



HAL
open science

Globalisation and International Business Localisation

Lucía Avella, Marta Fernández

► **To cite this version:**

Lucía Avella, Marta Fernández. Globalisation and International Business Localisation. European Review of Industrial Economics and Policy , 2010, 1. hal-03636933

HAL Id: hal-03636933

<https://hal.science/hal-03636933v1>

Submitted on 12 Apr 2022

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Globalisation and International Business Localisation

An Opportunity or a Threat for Spanish Industrial Firms?

Lucía Avella

Business Administration Department
University of Oviedo, Spain
lavella@uniovi.es

Marta Fernández

Business Administration Department
University of Oviedo, Spain
mbarcala@uniovi.es

This work analyses recent trends in the localisation strategy of industrial firms and the consequences for economies affected by relocalisation processes. We describe the main objectives of relocalisation, namely the search for new markets and cost reduction, and evaluate both the choice of an emerging country as a destination for new factories and the implications of such a decision for corporate social responsibility. Finally, we carry out an in-depth study of the Spanish case, indicating ways to maintain and improve the competitiveness of firms in Spain from both the business and institutional perspectives. This is a very topical matter following the recent relocalisations in our country.

Relocalisation, Globalisation, Developing Countries, Competitiveness

This article has been originally published as:
Avella Camarero Lucía y Marta Fernández Barcala (2008): “Globalización y localización de la empresa ¿oportunidad o amenaza?”, *Economía Industrial*, 217-232

Introduction

This study aims to analyse current trends in the localisation strategies of industrial firms and the consequences for the economies affected. It analyses the impact of economic globalisation over recent decades on firms’ localisation decisions, especially on their search for competitive manufacturing costs and/or new markets. Although a firm may have many reasons for setting up operations in a different country, we focus on decisions to locate in the so-called emerging or developing countries –where wage levels are usually low– and the implication of such decisions in the specific case of Spain.

Industrial localisation is the choice of a specific geographical localisation for a productive activity, that is, the place where the production factors must be located and from which the products must be transferred to the firm’s customers. Although localisation decisions are usually considered to be sporadic, in fact, the spatial distribution of an industry is dynamic and is subject to constant change. A localisation decision does not necessarily lead to the opening of a new factory in a different place to the current localisation of the firm. There are three basic possibilities (Schmenner, 1979): a) expansion of the current facilities, b) opening new factories in different localisations while maintaining the current ones, and c) closing down facilities in one localisation and opening new ones in different localisations. The last of these three options is by far the most costly for the firm, and it is referred to as “relocalisation”. It is

a decision that has important effects for the economy of both the country that receives the new factory and the country that is 'abandoned'.

Market globalisation has made localisation choices more complex. Over the last thirty years, almost all large firms have seen their markets grow, localisation playing a key role. The term "globalisation" describes, amongst other things, the trend to source goods and services from different localisations around the world to obtain cost benefits and improved quality in the factors of production. Moreover, the expansion of large, sophisticated foreign markets forces the main manufacturers to be present in the global market (McCormack *et al.*, 1994). Products made and sold on the home market are now in competition with products made abroad. In addition, firms are able to sell their products outside their local market, buy materials and parts abroad and even set up manufacturing facilities in other countries. More importantly, it has now become essential for firms to globalise their activities if they are to continue being competitive. So, an industrial firm that wishes to be competitive must consider localisation in global terms, that is, it must consider the possibility of opening up factories in different countries and closing down or downsizing some of its current factories.

The work is structured as follows. Firstly, we analyse the main reasons why firms decide a new localisation of their productive facilities, focusing on the localisation to developing or emerging countries with the main aim of cutting costs. We then consider the consequences of global localisation for Spanish firms and the consequences for the economy as a whole, the aim being to see it not as a problem but as a strategic challenge for maintaining (or boosting) competitiveness. Given the topicality of this subject, we make many references to real cases, based mostly on information in the financial press and other media (daily press, specialist journals, Internet, etc.).

1. Main reasons for global localisation

A firm may have many reasons for deciding a new localisation: to reduce direct and indirect costs, to limit the cost of capital, to pay less tax, to cut back logistics costs, to avoid tariff barriers, to improve customer service, to diversify exchange risks, to obtain new sources of supplies, to improve competitiveness, to learn from local suppliers, foreign customers, competitors or foreign research centres and to attract talent on a global level (Ferdows, 1997). However, over recent decades, two main reasons have emerged: (a) to enter a new market and/or to follow customers, and (b) to reduce the cost of supplies and/or production, mainly through lower wage costs in the country of destination.

With regard to the first reason, the trend towards global trade based on three regional groups of countries –North America, Europe and Asia– encourages firms to adopt strategies that will give them a manufacturing presence in regions where demand is high and trade is unrestricted. Each of these trading regions has relatively free internal movement of goods and production factors, with common regulations and coordinated macroeconomic policies. Firms that use export-based strategies may face additional administrative obstacles and potentially damaging regulatory barriers. It is therefore positive for a global firm to have at least one production facility in each region where demand is significant, not only because of tariff and non-tariff restrictions but also to be close to their main customers' markets (McCormack *et al.*, 1994). Setting up manufacturing facilities in certain countries may also enable firms to meet some of the requirements of the host governments and obtain advantages from them.

