcome, as shown in Table 1, suggests that 34 countries of the Muslim world (60%) are considered as least-developed developing countries (Group 1 and 2); 15 countries are considered as middle-income developing countries (Group 3); and only 8 countries are considered as developed countries.

Globally, the Muslim world represents some 20% of the world's population, has 50% of the world's oil reserve and 40% of the world's raw materials and other resources. Yet the Muslim world situation is portrayed in the following words:

"There is also not a single Muslim country that can be classified as developed. A number are very wealthy being well-endowed with natural resources. But almost all are lagging behind in modern knowledge, technological skills and in many instances, an effective Government. In fact in quite a few countries a state of near-anarchy prevails. By no criteria can any of these countries be classified as developed".^v

The lack of economic development and the presence of widespread poverty, inadequacies in food, shelter, the lack of easy access to schools and education, the lack of freedom and political representation, etc in some of the least developed developing countries of the Muslim world are common knowledge. Attempts at developing and implementing appropriate strategies – socio-economic, political, spiritual, etc – have been made, some discontinued and newer attempts being put in place in effort to bring about economic development to these countries (see for example Pramanik, 2004; Khairuddin and Hasan, 2004; 2005) but sadly the status quo remained.

OBJECTIVES OF THE PAPER

This paper reports on an on-going study focussing on socio-economic growth and development of countries of the Muslim world. Given that the majority of the countries of the Muslim world are in urgent need of socio-economic development in order to alleviate poverty and various other hardships (see for example Khairuddin and Hasan, 2004; 2005); and the authors are from the construction and economics backgrounds, it makes sense that the approach taken in the study relates to socio-economic growth and development through the construction sector point of view.^{vi}

Specifically, in this paper the authors thesis is that one effort to bring about socio-economic growth and development is through strengthening the indigenous construction sector of the countries of the Muslim world so that construction would in turn delivers the much needed basic infrastructures. The latter would then enable economic activities to be carried out and therefore promote socio-economic growth and development. To this end an examination on the size and contribution of the construction sectors of the countries of the Muslim world to their respective economies was carried out and the outcome formed a basis in considering policy implications on how construction could be used as a catalyst to bring about sustainable economic growth and development to these countries.

The parts of the on-going study to be reported in this paper are:

- Assessing the capabilities of the construction sector of the countries of the Muslim world; and
- Assessing policy implications on the way in which socio-economic growth and development could be brought to the countries of the Muslim world via their respective construction sectors.

The current study examines economic indicators of the countries of the Muslim world published by the Statistical, Economic and Social Research and Training Centre for Islamic Countries or SESRIC. SESRIC is an organ of the OIC (website <http://www.sesrtcic.org/>).

PLAN OF THE PAPER AND LIMITATIONS

The paper is presented in four parts. Part 1 provides context and lists the objectives of the on-going study and of the current paper. Part 2 provides the theoretical framework on the significance of construction to the economy while Part 3 describes the desk research that was carried out in order to achieve the objectives of the study to be reported in this paper and presents the results. Finally, Part 4 discusses the research outcome and the corresponding policy implications.

Several factors including the lack of reliable data on construction GDPs of some of the countries of the Muslim world, the methodology used and the limited funding available have constrained the carrying out of the study. The conclusions of this paper therefore, should be viewed within these constraints and further and deeper study should be carried out and is currently underway.

CONSTRUCTION AND THE ECONOMY

Construction is significant to a country's economy, irrespective of the country's levels of economic development. However, it has been established by many authors and commentators that construction is more important to a developing country than to a developed country, notably due to the fact that construction establishes the basic infrastructure that the developing country urgently requires in order to promote and sustain socio-economic growth and development. The relationship between construction and the economy is illustrated in Figure 1.

