THE INVISIBLE HANDSHAKE

THE ROLE OF KNOWLEDGE IN THE GLOBALIZING WORLD

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ABSTRACT

Like the invisible hand that leads the capitalist to promote welfare in spite of his primary intentions, today's economic institutions are been driven by an invisible handshake to a global perspective of knowledge, where standards and connectivity are making knowledge exchange overcome geographic distances.

This phenomena brings to every nation a wider concept of globalization, where the scale of developed economies no longer represent sufficient barriers of entrance, because competition will be running in a new environment with new rules. Such environment has knowledge as a critical resource, since the knowledge-based industries are in the mainstream of its development.

The tools required to shape information were provided by Information Technology, allowing knowledge to become the most important source of competitive advantage.

This article will investigate the role of knowledge in the globalizing world, focusing the enterprises and countries point of view, and exploring social, cultural and economic aspects presented by the adaptive landscape.

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INTRODUCTION

In the beginning of this new century, we are certainly seeing a lot going on in the global economy, at least in the economies that we consider as being a relevant part of our world. Globalization, information technology, strategic alliances, environmental concerns and much more are making our times as challenging as the whole evolution of human societies has been.

In this context, one particular subject interests us in this paper, that is the role of knowledge in a world undergoing a globalization process. At this moment it is important to emphasize that the scope of globalization, knowledge and wealth in this text will be restricted to the economic dimension of societies, and more specifically to the business view of these topics. It is obvious that these wide concepts deal with a lot more than business and economy, permeating from culture to politics and every other corner of the human sciences, but we will leave them outside, as they are already outside of our field of study.

In order to explorer the subject mentioned above we have chosen to take four steps. The first one is to understand what is globalization, reviewing some of interpretations presented in the business literature. The second one is to understand which companies go global and what they have to offer. The third step will be to investigate how knowledge is present in economy of our times and what is the contribution of the globalization of companies and markets to its dissemination. And finally, we will be investigating how this role played by knowledge can generate wealth.

GLOBALIZATION FROM THE BUSINESS ADMINSTRATION POINT OF VIEW

What does the buzzword "globalization" mean? According to Randolph (1990), since the middle 80's, academia and business refer to global companies, global strategies, global managers and so on. The more we hear these terms the more we become convinced that they are not talking about the same thing. The vulgarization of the term creates difficulties at the theoretical level (Parker, 1998).

Initially, globalization was the subject of historical, sociological and economic studies. An important landmark is McLuhan's visionary concept of the global village. As Bull (1977) points out, McLuhan's pioneer study exposes some essential points of the present phenomenon, such as the transnational organization reinforcement and the information technology standardization. Nowadays, people from engineering to biology are concerned about globalization.

One of the dominant ideas in social studies is that globalization is simply the present state of the continuous humankind historical development, (e.g. Bull, 1977; Neves, 1996; and Ianni, 1996). Other authors consider it a historical rupture that has been taking place since the end of the cold war, (Czinkota and Ronkainen, 1995; Abreu, 1999; Bertrand, 1994).

From the point of view of some scholars in economic-politics, globalization is the result of the capitalism dominance (e.g. Banas, 1996; Ianni, 1996). Ianni reinforces this idea saying that it is a new capitalism cycle where production has become transnational.

To other authors, globalization is related to the increasing obsolescence of the nation-state system (Ohmae, 1995; Levitt, 1983; Furtado 1998). Ohmae (1995) proposes that the more natural model is the "region-state", an economic area defined independently of the national borders.
Though there are still other relevant definitions from other fields, in this paper we only consider the business point of view. Based on Levitt (1983), Yip (1995), Bartlett and Ghoshal (1989),

Hout et all.(1982), Campbell (1993), Keegan (1995), Bertrand (1994), Parker (1998), among others, the following definition emerges:

> *"Globalization [to business administration] is the set of transformations faced by companies as a consequence of the contemporary phenomenon typical of the post cold war which is constituted by: (1) the empowerment of transnational organizations; (2) the mass information technology evolution; (3) the increasing flows of capital, merchandise, people and data across national borders; and (4) the tendency of world market homogenization."* (Azevedo and Bertrand, 2000)

In this context, globalization emerge in world as nations open their markets moved by a need of investments, access to foreign quality products and technologies, and reciprocal access to foreign markets, meet companies that need to expand their consumer base, and are able to do it due to their stage of technological and managerial development.

