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CHINESE INTERNATIONAL CONTRACTORS AND SUB-SAHARAN MARKET

Henrique Manuel Pimentel Reis

Polytechnic Institute of Setúbal, Portugal

Nowadays evolution of globalization process is bringing up new international relations and changing the ranking of strongest countries in terms of economic power. China has become an important international player, already considered by many as the fourth most powerful economy in this first decade of the XXI century. Anyhow, Chinese government is aware of China weaknesses and understands how important is to dominate or control international markets to get what they need or what they looking for.

Exploring new supplier markets or consumer markets becomes an important subject for management and economics. International businesses consist in transactions between economic agents from more than one country. These transactions may be supported by trading products, services or financial assets. However, investing abroad is very important to become more international and powerful.

This work concerns studying Chinese International Contractors approach to sub-Saharan market between 2005/2009, considering available data. We look for studying contractors' distribution for the several markets/countries existing there and, simultaneously, finding some explanations for strategic options of the Chinese companies. We compare this Chinese presence with the one of others countries contractors also working in sub-Saharan market. It is interesting to analyse the evolution of these companies' presence in some countries/markets.

There are several issues that must be considered and answered when preparing and implementing an internationalization process. In this case, we don't try to match the internationalization process of Chinese contractors with the incremental models.

From other studies we already know that geographic and cultural proximity are not the main variables to be weighted by them.

We will base our study in Networks Model and we will try to find some links and reasons for the strong presence of Chinese companies in this part of Africa.

We know that Chinese companies are still avoiding the most developed markets in terms of technological products or specialized services. They also try to avoid competing with powerful multinationals, preferring markets with a less internationalization level.

We can understand that internationalization options seem to be planned considering sovereignty and political strategies.

We are able to achieve some conclusions, even considering some of them are easily understood.

Keywords*:* Globalization, Internationalization, China, Contractors, Market.

INTRODUCTION

We consider internationalization an obvious important business issue of contemporary times, in sequence of globalization process, and this is not new for anyone but is nevertheless relevant to remember it, time to time.

China has become a very important international player, not only in political terms, and we notice the growing relevance that this country is winning in some markets. Public works directly link with sovereignty, because the main customer is the State, allowing relations with several interests and several action vectors.

We begin our paper referring the most known motivation factors pushing companies abroad, divided in traditional and emergent factors. Then we describe the main classification of internationalization models, explaining their characteristics, and going on with one of the most important theories for organizations' internationalization, the network relations. Previous studies, and the present paper, lead us to conclude that Chinese companies' internationalization are often framed in this theory, at least considering Chinese international contractors.

Our aim is to search for reasons supporting Chinese contractors' options going to Sub-Saharan markets, with a strong bet on public works, and we achieve some conclusions, in spite of difficulties to find all the factors pointing to the real formulation of internationalization strategies.

INTERNATIONALIZATION AND MOTIVATION FACTORS

Traditional Motivation Factors

Companies' internationalisation has subjacent several motivation factors, which importance on decision-making is variable according to each situation. Priority relation between those factors is not the same in all the situations, and normally we don't find all of them justifying an abroad expansion process. However, the whole of them explain the reasons driving firms to invest abroad.

Bartlett and Ghoshal (2000), wrote that very rarely companies could get international dimension without a previous clear goals definition, or a clear international development strategy formulation. Above all, if they want to go beyond direct or indirect export.

Nevertheless, after abroad commercial or operational activities stabilization, motivations for internationalisation's next step can change, either with time passing or with external involvement intensity. Frequently, the first feeling about international business development is considering it as an appendix of domestic activity. Then it turns on a relevant way for sales and profits increase, managed with great autonomy.

Tayeb (2000), points three vectors for internationalisation motivations, which are:

⇒ Top management role;
⇒ Self organization's motivations;
⇒ Success in the domestic market.

Managers' skills increase during the internationalisation process and new motivation factors to foreign investment and international interchange can appear. Managers feel pushed and seduced by their activities horizons enlargement, finding new ways for professional and personal achievement. They become more cultural and technically enriched, as a result of abroad activity.

Multinational companies move all over the world not for one or two main reasons, but for a set of them, pushing their growth and economic development, which cannot be interrupted or

modified to opposite direction after reaching a cruise speed level. It only can be modified for financial, economic or strategic reasons.

We must enhance that top managers, leading companies at each moment, have a very important role deciding on the future of their organizations. The companies' future will depend on skills and profile of each one of them.

Concerning the second vector and considering industrial economies appearance and growth Tayeb (2000), says we can find on raw materials sources search a first motivation for internationalisation and foreign investment practice, according to nowadays definition of these issues.

It seems evident to us that most developed European economies have an important part of their growth based on other countries raw materials transformation, namely countries from other continents. It means that internationalisation motivated by raw materials sources search became a relevant factor in order to achieve the welfare level that we can now enjoy at West Europe.

Managers just have to worry about concluding if raw materials transport cost from sources to usual production facilities is less than investing in new facilities near those sources. This issue frequently drives to invest in productive subsidiaries, avoiding deterioration of referred raw materials during source/facilities transport, namely if there is a high level of perishability.

Taking into account the attainment of resources and having present that costs management became managers' primordial factor looking forward to organisations' profitability levels, Tayeb (2000), speaks about internationalization concerning costs reduction. Thus, investing in branch offices aiming more efficient human resources it is another factor impelling economic interchange. Namely interchange between countries with different development degrees. Sometimes these options also allow working with cheaper human resources.

This becomes a more relevant issue if we are facing a labour-intensive activity. Thus, it will be very important to balance goods' transport costs to consumption markets with savings originated for placing manufacturing activity near cheaper labour force supply markets.

The same author also considers the search for new customers markets a motivating and an expansion abroad driving factor, concluding additionally it is reasonable that many companies find here scale economies. Industrial processes will be more profitable through a higher installed capacity level use. And stocks selling at several markets, beyond domestic one, are guaranteed.

Domestic market saturation can result from demographic exiguity, economic capacity, product's characteristics, technological evolution, consumers' positioning, innovative investment and internal or external levels of competition. However, sagacity to anticipate business developing problems, meaning, demand decrease for goods or services, based on referred reasons, will lead to greater or minor anticipation of abroad investment, trying to balance domestic difficulties.

Someway previous factors have parallelism with the product life cycle. Companies try to extend that cycle through international markets selling. Thus, they increase the product profitability, counterbalance the domestic market decline and avoid anticipating innovative investments. But it can happen, as we could conclude from previous paragraph, that domestic market quota loss has origin on foreign competitors' arrival to our country. Answering them companies' option is frequently to invest in emergent markets, which are still not aimed for developed countries enterprises. Strategically they create roots and strong relationship bows with local customers before their international competition decide to invest there.

Today we know that some economic units cannot consolidate and grow, or survive, if they don't consider internationalisation project as an important part of their strategy. The internationalisation can base on productive perspective, commercial perspective or both. If domestic market is too little and doesn't allow the level of sales that is profitable to the firm, this one need to look faraway and external markets become totally relevant.

Bartlett and Ghoshal (2000), wrote that we can also find in the administrative barriers to international trade an impelling factor for some organisations abroad expansion. If we cannot

export to protected markets we must enter them through foreign direct investment. Governments of developing countries often use artificial trade barriers as a way for getting more foreign investment and more contribution for their development.

Emergent Motivation Factors

Innovative technologies or intellectual capital are important factors, usually hard to get from other countries, mainly when they artificially hinder their mobility. However, their economic and financial exploration can be very interesting. We have here another good reason for an internationalization option. Organisations may have to choose those markets where they can benefit from referred factors. That is a reason why they should invest taking local partnership into account. Those alliances can have an economic, financial, cultural or technical basis.

We detach that Bartlett and Ghoshal (2000), also consider the research and development investments on new products or services as relevant factors for internationalisation option. Companies need to achieve high levels of turnover, because this is the only way to make those investments profitable. That is why enterprises created in a national perspective have evolved for an international or even global structure. It was a survival condition.

After one or more experiences in foreign markets new impulses may naturally appear, giving breath to internationalisation process. For example, when searching for new knowledge's sources, organizations can find new chances for introducing productivity gains, or for getting innovative services or products.

Considering knowledge's acquisition increases with international experience, facing other social and economic realities, they simultaneously develop self-abilities and skills for fitting and managing new situations. They also come upon market innovations, opening different market opportunities. Sometimes they must fit product/market binomial, suggesting new approach ways for present and future business developments.

