

# EVALUATION OF ISLAMIC FINANCING PRODUCTS FOR HOUSING AND INFRASTRUCTURE DEVELOPMENT

Saheed Adelekan<sup>1</sup>, Sam Wamuziri and Ben Binsardi

*Centre for Management Research, Glyndwr University, Plas Coch Campus, Mold Road, Wrexham, Wales, LL11 2AW, UK*

Housing delivery and infrastructure development are fundamental necessities for economic growth of any nation. However, the provision of these essential services on the required scale to meet demand remains problematic for most countries and governments worldwide. Lack of adequate supply of housing and infrastructure project finance has been identified as a major obstacle to such development. Previous studies and available literature have also highlighted that existing conventional finance and banking structures are unlikely to provide adequate funding streams necessary to address the acute shortage of housing and infrastructure particularly in developing countries. This paper evaluates the potential of Islamic financing products and services to contribute to housing and infrastructure finance. Firstly, a review of the principle features of Islamic financing products is provided. Secondly, the interest based conventional banking is compared with the Non-interest based Islamic finance which is currently gaining ground in many countries including the United States and the United Kingdom. Case studies of some Islamic banking products that have shaped the infrastructure landscape are provided. This study further evaluates and analyses the concept of cost of capital for Islamic finance models and products, and compares and contrasts it with conventional bank lending systems. The study finds that considerable potential exists for the construction industry worldwide to benefit from Islamic Finance which possesses business partnership characteristics that entail risks and reward sharing as opposed to the interest based conventional finance and banking systems. Furthermore, Islamic finance products are found suitable for housing and the construction industry. As a consequence, it is recommended, that individuals, clients, contractors, and business leaders should take a serious look at these products for their project and corporate finance needs for housing and infrastructure development.

**Keywords:** conventional banking, housing delivery, infrastructure development, Islamic finance, non-interest finance, risk sharing

## INTRODUCTION

Housing delivery and infrastructure development at the optimal level contributes immensely to economic growth and development of any nation. The function of infrastructure as a major determinant for economic advancement, particularly in developing countries has been widely acknowledged in literature (Calderon and Serven, 2003; Estache, 2006; Sahoo and Dash, 2009). Direct investments in

---

<sup>1</sup> [so@consularnetwork.com](mailto:so@consularnetwork.com)

infrastructure enhance housing delivery, increase production facilities, reduce trade and transactional costs, improve competitiveness, create employment opportunities and as such stimulate economic activities (Sahoo, Dash and Nataraj, 2010). However, housing delivery and infrastructure development on the required scale remains a daunting challenge for most countries and governments worldwide. The inadequacy of construction project finance has been identified as a major impediment to the delivery and development of these fundamental necessities. This is not unexpected in this period of the credit crunch and capital flight by lenders and investors. In such periods, investors will seek investment assets with potentially higher yield and low risk. Previous studies and the available literature underscore the fact that the existing infrastructure development finance structure through government budgets and conventional banking and finance systems are unlikely to supply adequate funding streams necessary to tackle the acute shortage of housing and infrastructure, particularly in developing countries. Many authors have also established that the current (one sided liability) interest based conventional banking system is fundamentally unstable (Friedman, 1969 and Simons 1948); this view was buttressed by the most recent economic downturn. Moreover the previous financial crises such as the German hyperinflation of the 1920's; Europe's oil shock inflation of the 1970's; the Argentina, East Asia and Russian defaults; Japanese banking crises; Enron bankruptcy and so on may suggest that there are inherent flaws in the interest based conventional finance system. However, it could be argued, that it is not the conventional banking system per se that is flawed, but the people operating the system who fail to adopt best practice and ethical values for business sustainability.

Islamic finance has been vindicated by its advocates in that it avoided much of the recent financial crisis not only because of its prohibition on speculations and uncertainties, but also for its emphasis on risk and profit sharing. This gives credibility to the Islamic finance model due to its characteristics which are different from conventional models. There is nothing to suggest that Islamic finance is flawless or devoid of risks. Indeed, Islamic financing institutions undertake risk evaluation and profitability analysis before taking any project funding decision in order to provide investors with some degree of certainty over their investments.

