

(Using Best Practices for greater Client Satisfaction in the Saudi Construction Industry)

[Fawaz Alshihre]

Abstract -The Best Practices for Client Satisfaction in the Saudi Construction Industry are explored. Customer satisfaction is a function of the extent to which the product's perceived quality is able or unable to meet the repurchase expectations. It is very essential for the companies to give serious consideration to customer satisfaction to strengthen the relationship with current and prospective clients. This factor of success acts as a bridge that leads to enhance collaboration, thereby, competitiveness and financial performance. Satisfaction indicates the degree to which the customers believe that an organisation has fulfilled their needs and requirements in the development of any product and service. The literature review has examined the secondary data and cases on major construction projects in Saudi Arabia. For such purpose, different types of secondary sources are used including academic textbooks, scholarly articles and report of the Saudi Arabian construction industry. For such purpose, around 31 secondary sources have been accessed. The reviews have been analysed with the interpretations of the facts and findings presented by the authors in particular sources.

The findings revealed that project managers are the key to the success of construction projects in the country because they seek to complete the projects on time and within the estimated budget along with the effective management of operations, maintenance and life-cycle costs. In relation to client satisfaction, it has been found out that timely completion of the projects, quality based services and impressive designing are the key factors for client satisfaction in the construction industry.

Finally, it has been concluded that the project managers are the key to the best practices required for client satisfaction in construction industry.

Introduction

Saudi Arabia is considered as the largest market for construction work in the Middle East being ahead of Iran, Turkey and other neighboring countries. In the Kingdom of Saudi Arabia, construction industry contributes greatly to the economic growth and development. The sector contributes about 8% to the total GDP with a nominal value of CAD \$ 48 billion per annum (Canadian Trade Commissioner Service, 2014). The construction sector in Saudi Arabia is in a booming stage with huge inflows of capital because of oil exports and opportunities of increasing investment from foreign countries. Need of residential and commercial buildings or infrastructure is the emerging need due to the rapid growth and development of the nation. Alasamri et al (2012) has reflected that high revenue from tourism is also substantial reason for construction project of infrastructure, and other utilities development. Such events circumstances provide a constant rise in excellent

opportunities in major aspects of construction engineering such as green buildings and sustainable development (Tiwari, 2014).

Amidst huge opportunities for foreign construction companies, highly successful ventures have been undertaken between Saudi construction companies and French, British, Italian construction companies (Husein, 2014). In the procurement arrangements, a large number of contractors are engaged in Saudi Construction industry. Need for construction services is a reason for the procurement of construction projects in Saudi Arabia. In the development of construction sector, the government of Saudi Arabia contributes efficiently by providing finance for the project. Commonly adopted methods for financing used in Saudi construction industry are project finance, conventional finance and shariah compliant finance (Husein, 2014). In addition to that, the active and constant concern and initiatives taken by the Saudi government for the growth and development of the infrastructure has provided constant opportunities for the construction sector in the country. The increase population has created a shortage of housing and thus motivated the government to promote construction projects for advanced housing projects (Husein, 2014). This has created a need for more effective practices to be adopted by the construction companies to provide maximum satisfaction to the clients. In addition to that, it has also been examined that in the construction work, number of people involved includes raw material suppliers, advisors, professionals, contractors and sub-contractors, architect, technicians, labour, and electricians. On this basis, several people are involved in different aspects of construction phases and activities; for instance, design operation, maintenance and other works. This stimulates the complications in the work, as there is a need to keep good coordination to provide satisfactory services. This further increase the complexities associated with the construction process that affects client satisfaction (Loosemore, 2003). As per Mazher et al., (2015), quality improvement can be achieved only through experienced project managers along with its measurement and examination (Mazher et al., 2015). To implement effective quality management process in the construction projects, three elements should be considered appropriately considered by the project managers, namely, quality planning, improvement and control. It is also examined from the literature that effective and timely inspection by project managers of the product and services will lead to fewer defects in the products and services. It has been further observed that customer perceived quality construct has been given considerable attention in the literature of marketing. It has been further observed that the perception of service quality, at the time of the next purchase decision, tends to directly influence the repeat

buying of the customers. According to Rahman (2012), the quality was given the top most priority with a 36.4 percent at the time of rating customer satisfaction (Rahman, 2012). In this respect, the following research has examined the ways in which the project managers in Saudi construction industry have used quality management to meet the needs of the clients by fulfilling the criteria for major construction projects in the Kingdom. The review of methodology has been presented in the next section. The next section provides detailed information about the major construction projects in Saudi Arabia. A detailed literature review has been provided in the next section of the paper. Furthermore, the summary of the literature results has been provided, and an overview of the proposed research has been presented.