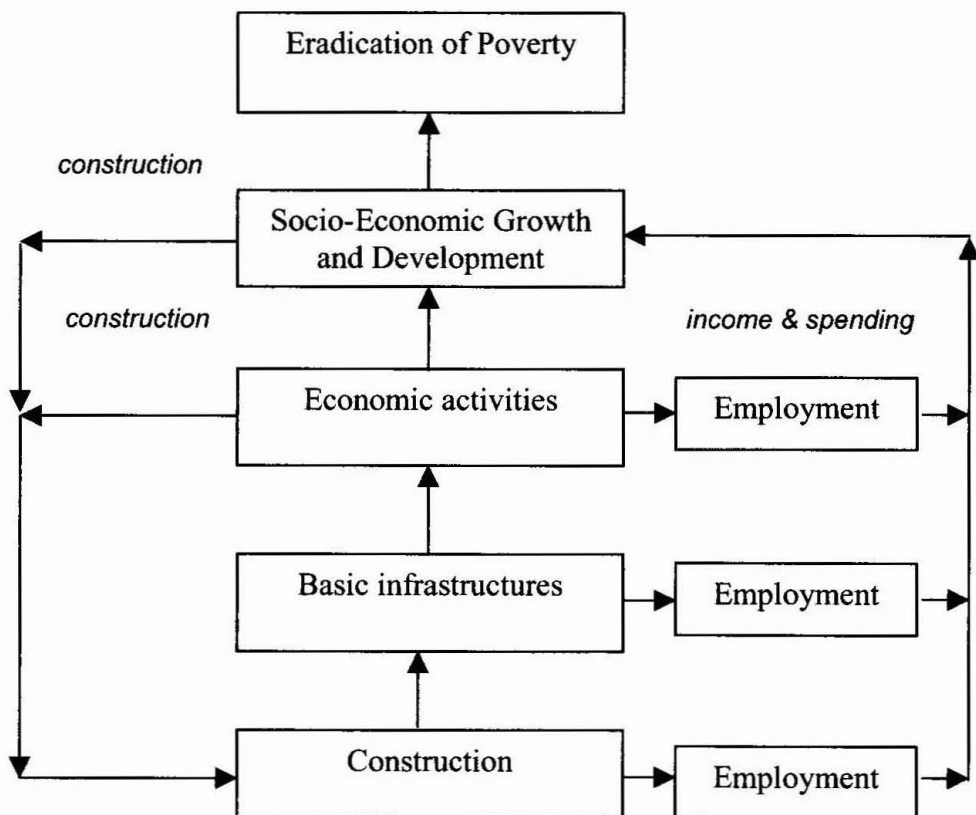


Figure 1 Theoretical framework on the relationship between construction and the economy

Previous studies on the significance of construction to the economy include works done by Turin (1973), Ofori (1980), Edmonds and Miles (1984), Wells (1986), Salih (1992), Ruddock and Lopes (1996), Khairuddin (1998) and Khairuddin and Hasan (2004) and Khairuddin and Hasan (2005).

The significance of construction to the economy may be examined as follows:

- Construction as an industry contributing to Gross Domestic Product (GDP).
- Construction as a major component of Gross Fixed Capital Formation (GFCF).
- Construction as a major employer in the economy.

Construction As An Industry Contributing To Gross Domestic Product (GDP)

In most countries, construction is featured as one of the sectors of the analysis of GDP by industrial origin. A review of literature on the relationship between value added by construction and the GDP in most countries draws the following conclusions:

- The contribution of the construction sector to the GDP follows a general but predictable pattern of up to 3 per cent of GDP, between 3 per cent and 5 per cent of GDP, and between 5 per cent and 10 per cent of GDP in the underdeveloped, developing and the developed countries, respectively.
- In the low income and middle-income developing countries, the rate of growth in construction is higher than the rate of growth in the economy as a whole. This phenomenon is due to the high rate of investment of which construction represents about 50 per cent in order to achieve economic growth.
- The contribution of the construction sector to the economy as a whole tends to increase as the income per capita increases. This suggests that a country's capability to spend on construction is related to its per capita income, i.e., higher income countries are able to spend more on construction than the lower income countries.

Construction As A Major Component Of Gross Fixed Capital Formation (GFCF)

GFCF refers to a national income accounting category representing the expenditure on fixed assets (for example buildings, vehicles, plant and machinery). Economists also refer to this expenditure as investment. However, expenditure on maintenance and repairs are not included in the GFCF.

A review of literature on the contribution of construction to GFCF in most countries draws the following conclusions:

- Investment in construction in most countries accounts for some 50 per cent of the GFCF.
- Investment in construction increases as the income per capita increase.

Construction As A Major Employer In The Economy

Construction is an important employer of the workforce in most countries, irrespective of the countries' level of economic development.

A review of literature on the relationship between construction and employment in most countries draws the following conclusions:

- Construction employs between 2 per cent and 10 per cent of the total workforce in most countries.
- Construction, in most countries, is labor intensive.
- Labor productivity in construction increases as income per capita increases.