Additionally we must refer that geopolitical issues and institutional relations are important supports for internationalization movements. The existence of strong multidomestic, global or transnational companies coming from same country is an important and powerful way to extended political influence beyond boards. This intention risks to bring up negative reactions and eventual feelings or fears of sovereignty's loss, but we know that developed and economic stronger countries find up with this strategy an open way for foreign affirmation.

Negotiations for foreign direct investment accomplishment that creates jobs in poor regions and contributes for their economic and social development may have as counterpart the support to strategic international trade decisions, or to have privileged access to relevant raw materials' supplying, or to get geopolitical strategic decisions or even for building lobbies against regions, cultures or countries.

We do not intend to exploit this issue, but we felt important to consider it in motivations' variety of choices for some internationalisation organisations' movements. Some of them may have here their main origin, and political power appears as most important interested part, even so shielded for a fictitious shareholder structure or helped by a provided administration aiming those goals.

Motivations also base on domestic market success, as Tayeb (2000) suggests, considering that referred success leads to more self-confidence for new markets approaching. Top management finds these challenges as natural and considers them the firm growth natural way.

However, it seems to us that another underlying condition must exist. A real internal business consolidation supporting new markets growth is very relevant. Thus, an eventual international failure, or a markets entry difficulty bigger than expected will not unbalance the functional structures of any type of institution.

INTERNATIONALISATION MODELS

General Framing

The internationalization model option for each company must be consistent with the conditions that it has for, eventually, developing its business in foreign markets. Concerning this, the diagnosis procedure is a very important stage preparing the decision about the internationalization process. This statement aims to highlight that companies must be fully aware about their financial conditions, technical resources, human resources, technological resources, and above all, available intellectual capital, with which they will address the new markets. Actually, international context must be properly studied, analyzed and understood, given the growing complexity acting abroad comparing the performance in the domestic market.

Already Aharoni (1966), stated that a decision related to investment across borders can not be seen isolated from future decisions, meaning that, looking back to a past decision, and considering that it is not understandable for itself, placed in a sequence of options assumed by the company we understand the logic that was behind his actual choice on a past time.

In the same way Tayeb (2000), considers two major groups of internationalization models, namely:

⇒ Sequential models;
⇒ Simultaneity models.

The sequential models, as can be inferred from the name, means the internationalization by stages, being identifiable the moments when companies have developed several measures to promote their involvement in international business, since the simplest way of exporting until they reach levels of internationalization more sophisticated.

Tayeb (2000), concludes that the most important thing is to realize that the sequential models are associated with a greater degree of concern about the uncertainty of results that will be achieved with internationalization, and that companies take a responsible care, as they enter new markets involving increased risks.

The option for more defensive market commitment levels in order to acquire international experience, allowing a gradually knowledge increase about business characteristics and determinants of new market functioning, leads directly to the expansion step by step.

According to Tayeb (2000), more knowledge about the market and better perception on its idiosyncrasies, will allow progress towards a greater international involvement, possibly through strategic partnerships or other forms of collaboration with local firms, until they choose to assume foreign direct investment.

This theory was supported by Johanson and Vahlne (1990), who had studied the internationalization process, searching for:

⇒ Making a parallelism between the increase of knowledge on foreign markets and the increase of international involvement;
⇒ Studying the reduction of uncertainty, namely the risk level, through a smooth entry in foreign market, with low level of financial and facilities commitment, and later in time assume an option of higher involvement in international business.

Tayeb (2000), concludes, therefore, for stating that the process of internationalization is a sum of incremental steps, each one supported by a set of management decisions, which are always the result of balancing several experiences. The same author refers that after this study these notions have become key elements of the internationalization process, although the empirical evidence resulted of an analysis based on a very limited number of companies. This is also one of the main

criticisms to the results of these studies, in spite the constraints in terms of resources and risk aversion are factors that lead to later confirmation that small and medium-sized enterprises prefer to consolidate their position before entering a new market and giving a new step in the process of internationalization.

However, according to Bridgewater et al. (2004), since the 90s that published literature pointed to a faster internationalization processes, even about companies constrained in terms of size and resources. One factor mentioned, to justify this trend, concerns the increasing number of niche markets revealing new opportunities, with reflection on internationalization. These markets allow competitive advantages based on the ability to develop and exploit innovations in products or processes as well as the flexibility of organizations adapting to change. According to Buckley (1989), small and medium companies may have not a disadvantage when compared to large multinationals if targets are specialized markets without significant economies of scale.

We can identify another large group of models of internationalization, the so-called simultaneity models. Tayeb (2000), states that they are based on arguments of international convergence of preferences and tastes of consumers, meaning global convergence, where the same product can be sell anywhere in the world, without any relevant changes in product mix, using the same strategy of communication and without concerns about relevant market segmentation.

Levitt (1983) is one of the authors that argued that consumers' tastes, regardless their geographic location, were becoming similar. This convergence is a result of the globalization of telecommunications, information systems, technological innovation and movement speed of information.

We would like to emphasize that the globalization of tastes can not be extended to all types of products, particularly those related to cultural profiles, region's natural conditions where one lives, such as climate, geography or orography, or with religious values, and we should always bear in mind the limitations of general applicability of this concept.

Both models are mainly based on internationalization process observation of manufacturing sector, considering Tayeb (2000) that required investment level for installation of a plant influences the choice for one of the above models.

As Hollensen (1998), a great level of financial needs, creating less flexible physical structures, associated with higher levels of production volume, as a way to get return on invested capital, imply that we should take more care deciding to expand internationally. So, it is natural that the process is made step by step, leading to a first approach to markets that are not so demanding on financial and technical involvement.

The author claims that the characteristics of surrounding environment and of companies involved are the two main groups of factors to take into account building the model of internationalization.

Hollensen (1998) refers as relevant parameters for analysis, the environment characteristics, the industrial structure of host country, the degree of market internationalization, its potential, the existing level of competition and substitute products, along with geographical distances and demographic and cultural composition. Considering factors affecting the company, the author highlights the degree of internationalization already achieved, even if that involvement in international business is conducted only by exportation, referring yet, the available resources, the productive activity characteristics, the goals with business expansion to foreign markets and the relationships and networks already built in foreign markets.

Theory of Networks

Johanson and Vahlne (1990) as well as Forsgren and Johanson (1992), developed several works looking out for networks creation as a process of companies' internationalization. The networks

perspective leads us to pay attention to long-term relations between companies of the same sector of activity or between companies that are economically interrelated or belong to complementary sectors. The authors state that the development of operations in international markets is influenced by the increasing existence of proximity relationships in those markets. From this perspective, the internationalization of the organization depends on a set of relationships inside the network, being the developed standards and the expressed behaviours the corollary of established relations between the various actors, introducing an international multilateral element in the process, as Johanson and Vahlne (1992). According to Madsen and Servais (1997), the internationalization process is influenced by the context in which the company operates. The authors state that the degree of internationalization of the company will depend, therefore, on networks established in the industry, and the position it occupies in this network. This position is strongly determined by the specific advantage of each company, meaning that hardly an economic unit with nothing to offer will gain access to such type of networks or will develop its process of internationalization.

According to Nieminen and Törnross (1997), the industrial development of enterprises in new markets faces a multiplicity of factors integrated in the environment and affecting business relationships. In this sense, it is important to understand the basic construction of networks as a way to approach the market, which, still according with the same authors, has to do with understanding how to combine heterogeneous resources with different actors and various activities.

Nieminen and Törnross (1997), argue that the networks can be used as a way to look at the process of business developing in a more holistic perspective. They highlight that one can identify the existence of networks taking into account the different aspects of the business-to-business, as well the context in which it develops, whether geographic, economic, social, cultural or political one.

Cook and Emerson (1978), consider that if there is a set of organizations, even small, that are related to each other regularly, they form a network of exchanges, understanding that it may be to exchange economic, social or cultural issues, among other possible fields.

According to Johanson and Mattsson (1988), the industrial systems imply that companies are incorporated in processes of production, distribution and consumption of goods and services, describing these systems as networks of business relationships. The division of activities, actions and work among the various economic units considered show that they are mutually dependent. However, same authors emphasize that the various activities that occur between the network elements, and between them and its outer space, must be coordinated, and there isn't a central unit to manage the entire system. It is through the interaction of different firms participating in the network that it is possible to coordinate the efforts of each component. The price can be, for example, one of the variables, among many others, leading to situations of balance.