This paper evaluates the potential contribution that Islamic financing products can make to improve housing and infrastructure delivery. The principle features of Islamic finance products are reviewed and compared with those offered in conventional banking. Case studies of major projects where Islamic financing techniques have been utilised are analysed. Furthermore, the concept of the cost of capital for non-interest based Islamic finance models and products is evaluated and compared with the conventional finance system.

## **RESEARCH AIMS, OBJECTIVES AND METHODS**

This paper reports a study in its preliminary stages investigating non-interest based Islamic banking and financing products as a viable source of funding for housing and development of major infrastructure projects such as power stations, water supply and sanitation, etc. The objectives of the study are these:

- To analyse the principal features of key financial products in Islamic project finance.
- To develop standardised models of genuine financial products and financial engineering in Islamic project finance.

- To evaluate and identify best practice in risk assessment and management approaches used by Islamic financial institutions for development of housing and major infrastructure projects.
- To develop standardised best practice models and approaches that combine conventional and shariah-compliant sources of finance in major projects.

A mixed methods approach will be adopted in this study to collect and analyse data and views of all key stakeholders in Islamic project financed infrastructure. Both primary and secondary data will be utilised. Interviews and focus groups will be used to gather primary data. Sources of secondary data will include existing literature and the Islamic Development Bank database. Case studies of past infrastructure projects involving Islamic financing techniques will be analysed to draw important lessons for the future.

## **ISLAMIC BANKING AND FINANCE**

Islamic banking refers to a banking system that functions on the principles of the Shari'ah (Islamic jurisprudence) and its practical application through the development of Islamic economics. Although the Islamic finance concept can be traced back to about 1,400 years, its recent growth can simply be dated to the 1970s when Saudi Arabia and the United Arab Emirates launched Islamic banks. It is now estimated that worldwide, around US \$1 trillion of assets are managed under the Islamic finance system. Shari'ah principles emphasises moral and ethical values in all dealings and prohibits both the acceptance and payment of interest charges (riba) for lending and borrowing of money. Due to the prohibition on interest based investments, Islamic banks are compelled to earn their income through profit sharing partnership or fee based investments. Business partnership subsists between participants in Islamic banking transactions as risks and profits are jointly borne by all parties. The products and Islamic financial mechanisms are equity-oriented which are based on a variety of profit and loss sharing formulas (Imady & Seibel, 2006). The code of conduct that guides the operations of Islamic banking and finance is derived from two religious sources; (i) the Shariah which comprises the Qur'an (Islam Holy Book) and the Hadith (i.e. the sayings and deeds of Prophet Mohammed (PBUH) and (ii) the Fiqh, which represents Islamic jurisprudence based on a body of laws deduced from the Shariah by Islamic scholars, established to create an equitable system of distributive justice and also to promote legitimate activities (halal).

The main principles of Islamic finance dictate that:

- Profits must be generated through lawful trade and asset-based investments.
- Investments must possess social and ethical benefits to the wider society beyond pure profit making motives.
- Risks and rewards should be shared in an agreed manner.
- All unlawful and harmful activities (haram) should be avoided.

Islamic finance system prohibits business activities involving; alcohol, firearms, tobacco, prostitution, pork products, speculation, betting, and gambling, debt financing without an underlying asset backing, avoidable risks (gharar) and all other trade and activities that provide goods or services considered contrary to its principles. The Islamic banking has same objectives as its conventional counterpart except that it operates in accordance with the rules of Shari'ah, known as Fiqh al-Muamalat (Islamic rules on transactions). Islamic finance principles disapproves of investments

made just for constant returns on investments without adequate consideration as to the nature of the venture on which the funds are invested. Many of these principles upon which Islamic banking is based are moral norms universally accepted all over the world for centuries.

## **PRINCIPLE FEATURES OF ISLAMIC FINANCE PRODUCTS**

There are five principle features of Islamic banking. Its financial products and instruments must be - (i) interest free, (ii) trade related and demonstrate genuine need for funds (iii) performance related and equity oriented (iv) Non exploitative; no usury (v) ethically guided.

