
ISSUES FOR THE GLOBAL CONSTRUCTION MARKET

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Introduction

There are many issues in regard to the impact of globalization on the construction industry that have emerged or are still emerging. Some are general, as for example, the polarisation of the global economy; the new rules and regulations controlled by organisations such as the World Trade Organisation (WTO); unrestricted international capital flows; and the influence of shareholders on the strategic directions of the organisation. Others are specific to the construction industry such as the influence of globalization on construction industry development; the more frequent listing of construction companies on stock exchanges; and the impact of globalization on other, non listed, construction related businesses.

This paper will examine some of these construction specific issues in context of the limited knowledge of their specific implications on the globalization of that industry. The paper takes the view that much of current "knowledge" in the debate of the impact of globalization on the construction industry is oversimplified with little or no respect for evidence or need for quantification. The core theses being that globalization will create a new construction industry and that there will be little contact between the old and the new industry.

Defining globalisation

The word 'global' may be over 400 years old (OED 2000 s.v. global), but the common usage of derivative words such as globalization and globalize did not begin until the late 1950's. Since the end of the Cold War in the 1980's, the concept of globalization has become more widespread. Today globalization is widely assumed to be crucially important.

Generally, the concept of globalization is defined as (e.g. Friedman 2000, Scholte 2000, Mulgan 1999, Waters 1995) an international system of increasing connectivity between countries, corporations and individuals which involves some form of trade, exchange, sharing or distribution of either quantifiable or non quantifiable components (Najjar et al. 2000).

"A social process in which the constraints of geography on social and cultural arrangements recede and in which people become increasingly aware that they are receding" (Waters, 1995, pg.3).

From an economic perspective globalization represents increasing capital flows and trade of goods and services and the spread of free-market capitalism to virtually every country in the world (Soros, 1998). From a social perspective globalization represents the sharing and exchange of ideas, beliefs and values as well as issues such as human rights, working conditions and consumer protection. From a legal perspective globalization represents rules and regulations of organisations such as the World Trade Organisation (WTO). From a political perspective globalization represents the international relations and multilateral trade agreements with the removal of trade barriers between individual countries and economic communities.

The global debate

The global debate (Schwartz, 2000) seems polarised between those who see globalization as a new force that will change cultures, societies and economies across the world and those that say that globalization is nothing new and incapable of influencing local states.

The problems mostly associated with globalization include the inequitable distribution of goods, services and wealth together with the unresolved problems of suppression of human rights and increased poverty and social unrest. Social commentators (e.g. Chomsky, Nader, Galbraith *et al.*) strongly criticise organisations such as the WTO, and the International Monetary Fund (IMF) and the World Bank for being un-elected, undemocratic organisations that conduct their business behind closed doors with no mechanism for public input and influence. They believe that the rules and multilateral trade agreements of the WTO do not encompass the fundamental values of society (Chossudovsky, 1998) and are not accountable for key issues such as the environment and human rights. They believe that the global 'corporate model' induces an enormous dependency on an export concentrated market that controls more and more of the world's natural resources, including patent monopolies based on biotechnology (Najjar *et al.* 2000). Some suggests that the answer to the problems of globalisation is to "tear down the WTO and tear up the rules" (Nader *et al.* 1999, pg. 3).

The main benefits of globalization are seen as the opportunity for economic and social development and higher standards of living through wealth and technology transfer (Najjar *et al.* 2000). It is argued that free trade creates significant and meaningful job growth, increases the standard of living and fosters peace as a result of new found prosperity. They consider that ordinance of the WTO, the IMF and the World Bank, should be increased because, not only do they increase global trade but they also protect the interests of small companies who cannot otherwise afford to protect their interests abroad. They argue that "If global corporations and big business are the enemy, ... who will supply the jobs after they're gone?" (Nader *et al.* 1999, pg 13).