The need for adjustments between the interdependent companies, in terms of quantity and quality of various goods and services that are traded, calls for some joint planning, or that a party has ascendancy over the other, in each transaction, according with Johanson and Mattsson (1988).

Axelsson and Easton (1992), said that companies, or organizations linked to business activities, in general, operate in environments that include a set number of players. They are in constant relationship between them and this leads to the development of a stable relationship that will translate into a process of organized trade. In the long term the consolidation of mutual understanding will lead to risk reduction of within network relationship development.

Nieminen and Törnross (1997), consider that dynamics of networks cannot be understood without reference to the basic concept of learning. The authors define learning as a cognitive exchange between actors and based on the ability to perceive the world in a new perspective. Learning allows to a new behaviour development for dealing with situations and problems of the contemporary world. According to Nieminen and Törnross (1997), a change in behaviour

involves compromise and adaptation. The commitment is based on trust and mutual cooperation among members of the network. The adjustment is the result of learning process and means that a company fits in production, technological and trade systems, or even in social and cultural issues, of the other partners.

Anderson and Narus (1990), argue that the success of a company depends, in part, on third ones, including one or more other companies. Based on a study of partnerships between producers and distributors contend that both are involved in fewer but ever larger networks of cooperation, in which the coordination of marketing and technological resources is increasingly challenging to achieve success near the markets.

Holm and Johanson (1997), refer that, in the Social Exchange Theory, networks are defined as combinations of two or more partners linked by relations of mutual exchange, in which the change in a dual relationship is constrained by the change, or the absence of change, on the other. In this sense, the use of the exchange networks theory in the perception of the transactions, in the business world, means that the implementation of a business is sustained by the realization of another one.

Therefore, the authors explain that, considering a relationship focused on business between a supplier and a customer, it is expected, in order for both to have access to resources controlled by others, without coincidence between these resources, that the two companies have other relationships of exchange that go beyond the named focal relationship. However, these relationships with third parties may have impacts in the latter, positive and negative, because of what Holm and Johanson (1997), called them interdependent relationships within the networking.

PUBLIC WORKS SECTOR

Public works are activities that play a very important role in the economic and social development of any region, because the construction of infrastructures that are socially and economically efficient is a prerequisite to economic growth and to a more efficient use of resources by each country. In this sense, political, economic, governmental and non-governmental organizations agree on the importance of this sector.

Public works are mainly based on two great areas:

1. Construction;
2. Conservation and maintenance.

We must sign that construction, in general sense, and public works in particular, are industries based on a wide range of projects. As written by Rodrigues (2005), there is no standardization of products or processes, and each work is, usually, one particular case. However we know that construction of buildings and houses may imply that some projects allow replication of various final products. An example is the construction of blocks of flats or houses. Also according to Rodrigues (2005), this context leads to the notion of irreversibility, meaning that it is reflected in the choice of a project, for a given time horizon, the exclusion of other options in terms of new works and their nature.

We believe that the most relevant is to retain that the development of this activity contributes to improve general well-being of people. In this sense we can speak of wealth creation, which fits into various types.

The public works enable citizens to enjoy better communication between them, by different routes of contact, since the construction of roads and highways, passing by the construction of railways and waterways, the latter through the creation of seaworthiness, and construction of ports and airports, as well as subways, bridges, tunnels, viaducts, and even mine rails, until the

construction of telecommunications networks, including optics fibre, broadband or wireless technology.

Public works also contribute to the organization of daily life through the construction of public roads, public lighting systems, footpaths, cycle tracks, social facilities, sports facilities, hospitals, courts, schools, universities, among others.

Public works still contribute to environmental sustainability through the construction of water treatment plants, garbage treatment plants, waste dumps and treatment centres, anti-noise or anti-air pollution facilities, among other possible equipment.

We can also observe a significant role of public works in the production of energy through the construction of dams, hydroelectric plants, and hydropower and wind farms.

Although not running out all the fields of public works intervention, we also want to refer their contribution to the lifestyle of contemporary societies, building infrastructures that allow water, electricity and gas reaching the citizens homes, companies' facilities, public buildings and all other places where those services are required.

EMPIRIC STUDY

Research Goals and Methodology

In this study, the relevant goal is trying to find the main reasons supporting internationalization process of larger international construction contractors from China going to Sub-Saharan markets, analysing the evolution of their presence since 2005 to 2008.

Analysis Limitations

The study is based on McGraw-Hill Construction data disclosure, about larger International Contractors, considering the years from 2005 to 2008, divided in two periods of time, 2005/2006 and 2007/2808. The largest international contractors ranking represents the largest 225 companies. The McGraw-Hill Construction data basis is built considering the turnover of each of the 225 companies in foreign markets. Another ranking, the largest global contractors, considers also the turnover in inner market.

Chinese International Contractors Highlights

Our first highlight is the international position of China in terms of international contractors ranking, shown in the tables of Annex I. During 2005/2006 biennium China had 49 international contractors among the largest ones, and this number rose to 50 during 2007/2008. It means the maintenance of a strong international presence. Nevertheless, the most relevant fact is that China became the country with more companies in this ranking, in result of the significant decrease in the number of U.S. companies. Additionally we can refer that Turkey passed from 22 to 31 contractors and Italy from 11 to 26, representing the highest increases and revealing a stronger bet in foreign markets.

Other important fact is the comparison between international and global rankings. China has passed from 49/25 binomial to 50/32, revealing that most of its larger contractors are focused on international markets. U.S.A. has the opposite situation, with a binomial of 51/103 in the first biennium and a binomial of 25/86 in the second period. This means that most of the largest U.S. companies are focused in domestic market.

We can put two hypotheses for explaining this:

1. China is a centrally planned economy and its domestic market is still weak and U.S.A. are a market economy, stronger and more mature;
2. China is looking for international expansion and has an economic strategy to win international weight; on the other hand, U.S. is economically strong but its international weight is mainly supported on technology, especially military technology.

However, considering tables of Annex II and reading the column respecting the weight of international turnover on total turnover, we notice that in 2006 there were 14 Chinese companies with more than 80% of their turnover in international markets. If we consider the 80% cases, this number rises to 20 in 2008. We can say that international foreign markets are becoming more important to Chinese contractors. Anyhow, there are a significant number of Chinese companies that have an important quote of their turnover in domestic market. It seems that we can conclude for the growing importance of the sector inside China and as a strategic economics vector of international expansion.

Let's look now to the tables in Annex III. In 2005/2006 Chinese companies were in 27 of the 29 market segments of Sub-Saharan Africa. In the biennium of 2007/2008 the situation is the same, but with one difference: now China is present in Swaziland and went out of Cape Verde. It remains out of Burkina Faso.

Considering segment by segment, and the biennium 2005/2006 comparing with 2007/2008, we notice, as more relevant, that:

- In Angola largest Chinese contractors passed from 11 to 17, representing an weight evolution from about 36.6% to 48.6% of the sum of largest international contractors working there;
- In the D.R. of Congo the evolution was from 2 to 6 companies, and from a weight of 25% to 60%;
- In Lesotho the evolution was from 1 to 3, and from 50% to 100%;
- In Senegal largest Chinese contractors passed from 2 to 4 companies and from 18.18% to 44.44% of the sum of largest international contractors working there;
- In Zambia the evolution was from 5 to 13 companies, bat the weight in the sum of companies is more less the same, because there many more contractors;
- In Cameroon the evolution is also significant, from 2 to 5 companies, and from a weight of 16.67% to 33.33%.

Independently of the main references we highlight above, reading carefully the data shown in referred tables, we notice that China generally reinforced its position in Sub-Saharan Africa.

In 2005/2006, 33 of the 49 largest Chinese contractors were working in this part of Africa. In 2007/2008 they were 36 in 50. In tables of Annex IV we can read that usually most of Chinese contractors are concentrated in Africa, North or Sub-Saharan, Asia and Middle East. In Latin America their presence has some relevance, but far from former markets. In Europe, China is mainly represented by two important contractors, and we find other sporadic cases, usually in Russia or Turkey. We consider 9 geographical markets: Europe, North America, Latin America, Caribbean Islands, Oceania, Asia, Middle East, North Africa and Sub-Saharan Africa. All of them are then divided in several segments.