Nations enter the globalization process with macroeconomic motivations and political arrangements that respect a very complex logic. The measures taking are complex, as well, involving the reduction of importing barriers and political economy alignment. But these movements are taken here as conditions more than as direct causes of the process we want to describe.

From the other side, companies enter globalization as they accumulate innovation capabilities that allow them to grow and expand into new markets, and this is what we will be covering in the next topics.

COMPANIES THAT GO GLOBAL

Although the globalization phenomenon is intrinsically related to the existence of a borderless world, the geographic barriers played a central role in the shaping of industries, markets and knowledge.

As Bryan and Fraser (1999) pointed out those barriers weren't merely physical, in fact, they also involved symbolic obstacles like differences in language, standards, cultural environment, tariffs, capital controls and restrictions on products, markets and labor.

The geographic barriers created a kind of market reserve, giving protection to the local enterprises against the foreign competitors. In other words, domestic companies had privileged access their local market.

The differences in economic conditions, education level, national values and culture among nations created different opportunities for the development of industries all over the world.

Since competitiveness is related to the industry capacity of innovation and upgrade (Porter, 1990), companies from different countries but belonging to the same industrial sector will necessarily have a different degree of competitiveness.

Companies achieve a higher degree of development because of pressure and challenge. Knowledge accumulation and the ability to compete globally are initially shaped by the home market degree of industry rivalry, local labor force characteristics, aggressiveness of established suppliers and exigency level of domestic consumers (Porter 1990).

Since home environment will be more dynamic and challenging for an industry in a given country than for others it is reasonable to affirm that a country cannot be competitive in all of its industries.

Competitiveness and Knowledge Accumulation in the Globalizing World

The ability to overcome the geographic barriers brought to some enterprises access to new markets, which means greater specialization and increased gains of scale (Bryan and Fraser, 1999).

The Globalization process allowed companies to source capital, goods, and technology from anywhere and to locate operations wherever it is cost effective (Porter, 1998).

In the globalizing world scenario companies of all nations experience a greater selective force than they used to face in their domestic markets.

Therefore, in the international environment, each company will probably deal with challenges that didn't exist in its previous market, testing its competencies and selecting the best in each sector in a global scale.

Its important to emphasize that in the globalizing world, focusing on the national market doesn't make sense anymore. As trade barriers fall, local companies are exposed to global competition. So, there is no space for a reasonably efficient local company, only the best ones with a truly global approach will be able to survive in the new global environment.

Applying this logic on Porter's work, it is possible to conclude that the competitiveness in the globalizing world is based on some of the nation's sectors, where the companies experienced conditions in their home market that induced them to develop the "right" competencies to compete internationally.

These "right" competencies are a product of the local industry development, where competition creates a constant need to innovate in order to survive. Competition allows the customer to be more exigent, and demands a cost efficient structure, increasing the pressure on the entrepreneur to innovate in every aspect of the production.

It is not by chance that the developed countries are contributing with a much larger number of global enterprises than the developing ones. Their domestic markets are more likely to create the conditions required for the development of the "right competencies" than the developing countries home markets.

The Cluster Concept

As a result of the globalization phenomenon the enterprises are searching for new markets and moving themselves for places where the critical resources needed are abundant. Thus, it can be argued that globalization is reinforcing the importance of locations.

Given this scenario the cluster emerged as a capital concept for the global business landscape. Clusters can be defined as: "Geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions in particular fields that compete but also cooperate" (Porter, 1998).

The geographic size of a cluster may vary greatly, ranging from a single town to an entire country or even a group of neighbors' countries.

Clusters can be found in developed and developing countries, but as one might expect the ones directly associated with developed economies are usually in a much more advanced stage.