Islamic banks use a variety of transactions and financing methods to provide the required finance that meets their clients' needs. The most common are the Shari'ah-compliant bonds (Sukuk) under which no interest is paid; rather, the returns on investments are generated through physical economic activities by utilising or leasing the underlying assets. The project finance sector, particularly in the Middle East most often employ the Istisna'a-Ijarah structure, which is sometimes generally referred to as the "procurement structure" and the Wakala-Ijarah structure. It is worthwhile to provide a synopsis of some of these Islamic financial instruments and products with their application in project financing:

### **Al-Ijarah (Leasing)**

This is the Islamic equivalent of a lease and an amalgam between the operational lease and the finance lease. The bank purchases and leases out assets required by their clients for a rental fee with the option to either purchase such assets during the period of rent or at the tail end of the contract. It provides the guarantee of regular payments all through the life of the financing with the flexibility of structuring the payment plan in a manner that makes it possible for Islamic financiers to accomplish a profit margin similar to that of conventional financiers. This is the most efficient and flexible way to facilitate high cost assets and technology related products. Ownership of the asset remains with the lessor bank, which will seek to recover the capital cost of the asset plus a profit margin from the lease or rents payable. Ijarah method is widely used for long-term projects like Independent Power Projects (IPPs) and Independent Water & Power Projects (IWPPs). These projects are in two distinctive phases (i) the construction phase and (ii) the operations phase. In reality a different method to suit the specific character of each phase is usually employed. For example, Ijara method is used as it is well suited, for the operations phase, while Istisna tend to suit and therefore used for the construction phase. Under Islamic finance, it is essential to finalise the contract arrangements for both phases before financial close, Ijarah is therefore structured as a forward leasing arrangement, known as Ijara Mawsufah Fi Al Dhimmah.

### **Al-Istisna'a**

An Istisna'a is a sale contract where one party agrees to manufacture a particular asset to an agreed specification, to be delivered at an agreed time for an agreed price. Under Istisna'a finance arrangements for construction projects, the bank signs an agreement to undertake the construction project jointly with the client and transfers the same to the client. The traditional Istisna'a contract is designed in a manner that the financier (Bank) signs two different contracts, one with the client and the other with the construction company in charge of the project. The bank pays the construction

company by instalments based on the level of completion. The price of the asset and the date of delivery are established at the outset. While the liability for the bank to pay the instalments and the liability of the developer to deliver the assets is deferred to the future but specific dates. Although traditional Istisna'a contracts have been successfully used for infrastructure projects, the extra burden placed on the banks to enter into a construction contract directly with the contractor basically increases the risk profile of project financing for the Islamic banks. By entering into a direct contractual relationship with the contractor, Islamic financiers shoulder additional risks in form of construction, credit and performance risk of the contractor. To mitigate these risks, Islamic financiers are moving away from the traditional Istisna'a towards a slightly modified version (Istisna'a with a recognised right to sub-contract) and procurement variant techniques. Most projects are now financed under a parallel structure where the client agrees under the istisna'a contract, to procure the manufacture, delivery and construction of the relevant asset from the manufacturer.

### **Istisna'a-Ijarah**

The procurement variant is an Istisna'a-Ijarah contract structure. The istisna'a contract is applied to the construction phase, while operations phase is done under the Ijarah contract. In order to mitigate the significant (construction, credit and performance risk of contractors) exposure of the Islamic financiers, the borrower enters into an Istisna'a contract to procure the manufacture, delivery and construction of the relevant asset from the manufacturer. Concurrently, the borrower also undertakes a construction contract with the contractor wherein a pass over of the Istisna'a contract terms and condition is incorporated allowing the contractor to subcontract the project, thereby spreading the risk between the Islamic financiers, the borrower and the contractor. The project financiers release payments by instalments based on certified level of completion and on an agreed timescale. On completion of the construction phase of the project, the Ijarah contract comes into effect when the completed project is leased out by the Islamic financier (lessor) to the borrower (lessee). Under the Ijarah contract, legal and beneficial ownership of the asset remains with the lessor bank. However, a transfer clause is usually included in the Ijarah contract whereby the Islamic financier (lessor) agrees to transfer the leased asset to the borrower (lessee), either during the term of the lease or at the tail end of the lease period. This is in many ways similar to the conventional equipment lease but certain responsibilities such as care and maintenance of the assets as well as the insurance obligation are usually performed by the borrower (lessee) on behalf of the Islamic Financier (lessor).