Deficiencies In Construction And Their Likely Consequences

In order for construction to perform its vital role and in order for its products to achieve their goals in terms of all the dimensions: politics, economics, social and culture, it has to be efficient and based on indigenous capabilities. Consequently, should a country's construction sector lack the capacity to initiate, construct, manage, operate and maintain construction products due to its lack of ability to define, design, select and construct buildings or civil engineering works, a deficiency in construction may occur.

Deficiencies in indigenous construction capacity would result in dependence on imported inputs: materials, plant and equipment, management and the skilled workers. In the context of the least developed developing countries prolonged dependence on imports that in turn could lead to increasing foreign debts and unfavorable balance-of-payment conditions would reduce their capacity to import these foreign inputs. As a consequence, the construction of infrastructure urgently needed to promote socio-economic growth and development would be delayed, put on hold or abandoned completely. This phenomenon may slowdown or causes a downturn in the rate of socio-economic growth and development of the country and subsequently, the living standards of the population may decline.

A country's economy therefore requires a capable indigenous construction sector, i.e., in terms of its relative size and the adequacy and timely supplies of the main resources, functions and institutions required for its processes.

CAPABILITIES OF THE CONSTRUCTION SECTOR OF THE COUNTRIES OF THE MUSLIM WORLD

It has been established in the foregoing part of this paper that there is a relationship between the levels of a country's construction output measured in terms of construction's contribution to GDP or GFCF and the country's level of socio-economic growth and development.

According to Wells (1986) should the output of a country's construction sector falls below the average figure, expressed in terms of construction's contribution to GDP or GFCF (the figures reproduced in Table 2) in relation to the country's level of economic development, there is a potential of deficiencies in indigenous construction capacity and inadequacies in construction output.

Variable	Group 1	Group 2	Group 3	Group 4
Value added in construction as a % of GDP	3.6	5.2	5.4	7.3
Construction as a % of GFCF	56	53	55.4	57.5

Note:

Groups 1 and 2 = Least developed developing countries;

Group 3 = Middle-income developing countries;

Group 4 = Developed countries

Table 2 The Average Contribution of Construction to GDP and GFCF (Countries Grouped According to Income Per Capita). Source: Wells (1986)

Countries Of The Muslim World: Share Of Construction To Their Respective GDP

Using data published by SESRIC an estimate was made on the share of construction to the GDP of countries of the Muslim world. The outcome of the estimate is as shown in Table 3. The results show that 30% or 17 of the countries of the Muslim world have very low share of construction sector contributions to their economies (3% or lower), followed by 39% or 22 countries having medium share (4-6%) and 32% or 18 countries having high share (7-15%).

Construction share of GDP	Number of countries	Percentage
Up to 3%	17	29.8
4 - 6%	22	38.6
7 - 9%	14	24.6
10 - 15%	4	7.3
TOTAL	57	100.0

Table 3 Distribution of the countries of the Muslim world by construction share of GDP, 2007. Source: SESRIC, 2009.

The results suggest that construction is actively contributing to the economies of the countries of the Muslim world and therefore plays an important role in the socio-economic development of these countries but the share of construction to the GDP varies significantly.

Applying the theory proposed by Wells (see Table 2), the results suggest that deficiencies in indigenous construction capacity and inadequacies in construction output exist in 30% of the countries of the Muslim world. In other words the construction sectors of these countries are deemed incapable of delivering the much needed basic infrastructures and that in turn could inhibit or prevent socio-economic growth and development to take place (the current study is preliminary in nature as such this report refrains from naming the countries concerned).

Countries Of The Muslim World: Per Capita Construction GDP

Table 4 shows the distribution of the countries of the Muslim world's per capita construction GDP in 2007. Overall, the per capita construction GDP of the countries of the Muslim world are predominantly low (mean US\$474; SD US\$1372), with a wide variation among the countries.

Specifically, 56% of the countries of the Muslim world have per capita construction GDP less than US\$100, 23% countries have per capita construction GDP between US\$101 to US\$400 and 14% have between US\$401 and US\$1000. Only four countries representing 7% of total appear to have per capita construction GDP more than US\$1000.