Considering the data in previous paragraph we can conclude that Chinese contractors avoid competition in most developed countries or markets, confirming conclusions of our preceding studies, (Reis, Henrique and Costa, Teresa (2009), *"Internationalization Strategic Options: A Comparative Study between Turkish Contractors and Chinese Contractors"* in 5th International

Conference in Business, Management and Economics, October, 22nd-24th, 2009, Izmir), (Reis, Henrique (2010), *"Internationalization Models Study on Larger International Contractors from U.S.A. and China*" in IJAS Conference, International Conference for Academic Disciplines, May 31st/June 3rd, Harvard University, Cambridge, Massachusetts, U.S.A.).

Sub-Saharan Market

Now we must have an idea of the main economic indicators about some of the countries in the geographic zone focused in this paper, namely those where Chinese companies have a higher weight. We use the available OECD statistics.

First we are going to set the exports situation of the selected countries in the year of 2008.

Angola: 97% of its exports were petroleum oils and oils obtained from bituminous minerals;

Cameroon: 53.8% of its exports were petroleum oils and oils obtained from bituminous minerals, 8.1% were lumber and tropical hardwood nes and 6% were bananas, including plantains;

Congo D.R.: 25.5% of its exports were petroleum oils and oils obtained from bituminous minerals, 16.3% were copper ores and concentrates and 15.2% were copper unrefined, copper anodes for electrolytic refining;

Lesotho: 40.8% of its exports were pullovers, cardigans and similar articles of cotton, knitted, 12.9% were men trousers and shorts and 12.4% diamonds non-industrial unworked or simply sawn, cleaved or bruted;

Senegal: 29.7% of its exports were petroleum oils and oils obtained from bituminous minerals, 10.7% were phosphoric acid and polyphosphoric acids and 6.3% were Portland cement nes;

Zambia: 56.4% of its exports were copper cathodes and sections of cathodes unwrought; 8.2% were copper ores and concentrates and 6% were cobalt, unwrought, matte and oth intermediate products.

We highlighted the countries that we referred in ***5.2.***, but we could go on knowing that raw materials are the man African countries exports.

In dangerous countries, as Sierra Leone, China has 3 companies among the largest 5 present there. We know that Sierra Leone had, in 2008, 25.1% of its exports based on diamonds non-industrial unworked or simply sawn, cleaved or bruted and 12.7% are petroleum oils and oils obtained from bituminous minerals. Another example is Zimbabwe, where 5 of the 8 largest contractors come from China. Zimbabwe has 13.4% of its exports based on ferrochromium containing by weight more than 4% of carbon, 12.3% were tobacco, and 11% were nickel mattes.

Finally we can take a look to the Table below. We selected some countries where largest Chinese contractors have a strong position and three important economic indicators concerning our paper.

We cannot say that Chinese companies have chosen markets based on GDP per Capita, because there are significant differences between the selected countries, or, we can call it, market segments. The same conclusion is applicable when reading the Average GDP Growth Rate between 2001/2009 or the % of Public Gross Capital Formation in 2008.

CONCLUSIONS/COMMENTS

This paper is a sequence of working papers we have been doing about international contractors, mainly those from countries with a strongest international presence. Our recent main interest has stood on the study of Chinese largest contractors.

The present paper allows us, namely considering the Annex IV, independently of our previous studies, to say that Chinese companies are still avoiding strong competition in the developed markets and where companies from developed countries have a stronger position, cases of North America, Europe, Oceania or Caribbean Islands.

Table1. Source:OECD.

Economic Indicators			
Countries	**GDP per Capita - 2009 ($)**	**Average GDP Growth Rate 2001/2009**	**% of Public Gross Capital Formation - 2008**
Angola	5.431	11,6%	14,0%
Botswana	13.124	3,9%	15,3%
Cameroon	2.374	3,3%	2,4%
Congo D.R.	323	4,7%	3,7%
Lesotho	1.201	3,1%	3,6%
Senegal	1.663	3,8%	5,9%
Sierra Leone	792	10,1%	3,5%
Zambia	1.516	5,4%	3,2%

Chinese companies are improving their interest and their economic and strategic presence in Sub-Saharan markets segments. Economic indicators of this countries don´t lead us to conclusions about a pattern for international strategy of Chinese contractors.

When we consider the natural resources of African countries and the main items of their exports, we conclude that both are based in important raw materials.

China greatly needs raw materials. Its position is evolving in the sense of stronger presence in Africa from 2005 to 2008, as shown in Annex III. We repeat what we wrote above: public works directly link with sovereignty, because the main customer is the State or public institutions.

We know that the conclusion seems natural or expected, but we consider important to highlight this reality: China is occupying Africa, namely Sub-Saharan Africa.

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ANNEX I

Countries 2005/2006	International Contractors	Global Contractors
U.S.A.	51	103
China	49	25
Turkey	22	8
Japan	15	15
Italy	11	10
South Korea	10	10
Spain	8	8
France	8	6
Germany	6	4
United Kingdom	5	5
Australia	3	2
Brazil	3	3
Canada	3	2
Belgium	2	2
Egypt	2	2
Netherlands	2	1
Ireland	2	2
Israel	2	0
Kuwait	2	1
Lebanon	2	1
Saudi Arabia	1	0
Austria	1	1
Denmark	1	1
U.A.E.	1	1
Ecuador	1	0
Finland	1	0
Greece	1	1
India	1	2
Macedonia	1	0
Norway	1	1
Pakistan	1	0
Portugal	1	1
Russia	1	2
Serbia	1	0
Sweden	1	1
Thailand	1	1
Taiwan	1	2
Iran	0	1
SUM	225	225

Paises 2007/2008	International Contractors	Global Contractors
China	50	32
Turkey	31	9
Italy	26	14
U.S.A.	25	86
Japan	15	15
South Korea	13	14
Spain	11	11
France	6	4
United Kingdom	5	5
Germany	4	4
Australia	4	3
Egypt	3	2
Austria	2	2
Brazil	2	2
Canada	2	1
Denmark	2	2
U.A.E.	2	2
India	2	2
Israel	2	0
Kuwait	2	1
Lebanon	2	2
Saudi Arabia	1	1
Belgium	1	1
Chile	1	1
Ecuador	1	0
Greece	1	1
Netherlands	1	1
Ireland	1	1
Luxembourg	1	1
Malaysia	1	0
Portugal	1	1
Russia	1	1
Serbia	1	0
Sweden	1	1
Taiwan	1	1
Iran	0	1
SUM	225	225

ANNEX II

Countries/Companies - Ranking Position 2006	% Int. Turnover/Total Turnover	Geographical Markets Presence	Number of Subsidiaries
China			
China Communications Construction Group 14	22,9%	8	42
China State Construction Eng'g. Corp. 18	18,3%	6	5
Sinohydro Corp. 51	19,2%	4	5
China National Machinery Indus. Corp. 55	66,4%	7	8
China Railway Engineering Corp. 67	3,1%	6	6
China Petroleum Eng'g. & Constr. (Group) Corp. 70	100,0%	4	n/a
Shanghai Constr. (Group) General Co. 73	9,2%	4	n/a
China Civil Engineering Constr. Corp. 82	81,0%	7	6
China Railway Construction Corp. 83	2,4%	4	5
China National Chemical Eng'g. Group 88	17,5%	4	9
Zhongyuan Petroleum Explor. Bureau 90	24,5%	5	n/a
China Metallurgical Group Corp. 95	2,6%	6	37
China Int'l Water & Electric Corp. (CWE) 97	73,6%	6	5
CITIC Construction 98	76,4%	6	2
Harbin Power Engineering Co. Ltd. 102	96,0%	3	n/a
Shandong Electric Power Constr. 115	15,3%	4	8
China Overseas Engineering Group Co. Ltd. 122	88,6%	4	4
Qingdao Construction Group Corp. 126	16,1%	5	5
CGC Overseas Construction Co. Ltd. 137	98,5%	4	7
Dongfang Electric Corp. 138	5,5%	2	5
China Jiangsu Int'l Econ-Tech. Coop. 140	59,5%	5	5
China Wanbao Engineering Corp. 143	100,0%	3	n/a
Zhejiang Constr. Investment Group 144	5,2%	3	5
China Nonferrous Metal Ind. Frgn. Eng'g. & Const. 145	100,0%	3	n/a
China Nat'l Machinery Import and Export Corp. 147	100,0%	2	n/a
Shanghai Electric Group Co. Ltd. 148	40,0%	1	1
China Gezhouba Group Corp. 150	10,7%	3	6
China Dalian Int'l Coop'n (Group) Holdings 154	45,3%	5	n/a
China Henan Int'l Coperation Grp. Co. 155	100,0%	2	n/a
China Zhongyuan Engineering Corp. 158	100,0%	3	n/a
China Petroleum Pipeline Bureau 159	10,8%	2	11
SEPCOIII Electric Power Construction 161	31,5%	2	n/a
China Shanghai SFECO 163	90,3%	3	7
Beijing Construction Eng'g. Group Co. 168	3,4%	3	7
Nantong Construction Group Joint-Stock Co. 171	15,1%	2	7
China Jiangsu Construction Corp. 177	29,2%	2	n/a
Weihai International Eco. & Tech. Coop. Co. Ltd. 179	100,0%	3	n/a
Beijing Uni-Construction Group Co. 185	5,7%	2	12
China Wu Yi Corp. Ltd. 187	25,1%	2	3