According to Porter (1998), clusters impact competition in three ways:

- By increasing the productivity of constituent firms or industries;
- By increasing their capacity for innovation and consequently increasing productive growth;
- By stimulating new business formation that supports innovation expanding the cluster

Technological innovation is for sure a key word for cluster development, constituting itself on a pillar for the knowledge-based economy.

Clusters play a major role in the countries in knowledge-based societies context. The degree to which a society is able to grow and develop relay on the ability to buildup, attract and use knowledge.

Due to the globalization emphasis on the technological innovation aspect, there was the necessity to distinguish the innovation clusters from the broader industrial clusters concept.

Bortagaray and Tiffin (2000) defines an innovation cluster as being "an organizational structure that creates new products and enterprises by means of collective industrial production within restricted geographical boundaries, based on high concentrations of knowledge exchange, interactive learning and shared social values".

The innovation clusters generates "spillovers" of technology, skills, information, marketing and customer needs that cut across firms and industries (Porter, 1998). These positive externalities will be examined in greater detail later in this article.

BEYOND CONVENTIONAL PRODUCTIVITY: THE KNOWLEDGE INTENSIVE ECONOMICS

In the previous topics we have anticipated that the globalization process emerged from a scenario where information technology has played a role, but we have saved to the present one the explanation of this powerful trend.

Human evolution clearly shows that the development of human knowledge is responsible for a great part of what we have become. Humans are capable of understanding how the world functions better than any other known animal, and we have reflected this in our societies. But this wouldn't be possible if we couldn't develop forms of accumulating and communicating this knowledge. Speech and writing skills were the instrument used to overcome this barrier, and by using them mankind has been able to make knowledge transcend generations in a way that learning by imitation couldn't do it.

But the "technology for knowledge" hasn't stopped there, more recently in human history, two major technologies were developed serving as foundations for the information age, telecommunication and computing. As we have found manners to communicate over long distances and to insert knowledge into products that can "behave" in complex and pre-established ways, our world has come to an information hurricane. Information is flying all over, into the air, into things and through us.

And the global companies, referred above, are in the eye of this hurricane, promoting its movement and been radically influenced by its speed and strength. In what the economists have termed as the "expansion of the production frontier" (Mashelkar, 1999), the traditional factor of production – land, labor and capital – have become less important than technology. Matters less how much you have to do it, and more how are you going to do it.

In fact, these improvements in telecommunication and computing have enabled a huge increase in the information flows that allowed enterprises to: reduce dramatically their transactional and production costs.

Some of the fastest growing industries use very little physical inputs like the microchip manufacturers and the software firms, that with a little bit of silicon and a lot of brains revolutionize our everyday life. The value given to those technologies is not just because the give are important to individuals privately, but because they radically influence every other sector in the world economy.

Although the scientific birthplace of such technologies was constructed with the accumulation of capital, the relationship of the amount invested with the successful establishment in this economy is not linear and deterministic. For example, from countries like India with an economy that is still struggling to satisfy the population basic needs are coming many of the brains of the software industry.

Also, scale doesn't define competition like it used to do, as we can see in the Windows versus Linux dispute. Who could have imagined that a single person from the cold and peaceful Finland would worry the huge software developer Microsoft Corporation? But Linus Torvalds, who wrote Linux as a student project did it. That's one of the marvelous of the technology age, a product is much more dependent on the ideas which generated it and on distributed collaboration, than on the capital investments behind it. The Linux market is being developed entirelly through distributed collaboration, where knowledge and communication networks develop the components of the technology by opening its architecture and adopting the best innovative efforts in the software package.

The rules to generate wealth in this knowledge intensive economy are still being written, but one thing is already known, to win the game you must play. Access is the key to the creation of conditions to increase wealth in this economy. That's why globalization is important, as it extends to less developed markets the knowledge accumulated in the domestic ones.