Quantifying globalisation

Approximately US\$1.7 trillion are transferred daily in the global market. The

major proportion of this flow, approximately 95%, is unproductive and speculative, with about 80% having a repatriation time of less than a week, often less than a day. The US\$1.7 trillion a day represents over twice the combined total foreign exchange reserves of all countries (Fortune, 2000).

Globalization has also seen an increasing influence of large corporations. The world's top two hundred corporations, now account for about quarter of all global economic activity and employ less than 1 % of the workforce (Chomsky, 1999). The trend is for a smaller number of large corporations, accounting for an increasing proportion of economic activity, employing a decreasing proportion of workers.

The majority of the risk associated with the speculative flow of capital is not taken by the large corporations, but by the people and Governments of smaller developing economies unable to absorb the impact of relatively large shifts of capital. In the worst case scenario of unencumbered global capital flows in and out of small or developing economies, local financial markets collapse and generate a subsequent recession such as the Asian crisis of 1997. In this situation there is a massive transfer of wealth from the public to the private sector and the majority of the population has to wear the risk and pay the cost (Najjar *et al.* 1999).

Current Understanding Of The Global Construction Market

The previous era of increasing international contacts was built around falling transportation costs resulting from the invention of the steamship, railroad and automobile. Today's globalization is built around falling communications costs, deregulation of markets, and in particular the capital markets and the growth of international organisations. How that will impact on the construction industry is far from clear. Construction related commentators, to date, have only discussed some general issues in relation to globalization (e.g. Weddikara *et al.*

2001, Ofori 2000, Raftery *et al.* 1998, Brandon *et al.* 1998, Miles 1991).

The theme of most of these commentators is to focus on the 'internationalization' of construction, in particular construction industries of developing countries, with the discussion directed at how a specific developing country or group of developing countries is reacting and/or is responding to the influence of large multinational construction organisations operating within their industries. They also focus on how the multinational construction organisations are restructuring their processes and or adopting new processes in order to operate 'successfully' in these foreign industries; and how there needs to be a substantial improvement in the application of IT in construction to retain competitive advantage.

Raftery *et al.* (1998) investigate several Asian construction industries and argue that the main trends resulting from globalization are: larger private sector participation in infrastructure projects; increasing vertical integration in the packaging of construction projects; and increased foreign participation in domestic construction. They argue that these trends are helping to polarize the technical, managerial and financial superiority of developed countries and that the developing countries will have to 'leapfrog' this gap in order to minimize their increasing inferiority. They consider that, in the long term, technology transfer, for example via joint ventures with developed countries such as those in the construction industries of Japan and China, may fill this gap.

Ofori (2000) is critical of the 'general and abstract level' of some of the issues raised by Raftery *et al.* He argues that the effects of globalization may be illustrated when analysed through 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 factors may be used to provide measurable indicators of how globalization

impacts on the 'capacity and effectiveness' of the construction industries ability to meet the demands placed on it.

Brandon *et al.* (1998) argue that "Global construction is undergoing substantial change... International competition is now becoming more widespread for a greater range of sectors within construction" (Brandon *et al.*, 1998, pg. 1). They consider comparison of the global construction market with other manufacturing industries is critical. "If the parallels with manufacturing are valid, construction urgently requires some international comparisons" (Brandon *et al.*, 1998, pg. 2).

This is essentially the debate on the impact of the multinational firm that we had in economics in the 60s and 70s (Grubel, 1981), substituting construction for manufacturing and would be valid if globalisation was nothing more than a proliferation of multinational firms. However, this is not so. The multinational firm of the end of the nineteenth century, the beginning and middle of the twentieth century or even the 1980s was an organisation that had a head office in one country and manufacturing units in two or more countries, each serving its own distinct market, delimited by national borders, protected by cost of transport, tariffs and restrictions on capital movements. The global firm, on the other hand, is a totally different type of organisation. It may have the head office located in Switzerland, financial services in Japan, research unit in India, design unit in Brazil and be listed on the stock exchanges in London and New York. It operates as if national borders do not exist. It is not aiming for export based on comparative advantage. Essentially, it doesn't export in a conventional sense, because it operates as if the globe was a single economy (Runeson, 2000).