(Fawaz Alshihre)

University of Wolverhampton
United Kingdom
Fawaz-1393h@hotmail.com

Review methodology

For exploring the aim and objectives, the presented research work has undertaken methods of case study analysis and Literature review. In these methods, different cases related to Saudi construction industry are analysed for the purpose of revealing trends in the industry. Different issues related to client satisfaction faced by the Saudi customers in construction project have been evaluated with the different theories and models illustrated in literatures.

Major Construction Projects in Saudi Arabia

In the recent years, Saudi Arabia has been the largest market for construction projects in the Middle East. In the last few years, construction projects, amounting to a net worth of 61 billion dollars, were awarded in the Kingdom. In addition to that, approximately a trillion dollar projects were planned and schedules were developed, considering the availability of resources and their allocation. A number of infrastructure construction projects make up a large part of the development ambitions of Saudi Arabia along with various other medical, commercial and non-infrastructure projects that are underway. As per the report of Saudi construction market analysis (2014), Saudi Arabia has witnessed a boom in the construction sector because of the increasing demand for residential and commercial buildings. Demand for housing has increased in the country because of the need for new real estate developments for the new generation in the country. The Saudi construction industry witnessed an expenditure of nearly 72 billion dollars in 2013 for the infrastructural development of the

country (Saudi construction market analysis, 2014). Construction companies involved in the projects have a sheer motive of delivering successful projects in the agreed period of time (Saudi Arabia projects market report 2014, 2014).

Major examples of such large ongoing projects in Saudi Arabia are Aldara Hospital, Jeddah Corniche, Abraj Kudai Development, King Fadah Medical City Hospital and a number of other local projects (Husein, 2014). Apart from the above enumerated upcoming construction projects in Saudi Arabia, there have been a number of successful large projects in the past. These include Yanbu Industrial City, Royal Commission Medical Centre and Health Care Centre and US Air Force Peace Shield Program. Yanbu Industry City was developed from an unidentified location in the desert into a residing community of 150,000 individuals (The Report: Saudi Arabia, 2009).

In addition to this city, the project also included a 30-year master plan for modernising and industrialising the underdeveloped areas of the Kingdom of Saudi Arabia (The Report: Saudi Arabia, 2009). The overall project for the city involved water intake facility; waste treatment plant and facilities; community housing; seaport; landscaping with trees, shrubs and grass; recreational facilities; drainage and roads. The overall project has been effectively supervised at each stage for creating the unique and distinct example of quality construction (The Report: Saudi Arabia, 2009).

The construction industry has witnessed high growth in terms of employment opportunities, living standards and safe and secure housing facilities in the Kingdom, and is expected to continue the same in the upcoming years (Saudi construction market analysis, 2014). The Saudi construction market is expected to experience a high level of changes, such as investment from abroad in the upcoming years. The projected growth rate of Saudi construction industry is estimated to be 35% per year; if this rate is achieved, then the industry will become the fastest growing industry in the country in a few years. Due to this, the government is attracted by the huge growth possibilities in this industry. The construction industry of Saudi Arabia has highly supported the development of the overall economy and socio-economic structure of the country (Deloitte GCC Powers of Construction, 2013). The Saudi construction industry was allotted a total budget of 72 billion dollars in 2013 to enhance the development of this sector. The budget is expected to grow in the upcoming years. It is expected that the recent development in the construction sector of Saudi Arabia will increase the overall budget to 3 trillion dollars by the end of 2020.

