Evaluation of Turkish construction industry through the challenges and globalization

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THERE IS A GROWING CONCERN OF GLOBALIZATION OF CONSTRUCTION INDUSTRY. It is affected dramatically from all political dynamics, legal and economic activities and technological aspects. Turkish construction industry represents an important role at the threshold of the European Union membership of Turkey. The current regulatory situation of the Turkish construction industry created necessary enabling environments to promote globalization and the opportunities to enhance its position. The aim of this paper is to identify current potential factors that would foster increasing globalization of the Turkish construction industry within the international markets. Also the global issues in the context of the construction industry are discussed. Another objective of the study is to examine to extent to which factors will facilitate the globalization of Turkish construction industry. Results highlight the current status and discuss the potential directions together with problems and the position through the international arena for global competitiveness of the industry.

Keywords
globalization, international construction, Turkish construction industry, competitiveness

INTRODUCTION

Global is a term that captures the extended consequences of actions by citizens in one country as their actions are magnified by world events (Yates, 2007). Global is defined as being "worldwide" or "involving the earth as a whole" (Webster's Unabridged Dictionary, 2005). Before 1990s, globalization was widely believed to be the antithesis of approaches which emphasized sensitivity to local context and the merit of local cultures. But further research on globalization over the decade and a half has shown that globalization involves many contradictory processes and has diverse outcomes. It has forced a rethinking of locality and context dependency. The situation is not a matter of simple homogenization. The debate has developed away from a binary opposition of either global standardization or local distinctiveness. In place of this dualism, a pattern of hybridity and adaptation has emerged, displacing the "local or global" view of globalization which held sway in the early 1980s (Shields, 2003). Waters (2001) defines globalization as a social process in which the constraints of geography on economic, political, social and cultural arrangements recede, in which people become increasingly aware that they are receding and in which people act accordingly.

The various types and degrees of possible impacts are echoed in a wide range of definitions and discussion points of globalization. The Oxford Dictionary finds uses of the global dating back 400 years, but to speak of something as globalized and globalization are mid-twentieth century turns of phrase. Academic recognition of globalization is signalled by the argument and collation of 1980s theories of trade and the dissemination of notions of Western civility and civil society (Shields, 2003). Robertson (1992) defined the globalization as a concept refers both to the compression of the world and the intensification of consciousness of the world as a whole.

Such definitions emphasize a process of thinking up and linking up from a local to a trans-national scale. In dictionaries, globalization has continued to mean diffusion and export on a world-wide scale. However, academic analyses reveal not only the specter of a homogenized global cultural and economic space, but a simultaneous phenomenon involving the take up of regional cultures internationally. This involves the creation, in many cases, of new hybrids as ideas and products from elsewhere are integrated with local practice and conditions (Shields, 2003).

The common usage of globalization word did not begin until the late 1950's. Since the end of the Cold War in the late 1980's, the concept of globalization has become more widespread. Today globalization is widely assumed to be crucially important (Najjar, 2003). Generally the concept of globalization is defined as an international system of increasing connectivity between countries, corporation and individuals which involves some form of trade, exchange, sharing or distribution of either quantifiable or non-quantifiable components (Najjar and Weddikara, 2000 and Scholte, 2000). Najjar (2003) expressed the globalization from four perspectives: Economic (increasing capital flows and trade of goods and services); Social (sharing and exchange of ideas, beliefs and values); Legal (rules and regulations of organizations such as the World Trade Organization (WTO)) and Political perspective (international relations and multi trade agreements and trade barriers). The main benefits of globalization are that it provides the opportunity for economic development and higher standards of living through wealth and technology transfer (Najjar et al., 2000).

Construction industry is one of the most important driving forces of the economy with its trigger effect to other industries. Increasing impact of globalization on construction industry is from all aspects of global trends in international markets like technological developments, political, social and environmental changes and economic activities. Turkish construction industry has shrinked in the last decade because of the 1999 earthquake followed by economic crisis. To challenge in a global environment, it is necessary to understand the current situation and future plans of Turkish construction industry. It is important to raise national awareness of the urgent need to embrace globalization as the Turkey path to maintaining competitiveness. Some of the problems observed in Turkish construction industry are discussed in this study. Furthermore, the paper focuses and evaluates the impact of Turkey's membership process in European Union (EU) within the construction industry. Results indicate that stakeholders and organizational structures in developed countries should be investigated in details and compared with Turkish Construction Industry. An effective organization should be established to monitor and evaluate impacts on the industry and challenge in global arena.