David Hawk (1991) talked of the global construction industry as a new industry, rather than a development or a marginal change of the industry we have now. The new industry will not just erect buildings. It

will initiate, design, construct and manage, it will produce the material and arrange the finance, it may operate and eventually demolish the buildings. This vision originated in a series of interviews with twenty leading organisations that would be part of this new industry.

An industry like this does not just appear, it grows out of a new environment, and Raftery et al gives some insight into the process that will create it. We are seeing a growth of BOT projects, often large projects where the sponsors are involved in every process, from the design of the buildings to the operation of the facilities. The unique aspect of this is, of course, that for the first time, the construction firm gains some market power. It now

combines the design with the construction and operation, which means that it can control the use of technology.

Analysing The Global Construction Market

As a starting point, we might adopt the following framework (refer to Fig. 1) to form the basis for further discussion. This initial framework consists of the following interrelationships as they apply to global construction: 1. neo-classic perspective; 2. manufacturing industries comparative perspective; 3. construction industry development perspective; and 4. ownership structure perspective. We shall discuss each in turn.

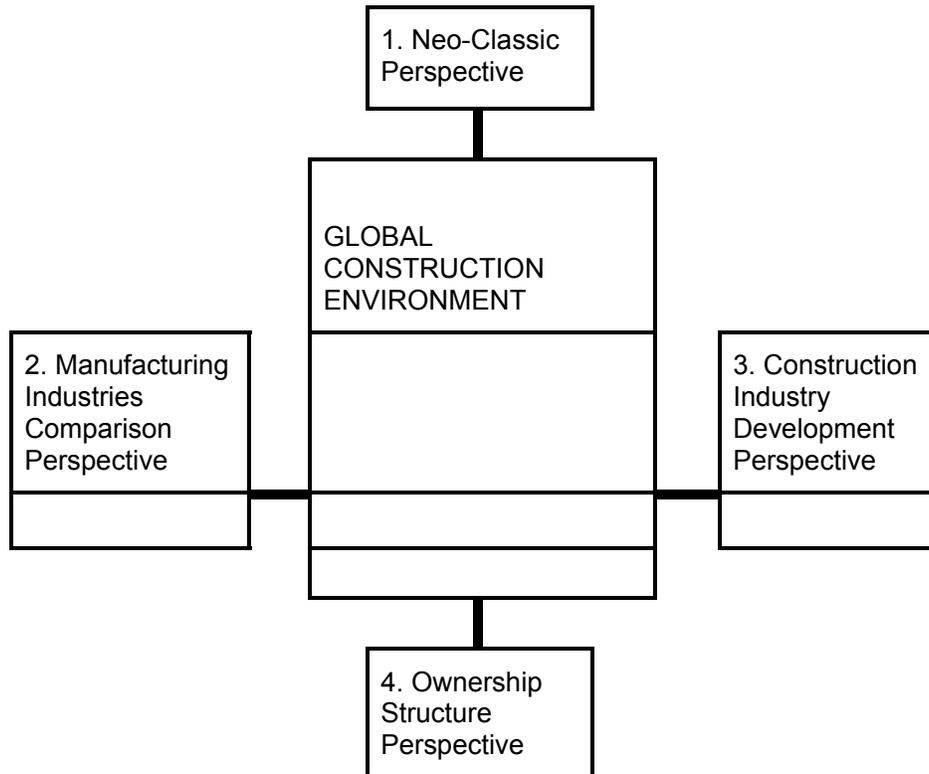


Fig. 1: A conceptual framework to initiate analysis of the ‘global construction environment’ in relation to four selected perspectives

1. Neo-Classic Perspective

Neo-classical analysis is perhaps the most appropriate perspective to observe

globalization because of the way classical and neoclassical theorems have been used to demonstrate the advantages of international and regional trade. The

fundamental behaviour and supply and demand in the global construction market should be the same as those for any market irrespective of scale, location and product or service. Hence, characteristics of the global construction market may be described in terms of factors such as supply, demand, elasticity, market power, etc.