Jiangsu Nantong No. 3 Construction Grp. 188	7,4%	5	8
China Petroleum Pipeline Eng'g. Corp. 189	76,9%	4	3
China Huanqiu Contracting & Eng'g. Corp.192	29,8%	2	4
China Jiangxi Corp. for Int'l Eco. & Tech. Coop'n 193	92,0%	2	10
China Nat'l Complete Plant Imp. & Exp. Corp. 197	100,0%	5	4
China Chongking Int'l Construction Corp. 201	44,6%	3	10
Shandong Hong Chang Road & Bridge Eng'g. Co. 206	37,4%	1	3
Shanghai Tunnel Engineering Co. Ltd. 211	7,2%	1	4
China Liaoning Int'l. Eco. & Tech. Coop. Group 216	70,7%	4	3
Guangdong Xinguang Int'l. Group 219	7,4%	3	2

Countries/Companies - Ranking Position 2008	**% Int. Turnover/Total Turnover**	**Geographical Markets Presence**	**Number of Subsidiaries**
China			
China Communications Construction Group Ltd. 17	22,6%	9	40
China State Construction Eng'g. Corp. 25	12,7%	6	5
China National Machinery Indus. Corp. 28	79,9%	9	12
China Railway Construction Corp. Ltd. 51	6,0%	6	7
Sinohydro Corp. 56	20,2%	4	6
CITIC Construction 59	97,0%	6	2
China Metallurgical Group Corp. 61	5,9%	9	30
China Railway Group Ltd. 62	3,9%	8	6
China Civil Engineering Constr. Corp. 72	87,8%	8	6
Dongfang Electric Corp. 80	17,6%	4	5
Shanghai Electric Group Co. Ltd. 83	66,3%	2	1
China National Chemical Eng'g. Group Corp. 90	16,7%	5	13
Sinopec Engineering Inc. 94	49,7%	1	n/a
SEPCOIII Electric Power Construction Corp. 95	78,6%	3	n/a
China Gezhouba Group Corp. Ltd. 99	23,2%	4	40
China Petroleum Eng'g. & Constr. (Group) Corp. 100	46,3%	3	2
Shanghai Constr. (Group) General Co. 103	6,4%	7	n/a
China Nat'l Technical Import & Export Corp. 109	100,0%	3	n/a
Zhongyuan Petroleum Explor. Bureau 112	23,7%	5	n/a
China Petroleum Pipeline Bureau (CPP) 120	23,0%	4	11
China Int'l Water & Electric Corp. (CWE) 122	86,8%	6	5
Shandong Electric Power Constr. Corp. 123	23,2%	3	6
China Geology Overseas Constr. Group Co. 131	96,6%	3	7
Harbin Power Engineering Co. Ltd. 137	79,8%	2	n/a
Beijing Construction Eng'g. Group Co. Ltd. 140	11,5%	6	16
China Overseas Engineering Group Co. Ltd. 141	85,0%	4	5
China Geo-Engineering Corp. 142	51,3%	3	14
Qingjian Group Co. Ltd. 143	15,8%	4	5
Hefei Cement Research & Design Institute 145	93,6%	5	n/a
China Jiangsu Int'l Econ-Tech. Coop. Corp. 147	62,6%	5	5

China Wanbao Engineering Corp. 153	92,3%	4	n/a
China Henan Int'l Cooperation Grp. Co. Ltd. 165	100,0%	1	n/a
Anhui Constr. Engineering Group Co. Ltd. 168	14,1%	4	18
China Dalian Int'l Econ. & Tech. Coop'n (Group) 172	91,5%	6	1
China Zhongyuan Engineering Corp. 175	88,2%	3	n/a
China Nat'l Machinery Import and Export Corp. 185	100,0%	3	n/a
China Huanqiu Contracting & Eng'g. Corp.189	18,9%	3	7
Xinjiang Beixin Constr. & Eng'g (Group) Co. Ltd. 191	19,2%	5	1
China Jiangxi Corp. for Int'l Eco. & Tech. Coop'n 192	100,0%	2	10
Sinosteel Equipment & Eng'g Co. Ltd. 193	33,1%	3	n/a
China Nonferrous Metal Ind. Frgn. Eng'g. & Const. 194	100,0%	3	n/a
Weihai International Eco. & Tech. Coop. Co. Ltd. 199	100,0%	2	n/a
Shanghai Urban Constr. (Group) Corp. 202	4,0%	2	8
Anhui Foreign Econ. Constr. (Group) Co. Ltd. 212	100,0%	5	n/a
Hydrochina Corp. 214	9,8%	1	9
Zhongding Inter'l Engineering Co. Ltd. 220	100,0%	4	8
China Jiangsu Construction Corp. 221	21,8%	4	1
China Wu Yi Corp. Ltd. 222	22,0%	3	2
China Nat'l Complete Plant Imp. & Exp. Corp. 224	100,0%	3	4
Zhejiang Constr. Investment Group Co. Ltd. 225	2,4%	3	2

ANNEX III

Largest International Contractors Markets - Public Works in 2005/2006

Sub-Saharan Africa

Countries	**Angola**		**Congo**		**Gabon**		**D. R. Congo**	
	Number	%	Number	%	Number	%	Number	%
Germany	2	6,67%	0	0,00%	1	11,11%	0	0,00%
Belgium	1	3,33%	0	0,00%	0	0,00%	1	12,50%
Brazil	2	6,67%	0	0,00%	0	0,00%	0	0,00%
China	11	36,67%	7	50,00%	3	33,33%	2	25,00%
Spain	3	10,00%	1	7,14%	1	11,11%	1	12,50%
France	4	13,33%	5	35,71%	4	44,44%	2	25,00%
Netherlands	1	3,33%	0	0,00%	0	0,00%	0	0,00%
Israel	0	0,00%	0	0,00%	0	0,00%	1	12,50%
Italy	0	0,00%	1	7,14%	0	0,00%	0	0,00%
Japan	2	6,67%	0	0,00%	0	0,00%	0	0,00%
Portugal	1	3,33%	0	0,00%	0	0,00%	0	0,00%
U.S.A.	3	10,00%	0	0,00%	0	0,00%	1	12,50%
Sum	30	100,00%	14	100,00%	9	100,00%	8	100,00%

Largest International Contractors Markets - Public Works in 2005/2006								
Sub-Saharan Africa								
Countries	**South Africa**		**Botswana**		**Lesotho**		**Swaziland**	
	Number	%	Number	%	Number	%	Number	%
Germany	1	4,17%	0	0,00%	1	50,00%	0	0,00%
Canada	1	4,17%	0	0,00%	0	0,00%	0	0,00%
China	6	25,00%	8	72,73%	1	50,00%	0	0,00%
Egypt	0	0,00%	1	9,09%	0	0,00%	0	0,00%
Spain	1	4,17%	0	0,00%	0	0,00%	0	0,00%
France	4	16,67%	0	0,00%	0	0,00%	1	33,33%
Greece	1	4,17%	1	9,09%	0	0,00%	1	33,33%
Netherlands	1	4,17%	0	0,00%	0	0,00%	0	0,00%
Italy	2	8,33%	0	0,00%	0	0,00%	1	33,33%
Japan	1	4,17%	0	0,00%	0	0,00%	0	0,00%
U.K.	1	4,17%	0	0,00%	0	0,00%	0	0,00%
U.S.A.	5	20,83%	1	9,09%	0	0,00%	0	0,00%
Sum	24	100,00%	11	100,00%	2	100,00%	3	100,00%