Despite the fact that the Istisna-Ijara Mawsufah Fi Al Dhimmah is mostly used in IWPPs in the Middle East, the Shariah boards of some banks in some countries, particularly Saudi Arabia do not seem to favour this technique. The importance of avoiding unnecessary complexity in the contractual structures to eradicate the element of avoidable risks is stressed by Shariah Scholars. According to some of these scholars, the combination of Istisna and Ijara is unacceptable as it amounts more or less to two contracts in one; the two contracts seem to be mutually dependent and interconnected. An alternative structure called Wakala-Ijara Mawsufah Fi Al Dhimmah is employed by some Islamic financiers so as to overcome this controversy.

### **Wakala – Ijarah**

The alternative type of contract but similar to the Istisna'a -Ijara and frequently used in project financing involving Islamic tranche is referred to as Wakala-Ijarah Mawsufah

Fi Al Dhimmah structure or “Wakala-Ijara structure”. In this contract arrangement, the borrower is engaged as an agent or "Wakil" to the Islamic financier under an agency agreement referred to as Wakala agreement. But for the agency agreement where the connection between the financier and the borrower is a principal to agent contractual relationship, the Wakala - Ijarah agreement functions more or less in the same way as the Istisna'a-Ijarah contract. Both types of procurement contracts apply the Ijarah agreement at the operations phase. The design, engineering, construction, testing, commissioning and delivery of the asset specified in the Wakala-Ijarah agreement are procured by the borrower in the capacity of an agent to the Islamic financier. Although the same rights and obligations in respect of asset transfer exist in both techniques, unlike the Istisna'a-Ijarah, the Wakala-Ijarah does not incorporate separate purchase and sale agreements. The Wakala-Ijarah arrangements seem to be widely accepted in Saudi Arabia and all IWPPs in that country have used this technique.

### **Al-Mudarabah**

This Islamic finance product is basically similar to equity finance; it is a profit partnership agreement between the bank and the client, whereby the bank supplies total funding, while the client invests and manages the capital using their expertise in return for a percentage of the profits – provided there are no losses. Profits are shared as specified in the finance agreement; however, there is no guarantee that profits will be made, neither is it certain that the capital will be recovered. Mudarabah as an Islamic Finance product promotes good administration and concrete business arrangements. In practice, the Islamic banks act as investment managers on behalf of investors or customers who deposit funds with the bank.

### **Al-Murabahah**

Murabahah is a purchase and resale agreement best known as a sale-based instrument. It is a cost plus contract; instead of a loan agreement, the bank purchases the required asset for which the loan would have been provided from a third party and re-sells it at a predetermined higher price (Cost plus profit) to the party that requires the property. By paying this higher price over several instalments, the capital user has effectively obtained credit by paying a premium as opposed to interest.

## **CONVENTIONAL VS ISLAMIC BANKING**

Economic development and growth of any nation requires an efficient banking and financial system. In reality, successful implementation of monetary policies, which are utilised by governments to control and manage numerous macroeconomic factors, are facilitated by flexible and accessible financial systems. The overall strength and stability of an economy is largely determined by the prevailing banking system which constitutes a key component of the financial system. All the economic units of a country are connected together by the banking and financial systems, hence any uncertainties, instability, and lack of confidence within the banking system has severe implications on the economic situation of that country. In essence, banking systems direct financial transactions, operate as the financial intermediary and help in wealth creation (Akkizidis and Khandelwal, 2008).