Impact of globalization in construction industry

In the threshold of this century, construction industry is being shaped by global political, social and economic events that are no longer concentrated in western nations because eastern nations are moving to the forefront of global visibility. Construction is a labour intensive industry, hence industrial relations legislations and trades union power have always been undermined in the construction industry by the wide spread use of construction professionals. In order to remain competitive edge in the global market place, construction industry have to be able to adapt quickly to working with people from other cultures, and they have to understand and develop a cultural perspective that is incorporated into their construction projects to manage. Modern educational systems have provided engineers and contractors with solid scientific and engineering backgrounds, but in the twenty-first century, engineering and construction professionals need to be familiar with the eccentricities of other cultures and how to work effectively in the global arena (Yates, 2007).

Most of the scholars (Yates, 2007; Mawhinney, 2001; Weddikkara et al., 2001; Ofori, 2000 and Raftery et al., 1998) have focused on the internationalization of construction in relation to globalization. In particular, they have discussed construction industries of developing countries and the influence of large multinational construction organizations operating within their industries (Najjar, 2003). Ofori (2000) argues that the effects of globalization may be illustrated by analyzing construction industry development and its component factors such as development of materials, project documentation and procedures, human resources, technology, contractors and institutions. He also considers that these fac-

tors may be used to provide measurable indicators of globalization impacts on the construction industry.

The appearance of international contractors was the first move in the globalization of construction (Ngowi et. al., 2005). When engineering and construction (E&C) professionals work in the global arena, their objectives are the same as when they work in their native countries-to design and construct projects on time, within budget, safely, and with the highest achievable quality. The only additional obstacles in the global environment are language barriers, cultural misunderstandings, and working with personnel with varying degrees of technical education (Yates, 2007). Oz (2001) argues that increasing number of international firms based in developing countries such as Turkey, has an impact on the level of competition intensity in the international construction market.

According to Ngowi et. al. (2005) there are several ways in which construction firms enter the international market : i) Economic booms such as the one resulting from sale of oil as in Middle-East Countries; ii) Bilateral and sometimes multilateral agreements, which set up protocols that enable firms of the participating countries to enter the markets of each other/ one another; iii) Participation in large international projects; iv) International construction market is to carry out construction work for Multinational Corporations. The growth of multinational operations in truly global operations has been an important factor in the internationalization of construction (Ngowi, et. al., 2005).

Global trends affecting construction industry are large and growing concern for nearly every member of the construction industry, from architects and engineers to general contractors. All of the trends examined in global market are expected to have widespread, significant effects on the construction industry. Specific opportunities and threats are region specific, but an understanding of the trends and their driving forces is universally valuable. Change in the construction industry is a synopsis on the global trends that will affect the procurement of international construction over the last twenty years. The construction procurement systems in many countries may need to undergo considerable changes in the (near) future to ensure their continuation. Adaptive strategies can play an important role in efficiently solving impending problems and exploiting emerging opportunities optimally.

Easy and cheap transport and communication technologies create an environment conducive to globalization. Economic incentives, like cheap labour and new markets, are key motives for taking advantage of this effectively shrunken time and space. Cross-border mergers and acquisitions have become an increasingly important means of entering foreign markets since the mid-1980s. The international activities of multinational companies exemplify this for the construction sector. The construction industry is constantly changing along with the rest of the world. Global trends often take diverse forms and have dissimilar impacts on a local scale. Some trends, like increasing political tension, can have highly localized revolutionary effects. Early identification of these chances and threats maximizes our ability to adapt global environment. Foresight studies are a tool for this purpose.

Construction is an important part of global economy with its unique characteristics affected by and affecting all parts of the world. The construction industry has changed significantly within recent years. Increased competition created by issues such as globalization, rapid developments in construction technologies have led many organizations to seek innovative solutions to decrease cost, improve schedule, keep current on technological developments and ensure market share in their dynamic business environment. World is becoming “small global village” because of Increasing Multinational companies and innovative Information & Communication Technologies (Yates, 2007).

Engineering and construction professionals know how to achieve technical objectives, but achieving project objectives in a global environment requires more than merely technical expertise. It is during the execution stage of projects that cultural, political, environmental, religious, legal, and language barriers surface, and it is how these barriers and differences in perspective are addressed that determines the success or failure of global E&C projects (Yates, 2007). Within the general trend of globalization, worldwide economic cooperation and technology transfer are common practice. International construction projects are just one of the activities that involve multinational participants from different political, legal, economic, and cultural backgrounds (Chan and Tse, 2003).