Largest International Contractors Markets - Public Works in 2005/2006								
Sub-Saharan Africa								
Countries	**Cape Verde**		**Gambia**		**Guinea**		**Senegal**	
	Number	%	Number	%	Number	%	Number	%
Germany	0	0,00%	0	0,00%	0	0,00%	2	18,18%
China	2	66,67%	1	50,00%	8	34,78%	2	18,18%
Denmark	0	0,00%	0	0,00%	0	0,00%	1	9,09%
Spain	1	33,33%	0	0,00%	1	4,35%	1	9,09%
France	0	0,00%	0	0,00%	3	13,04%	4	36,36%
Greece	0	0,00%	0	0,00%	1	4,35%	0	0,00%
Japan	0	0,00%	0	0,00%	1	4,35%	1	9,09%
Kuwait	0	0,00%	1	50,00%	0	0,00%	0	0,00%
Portugal	0	0,00%	0	0,00%	1	4,35%	0	0,00%
Serbia	0	0,00%	0	0,00%	1	4,35%	0	0,00%
Turkey	0	0,00%	0	0,00%	1	4,35%	0	0,00%
U.S.A.	0	0,00%	0	0,00%	6	26,09%	0	0,00%
Sum	3	100,00%	2	100,00%	23	100,00%	11	100,00%

Largest International Contractors Markets - Public Works in 2005/2006								
Sub-Saharan Africa								
Countries	**Malawi**		**Mozambique**		**Tanzania**		**Zambia**	
	Number	%	Number	%	Number	%	Number	%
Germany	0	0,00%	0	0,00%	1	6,25%	0	0,00%
China	1	33,33%	5	50,00%	8	50,00%	5	55,56%
Denmark	0	0,00%	0	0,00%	1	6,25%	0	0,00%
Spain	0	0,00%	2	20,00%	0	0,00%	0	0,00%
France	0	0,00%	0	0,00%	1	6,25%	0	0,00%
Greece	1	33,33%	1	10,00%	0	0,00%	1	11,11%
India	0	0,00%	0	0,00%	1	6,25%	0	0,00%
Italy	1	33,33%	1	10,00%	0	0,00%	0	0,00%
Japan	0	0,00%	0	0,00%	1	6,25%	1	11,11%
Norway	0	0,00%	0	0,00%	1	6,25%	0	0,00%
Portugal	0	0,00%	1	10,00%	0	0,00%	0	0,00%
Serbia	0	0,00%	0	0,00%	0	0,00%	1	11,11%
U.S.A.	0	0,00%	0	0,00%	2	12,50%	1	11,11%
Sum	3	100,00%	10	100,00%	16	100,00%	9	100,00%

Largest International Contractors Markets - Public Works in 2005/2006								
Sub-Saharan Africa								
Countries	**Burundi**		**Rwanda**		**Kenya**		**Uganda**	
	Number	%	Number	%	Number	%	Number	%
Austria	0	0,00%	1	16,67%	1	8,33%	0	0,00%
China	1	100,00%	1	16,67%	3	25,00%	6	50,00%
Egypt	0	0,00%	1	16,67%	0	0,00%	1	8,33%
Spain	0	0,00%	0	0,00%	1	8,33%	0	0,00%
France	0	0,00%	1	16,67%	1	8,33%	1	8,33%
Greece	0	0,00%	0	0,00%	1	8,33%	0	0,00%
Netherlands	0	0,00%	0	0,00%	1	8,33%	0	0,00%
India	0	0,00%	0	0,00%	1	8,33%	0	0,00%
Israel	0	0,00%	0	0,00%	0	0,00%	1	8,33%
Italy	0	0,00%	0	0,00%	1	8,33%	1	8,33%
Japan	0	0,00%	1	16,67%	1	8,33%	0	0,00%
Serbia	0	0,00%	0	0,00%	0	0,00%	1	8,33%
U.S.A.	0	0,00%	1	16,67%	1	8,33%	1	8,33%
Sum	1	100,00%	6	100,00%	12	100,00%	12	100,00%

Largest International Contractors Markets - Public Works in 2005/2006										
Sub-Saharan Africa										
Countries	**Benin**		**Cameroon**		**Ivory Coast**		**Ghana**		**Nigeria**	
	Number	%	Number	%	Number	%	Number	%	Number	%
Germany	0	0,00%	1	8,33%	0	0,00%	1	4,76%	2	5,26%
Austria	0	0,00%	0	0,00%	0	0,00%	1	4,76%	0	0,00%
Belgium	0	0,00%	1	8,33%	0	0,00%	0	0,00%	1	2,63%
China	1	33,33%	2	16,67%	3	37,50%	7	33,33%	10	26,32%
South Korea	0	0,00%	0	0,00%	0	0,00%	2	9,52%	1	2,63%
Denmark	0	0,00%	0	0,00%	0	0,00%	1	4,76%	0	0,00%
Egypt	0	0,00%	0	0,00%	0	0,00%	1	4,76%	2	5,26%
Spain	0	0,00%	0	0,00%	0	0,00%	0	0,00%	2	5,26%
France	2	66,67%	3	25,00%	3	37,50%	1	4,76%	5	13,16%
Greece	0	0,00%	0	0,00%	0	0,00%	0	0,00%	1	2,63%
Netherlands	0	0,00%	0	0,00%	0	0,00%	1	4,76%	0	0,00%
Israel	0	0,00%	0	0,00%	1	12,50%	1	4,76%	1	2,63%
Italy	0	0,00%	0	0,00%	0	0,00%	0	0,00%	3	7,89%
Japan	0	0,00%	1	8,33%	0	0,00%	1	4,76%	2	5,26%
Lebanon	0	0,00%	0	0,00%	0	0,00%	0	0,00%	1	2,63%
U.K.	0	0,00%	0	0,00%	0	0,00%	0	0,00%	1	2,63%
Serbia	0	0,00%	0	0,00%	0	0,00%	1	4,76%	1	2,63%
Turkey	0	0,00%	1	8,33%	0	0,00%	0	0,00%	0	0,00%
U.S.A.	0	0,00%	3	25,00%	1	12,50%	3	14,29%	5	13,16%
Sum	3	100,00%	12	100,00%	8	100,00%	21	100,00%	38	100,00%

Largest International Contractors Markets - Public Works in 2005/2006								
Sub-Saharan Africa								
Countries	**Burkina Faso**		**Liberia**		**Sierra Leone**		**Zimbabwe**	
	Number	%	Number	%	Number	%	Number	%
Germany	1	25,00%	1	25,00%	0	0,00%	0	0,00%
China	0	0,00%	2	50,00%	2	33,33%	6	66,67%
Spain	0	0,00%	1	25,00%	0	0,00%	0	0,00%
France	2	50,00%	0	0,00%	1	16,67%	0	0,00%
Italy	0	0,00%	0	0,00%	1	16,67%	2	22,22%
Serbia	0	0,00%	0	0,00%	0	0,00%	1	11,11%
Turkey	0	0,00%	0	0,00%	1	16,67%	0	0,00%
U.S.A.	1	25,00%	0	0,00%	1	16,67%	0	0,00%
Sum	4	100,00%	4	100,00%	6	100,00%	9	100,00%

ANNEX III (CONTINUATION)

Largest International Contractors Markets - Public Works in 2007/2008								
Sub-Saharan Africa								
Countries	**Angola**		**Congo**		**Gabon**		**D. R. Congo**	
	Number	%	Number	%	Number	%	Number	%
Germany	1	2,86%	0	0,00%	0	0,00%	0	0,00%
Brazil	2	5,71%	1	5,56%	0	0,00%	0	0,00%
China	17	48,57%	7	38,89%	3	33,33%	6	60,00%
Spain	3	8,57%	0	0,00%	2	22,22%	0	0,00%
France	3	8,57%	4	22,22%	3	33,33%	1	10,00%
Israel	0	0,00%	1	5,56%	0	0,00%	1	10,00%
Italy	3	8,57%	4	22,22%	1	11,11%	0	0,00%
Luxembourg	1	2,86%	0	0,00%	0	0,00%	0	0,00%
Portugal	1	2,86%	0	0,00%	0	0,00%	0	0,00%
U.S.A.	4	11,43%	1	5,56%	0	0,00%	2	20,00%
Sum	35	100,00%	18	100,00%	9	100,00%	10	100,00%