Many firms were quick to understand that markets were not going to be limited exclusively to domestic firms but that there was to be a process of business internationalisation and, subsequently, globalisation, making it necessary for them to

open up to foreign countries. A case in point was the Campofrío meat processing firm which started out in Spain in 1952, and in 1990 went international by opening up a factory in Russia. By 2007, the group had factories in Spain, Portugal, Russia and Romania and investments in the Philippines, Mexico, the Dominican Republic and Argentina. It then changed its international strategy and started focusing mainly on Europe. Today, the Campofrío products, from factories in Spain and other countries, reach consumers in more than 40 countries¹. Many other Spanish firms have experienced similar patterns. Chupa Chups began to internationalise in 1967 when it opened a factory in France. Today it has 5 factories in Spain, Russia and Mexico². Another case is Roca, a manufacturer of bathroom, heating and air conditioning appliances and ceramics, which has a network of 60 factories in 19 countries set up over the last 30 years³.

In the framework of strategic outsourcing or “comakership”, the close links that suppliers need with their customers often force them to relocate to be closer to them. In some industries, such as automobile components, this process is having a great effect on localisation decisions. One example is Gestamp Automoción⁴ which, after a gradual process of internationalisation with the aim of offering a better service to its customers, by 2008 was present in 17 countries.

Similarly, the decision to relocate to another country in order to find new markets or follow customers involves the consideration of other possible options apart from setting up a fully-owned subsidiary, such as licensing or *joint ventures* (Young *et al.*, 1989).

With regard to the second reason, the localisation decision has become in the last decades especially relevant for the purpose of reducing costs, mainly wage costs. It involves the transfer of part of all of a firm’s production activities to an emerging country in order to take advantage of that country’s lower wage costs, generally continuing to sell the products in the country of origin. This is often called *relocalisation*. For example, in the mid-1990s, Mattel, the Barbie doll manufacturer, obtained its raw materials –plastic and hair– in Taiwan and Japan. Assembly was usually carried out in these two countries as well as in the Philippines but was then transferred to lower-cost countries, such as Indonesia, Malaysia and China. The molds and paint used for the dolls came from the US. China provided not only labour but also cotton to make the dolls’ clothing. So when a Barbie doll left China, of the 2\$ of its export value, 35 cents covered Chinese labour, 65 cents the materials and the remaining dollar covered transport and the profits obtained in Hong Kong. The dolls were sold in the US market for \$10, with Mattel making at least \$1 and the rest covering transport, marketing and retailers’ profit (Feenstra, 1998).

Figure 1 shows the cost per hour of production workers in different countries, and clearly indicates the wage advantages that can potentially be achieved by producing in countries such as Brazil, Poland or the Czech Republic.

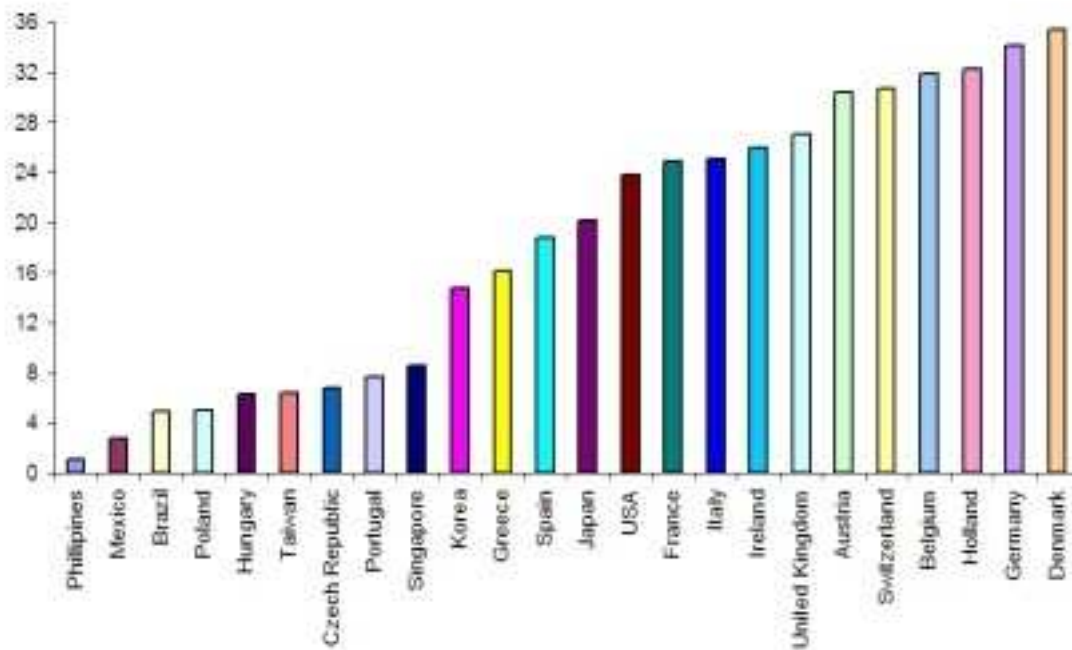
Figure 1 Cost per hour of production workers in 2006 (in US \$)