The growth of multinational organizations in truly global operations has been an important factor in the internationalization of construction. The lowering of trade barriers, the movement of funds and setting up of new operations globally has created a platform for interested construction companies to follow and exploit. When multinational companies move out of their domestic markets it is reported that many continue to use their tried and tested suppliers, often the same construction company that built their last domestic project. At the same time the need for local knowledge is recognized and the multinational companies are quick to form joint ventures with local partners, an acknowledged trend in globaliza-

tion (Mawhinney, 2001). Ofori (2000) argues that construction industry development is complex and multidimensional. He suggest that the component factors of construction industry such as development of materials; project documentation and procedures; human resources; technology; contractors and institutions both public and private may be used to provide measurable indicators of globalization. Najjar (2003) stated that globalization for the construction industry and construction organizations is encompassed in the social, economic, political and legal forces, resulting from of increasing global connectivity, which impact on the capacity, efficiency and effectiveness of the i) processes of production; ii) products and services; and iii) ownership structure of construction industry. According to De Valence (2003) the construction industry has become more global, deregulated, open and competitive as a result of changes in the international economic system. He also argues that industry is not suitable for internationally integrated production, thus, the effects of globalization are seen in the rise of international contracting and corporate activity (De Valence, 2003).

European countries are in a period of great social, political and economic change, particularly as a result of European integration. Actually most of the countries through the world are changing from an industrial to an information society with progressive urbanization. Especially developed countries aspire to a higher quality of life and economically and socially are placing greater demands on the quality and efficiency

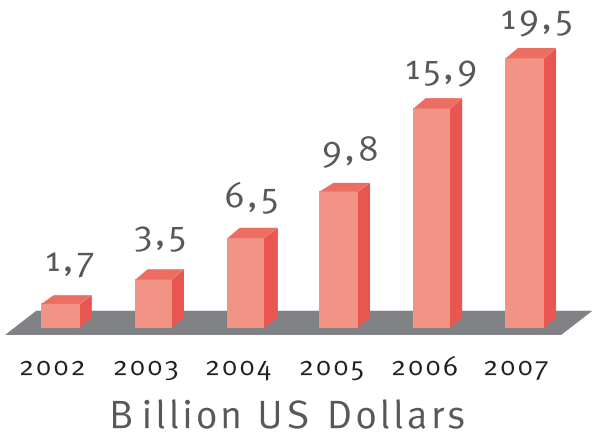

Figure 2: **Increasing volume of work between 2002-2007 in Turkish Contracting Services Abroad (Source: The Turkish Contractors Association (TCA)) *http://www.tmb.org.tr/index.php?l=eng***

of the built environment. On the other hand, the sustainability of physical environment is under threat in the world. Conserving non-renewable resources, environmental protections, destruction of cultural heritage are the keywords for the built environment. Construction needs to offer more attractive employment in an industry where the liberalization of the market has increased opportunity and competition and the domestic industry will be more open to external competition. Information Technology (IT) will be a powerful technological driving force (Irish Council for Science, Technology & Innovation, 2008).

Current situation of the Turkish construction industry

Various indicators can be employed as the basis of analysis in examining the current situation of the Turkish construction industry. Among these are economical outputs like GDP or GNP, construction firms, and employment. As highlighted by Pearce (2003), each of these indicators reveals part of the story that is relevant to our understanding of the state of the construction industry. The distinction between the broad and narrow definitions becomes very significant when examining these indicators. In the construction sector GDP is the total production value of building services resulting from domestic construction activities realized by local production units in the building sector in a country after the expenditures incurred have been subtracted from the total value. At the same time it is the total of expenditures made on consumption and investments within a given year. Growth in GDP is not related to growth in capital or the workforce, it is at the same time related to their efficient and profitable use, in other words to total factor efficiency. In 2006 an increase of 5.2% was observed in personal final consumption expenditures on consumer durables, which account for much of the rise in GDP (Turkish Construction Sector Report, 2007; 2008).

	2007	2008
Total Volume of Work	**105 billion USD**	**130 billion USD**
Number of Turkish Contracting Services Abroad	**4300**	**5000**
The number of countries in 4 continents	**69 countries**	**70 countries**

Table 1. **Foreign contracting works of Turkish companies by the end of 2007 and 2008**

In terms of the number of firms and volume of work for Turkish contractors through the foreign countries by the end of 2007 and 2008 are shown in Table 1. Figure 2, also shows the increasing volume of work between 2002-2007 in Turkish Contracting Services Abroad in terms of development of construction industry.