In the views of Al-Yami and Price (2006), the economy of Saudi Arabia is able to experience a high growth and development because of a high efficiency in its construction industry. In the last past three decades, a significant increment in the growth and development of the construction sector of the country has been seen that induce infrastructural development of the country (Al-Yami and Price, 2006). In addition to this, Alsuliman, Bowles and Chen (2012), have supported that the Saudi construction industry has offered various employment opportunities to the people of the country. The demand and requirement of engineers have increased in the construction sector of the

country due to which the need for employment opportunities for new employees has increased in the Saudi construction industry. Saudi construction industry was able to gain a high success in the year 2014 due to which it is considered as the strongest investment sector in the world today (Alsuliman, Bowles and Chen, 2012). The interest of investors is growing in the construction industry, as a result of which, it is working closely with industry experts in order to create platforms for those working across the building and construction sectors. The main determinants that need to be considered by the construction projects in Saudi Arabia are energy and time efficiency, together with cost effectiveness and quality, to yield satisfaction to clients and other stakeholders (Alsuliman, Bowles and Chen, 2012).

The tremendous contribution made by the Saudi construction industry in respect of the country's economic growth and development, indicates the increasing significance of the construction industry in the economy, and thereby, it is essential to look after the factors contributing to the competitiveness and long term sustainability of the industry. In this context, stakeholders' satisfaction especially clients/customers is the major factor that needs to be ensured to contribute substantially in the growth of construction industry. Client satisfaction is the major issue in the context of construction industry because of complex process/activities, issue of skilled labour and capital investment, technological changes, time constraints and market fluctuations (Langford and Male 2008).

Challenges in Saudi Construction Industry Projects

Royal Commission Medical Centre and Health Care Centre has been another major quality based construction project that was highly effective in resigning, construction management, and supervision of the site and administration of the contract. The project involved facility operation, maintenance services for a Medical Centre, Health Care Clinics and Warehouses consisting of 342 beds along with a special ward for treatment of burn patients and other housing facilities for the staff members (Construction Week Online.Com, 2015). The medical centre was constructed as a five-storey building that included male and female in-patient wards, intensive care units, pediatric unit, emergency section, radiology, pathology, laboratory, pharmacy, neonatal intensive care unit and physiotherapy sections. The project was another classic example of excellent construction projects undertaken in Saudi Arabia in terms of quality management and efficiency (Construction Week Online.Com, 2015).

The US Air Force Peace Shield Program involved the construction of radar data acquisition facilities, control centres and underground command centre. The key aspects of the project involved technical inspection, quality assurance, administration of construction and review of project design (Saudi Arabia construction update, 2015). It has been the largest construction project that was ever managed by the Air Force and involved the development of defence communication systems around the perimeter of the

country. The project took a time period of ten years and included construction of five new underground command and operation sectors, two base operation centres, thirty-three communication site facilities and two base operation centres and ten ground entry stations (Saudi Arabia construction update, 2015).

Despite some limitations and challenges associated with risk management in Saudi Arabian construction industry, the construction projects have been highly effective in combining advanced technology with unparallel quality and control management. The quality management techniques applied in the construction projects are explicitly reflected in the safety and cost management along with effective scheduling (Parsons, n.d). A majority of large and well-established construction companies in Saudi Arabia seek to deliver cost-effective, safe, high-quality systems and advanced facilities to meet project deadlines and quality assurance (Alotaibi, Yusoff and Islam, 2013). *Persisting Issues and the Factors That Build Satisfaction among Clients Saudi Construction Industry*

The construction industry is considered as one of the most complicated and uncertain industry because of the complexities and difficulties involved in construction projects. Various innovations and technological changes have contributed to increasing efficiency of these projects but, at the same time, these changes affect the productivity and efficiency of employees (Alsuliman, Bowles and Chen, 2012). The incorporation of hi-tech machines have revolutionized the whole construction industry, due to which, it has become difficult for employees and workers to adopt these changes in less time (Alsuliman, Bowles and Chen, 2012). Employees are not aware of the new technologies and innovations taking place in the market. Moreover, training is given to employees, who require time, and this leads to a delay of the construction projects by consuming longer delivery time. This has affected the mindset of clients and their loyalty level towards the Saudi construction projects.