For several decades, conventional banks have acted as financial intermediaries. Most of the income generated by these banks is principally interest based. According to Khan and Porzio (2010), Christian churches had already condemned Usury (any form

of interest claimed on a loan), prior to the time Prophet Mohammed rose to defend debtors against the voracious demands of their lenders. Therefore, it can be argued that both Christianity and Islam condemn or prohibit interest. Questions have been raised by Islamic scholars on the necessity and validity of interest in the process of financial intermediation. Islamic finance systems consider interest as a form of exploitation since it is charged on money without added value. In its quest to offer sustainable and justifiable distribution of wealth and income, Islamic finance has endeavoured to develop alternatives to the conventional financing system.

## **INFRASTRUCTURE PROJECTS FUNDED WITH ISLAMIC FINANCE PRODUCTS IN THE MIDDLE EAST**

More power projects are now required in the Middle East due to economic growth in the region. Funding for such projects in the past was through conventional means; however the use of Islamic finance is now on the increase. All power projects in the Gulf Cooperation Council (GCC) may be financed in the near future under Islamic laws through the use of Sharia'h Compliant financing products. The Islamic financing of power in the region is expected to be given a boost for many reasons. First, the Power project sponsors in the GCC countries are keen to enhance the status of Independent Power Projects (IPPs) and the Independent Water & Power Projects (IWPPs) among the Islamic investors and wish to achieve this objective by utilising Shariah compliant financing products. Secondly, the risk enthusiasm of Islamic banks is growing and thirdly, the governments of GCC nations are encouraging Islamic banking in the region. Almost all the recently launched IPP/IWPP schemes by the GCC to open the sector to private investments were successfully backed by Islamic project finance.

For example, the Ma'aden Phosphate company's mining project in Saudi Arabia worth about \$5.50 billion includes the construction of power and desalination plants. The project involved 2 Islamic tranches totalling US\$1.8 billion and one of the largest Islamic project financing to date. The Istisna-Ijara Mawsufah Fi Al Dhimmah and Wakala-Ijara Mawsufah Fi Al Dhimmah structures were utilised. The Al Waha Petrochemical project totalling US\$526.55 million financing of a private petrochemical project in the Kingdom of Saudi Arabia was the first project financing in the Middle East. It was wholly executed with Islamic finance. Another recent project in the IWPP sector is the Al Dur project in Bahrain in 2009.

### **Case Study: Al Dur Independent Water & Power Project (IWPP)**

In 2009, the contract to construct the 218 000 m<sup>3</sup>/day water desalination and 1234 MW power project in Bahrain was won by a consortium comprising GDF Suez of France and Gulf Investment Corporation of Kuwait. The cost of the construction project was estimated at US \$2.1 billion. The first unit was expected to commence in July 2010 and to attain full operation capacity by July 2011. The project funding was from debt and equity in the ratio of 75:25 with the Power and Water Project Agreement (PWPA) tenure of 25 years. The \$1.7 billion fund for the project was achieved from multiple sources which includes; Islamic financing, export credit agencies and commercial financing. This was the first Independent Water & Power Project transaction with multiple Islamic tranches. The Islamic financing worth \$300 million consists of Istisna-Ijara Mawsufah Fi Al Dhimmah and Wakala- Ijara Mawsufah Fi Al Dhimmah. The financial deal for the project was achieved and successfully closed in July 2009 within an adverse market condition. Since long-term

liquidity was not available, the project was only able to settle for eight year tenure and a balloon of 80 per cent for the Islamic and commercial tranches. The financing structure was referred to as "mini-perm". The main documents for the Istisna-Ijara Mawsufah Fi Al Dhimmah tranche are the Istisna agreement, the forward lease agreement and the service agency agreement. While the documents for the Wakala-Ijara Mawsufah Fi Al Dhimmah tranche were the Wakala agreement, the forward lease agreement and the service agency agreement respectively. In the forward lease agreement, the actual lease commenced only from the date the assets were delivered and the passing of the assets title to the Islamic banks (PEI 2010).