¹ Pérez Galdón, B. (1995): “Campofrío desarrolla en el exterior el 50 por ciento de su capacidad productiva”, *Cinco Días (Especial Internacionalización y Exportación)*, 28 December, p. XXII; Barciela, F. (2004): “Parón en la carrera. Campofrío vuelve a sus cuarteles de invierno tras la gran expansión de los 90”, *Emprendedores*, pp. 26-32; <http://www.campofrio.es> (visited December 2008).

² <http://www.chupachups.com> (visited December 2008).

³ <http://www.roca.es> (visited December 2008).

⁴ Gestamp Automoción is an industrial group which carries out die stamping and assembles metal parts for automobiles. It belongs to the Gestamp Corporation, a leading European Union multinational in steel, automobile components, warehousing and logistics. It has two main industrial divisions, Gonvarri and Gestamp Automoción, and is present in seventeen countries, mostly in the European Union and Mercosur. In 2007, sales by the Gestamp Corporation exceeded 2.1 billion euros, and the staff numbered over 11,000; <http://www.gestamp.com> (visited December 2008).



Source: Bureau of Labor Statistics (USA Department of Labor; www.bls.gov)

Examples can be given of firms that have decided a new localisation in order to produce in foreign countries while selling mainly in their home markets in order to take advantage of the cost differences. For example, Indo, a leading Spanish optics firm (lenses, eyewear, optical and ophthalmic equipment and instruments, as well as interior design for opticians' shops and clinics) has factories in Spain, Morocco, Thailand and China. Its first foreign factory was set up in the 1990s at the same time as it closed down one of its factories in Spain (with lens production being transferred to Morocco) and partially dismantled another of its factories in Spain (with the transfer of eyewear to China). The aim was to reduce costs by 2.6 million euros⁵. Moreover, the organic plastic lens factory in Thailand supplies lenses to all the group's assembly factories.

Such localisation decisions are often based on a combination of the two above-mentioned reasons. Firms tend to go to developing countries to take advantage of lower wage costs to supply both their local market and other neighbouring countries. The turn of the century saw a large increase in relocalisation to two specific geographical areas: the countries of Eastern and Central Europe, especially those which joined the European Union in May 2004, and China. In both cases, both of the above-mentioned reasons apply, namely lower costs and market access, both real and potential, as well as other specific reasons in both cases.

The main reason for relocating to the countries of Eastern and Central Europe was precisely their lower labour costs—for example, the average wage in the Czech Republic when it joined the EU was 450 euros a month, as opposed to 1,500 in Spain; in Germany labour costs at the time accounted for 27% of the total cost of manufacturing as opposed to 8% in the Czech Republic. But there were other reasons, such as (a) the availability of skilled, efficient labour (some firms even set up engineering centres in these countries), generally with little trade union awareness, (b) government aid in the

⁵ S. S. (1999): "Indo entrará en pérdidas por su plan de reestructuración", *Expansión*, 17 November, p. 8; <http://www.indo.es> (visited December 2008).

form of subsidies, land and tax benefits (the factory set up in the Czech Republic by PSA obtained subsidies amounting to 66 million euros), and (c) these countries are close to European markets and decision-making centres. Their localisation is convenient for distributing products to the rest of Europe; in fact, 40% of what is exported from Spain can be supplied at lower cost and faster from some Eastern European countries⁶. It is true that at the start of this decade the countries of Eastern Europe had a low level of demand, so that firms setting up operations there were not aiming to access a new local market but to distribute their products to other European countries. However, membership of the EU stimulated the economy of these countries, pushing up local demand and providing an added advantage for firms installed there. Therefore, not only did firms receive aid and subsidies that were not supervised by the EU but, once they joined the EU, their products were considered EU products and had the advantage of free movement within the Community. However, after EU membership, wage costs in these countries will probably rise to levels that are comparable to those of the other EU countries.

China is a particularly attractive country for setting up business, for both local and foreign firms. Some traditional low-wage countries, such as Mexico and even Morocco, are now losing ground against China. It is a growth country, with low wage costs and plenty of labour. Trade unions and strikes are forbidden, and most local workers work more than 60 hours a week and are not allowed to complain. But, above all, China offers a huge potential market with a growing industry with medium-high purchasing power and a high level of demand for consumer and durable goods. Chinese factories are now producing computers, automobiles, domestic appliances, toys and textiles. In the middle of this decade, China was producing 50% of the world's cameras, 30% of its air conditioning units and 30% of its television sets. Many firms set up activities there because they fear their competitiveness might be damaged by low-priced Chinese products flooding onto international markets.