Azis et al. (2012) have stated that there are a number of factors associated with the construction industry that cause serious issues for the growth and expansion of the industry. In this respect, financial problems because of late payment, design changes and cost overruns, human resource problems out of absenteeism and excessive overtime and productivity and technological problems are key factors that create pertinent issues in the construction industry. In addition to that, waste is also a serious concern in construction, which has a direct impact on the productivity, project completion, material loss and project cost.

Another key factors creating issues in the industry is delay in completion of the projects. Delays in time can be caused because of problems related to financing, design change, weather conditions and others, which eventually emerge as a significant issue for the industry (Azis et al., 2012). According to Mahendra et al. (2013), it has been seen that risk management technique is not widely used as a result of less knowledge and awareness about the same among the people (Mahendra et al., 2013). Thus, in the construction industry, the type of risks should be identified and after that, a proper organisation and controlling of risks should be done so that the level of customer satisfaction can be increased in the construction industry.

As per the report of Saudi building quality hit by 'cheating and fraud' (2014), it has become important for the Saudi construction industry to ensure a long lifespan of the buildings. This can be possible with the support of advanced practices and latest technologies and the use of better building material and environment-friendly construction technologies. However, in the last few years, this industry has witnessed a few cases of certain illegal practices followed by some construction companies in this sector (Construction week, 2014). Use of low grade cement and iron, along with outdated quality improvement practices, have become the most common practice followed by some construction firms in this industry to increase the profits. This may lead to the collapse of buildings even after their regular maintenance, which affects the savings of the clients. It has been surveyed that the average lifespan of buildings in Saudi Arabia is 25 to 50 years while, it is up to 100 years in many other countries across the globe. All these factors incur a high cost for clients, which again affect their satisfaction level and make them dissatisfied (Construction week, 2014).

Recession in the year 2008 has also affected the growth and development rate of the Saudi construction industry. The construction industry witnessed contraction in this time period and as a result, it is still not able to cover most of its areas (Construction week, 2014). Though it received a high support from the government of the country, but still, it is not able to develop at the same pace with other industries in the country. The growth in the commercial and residential construction sector is not able to match the growth in the utility sector. Thus, the lack of basic utilities like water and power has affected the usage of various buildings by the people of the country. Moreover, all these factors showed a negative impact on the construction industry of Saudi Arabia. Thus, this industry was not able to fulfil the housing demands of the people of the country, which resulted in increased client dissatisfaction (Construction week, 2014).

As per the reports of Industry Best Practice (2014), the level of accidents and injuries has increased in the Saudi construction industry. It is now being considered as one of the most dangerous industries in comparison to other countries (Industry Best Practice, 2014). It has been analysed from past information that more than 80 to 100 workers are killed at construction sites in the UK every year. In addition to this, around 500 to 800 workers get injured in small and large accidents on the construction sites in the UK every year. According to the main theme recognized by Aulich (2013), the best practices involved in the construction industry, which affect client satisfaction, need to be recognised (Aulich, 2013). The core working group must be identified with the working project, and a master plan should be made for the sites, which help in gaining client satisfaction. In addition to that, lack of effective management of knowledge is another key issue which further results in dissatisfaction of clients as right delivery of construction projects with quality standards is not provided to them. According to Kangogo and Manyasi (2013), customer satisfaction is developed by recognising the needs of the customers, which affect the overall business of the hotel industry (Kangogo and Manyasi, 2013). In the same

way, the construction industry needs to identify the needs of the customers.

In the views of Bresnen and Marshall (2000), disputes between the partners affect the performance of the construction projects, which leads to weak performance of employees and longer lead time. If the partners do not take equal interest in the construction projects, then it may affect its quality, which leads to the dissatisfaction of clients (Bresnen and Marshall, 2000). From the viewpoints of Le-Hoai, Lee and Lee (2008), lack of communication channels between the employees, managers and workers, associated with the construction projects, often leads to the misinterpretation of information. This leads to conflicts and lack of understanding among employees, which affect the construction projects by delaying them and leading to client dissatisfaction. The selection of the consultant of the construction industry is the main problem as, if the consultant lacks appropriate, knowledge or skill, it may affect the project. Lack of competent project team, project manager and project management skills affects the quality and standards of the construction projects (Le-Hoai, Lee and Lee, 2008). Lack of adequate resources and training facilities for skilled project managers and workers in site management are other issues that cause a problem in completing the construction projects with efficiency. Moreover, clients demand for fast development of infrastructure due to which the supply of material like steel, bricks and cement tend to increase. Shortage of these materials shows a significant influence over their prices, which is incurred by the clients. All these factors lead to a delay and extra cost in the project, which is ultimately passed to the clients, making them dissatisfied (Le-Hoai, Lee and Lee, 2008).