THE GLOBALIZATION OF KNOWLEDGE THROUGH COMPANY EXPANSION: POSITIVE EXTERNALITIES AND STANDARDIZATION

When a company that have been successful in its domestic markets goes global, it extends its structure physically into target markets. This process of investment takes more than capital to the new market, it takes also the knowledge accumulated over the development of the company in a probably more selective market (following Porter's reasoning). This knowledge can be, to a great extent, imitated and absorbed by the surrounding economy. Local companies can use almost every type of knowledge brought by global companies, excluding the technologies subject to intellectual property protection, to increase productivity. This involuntary spread of knowledge that benefits national markets with the entrance of global companies is, in economics language, a positive externality of the globalization phenomenon.

The spread of knowledge happens in many forms, some of which we enumerate below:

- Specialization of labor
- Technology transfer to local partners
- Benchmarking
- The alignment of business related legislation to international standards

Specialization of Labor

In order to start operating in a given country, companies need to hire personnel to make the process function. Usually the cost of transferring staff from home is much higher than to hire people in the local market and give them the proper training, so that's the most adopted practice observed. Since the employees are not subject of ownership, in its strict sense, the training provided by the establishing companies promotes the specialization of the labor available on the local market, reducing the costs for other companies to implement similar technologies, and even motivating this practice simply because of the awareness of the technology benefits.

Technology transfer to local partners

Along with the specialized labor needs, entering companies must develop local suppliers for inputs and services that fit into their production processes. Many times the local suppliers are not technologically and organizationally structured to do so. Sometimes because the local industry development hasn't come to the same level of sophistication as the one from which the entering company came, and in other cases, because the company need is very specific. In both cases, technology transfer will take place, increasing the knowledge available to the local economy.

Benchmarking

Companies that have grown sufficiently to go global, usually stand at the top of its sectors when performance is considered. This position reflects the use of best practices for operating processes and managerial decision making. Just by operating in an economy, those companies are being observed by other firms. The best practices serve as comparison for the current processes, in a procedure commonly called by "benchmarking".

Benchmarking works by one of the most natural and ancient ways of techniques learning. Just by imitation, businesses that haven't had the right conditions to innovate in some parts of its value chain, may learn the best practices adopted by the sector leaders, or other companies with similar processes.

The alignment of business related legislation and practices to international standards

Another important knowledge that the global companies bring to a new economy is the homogenization of business-related practices and legislation to international standards. Two main influences of this type can be highlighted:

- International consumer markets demand that the products must be manufactured under certain conditions of environmental concern, labor humanitarian conditions and safety.
- Global competition asks for a less bureaucratic commercial legislation, as agility and cost efficiency are demanded.

A good example of the first topic is given by the accusations against Nike Inc. regarding its operations in Asia (ATHREYA, 1995). Being a global company Nike design its products in U.S., contract the manufacturing in Asia, and commercialize in the whole world. Investigations by the Asian American Free Labour Institute on interviews with workers from the P.T. Nikomas factory in Serang in June has revealed working conditions which leaves much to be desired. The overworking and underpaying of workers, neglect of health and safety, physical abuse of workers and the persecution of those involved in organizing workers are common features in all of those plants. As the international consumer markets have become aware of these conditions, Nike received a lot of pressure to impose new practices to its suppliers. In response, Nike issued a Code of Conduct that demands a new posture from its suppliers.

Although in the case above the country legislation hasn't actually changed, labor practices has been influenced by global consumer markets demands of humanitarian concerns.

All of these types of knowledge collaborate to a creation of wealth and quality of life in the countries that receive them.

THE INVISIBLE HANDSHAKE

The combination of buildup, transfer, application and distribution of knowledge is the key to achieve success in the globalizing world. In this context, the creation of a knowledge-based society must be a primary goal for each and every nation that is willing to increase its role in the globalization game.

The nations where the investing companies come from may own the capital and the profits, but the knowledge and the productivity generated on the globalization of companies is a property of wherever they go to. Like in a handshake where the parts signalize their mutual understanding and cooperative intentions, knowledge flows through the globalization process to create mutual understanding and wealth generation.

The length and strength of this handshake is influenced by country's ability to attract and develop innovation clusters, which are the basis of the new knowledge-based economy.

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