### **Case Study: Shuaibah- Power and desalination Project: Independent Water & Power Project (IWPP)**

In July 2004, the international competitive bidding process for the 900 MW net oil-fired steam power plant and an associated 880 000 m<sup>3</sup> desalination plant was launched by SWEC (Saudi Water & Electricity Company). A Saudi-Malaysian consortium comprising of: ACWA Power Projects of Saudi Arabia and Tenaga Nasional Berhad, Malakoff Berhad and Khazanah Berhad of Malaysia was selected in June 2005, as the highest ranked bidder to Build, Own and Operate (BOT) the Shuaibah IWPP. In August 2005, the Saudi cabinet approved the formation of the Shuaibah Water & Electricity Company (SWEC); the project company. SWEC awarded the consortium of Siemens Power Generation and Doosan Heavy Industries and Construction Co the contract for the turnkey Engineering, Procurement and Construction (EPC) of this steam power plant with associated desalination facility to be located in Shuaibah. Siemens was the lead member of this consortium.

The Power and Water Purchase Agreement (PWPA) was signed in Riyadh Saudi Arabia on 15th November 2005. The financial deal for the project was achieved and closed in January 2006. The total project costs of \$2.5 billion was funded by a multi-tranche financing involving 23 banks on a debt to equity ratio of 80:20 comprising; Islamic financing of \$210 million, \$455 million from Export-Import Bank of Korea ("K-Exim"), commercial facilities of \$875 million, and export credit financing of \$400 million from Hermes while the balance was raised from funds internally generated from the project and equity bridge loan of approximately \$500 million. In addition, the financing also included \$72 million of standby commercial debt and \$18 million of standby equity bridge loan to cover any cost overruns. Off-take risks were addressed by signing the Power and Water purchase agreement before financial closure with a grid company. The tenure of the concession is 20 years and the Islamic financing product used was the Ijara Mawsufah Fi Al Dhimmah (PEI 2006.)

## **THE CONCEPT OF COST OF CAPITAL**

Capital invested in a company or a project could be derived from different sources such as equity shares, preference shares, Islamic financing or debt. Every capital funding is acquired at a cost; however, the cost of capital varies depending on the source. Cost of capital can be defined as the cost of acquiring funds which is equal to the average rate of return expected by an investor for providing the funds. The cost of capital is the minimum expected rate of return that a project must earn to breakeven. Cost of capital is usually expressed in percentages with appropriate allowance made for tax purposes in order to get a correct picture for the cost of capital. Islamic finance is based on core principles of justice, equity and welfare with the aim of providing socio-economic justice and equitable distribution of income and wealth (Hassan, 2009). Debt servicing requirement under Islamic finance is connected to the

performance of the underlying project to be financed. Whereas, under the conventional banking system, there are two major characteristics that affect the value of money, namely time and investment decisions made by investors most often without due consideration to the ethical and moral elements of the investment. Time dimension to the value of money is a widely accepted phenomenon in conventional banking which is calculated practically as the interest earned on a given amount over a period of time. Therefore, specific amounts of increase in the volume of money is expected by investors in the interest-based economies irrespective of the nature of the venture (Sidawi and Meeran, 2010). The second aspect is the investment decisions which can be defined as the process of choosing ventures and projects in which to invest in order to increase the amount of money. Conventional banks as investors apply both aspects of this theory in all their business transactions. Factors affecting the asset value are first considered over a specific period of time after which the potential risks, losses and gains are calculated in order arrive at an investment decision. While under Islamic finance system, the rules are set by the Islamic Shari'ah with its authority derived from two main sources which are the Quran and Hadith strictly observed by the jurists and interpreters of Islamic law.

## CONCLUSIONS

In many cases, Infrastructure project financing requires contributions from a consortium of banks or financiers due the complex nature and huge financial requirements of such projects. In the quest to attract adequate project finance and with the Islamic investors seeking acceptable investments, the major challenge is how to strike a balance and develop project financing products that are not only attractive to international project financiers but also shariah compliant. Multiple tranches whereby project sponsors use a combination of Conventional and Islamic finance structures appears to be the main solution. However, capital providers may now be compelled to use profit sharing structures since the Shari'ah principles prohibit interest-based financing.