The toys industry is of special interest. Two out of every three toys sold in the world are now produced in China. This has led Spanish toy manufacturers to produce in China, either in their own factories or in alliance with Chinese manufacturers or outsourcing to them. IMC, which specialises in electronic games, mostly produces in China while its headquarters in Spain carry out design and research on new product lines. Famosa, which now produces 70-85% of its toys in China, has become the leading Spanish toymaker. 40% of Falca's dolls come from China, and Injusa, which produces electric vehicles and motorbikes, produces seven of its 80 models in China. This management model –with design in Spain and production in China– has been the key to survival for a number of Spanish manufacturers⁷.

Most experts consider that investment in China can only grow, because it is estimated that within fifteen years 40% of world production will come from there. They agree that China will continue to be an attractive localisation for at least fifteen years because of the labour coming from rural areas. For western firms, China also has the added appeal of the stability that the political dictatorship affords⁸.

⁶ De Querol, R. (2002): "La industria del automóvil concentra su nueva inversión en Europa del Este", *Cinco Días*, 15 April.

⁷ Source: www.adnmundo.com, 24 December 2006.

⁸ Jiménez, D. and Canales, M (2003): "El 'made in China' hace temblar al comercio de todo el mundo", *Suplemento Nueva Economía de El Mundo*, no. 199, 7 December.

2. Localisation in developing countries in order to cut costs

When the aim of relocalisation to developing countries is to cut wage costs (generally selling the products to developed countries), the results are debatable and a detailed analysis should be made of such decisions. Firms should remember that today demand is increasing for added-value, quality products as opposed to cheaper, less added-value products. This suggests that, if factories are relocated to foreign countries to save on labour costs, the competition is being considered only partially and the decision may not be a positive one for the firm. Even if the decision seems right, there will inevitably be problems.

Three basic aspects need to be taken into account. Firstly, it must be determined whether costs will really be lower costs after relocalisation. Secondly, there may be benefits from producing and selling in the country of origin that would be lost if the factory relocates to a developing country with the aim of selling in developed countries. The characteristics of the target countries, amongst other things, must be studied as well as the consequences of eliminating factories in the country of origin to see whether lower labour costs would really outbalance the advantages of local production. Thirdly, matters relating to corporate social responsibility must be considered in relocalisation decisions.

It seems surprising, to say the least, and perhaps even contradictory, that many western firms have adopted a policy of locating factories in developing countries to take advantage of the lower competitiveness of internal factors, especially wages, yet Japanese firms, often considered the most efficient in the world, are setting up factories in the US and other countries where wage costs are high. By focusing on better product design, improved quality, minimal stocks, the elimination of waste and worker participation in decisions, Japanese automobile manufacturers have turned out to be leaders in costs and quality in their industry without, in principle, searching for the most profitable localisations. The localisation strategy of Toyota is to produce where they want to sell, rather than where it is cheapest to produce. So they have factories on the three continents where they sell most vehicles –one third of their sales are in Japan, one third in North America and the remaining third in Europe and other countries. They do also have factories in developing countries (where labour costs are low), but their main aim is always to serve local and neighbouring markets. In 2004, Toyota set up its IMV Project (Innovative International Multi-Purpose Vehicle) with the launch in Thailand of its Hilux Vigo van, stating that it was thus entering a third period of global production. It now has a global, optimised system for production and logistics for the manufacturing of five vehicle models –three vans and two multi-purpose vehicles (one people carrier and one off-road vehicle)– which it distributes to more than 140 countries. For assembly, Toyota mostly uses factories in Thailand, Indonesia, Philippines, India, Malaysia, Argentina and South Africa. These production and distribution hubs supply vehicles to Asia, Europe, Africa, Australasia, Latin America and the Middle East. In 2007, within its IMV Project, Toyota produced over 120,000 units. Another special feature of this IMV Project is Toyota's aim that almost 100% of the vehicle components should come from non-Japanese sources (the Hilux Vigo launched in Thailand had 95% of non-Japanese components). From the historical and geographical point of view, the IMV Project amounts to a third stage in Toyota's production and localisation system. The first was when it produced only in Japan and exported to other countries. The second was when it located factories in its key markets. Now, with the help of gradual

trade deregulation, it has begun a third phase by setting up an efficient, global production and logistics system⁹.

2.1. The real potential for cost reduction

In general, the cost reduction to which manufacturers refer when relocating to emerging countries is basically labour costs. But total cost is a much broader concept that includes many items. A survey amongst manufacturers and carried out by the US National Consumers Association discovered that, on average, labour accounts for just about 15% of production costs. Even for most electronics articles, labour accounts for just 5-10% of total cost (Markides and Berg, 1988). Savings on labour therefore affect just 15% of total production costs so are unlikely to have much of an impact on the latter. Moreover, product cost structure is basically determined by the cost of materials, equipment depreciation, capital charges and general overheads. Many of these items are not specific to factory localisation but are included in the product by the technologies and processes used in production (McCormack *et al.*, 1994). When the focus is placed on cutting the cost of labour, the remaining 85% of total production costs may be neglected, that is, administration, stocks, R&D+i, marketing and distribution.