Largest International Contractors Markets - Public Works in 2007/2008								
Sub-Saharan Africa								
Countries	**South Africa**		**Botswana**		**Lesotho**		**Swaziland**	
	Number	%	Number	%	Number	%	Number	%
Germany	1	3,57%	0	0,00%	0	0,00%	0	0,00%
China	7	25,00%	10	76,92%	3	100,00%	1	33,33%
Egypt	0	0,00%	1	7,69%	0	0,00%	0	0,00%
Spain	2	7,14%	0	0,00%	0	0,00%	0	0,00%
France	3	10,71%	1	7,69%	0	0,00%	1	33,33%
Greece	0	0,00%	1	7,69%	0	0,00%	0	0,00%
Netherlands	1	3,57%	0	0,00%	0	0,00%	0	0,00%
India	1	3,57%	0	0,00%	0	0,00%	0	0,00%
Italy	6	21,43%	0	0,00%	0	0,00%	1	33,33%
Japan	1	3,57%	0	0,00%	0	0,00%	0	0,00%
U.K.	1	3,57%	0	0,00%	0	0,00%	0	0,00%
U.S.A.	5	17,86%	0	0,00%	0	0,00%	0	0,00%
Sum	28	100,00%	13	100,00%	3	100,00%	3	100,00%

Largest International Contractors Markets - Public Works in 2007/2008								
Sub-Saharan Africa								
Countries	**Cape Verde**		**Gambia**		**Guinea**		**Senegal**	
	Number	%	Number	%	Number	%	Number	%
Austria	0	0,00%	0	0,00%	1	4,17%	0	0,00%
Brazil	0	0,00%	0	0,00%	1	4,17%	0	0,00%
China	0	0,00%	1	50,00%	10	41,67%	4	44,44%
Denmark	0	0,00%	0	0,00%	0	0,00%	1	11,11%
Spain	1	100,00%	0	0,00%	1	4,17%	1	11,11%
France	0	0,00%	0	0,00%	2	8,33%	3	33,33%
Greece	0	0,00%	0	0,00%	1	4,17%	0	0,00%
Italy	0	0,00%	0	0,00%	2	8,33%	0	0,00%
Japan	0	0,00%	0	0,00%	1	4,17%	0	0,00%
Kuwait	0	0,00%	1	50,00%	0	0,00%	0	0,00%
Portugal	0	0,00%	0	0,00%	1	4,17%	0	0,00%
Serbia	0	0,00%	0	0,00%	1	4,17%	0	0,00%
U.S.A.	0	0,00%	0	0,00%	3	12,50%	0	0,00%
Sum	1	100,00%	2	100,00%	24	100,00%	9	100,00%

Largest International Contractors Markets - Public Works in 2007/2008								
Sub-Saharan Africa								
Countries	**Malawi**		**Mozambique**		**Tanzania**		**Zambia**	
	Number	%	Number	%	Number	%	Number	%
Brazil	0	0,00%	1	5,56%	0	0,00%	0	0,00%
China	3	60,00%	8	44,44%	10	50,00%	13	59,09%
Denmark	0	0,00%	1	5,56%	2	10,00%	0	0,00%
Spain	0	0,00%	2	11,11%	0	0,00%	0	0,00%
France	0	0,00%	2	11,11%	2	10,00%	2	9,09%
Netherlands	0	0,00%	0	0,00%	1	5,00%	0	0,00%
India	0	0,00%	0	0,00%	1	5,00%	0	0,00%
Italy	1	20,00%	2	11,11%	0	0,00%	1	4,55%
Japan	1	20,00%	0	0,00%	2	10,00%	1	4,55%
Portugal	0	0,00%	1	5,56%	0	0,00%	0	0,00%
Serbia	0	0,00%	0	0,00%	0	0,00%	1	4,55%
U.S.A.	0	0,00%	1	5,56%	2	10,00%	4	18,18%
Sum	5	100,00%	18	100,00%	20	100,00%	22	100,00%

Largest International Contractors Markets - Public Works in 2007/2008								
Sub-Saharan Africa								
Countries	**Burundi**		**Rwanda**		**Kenya**		**Uganda**	
	Number	%	Number	%	Number	%	Number	%
Austria	0	0,00%	1	12,50%	0	0,00%	0	0,00%
China	2	66,67%	4	50,00%	7	38,89%	8	57,14%
Egypt	0	0,00%	1	12,50%	0	0,00%	1	7,14%
Spain	0	0,00%	0	0,00%	1	5,56%	0	0,00%
France	1	33,33%	1	12,50%	2	11,11%	1	7,14%
Netherlands	0	0,00%	0	0,00%	1	5,56%	0	0,00%
India	0	0,00%	0	0,00%	1	5,56%	0	0,00%
Israel	0	0,00%	0	0,00%	2	11,11%	1	7,14%
Italy	0	0,00%	0	0,00%	1	5,56%	1	7,14%
Japan	0	0,00%	0	0,00%	2	11,11%	1	7,14%
Serbia	0	0,00%	0	0,00%	0	0,00%	1	7,14%
U.S.A.	0	0,00%	1	12,50%	1	5,56%	0	0,00%
Sum	3	100,00%	8	100,00%	18	100,00%	14	100,00%

Largest International Contractors Markets - Public Works in 2007/2008										
Sub-Saharan Africa										
Countries	**Benin**		**Cameroon**		**Ivory Coast**		**Ghana**		**Nigeria**	
	Number	%	Number	%	Number	%	Number	%	Number	%
Germany	0	0,00%	0	0,00%	0	0,00%	0	0,00%	1	2,56%
Australia	0	0,00%	0	0,00%	0	0,00%	0	0,00%	1	2,56%
Brazil	0	0,00%	1	6,67%	0	0,00%	0	0,00%	0	0,00%
Belgium	0	0,00%	1	6,67%	0	0,00%	0	0,00%	0	0,00%
China	3	42,86%	5	33,33%	4	40,00%	7	41,18%	10	25,64%
South Korea	0	0,00%	0	0,00%	0	0,00%	1	5,88%	1	2,56%
Denmark	0	0,00%	0	0,00%	0	0,00%	1	5,88%	0	0,00%
Egypt	1	14,29%	1	6,67%	0	0,00%	1	5,88%	2	5,13%
Spain	0	0,00%	1	6,67%	0	0,00%	0	0,00%	0	0,00%
France	2	28,57%	2	13,33%	2	20,00%	2	11,76%	4	10,26%
Greece	0	0,00%	0	0,00%	0	0,00%	0	0,00%	1	2,56%
Netherlands	0	0,00%	1	6,67%	0	0,00%	1	5,88%	0	0,00%
India	0	0,00%	0	0,00%	0	0,00%	0	0,00%	1	2,56%
Israel	1	14,29%	0	0,00%	1	10,00%	1	5,88%	1	2,56%
Italy	0	0,00%	0	0,00%	2	20,00%	0	0,00%	6	15,38%
Japan	0	0,00%	1	6,67%	0	0,00%	1	5,88%	2	5,13%
Lebanon	0	0,00%	0	0,00%	0	0,00%	0	0,00%	1	2,56%
U.K.	0	0,00%	0	0,00%	0	0,00%	0	0,00%	2	5,13%
Serbia	0	0,00%	0	0,00%	0	0,00%	1	5,88%	1	2,56%
U.S.A.	0	0,00%	2	13,33%	1	10,00%	1	5,88%	5	12,82%
Sum	7	100,00%	15	100,00%	10	100,00%	17	100,00%	39	100,00%

Largest International Contractors Markets - Public Works in 2007/2008								
Sub-Saharan Africa								
Countries	**Burkina Faso**		**Liberia**		**Sierra Leone**		**Zimbabwe**	
	Number	%	Number	%	Number	%	Number	%
Brazil	0	0,00%	1	20,00%	0	0,00%	0	0,00%
China	0	0,00%	3	60,00%	3	60,00%	5	62,50%
France	2	66,67%	1	20,00%	0	0,00%	0	0,00%
Italy	0	0,00%	0	0,00%	1	20,00%	2	25,00%
Serbia	0	0,00%	0	0,00%	0	0,00%	1	12,50%
U.S.A.	1	33,33%	0	0,00%	1	20,00%	0	0,00%
Sum	3	100,00%	5	100,00%	5	100,00%	8	100,00%