Per capita construction GDP (US\$)	Number	Percentage
Up to 25.0	11	19.3
26 - 50	14	24.6
51 - 100	7	12.3
1 01 - 200	9	15.8
201 - 400	4	7.0
401 - 1000	8	14.0
1001 - above	4	7.0
TOTAL	57	100.0

Table 4 Distribution of the countries of the Muslim world by per capita construction GDP, 2007. Source: SESRIC, 2009.

Countries Of The Muslim World: Relationship Between Construction And Other Sectoral GDPs

In examining the relationship between construction sectors' association with other sectoral GDPs and per capita income/GDP, Pearson's correlation coefficient matrix has been estimated and the results presented in Table 5.

It can be seen from Table 5 that on the one hand construction GDP is highly positively correlated with total consumption and wholesale, retail share of GDP and also positively related to industry GDP, but it is significantly negatively related to agriculture GDP. On the other hand, per capita construction GDP is positively correlated with per capita GDP and industry GDP, but it is negatively related to agricultural and commercial and service sector GDPs. Similarly, per capita GDP is positively correlated to per capita construction GDP and industrial GDP, but it is negatively related to agricultural, commercial and service sector GDPs.

The results presented in Table 5 indicates per capita income is highly positively determined by per capita construction GDP and industrial GDP, however, the same variable has strong negative relations with other sectoral GDPs. This means that an increase per capita income requires positive contributions from construction and industry whereas it would imply declining trends to other GDP contributions.

	1	2	3	4	5	6	7
Construction GDP in US\$	-	-	-0.32*	0.29*	0.89**	0.86**	-
Per capita construction GDP	-	0.78**	-0.37**	0.42**	-	-	-0.31*
Share of construction GDP	-	-	-	-0.21	-	-	-
GDP per capita in US\$	0.78**	1.0	-0.48**	0.55**	-	-	-0.37**

1 = Per capita construction GDP; 2 = GDP per capita in US\$; 3 = Agriculture share of GDP;
4 = Industry share of GDP; 5 = Total consumption US\$; 6 = Wholesale, Retail share of GDP; 7 = Share of commerce & service to GDP

Table 5 Correlation matrix between construction sector and non-construction sector GDPs of countries of the Muslim world, 2007. Source: SESRIC, 2009.

CONCLUSION

A study on the scenario of construction sector of the countries of the Muslim world was conducted and reported herein this paper. The study, using secondary data published by SESRIC, examined the contribution of construction to the GDP of these countries. A summary of the results of the study is as follows:

- Majority of the construction sectors of the countries of the Muslim world make small contribution to their GDP;
- At per capita level, most of the countries of the Muslim world's' construction GDPs are very small; and

- Per capita construction GDP is positively correlated to per capita GDP and GDP from the industrial sector, while the same variable is negatively related to other sectoral GDPs.

From the above findings the following policy implications are recommended:

1. Development of the countries of the Muslim world, in terms of enhancing per capita income or GDP, relies with the generation of construction and industrial sector GDPs and not with other sectoral GDPs. This aspect of the findings support the authors' thesis made at the beginning of the paper that construction can become a catalyst to promote socio-economic development through the delivery of infrastructures that would in turn support industrial activities in the countries of the Muslim world.
2. Countries of the Muslim world should promote active and mutual cooperation, in line with aims and objectives of the OIC. In this respect, the least developed developing countries of the Muslim world should collaborate with the middle-income and the developed countries of the Muslim world.
3. In relation to 2 above, a concept of mutual cooperation such as Smart Partnership should be considered. Topping the agenda for such a smart partnership. Construction-wise should include sharing of skills and expertise, technology transfers and higher education and training and in project funding. The more developed countries of the Muslim world that have relatively well developed construction sectors should provide leadership. Perhaps, the proposal otherwise known as *Al Musharaka Al Zakia* proposed by Khairuddin and Hassan (2004) merit revisiting.

The need for cooperation and integration among the countries of the Muslim world has been reiterated as follows:

"Economic cooperation and integration shall accelerate the development of the Muslim world and intensify the inter-relations between the Islamic countries. For the OIC and its subsidiaries, the economic cooperation among ICs has a value in itself; therefore, the community perspective should be taken for the evaluation of developmental projects and proposals" Prof. Volker Nienhaus, 1987, p.125.

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^{vi} The first author is a Quantity Surveyor and a construction procurement specialist; the second author is an economist and specializes in urban and regional planning and development.