Moreover, net savings on labour are often lower than expected. There are various reasons for this. Firstly, when transferring a factory to a developing country, it must be remembered that the productivity of the labour force is usually lower than that in a developed country –fewer skilled workers, workers unused to working in industry, high levels of absenteeism and rotation– so a linear comparison of wages does not give an exact idea of potential savings. In order to calculate the real value of savings achieved, the link between wages and productivity must be taken into account, because paying a low wage to a worker with low productivity may lead, in extreme cases, to a higher real payment in relative terms. This would be the case, for example, if a wage one third lower is paid to a worker who is half as productive as another. It should also be remembered that workers in developing countries are usually less well-trained than those in developed countries, so money would have to be spent on training in production, maintenance and quality control. This would push up costs and, in the worst case, might reduce the quality of products for a time, at least until training achieves the desired effects. All these factors mean that the net result with regard to cost-cutting might not be as good as was initially expected. It is true that, with time, some of these problems –reduced productivity, the need for training and worker absenteeism– can be resolved but it is also often the case that once workers have become more productive they demand higher wages and better working conditions (Berry *et al.*, 1993). They might end up demanding wages that are similar to those of their colleagues in developed countries¹⁰. Working hours, too, start out being longer but are gradually cut back in response to demand from society and from the trade unions in developing countries for more socially advanced laws, similar to those of industrialised countries.

Studies have been carried out showing that localisation in industrialised, or recently industrialised countries is preferable because the savings possible there are greater than those obtained by lower labour costs in developing countries (McCormack *et al.*, 1994). It is important to consider the availability of infrastructure, from railways to airports. In some countries, there may be problems with the power supply, drinking water and the existence of prepared land for industrial factories. Some manufacturers that have set up

⁹ Toyota Motor Corporation (2002): “Planet Toyota: Production Expands Worldwide”, Special Report, Public Affairs Division, 1 July 2; available at <http://www.toyota.com> (visited December 2008).

¹⁰ On 1 March 2004, for the first time in its history, China introduced a minimum wage (Agencies (2004): China establece el primer salario mínimo”, *Expansión*, 7 February, p. 41).

operations in developing countries –3M in Bangalore (India), Xerox in Shanghai, Motorola in Tianjin (Shanghai and Tianjin are two of China’s most expensive cities)– chose localisations where infrastructure is well-developed and where there is greater availability of skilled workers, even though they are more expensive (Ferdows, 1997). Security might also be an important consideration. This is the case for the Japanese multinational Sony which operates with several maquiladoras in Mexico on the border with the US. From 1998 to 1999 it doubled its budget for security for its executives, paying out a total of 1 million dollars¹¹.

2.2. Advantages of producing in the country of origin and risks of producing in emerging countries

As stated above, cost is not the only relevant variable in purchase decisions. If a firm wants to retain its customers, it must maintain high levels of quality and this will be much more difficult if its factory is located outside the country where it is to sell its products. It is difficult enough to control quality in factories located close to the end market, and even more so when the distance between the two is large. Communication becomes difficult, and engineering changes may take months to be implemented. Meanwhile, many products with defects or without the necessary changes may be sent out from the developing country to the end market (Kotkin, 1988).

Some firms consider that transferring activities to a different country where labour costs are lower is a wise move because the greatest added value will remain in the country of origin where research and design activities take place. However, design and production are closely related and separating them may not be appropriate (Markides and Berg, 1988). A firm manufacturing in a foreign country may quickly lose its practical know-how in its design and its capability for innovation because it does not receive the necessary feedback from the market. This argument might explain why Lego, the Danish toy manufacturer – operating in a sector in which retail price competition is fierce, pressure from competitors is intense and manufacturing processes are fairly simple– for many years concentrated its manufacturing processes in Denmark and the US. However, Lego today also produces in the Czech Republic, Mexico and Hungary, an alternative it feels meets its product quality and design requirements better. In July 2008, it reversed the decision it had taken two years earlier to outsource some of its production with the aim of guaranteeing the overall quality of its production process¹².

Moreover, in order to meet customers’ needs, there should be close contact between the engineering and production staff and distributor representatives, and this is difficult to achieve when the end customer is miles away from the factories and when there are additional problems of cultural and language barriers. The Taiwanese bicycle manufacturer Giant considers that, if production is close to the end market, customer’s needs will be met more easily and, for this reason, it transferred part of its production activities from the Far East to Holland, even though wage costs are 70% higher¹³.

In their endeavour to establish global activities and achieve global products, entrepreneurs sometimes forget the importance of the firm’s specific characteristics and

¹¹ Expansión (2000): “Sony advirtió sobre la posibilidad de retirar sus inversiones en México”, *Expansión*, 10 May.