The economic crises in 2000 and 2001 have been driving forces for Turkish industry to attack foreign markets, which increased the number of companies who become aware of the requirements for global competition (Elci, 2003). According to the Global Competitiveness Report of the World Economic Forum, Turkey was in 63th position out of 134 countries in the 2008 growth competitiveness index of all EU member and candidate states (The Global Competitiveness Report (2008-2009). Thirty-one Turkish firms have made it onto international construction sector magazine Engineering News-Record's (ENR) Top 225 Global Contractors 2009 list, making Turkey second only to China in terms of its total number of firms on the list. The number of Turkish companies on the list increased from 23 in 2008 to 31 this year while China leads the list with some 50 contractor firms.
Turkish construction industry, which competes at international markets for over 40 years has an important potential globally despite it has shrinked in the last decade. Especially, during the ten years period between 1993-2003 it has shrinked with the ratio of 22.4%. In 2005 it is increased with the ratio of 19.7%. Currently, it is behind this enormity. Increased competitiveness in construction industry over the mid and long term required the improvement of performance. The impact of EU accession process is critical for Turkey's economical and social development.
Turkish public offices, in general, are renowned for their tedious bureaucratic procedures, which involve tremendous amounts of paperwork, long waiting periods, and many redundant formalities. The current system not only places a burden on the general public, but also creates immense amounts of unnecessary work for public servants. Obtaining construction-related permits, applications go through a hierarchical chain which takes sometimes months for approval. The actual construction process and the restrictions imposed by public authorities are time-consuming and place limitations on change efforts. Although it is obvious that certain changes in the present system are necessary in setting the foundation for a less hierarchical system that will enable less time-consuming process and efficacy, such changes are anticipated to be difficult to implement. Public offices have operated in this manner for years, and public servants have adopted a culture of bureaucracy. The decision-making mechanism has always been passed up a hierarchical ladder, discouraging the development of decision-making skills of lower level staff (Bayramoglu, 2000).
The General Specifications for Public Works (GSPW), which was last updated as a supplement to the State Procurement Law in 1984, shows many inadequacies when applied in today's construction environment. These specifications are also far from reaching international standards. One of the primary problems of the GSPW is that it mandates use of the unit price index prepared by the Ministry of Public Works. Although this index is updated yearly, and certain cost adjustments are made to reflect these changes on projects with duration longer than a year, these changes usually do not fully account for the rapid devaluation of the Turkish Liras, thus puts the contractor at financial risk (Bayramoglu, 2000). In international tenders financed through international creditors (such as the World Bank) the use of "International Administrative Specifications of Civil Works" issued by "Federation Internationale des Ingenieurs Conseil (FIDIC) is compulsory. These specifications not only protect the rights of all parties, but also are continuously updated to comply with social, economic and technological developments. However, since the use of the above mentioned international specifications is limited to international tenders, the local contractors are generally restricted to use GSPW despite its inadequacies (Bayramoglu, 2000). Ocal and Kaya (2000) state that construction specifications and contracts use in Turkey are inadequate and not to sufficient in detail. The consequential uncertainties lead to numerous problems during implementation as follows: The control process becomes difficult, because expected attributes and requirements are not clearly defined; Uncertainties in roles and responsibilities lead to disputes between contracting parties causing delays, and sometimes project termination; Inadequacies in technical and dispute resolution clauses lead to long and expensive court cases; Work completed with defects or incorrectly, due to lack of detail, must be repeated, leading to wasteful expenditure (Ocal and Kaya, 2000).

Turkey is highly dependent on the construction industry in fulfilling its need of infrastructure, residential, commercial, educational, and industrial type construction. The need for construction has multiplied, and gained urgency after the 1999 earthquakes, adding additional emphasis on the time, cost, and quality factors on relief projects. Legislation was passed on April 10, 2000 stating that "control of all construction projects over a certain value is to be undertaken by certified consultants" (Bayramoglu, 2000). Today, Turkish contractors gained experience in international markets, perform a growing success in a changing environment where high competition pushes the profit rates down.

Understanding Turkish construction industry within the EU accession process

In the context of Turkey's integration with the European Union the need for sustaining competitive advantage of industrial enterprises through technological innovation has increased. Participation to "European Technology Platforms" enables to develop and implement short and long run strategies to enhance the innovative capacity of Turkey (Dikbas and Akkoyun, 2006). Strong and weakness, opportunity and threatens are indicates the competitiveness of the industry in global arena. That's why understanding of the Turkish construction industry has an importance to gain a competitive edge in a global environment. Vision 2020 report (1999) prepared by CII (Construction Industry Institute) in USA conclude that the globalization is the trigger effect of construction industry and the projects. Report expressed this trigger effect by using the foresight methods and strategically planning works. According to Vision 2020 report (1999) the economy of countries and regions will be integrated in the future; multinational operations within the construction projects will be growth and will create an important factor in the internationalization of construction; BOT (Build-Operate-Transfer) type of projects will become widespread in global environment; procurement systems will be changed within the base of globalization; and stakeholders will be harmonized through the multicultural environment through the construction projects.