ANNEX IV

Countries/Companies - Ranking Position	Europe	North America	Oceania	Latin America	Caribbean Islands	Asia	Middle East	North Africa	Sub-Saharan Africa	SUM
China										
China Communications Construction Group Ltd. 17	12	2	3	8	1	16	11	7	15	75
China State Construction Eng'g. Corp. 25	1	1	0	0	0	6	3	3	2	16
China National Machinery Indus. Corp. 28	10	1	1	4	3	19	10	3	16	67
China Railway Construction Corp. Ltd. 51	1	0	0	0	1	3	4	2	3	14
Sinohydro Corp. 56	0	0	0	0	0	12	5	5	9	31
CITIC Construction 59	1	0	0	2	0	3	1	1	3	11
China Metallurgical Group Corp. 61	5	2	2	4	1	14	7	3	5	43
China Railway Group Ltd. 62	2	1	2	1	0	14	4	1	12	37
China Civil Engineering Constr. Corp. 72	4	0	1	1	1	4	3	3	6	23
Dongfang Electric Corp. 80	2	0	0	0	0	3	1	0	1	7
Shanghai Electric Group Co. Ltd. 83	0	0	0	0	0	3	0	1	0	4
China National Chemical Eng'g. Group Corp. 90	2	0	0	0	0	8	1	1	2	14
Sinopec Engineering Inc. 94	0	0	0	0	0	0	1	0	0	1
SEPCOIII Electric Power Construction Corp. 95	0	0	0	0	0	1	1	0	1	3
China Gezhouba Group Corp. Ltd. 99	0	0	0	0	0	5	3	2	1	11
China Petroleum Eng'g. & Constr. (Group) Corp. 100	0	0	0	0	0	2	2	2	0	6
Shanghai Constr. (Group) General Co. 103	3	1	0	0	1	5	3	1	2	16
China Nat'l Technical Import & Export Corp. 109	0	0	0	0	0	4	3	1	0	8
Zhongyuan Petroleum Explor. Bureau 112	0	0	0	1	0	3	3	2	1	10
China Petroleum Pipeline Bureau (CPP) 120	1	0	0	0	0	3	0	2	5	11
China Int'l Water & Electric Corp. (CWE) 122	0	1	0	1	0	5	3	4	2	16
Shandong Electric Power Constr. Corp. 123	0	0	0	1	0	2	1	0	0	4
China Geology Overseas Constr. Group Co. 131	0	0	0	0	0	1	0	3	3	7
Harbin Power Engineering Co. Ltd. 137	0	0	0	0	0	4	0	1	0	5
Beijing Construction Eng'g. Group Co. Ltd. 140	0	1	0	0	1	2	2	2	4	12
China Overseas Engineering Group Co. Ltd. 141	0	0	1	0	0	2	0	3	7	13

China Geo-Engineering Corp. 142	0	0	0	0	0	5	0	3	7	15
Qingjian Group Co. Ltd. 143	0	0	0	0	0	3	3	3	6	15
Hefei Cement Research & Design Institute 145	1	0	0	1	0	2	2	2	0	8
China Jiangsu Int'l Econ-Tech. Coop. Corp. 147	0	0	1	0	0	1	2	1	8	13
China Wanbao Engineering Corp. 153	0	0	0	0	0	3	3	5	1	12
China Henan Int'l Cooperation Grp. Co. Ltd. 165	0	0	0	0	0	0	0	0	6	6
Anhui Constr. Engineering Group Co. Ltd. 168	0	0	0	1	0	2	0	3	4	10
China Dalian Int'l Econ. & Tech. Coop'n (Group) 172	1	0	0	1	0	1	1	1	2	7
China Zhongyuan Engineering Corp. 175	0	0	0	0	0	1	1	1	0	3
China Nat'l Machinery Import and Export Corp. 185	2	0	0	1	0	4	0	0	0	7
China Huanqiu Contracting & Eng'g. Corp.189	0	0	0	0	0	2	1	1	0	4
Xinjiang Beixin Constr. & Eng'g (Group) Co. Ltd. 191	1	0	0	0	0	3	1	1	2	8
China Jiangxi Corp. for Int'l Eco. & Tech. Coop'n 192	0	0	0	0	0	1	0	0	6	7
Sinosteel Equipment & Eng'g Co. Ltd. 193	1	0	0	1	0	1	0	0	0	3
China Nonferrous Metal Ind. Frgn. Eng'g. & Const. 194	0	0	0	0	0	2	1	0	1	4
Weihai International Eco. & Tech. Coop. Co. Ltd. 199	0	0	1	0	0	0	0	0	2	3
Shanghai Urban Constr. (Group) Corp. 202	0	0	0	0	0	2	0	0	1	3
Anhui Foreign Econ. Constr. (Group) Co. Ltd. 212	0	0	0	2	1	1	0	2	4	10
Hydrochina Corp. 214	0	0	0	0	0	0	0	1	0	1
Zhongding Inter'l Engineering Co. Ltd. 220	0	0	0	0	0	3	1	1	2	7
China Jiangsu Construction Corp. 221	1	1	0	0	0	1	4	0	0	7
China Wu Yi Corp. Ltd. 222	1	0	0	0	0	5	0	0	4	10
China Nat'l Complete Plant Imp. & Exp. Corp. 224	0	0	0	0	2	0	0	2	3	7
Zhejiang Constr. Investment Group Co. Ltd. 225	0	0	1	0	0	1	0	1	0	3

Ranking Position	**Market Segments**
17:	Angola, Benin, Burundi, Congo, Guinea, Kenya, Malawi, Nigeria, Rwanda, Senegal, South Africa, Swaziland, Tanzania, Uganda, Zambia;
25:	Botswana, Congo D.R.;
28:	Angola, Botswana, Cameroon, Congo, Gabon, Ghana, Guinea, Ivory Coast, Kenya, Liberia, Nigeria, Senegal, Sierra Leone, Congo D.R., Zambia, Zimbabwe;
51:	Angola, Guinea, Nigeria;
56:	Angola, Botswana, Congo, Ghana, Kenya, Mozambique, Tanzania, Congo D.R., Zambia;
59:	Angola, South Africa, Uganda;
61:	Mozambique, Nigeria, South Africa, Congo, D.R., Zimbabwe;
62:	Angola, Botswana, Ghana, Guinea, Kenya, Mozambique, Nigeria, South Africa, Tanzania, Uganda, Congo, D.R., Zambia;
72:	Botswana, Nigeria, Rwanda, Tanzania, Uganda, Zambia;
80:	Angola;
83:	*
90:	Angola, Mozambique;
94:	*
95:	Nigeria;
99:	Burundi;
100:	*
103:	Gabon, Guinea;
109:	*
112:	Nigeria;
120:	Congo, Ivory Coast, Tanzania, Uganda, Zambia;
122:	Cameroon, Ghana;
123:	*
131:	Angola, Congo, Rwanda, Tanzania;
137:	*
140:	Angola, Congo Rwanda, Tanzania;
141:	Angola, Benin, Botswana, Guinea, South Africa, Uganda, Zambia;
142:	Benin, Ivory Coast, Lesotho, Mozambique, Senegal, Tanzania, Zambia;
143:	Angola, Botswana, Ghana, Lesotho, Liberia, South Africa;
145:	*
147:	Angola, Botswana, Congo, Guinea, Kenya, Malawi, Zambia, Zimbabwe;
153:	Tanzania;
165:	Guinea, Liberia, Mozambique, Senegal, Tanzania, Zambia;
168:	Angola, Cameroon, Nigeria, Sierra Leone;
172:	Gabon, Guinea;
175:	*
185:	*
189:	*
191:	Angola, Sierra Leone;
192:	Botswana, Ghana, Kenya, Uganda, Zambia, Zimbabwe;
193:	*
194:	Zambia;
199:	Congo, Congo D.R.;
202:	Angola;
212:	Malawi, Mozambique, Zambia, Zimbabwe;
214:	*
220:	Botswana, Cameroon;
221:	*
222:	Angola, Guinea, Kenya, Tanzania;
224:	Ivory Coast, Mozambique, Uganda;
225:	*.