¹² Tait, N. (1997): “Producir al menor coste no es siempre la respuesta”, *Expansión*, 10 November, p. 10-11; The Lego Group (2007): *Firm Profile 2007*, The Lego Group; available at <http://www.lego.com> (visited December 2008).

¹³ Marsh, P. (1997): “Bicicletas taiwanesas: Hechas en Holanda, diseñadas en Estados Unidos”, *Expansión*, 1 December, p. 11.

localisation, which may be real sources of competitive advantage. Designing a complex product, even more than producing it, may require complex organisational and management skills and system integration, precisely the things that are difficult to transfer to another country. Products may be global, but their production systems may require specific know-how, and this will depend on the localisation of the factory because, for example, there may be suppliers with very specialist knowledge and advanced technology who are not available anywhere else and are not prepared to move with the firm (Fruin, 1997). Technologically complex production that requires interaction with the customers or with strategic industries whose localisation is influenced by national policies may create restrictions, making it important for production activities to be close to markets.

The delivery time –or, more generally, lead time, that is, the period between placement of the order by the customer until receipt by them of the product– is another argument in favour of producing in the country where the products are to be marketed. Firms that depend on activities in foreign countries are slower to adapt to any changes required by the market. Many customers do not want to depend on supplies that are produced thousands of miles away. Such customers may be lost if a firm decides to relocate. Lead times are tied directly to the delivery of raw materials and components by suppliers to the factory. If supplies are delayed, delivery will be postponed and the production process may even come to a standstill. Most firms have neither the scale nor the resources to set up their own supplier network. In developing countries, it may be extremely difficult to obtain skilled suppliers whereas in the country of origin, there is often a network of very competitive local suppliers. This consideration favours manufacturing in industrialised regions (McCormack *et al*, 1994).

Producing in a foreign country normally involves high transport costs because of the distances to be covered. Such costs can only be reduced if large amounts of materials are carried, so firms that have to operate with higher stock levels. This in turn leads to high costs for storage and handling of stocks, and generally high opportunity costs. Therefore, transport costs can be reduced but stocks increase, as does the possibility that stored products will become obsolete because of a change in demand.

It should also be pointed out that managing a factory in an emerging country may also be a serious problem. It is often difficult to transfer management teams to the new country, too few managers being sent, or those sent having too little experience or insufficient qualifications, making it necessary to take on local managers having specific local knowledge. Additional difficulties may arise in human resources management because of cultural differences between the country of origin and the new localisation.

Moreover, once a firm has transferred its factory to a foreign country, the host government may start to pressure the management to include locally-produced components in order to support the local auxiliary industry but at the risk of affecting end quality, to transfer technology to local firms –which may end up being competitors because technology may not have the same legal protection as in the country of origin– or to include national capital in the ownership structure of the new factory. Even the possibility of nationalisation should be remembered, when a government takes over the assets of a firm without having any obligation to pay. Such circumstances can end up trapping the original firm. If it wants to continue in the new country, it has no alternative but to accept what the government wants from it (Markides and Berg, 1988).

Other important challenges in relocation are different languages, customs and regulations. By way of example, Fagor Electrodomésticos had problems when it first moved to a foreign country. Communication with the local partner was so difficult that

the production chain was stopped on a number of occasions. The Moroccan partner accused Fagor of wanting to take its brand's place on the market, while Fagor claimed that the problems stemmed from a different business mentality and a different view of the market¹⁴.

Relocalisation decisions also come up against what is known as 'country risk'. In many possible localisations, the political, social and financial situation may be unstable. For example, if the country undergoes an unexpected political turnabout or a financial crisis, this may lead to serious damage for firms working there. Exchange rates and other types of risk oblige firms to be flexible with regard to capacity and localisation, and to consider their global networks in a consistent way. Obtaining competitive advantages by exporting from countries with devalued currencies to countries with stronger currencies has been a frequent practice by international firms. But currency fluctuations are beyond the control of firms and are difficult to predict. What is profitable today might well be disastrous tomorrow because of changes in the exchange rate.

It must also be remembered that, when products are produced in one country and sold in another, they might be subject to tariffs that raise the final cost (Markides and Berg, 1988). During the 1980s, there was a shift towards greater protectionism on the part of developed economies in the form of non-tariff barriers that restricted the local content of products, sales volumes or market share and limited a firm's capability to export. More importantly, such methods were applied especially to imports from developing countries where labour costs were low. However, all these trade barriers have gradually been eliminated over the last 25 years and are no longer so important.

A final consideration is that relocalisation of manufacturing of products and components that are sold on the domestic market helps weaken a country's industrial fabric and destroy jobs (Markides and Berg, 1988). This can give rise to what are known as 'hollow corporations'¹⁵, which transfer all their production activities to other parts of the world, leaving in their home country just the activities that generate most value but that tend to create little employment (although the remaining jobs tend to be for highly-qualified workers).