Comparison of the Prevailing Practices in the Saudi Construction Industry with the Strategies Adopted by Other Nations

Abdul-Hadi, AL-Sudairi and ALqahtani (2004) have mentioned that in comparison with the construction industry in the UK, the Saudi construction industry has been implementing Business Project Re-engineering (BPR) to focus on eliminating barriers. The use of BPR is being popularised in the Saudi construction industry; however, an improper use of the strategic management tool can lead to dangerous consequences (Abdul-Hadi, AL-Sudairi and ALqahtani, 2004). The scenario in the UK construction industry is different as the industry has been continuously deploying techniques, tools and manpower to improve the overall level of satisfaction of clients and the rate of the success of projects (Abdul-Hadi, AL-Sudairi and ALqahtani, 2004).

The construction contracts in the UK are primarily evaluated on the basis of the involved cost; however, in the Kingdom, the majority of the construction projects are undertaken on the basis of the nature of the projects, which relates to the methods of design, procurement and contract

type. The report, 'Saudi construction market analysis' (2014), reveals that in Saudi Arabia, there has been a rise in the demand for commercial and residential buildings, which has instigated a boom in the construction sector. The construction industry is marked as the second most rapidly growing industry in the Kingdom. In the past few decades, the growth in the industry has been higher in comparison to the growth in the United Kingdom as it has been fuelled by the sudden development of the economic status, with contributions from the oil and natural gas industry in the Kingdom (Saudi construction market analysis, 2014). Industrial revolution in the 18th and 19th centuries brought growth and expansion of the construction industry, fuelling the changes in living standards, economic expansions, increased industrial projects and innovations (Saudi construction market analysis, 2014).

In the Saudi construction industry, it has been observed that each phase of the construction involves the use of innovative methods that are even implemented in the middle of the project. The interventions are successful; however, there are chances that it may affect the ongoing progress, budget, time duration and information sharing, which may impact the overall project output (Al-Yami and Price, 2006). On the other hand, there are certain differences in the construction industry of the United Kingdom, as the level and availability of various resources are different in the two nations. The UK construction industry is more about the use of technological innovations, highly precise services and client-centric project outcomes in comparison to Saudi Arabia's industry (Cheng, Proverbs and Oduoza, 2006). In the UK, the construction companies use more strategic data management system and project management tools as the valuation of the projects is dependent on their completion in the limited timeframe and with more the customer-centric results. In the UK, precise reasons that are responsible for the delay in projects are non-alignment of the operational activities and lack of data sharing among different agencies in the projects (Cheng, Proverbs and Oduoza, 2006).

Ways in which Project Managers can Increase Client Satisfaction in Saudi Construction Industry

In the perspective of Nzekwe-Excel (2012), adoption of a strategically developed design or system that encourages coordination between groups and agencies involved in construction projects can be helpful for project managers in increasing client satisfaction (Nzekwe-Excel, 2012). This design or system assists construction companies in attaining the aim of maximising dissatisfaction among clients and improving productivity. One of the major challenges for the construction industry is to satisfy its clients through project outcomes that are generated in the fixed period of time, using the prescribed budget (Alsulamy, Gupta and Sloan, 2014). Although the construction industry in Saudi Arabia has adopted various techniques and methods, they still lack in essentials that are required to satisfy clients' interest. Thus, the industry is adopting measures like monitoring, identifying and understanding the

needs of project teams, satisfying internal clients' interest. A satisfied team has the potential to deliver the best possible project outcomes through the use of effective resource allocation techniques (Nzekwe-Excel, 2012).