However, the theoretical framework by which the development and effects of a global construction market may be evaluated does not necessarily follow a typical neo-classical model since a large number of the essential assumptions are inappropriate. The assumption of international trade as a substitute for factor immobility does not apply because there is unrestricted mobility of capital. As a consequence there is no income equalisation as assumed in the Heckscher-Ohlin-Samuelson Theorem, nor any mutual adjustments of production and prices. For some particular issues, such as for instance capital movements, it has been suggested (Soros 1998) that the equilibrium type models of neo-classical economics are totally inappropriate, and that we should look towards chaos-type theories instead.

2. Manufacturing Industries Comparison Perspective

The construction industry has always been characterised as low technology and low productivity (Harvey and Ashworth, 1993). There has been little incentive for research in the industry because the construction company has little control over the use of new technology. The use of any innovation is dependent on designers incorporating it into their designs, something that they are reluctant to do if it confers monopoly power onto the sponsor of that technology.

With the BOT project the 'builder' or sponsor obtains some control over the market in the sense that it decides on the incorporation of any innovations. In fact, it may now compete on technology which for the first time puts it in a position where it has reasonable prospects of recovering

expenditures on research and development. A typical example of competition on technology is the Sydney Harbour tunnel (Saha, 1997). With the demonstration of the success of BOT projects, it is likely that the private sector may adopt some of its crucial aspects, in fact we are already seeing some development towards market control in the form of developments in partnering for some types of projects.

While BOT projects and the like are not essential parts of globalisation, they are the results of the economic rationalism that is the foundation for the economic deregulation that created the potential for the global market (Runeson, 2000). With global markets large enough to support corporations of the size necessary to incorporate research departments, with projects complex enough to benefit from high technology and with the potential for corporations in the construction industry to gain market power from new technology we have the foundation for a new, high technology industry, similar to the manufacturing industry. According to Hawk (1991), the organisations he interviewed had all, one way or another started to work towards membership in this industry.

Because of the mobility of capital, it is possible for the global firm to locate production in the country with the lowest cost of labour, pitting developing countries against each other, further increasing the inequality of income distribution, both between and within countries (Swift, 1996). In the competition for global investments, governments have used as arguments the absence of all forms of protection of labour in the form of trade unions, minimum wages and conditions or occupational health and safety (Probert, 1996). In combination with tax holidays it means that the benefits to the economy of the receiving country are almost zero, although to individual shareholders it may be substantial (Chossudovsky, 1998).

In the case of the construction industry, the negative impacts may be less than in the case of manufacturing industry as part

of the work needs to be located at the site of the project. However, for the manufacturing part of the global corporation and some of the service like design and finance, there will still be the ability to play countries against each other for lower costs and fewer regulations, making it an instrument for transfer of wealth from developing to developed countries just like global manufacturing firms.

3. Construction Industry Development Perspective

Construction industry development, as defined by Ofori et al (2000), resulting from transfer from multinational contractors to developing countries has been limited. Moreover there has been even less technological transfer from the construction industry to other industries. Quantifying any globalization based construction industry development and any subsequent improvement in efficiency and effectiveness will not be possible if the major theses of this paper is accepted: that globalisation will create a new industry and that there will be little contact between the old and the new industry.

International trade has always been seen as mechanisms for economic development, particularly for the less developed country (Caves and Jones, 1973). With no movement (or limited movement) of resources, the return to the abundant resource, (which would be labour in developing countries), would increase, and the total output to be shared between trading partners would increase. In the case of the multinational firm, new capital invested in the developing country and transfer of technology would cause economic growth. The global firm, on the other hand, doesn't necessarily confer such benefits. This is so because the capital for production may come from a third country, not necessarily involved in the trade, which may be able to expropriate all or most of the benefits. Chossudovsky (1998) gives an example of this when he demonstrates that the developing country receives less than three per cent of the total value added in

the production of garments, the rest divided among various global corporation and developed countries.