2.3. Corporate social responsibility in relocalisation decisions

The above reasoning does not imply that the possibility of producing in another country should be rejected outright if the circumstances are right and the market potential is of interest. But corporations wishing to transfer activities to a developing country, for any of the mentioned reasons, must understand not only the factors described but also matters relating to social responsibility¹⁶, with regard to both the country to which they plan to relocate and the country they are leaving behind or where they are decreasing their activity.

There are two main considerations. Opposition is growing to the relocalisation of factories in developing countries (especially in the Far East and Latin America). Public opinion has become more aware of the working conditions imposed by firms on their workers in order to optimise productivity and minimise costs, bringing prices down and pushing profits up (with some firms manufacturing very exclusive, high-priced

¹⁴ Fuentes, M. A. (1995): "Fagor Electrodomésticos 'tropieza' en su primera inversión en el extranjero", *Expansión*, 20 October.

¹⁵ Jonas, N. (1986): "The hollow corporation", *Business Week*, 3 March, pp. 53-55.

¹⁶ For further information on reasons for the increased adoption of Corporate Social Responsibility practices both internationally and in Spain, see Nieto and Fernández (2004).

products)¹⁷. Therefore, firms setting up factories or buying from suppliers in developing countries have to ensure that labour laws are enforced and human rights protected. They have to eliminate unacceptable practices such as child labour, very long working hours (up to 16 hours, six days a week), very low wages, unhealthy working conditions and a lack of safety measures or of freedom to organise a trade union to protect workers' rights. And they are increasingly being called on to answer for practices that damage the rights of their workers, who are often children or women¹⁸.

For example, in 1992 Reebok drew up a code of practice (Reebok Human Rights Production Standards), endeavouring to enforce the rights of its direct and indirect workers –offering fair wages, ethical working hours, freedom of association, health and safety in the working place– and to put an end to child labour and discrimination. It established on-going collaboration with other key brands in the industry and with non-governmental organisations, with the supervision of the supply chain, independent audits, education programmes and permanent monitoring by the Fair Labor Association (to which Reebok belongs). It also ensures that all its suppliers follow its code of conduct. Certain factories apparently prefer not to work with Reebok, precisely because of its strict requirements. For example, in 1996, it announced a decision to include a guarantee that all footballs are produced without child labour, limiting the process to a single factory in Pakistan in order to facilitate control. Every part of the production process is monitored to ensure that children are not part of it. In the region of Sialkot in Pakistan, footballs have traditionally been sewn by external manufacturers and it is estimated that 20% of the workers are children¹⁹.

Along the same lines, the General Manager of Indo, Antoni Olivella, considers that “relocalisation can and should be done ethically. It can go together with the concept of social responsibility”. Regarding the firm’s 180 workers in its Chinese factory in 2004, he stated, “They work 48 hours a week, not 60. There are dining halls and we pay 50% more than the minimum wage. And, of course, they have medical services”²⁰.

In this process, there are now calls for firms transferring their factories to developing countries to face up to their responsibilities in the country they are leaving with regard to any aid received, promises made to create jobs and the consequences for both the workers they make redundant and the auxiliary industries that are left in the lurch²¹. However, while demanding responsibility of this type may represent a barrier for firms wanting to leave, it is a two-edged sword as it implicitly also creates barriers to entry. Such protectionist practices may go against measures to encourage business internationalisation.

3. Localisation and competitiveness: the case of Spain

Businesses located in Spain have not been unaffected by the process of economic globalisation. In the past Spain had an important role as a low-cost manufacturer and was often chosen as the localisation for foreign-owned businesses in previous decades. But times have changed and Spain is no longer a low-cost destination for foreign investment. Over recent years, a number of firms have cut back or dismantled their activities in Spain and transferred them to other lower-cost countries, with inevitable effects for their suppliers. **Table 1** shows some of the most significant cases of

¹⁷ Elorriaga, G. (2003): “Talleres del sudor”, *El Comercio*, 21 December, p. 58.

¹⁸ For a detailed description of some of these practices, see Raworth (2004): *Trading Away Our Rights: Women Working in Global Supply Chains*, Intermon Oxfam Internacional, Barcelona.

¹⁹ For further information, see www.reebok.com (visited in December 2008).

²⁰ Trillas, A. (2004): “La deslocalización puede hacerse con ética social”, *El País (Negocios)*, 29 February, p. 3.

²¹ Ballina, F. (2004): “La fuga de las multinacionales”, *La Nueva España*, 19 January, p. 80.

relocalisation from Spain. In addition, some Spanish firms, without actually reducing their capacity or closing down factories in Spain, have decided or are considering the possibility of opening factories in other countries with lower wage costs to take up this advantage while also gaining access to new markets.