Alotaibi, Yusoff and Islam (2013) proposed that a construction project is vast in the nature and is spread over a number of small locations, involving a plethora of activities. An alignment of all these essentials is required to be governed by a monitoring team, which conducts regular discussions and meetings to share information and subsequent project developments (Alotaibi, Yusoff and Islam, 2013). Complexity and spread of the construction projects instigate a sense of careful monitoring, which can be useful in developing better customer-centric project management techniques (Alotaibi, Yusoff and Islam, 2013). In the perspective of Nzekwe-Excel (2012) collaborative working pattern and effective coordination plays a crucial role in for effective management and completion of the large projects spread over huge locations within the limited time frame along with the expected outcomes. Further, a detailed investigation of the project requirements and site at the initial stage can be very helpful in ensuring the delivery of effective project results (Nzekwe-Excel, 2012).

Kärnä, and Junnonen (n.d.) have evaluated that customer feedback process can be a tool that may result in higher customer satisfaction in the construction industry. The feedback of the customers provides very crucial information to the companies during and after the completion of the project and helps in improving the service quality. For this purpose, implementation of customer feedback system can be very helpful to explore the needs of the customers (Kärnä and Junnonen, n.d.). This process can help the construction companies to built customer's trust and faith. This feedback system can include several elements such as it should be comparable, user-friendly and user-oriented. This will help in making it more attractive and convenient to the customers. The system implemented should be made to serve the needs and objectives of a specific company (Kärnä and Junnonen, n.d.). Azhar et al., (2013) have examined that re-engineering is an effective technique that can be helpful in providing higher degree of satisfaction to the clients of the construction industry. The quality control under this technique focuses on the start and the end of the production, and ensures that everything goes in accordance to the client (Azhar et al., 2013).

Summary of Results

The examination of the literature on quality management in construction projects in Saudi Arabia revealed that in order to ensure quality in the projects the project managers seek to complete the projects on time and within the estimated budget along with the effective management of operations, maintenance and life-cycle costs. In addition to that, the project managers also ensure that scope of construction operations are well defined; the budget is appropriately allocated and managed; the staff members are well qualified, experienced and trained to undertake the project successfully in terms of quality (Alotaibi, Yusoff and Islam, 2013). Further, the project manager also ensure that

the requirement of the regulatory agencies, protection of public property and utilities, conformance with major legislations, compliance with key policies as well as regulations related to public health and environmental safety (Alotaibi, Yusoff and Islam, 2013). Thus, it can be concluded that the project managers play a crucial role in providing best practices required to achieve client satisfaction in construction industry.

A proposed research

The review has established the need for research that can improve practices in Saudi Arabia. One such research is being carried out by the authors. The main aim of this research is to explore various practices that can be adopted by the contractors in Saudi Arabian construction industry in order to guarantee the client satisfaction especially by ensuring cost effectiveness and timely completion of a project. The research will compare the present practices in the construction industry of the Kingdom of Saudi Arabia and best practices outside the Kingdom in order to identify various shortfalls and concerns and formulate effective recommendations.

In order to ensure the effective accomplishment of the aim of this research, certain key objectives can also be underlined:

- To critically review various researches previously conducted on the construction industry in order to gain an insight into the persisting issues and practices in the construction industry.
- To use the literature to identify and examine the existing research to underline various factors that influence the practices and processes adopted by contractors and construction companies operating in Saudi Arabian construction industry.
- To uncover various factors by means of primary data collection, such as socio-cultural, economic, and technical factors that lead to build satisfaction among clients.
- To analyse the data collected to compare and contrast the prevailing practices in the Saudi construction industry with the strategies adopted by other nations in order to identify the best practices that should be adopted to provide best practices to client satisfaction in the construction industry.
- To develop a practice guide for improved satisfaction of the construction clients in Saudi Arabia.

Conclusion

This research study is mainly related to the subject of exploration of the best practices that are crucial to render greater client satisfaction in the Saudi construction industry. In order to explore this research problem, a detailed literature review has been conducted in this research study. The literature review has presented several facts and findings for the final research project. The overview of the proposed research, provided in the paper, is very much significant for organising the final research work.

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