Despite the advantages in the use of Islamic finance, the risk sharing and asset ownership requirement creates potential bottlenecks in structuring financial deals as well as project management. For instance, the part project asset title retention requirements by the Islamic financiers could increase the level of risk from the conventional co-financier's perspective in case of project default due to the divisible collateral backing of the loan. In a bid to overcome this challenge and also to accommodate the various shariah boards' requirements particularly in the GCC countries, wholly multiple Islamic tranches have been used in most of the recent project financing transactions as a viable alternative.

Allocation of risks to all parties is an integral part of the delivery process. Islamic finance stipulates risk sharing which indeed forms one of the basic requirements for the funds to be provided. This is a positive indication that such finance is well suited for construction projects including housing and infrastructure development. Unlike the conventional interest based one sided liability, Islamic finance is asset based. It can be argued that Islamic finance is ideal for housing and infrastructure development as they are both assets. Islamic finance is rapidly gaining recognition in many countries including the United Kingdom and the United States. Some of the opportunities posed by Islamic finance are; it may lower the overall costs of financing a project; it could pave way for viable projects that may not proceed due to poor credit ratings and it may bring a ray of hope to projects that do not have access to conventional finance.

Top executives directing infrastructure projects in the GCC countries are now more than ever before, keen to finance them under Islamic rules as many of their investors are seeking long-term investments that are ethically and religiously acceptable. This is an indication that Islamic investors are likely to invest in Islamic banks as against the conventional banks in the near future. The construction industry worldwide should consider looking into how to access the growing Islamic investments currently estimated at \$1Trillion (USD) and must also be proactive so as to meet the project sponsors' requirement of funding future projects using Islamic financing products.

## REFERENCES

- Akkizidis, I. and Khandelwal, S.K. (2008) "Financial Risk Management for Islamic Banking and Finance" UK: Palgrave Macmillan, First Edition.
- Calderón, C. and Servén, L. (2003) "The Output Cost of Latin America's Infrastructure Gap", in Easterly, W., and L. Servén, ed., *The Limits of Stabilization: Infrastructure, Public Deficits, and Growth in Latin America*, Stanford University Press.
- Estache, A. (2006) *Infrastructure: A Survey of Recent and Upcoming Issues*, World Bank, Washington D.C.
- Friedman, M. (1969) "The monetary theory and policy of Henry Simons". In M. Friedman (Ed.), *The optimum quantity of money and other essays*. Chicago: Aldine.
- Hassan, A. (2009) "After the credit crunch: The future of Shari'ah compliant sustainable investing "; *Humanomics*, Vol. 25(4), pp.285-296, (Emerald Group).
- Imady, O. and Seibel, H. D. (2006) "Principles and products of Islamic finance", working paper no 2006-1, Development Research Centre, University of Cologne Germany, 2006.
- Khan, F. and Porzio, M. (2010) "Islamic banking and finance in the European Union: A challenge" (pp. 1-7), Cheltenham, UK: Edward Elgar Publishing Limited.
- PEI Power Engineering International (2006) Power and desalination – Shuaibah: a model IWPP. Available at [www.powerengineeringint.com/articles/mee/print/volume-3/issue-2/features/po](http://www.powerengineeringint.com/articles/mee/print/volume-3/issue-2/features/po) accessed on 15<sup>th</sup> April 2013.
- PEI Power Engineering International (2010) Funding power projects with Islamic finance. Available at [www.powerengineeringint.com/articles/mee/print/volume-7/issue-1/features/fun](http://www.powerengineeringint.com/articles/mee/print/volume-7/issue-1/features/fun) accessed on 15<sup>th</sup> April 2013.
- Sahoo, P. and Dash, R.K. (2009) "Infrastructure Development and Economic Growth in India", *Journal of the Asia Pacific Economy*, 14(4), 351-365
- Sahoo P. Dash R.K. and Nataraj G. (2010) *Infrastructure development and economic growth in china*, Institute of Developing Economics.
- Sidawi, B. and Meeran, S. (2010) A framework for providing lifelong finance to the owners of affordable dwellings in the Kingdom of Saudi Arabia. *Cities*, 28(2):138-146.
- Simons, H. (1948) *Economic policy for a free society*. Chicago: University of Chicago Press.