One of the fascinating aspects of traditional building is how resilient it has been. There has been a lot of research and innovation going into for instance single family housing without much effect on the operation of the industry. The overwhelming part of the industry concentrating on conventional, small scale building, will therefore probably not be affected at all by the new industry. Rather, we will see a development of two construction industries. Firstly, we will have the current, low technology local or regional firm, constructing conventional buildings in a conventional way, competing exclusively on price. It will import, as it currently does, all its new technology from the producers of equipment and material as, due to the fragmentation of the industry and its extensive use of subcontracting, no-one has a sufficiently large financial interest in the building to support research on the structure or recover any expenditures on research. Secondly, we will have the new, high technology firm, operating in the global market, competing with a high technology package, providing not buildings but solutions to accommodation needs, including if necessary both finance and operation. New technology will be developed in-house and include not only materials and equipment but also technology of construction.

Because of the differences between the two industries there is no reason to assume that technology transfer will be as important as assumed in the debate about multinational firms. Rather we will have a small number of firms in the high technology, global sector, maybe twenty or so world-wide, operating in isolation from the conventional industry (Hawke, 1991).

4. Ownership Structure Perspective

If understanding the real meaning of globalization for the construction industry requires the understanding that a 'global'

business implies more than just operating in foreign markets; producing new products for new markets; or improving capacity and effectiveness, we may get some early indications from changes in ownership structures (Najjar *et al.* 2000). Construction organisations are currently being globalized via an unrestricted capital market which facilitates international takeovers and mergers. In Australia there is an increasing trend for foreign ownership of major construction companies. The largest construction organisation is now 47 per cent overseas owned and all other publicly listed construction organisations have some degree of foreign ownership with the total foreign ownership, in terms of market capitalisation, of some 30 per cent (Najjar *et al.* 2000).

Similar trends are displayed in the construction industries of most developed economies. The advantage to the foreign investor is the potential for market control and the potential use of new technology. These possibilities are not as yet as transparent for the construction firms in developing countries.

One of the problems of globalisation is the loss of control for the national and local governments. It has been said that the twentieth century has been characterised by three broad developments. First there has been the growth of democracy, secondly there has been the growth of the large corporations and finally, there has been the growth of the attempts by the large corporations to suppress democracy (Carey, 1995). In many areas, this has been especially evident, as for instance in the suppression of a debate on issues, like sustainable economic growth, land rights for indigenous people or even globalisation or exploitation of workers in developing countries.

There is also the impact of the global firm on local firms by the competition fuelled by low cost of labour. The major problem, however, is in the potential for generating the kind of destabilising capital flows discussed above, which caused the economic crisis in South-East Asia in 1997

(Soros, 1998) with the accompanying massive transfer of wealth from the developing economies involved towards developed economies with access to capital.

Conclusion

Globalization for the construction industry and construction organisations is creating a new type of construction industry, high technology and vertically integrated that will operate side by side but totally independent of the conventional, low technology industry. The creation of a global market means that what used to be niche markets in national markets become large enough to allow investments into research and development, and therefore prime targets for the research intensive, high technology global firm. Small construction firms simply do not have the resources to operate effectively in the global market.

The challenge for the national governments, international organisations and ultimately, global construction corporations is in developing a system that minimises the polarisation and dehumanisation consequences of globalization and the corporate culture process. For industry organisations such as for instance the CIB this means providing a link between the two industries and facilitate the transfer of technology from the global to the local industry. For educators it means finding a way to be relevant to both industries.

Any framework for observing the development of the new global construction market is by no means limited to those areas discussed in this paper. Indeed these perspectives represent the initial analysis of an environment that is only just emerging and may necessitate collaborative development with other disciplines vis. facilities management. The validity of any future analysis will require a shifting of the current understanding and observing a multinational firm operating in single market to recognising the global firm operating in new and totally separate market.

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