Most of the developed countries are focused on the research and foresight projects in construction industry. One of the most important project is conducted by EU is the "Communication on the Competitiveness of the European Construction Industry" identifies ten strategic objectives and key factors aimed at enhancing the competitiveness of the sector: Regulatory Environment, New Procurement Systems, New Management Techniques, Off-site Production, the Role of Government, ICT (Information and Communication Technologies), SME's (Small and Medium Enterprises), Sustainability, Reinforce Research & Development, and Labour force (http://ec.europa.eu/enterprise/construction/compcom/compcom.htm).

The five year development plan developed by the State Planning Organization (SPO) operating under the Turkish Prime Ministry is aimed at setting medium to long term development targets and strategies towards optimal improvements in Turkey by the year 2023, which marks the 100th anniversary of the establishment of the Turkish Republic (SPO, 1999). The task of implementation of the Technology Foresight Project in coordination with the related institutions and establishments, pursuant to the decision of the Supreme Council for Science and Technology, constitutes the main axis of the Vision 2023 Project which has been assigned to Turkish Science and Research Institute (TUBITAK). Beyond doubt, TUBITAK Vision 2023 foresight project is the most important project in Turkey when we compared with the world-wide projects in construction industry. The ''Vision 2023'' project involves the first-ever national foresight exercise of Turkey, with three more sub-projects that aim at collecting and evaluating data on the current science, technology and innovation capacity of the country (Saritas et al., 2007). But, some of the key issues like new procurement systems, the role of government, sustainability and reinforced research & development need to identify as strategic objective in details. The key issues considered for reconciling the EU accession process of Turkey are investigate in construction industry simultaneously require some serious of desired innovations. Current status of Turkish construction industry through this reconciling process should take into account to contribute maximum contribution for industry.

One of the main topics to evaluate the EU accession process of Turkey is the construction products regulations. Construction Product Directive – CPD (Council Directive 89/106/EEC) on the regulations and administrative provisions of the Member States relating to construction products was signed in 1989. The directive CPD came into force in 2007 in Turkey. The CE Mark was established by the European Union to ensure the free circulation of products in Europe. The Government of Turkey has directed the Turkish Customs Service to ensure that all imported products that fall within a particular EU industrial directive must show conformity to the standard. However, there is no local approved organization for the CE mark enforcement.

General review and the comparison of the conducting research and foresight projects enhancing the competitiveness of the construction industry through the developed countries and Turkey indicates some of the critical differences regarding the focused strategic objectives and key factors of the project and the organizational structure. For instance, most of the projects undertaken within these countries are organized by public body and legislations have crucial role. On the other hand, a temporary steering committee conducting a vision project in Turkey. Role of the government and new procurement systems has an important impact factor for the enhancement process of the construction industry in developed countries' attempts. However, addressing factors influencing the construction industry development are inadequate through the enhancement process of Vision 2023 project.

CONCLUSIONS

This study can provide a context for assessing the current status of the Turkish construction industry. In addition, the results and the recommendations made in this study can be utilized as a preliminary step for developing a national strategic agenda for the Turkish construction industry. This study is the first step to understand the further process of Turkish construction industry through the EU accession period of Turkey. Industry should be aware of the globalisation and how to benefit more from it. Construction companies as a component factor of the industry should continually change with time and technology. In order to understand globalisation within the industry, all the component factors should be identified and appropriately addressed. In order to achieve sustainable competitiveness in international market, Turkish construction industry should continuously improve itself by following the changing market conditions, adopting to new procurement systems and business trends and tracking for developments. Thus, EU accession process has a direct impact on Turkish construction industry with the new directions, standards, regulations, modification of legislations and competitive environment. Risks and opportunities created during this process for industry should be analyzed in detail within the base of all stakeholders of construction industry. For further researches, organizations and their structures in developed countries including EU countries which are conducted foresight and strategically planning projects for construction industry should be investigated to gain competitive edge in global market. A comparative and collaborative research projects between these countries and Turkey should be supported. Furthermore, an effective third party organization should be established to monitor construction industry.

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