The main reason for such relocalisation decisions is to reduce labour costs. Although it is true that the cost per hour in Spain up to May 2004 (15 euros) was lower than the EU average at the time (22.19 euros), it was significantly higher than that of the most expensive country in Eastern Europe, Slovakia (8.9 euros) and much higher than those in countries such as India and China (2.7 and 1.4 euros, respectively). For the cost of one worker in Spain, firms could employ three in Poland, five in Slovakia and ten in China (Ciriza *et al*, 2004). However, as already stated, there were additional reasons for moving from Spain to other countries, especially China, Morocco and Eastern Europe. The economic boom in China and EU enlargement were very challenging for Spanish firms, causing not only shutdowns in Spain to relocate elsewhere but also a loss of competitiveness for products made in Spain in comparison with products made in these countries. Such risks were especially great in the case of standard, low added-value products which primarily compete on price.

Table 1: Firms operating in Spain that have relocated²²

FIRM	SPANISH REGION OF ORIGIN	DESTINATION	DESCRIPTION
MOULINEX (GRUPO SEB)	Aragón	China	Factory shutdown
PANASONIC	Catalonia	China	Factory shutdown
HASBRO (MB)	Valencia	China	Factory shutdown
MAJORICA	Balearic Islands	China	Factory shutdown
SAMSUNG	Catalonia	China and Slovakia	Factory shutdown
SEAT	Catalonia	Slovakia	Reduced capacity
NISSAN	Catalonia	Eastern Europe	Reduced capacity
HEWLETT PACKARD	Catalonia	Hungary	Factory shutdown
DELPHI	Aragón	Poland	Reduced capacity
EATON LIVIA	Catalonia	Poland	Reduced capacity
LEAR	Catalonia	Poland	Factory shutdown
NOVALUX (PHILIPS)	Catalonia	Poland	Factory shutdown
AUTOTEX	Catalonia	Czech Republic	Factory shutdown
VALEO	Catalonia	Morocco	Factory shutdown
DELPHI	Castilla y León/ Andalusia	Morocco	Factory shutdown
LEVI	Castilla y León	India	Factory shutdown
KELLER	Basque Country	India	Reduced capacity

The cases given in Table 1, as well as many others, have led relocalisation of production to become a very topical matter in Spain. The controversy can be seen from different angles. Some of the arguments are given below, so that a detailed analysis can be made of the phenomenon in general and its consequences for firms and for the authorities in charge of industrial policy.

²² The table is largely based on media reports from 2002 to 2008.

3.1. Business challenges for competitive manufacturing in Spain

Clearly, the prime aim of a firm must be to survive and this means it must be competitive. For years, the competitiveness of firms located in Spain was based on low production costs, but this advantage no longer exists. Spanish firms run a serious risk of losing competitiveness with regard to both local firms in developing countries and western firms setting up operations in them. It is therefore necessary for firms working in Spain to develop other competitive advantages apart from low cost, based on quality, technology and innovation and fast, reliable delivery and service, and to avoid the production of generic goods with no added value.

In the chemicals sector, firms such as Solvay Ibérica, Novartis, Basf and Dow Chemical, in which labour is not the prime factor, continue to be active in Spain and some of them are even considering additional investments and the installation of new factories. Firms in other industries have recently moved to Spain –Hyundai-Image Quest (TV screens and TFT), Curvet (glass for furnishings and automobiles). And some Spanish-owned firms –Vitelcom (mobile telephones) and Infinity Systems (computers) continue to invest and produce in Spain (Ciriza *et al.*, 2004).

The key is to find alternatives to cost as a factor for competitiveness because, in industries or for products where this is not possible, the battle has already been lost. When the basic competitive priority of a firm is cost, when the aim is to produce a large volume of products with low added value and when the production process is unskilled labour-intensive, competitiveness can only be maintained if costs are low. In such cases, the decision to relocate to an emerging country is often the right one. On the other hand, when the basic targets of production are flexibility, quality, innovation or time, when the products are innovative, exclusive, high-technology or require a high local content (that is, adaptation to the tastes, preferences and regulations of the country), when the production processes are flexible, require skilled labour or are very technology-intensive, cost is not the variable that matters in the localisation decision. In such cases, a developed country would be the ideal scenario (Feenstra, 1998; McCormack *et al.*, 1994; Stobaugh and Telesio, 1983). A network of local suppliers that can meet the needs of the subsidiaries of multinational firms and, in general, of any firm, is also an important argument for attracting or retaining investments from a developed country. The promotion of competitive SMEs that can meet the expectations of large firms is therefore key to attracting the installation of production facilities in Spain.

On the one hand, firms should promote research, development and innovation (R&D+i) in Spain. It may also be crucial for retaining factories to centralise decision-making in Spain. On the other hand, Spanish firms need to step up the productivity of their workers and this requires investment in training to improve their human capital, increasing their skills and versatility. All the production resources, not just labour, must be efficient. Sometimes, in order to achieve such improvements, firms need thorough restructuring, promoting the role of workers in the firm, increasing their participation and motivation and encouraging team work.

Such measures were taken by the luxury coach manufacturer Irizar, a member of the Mondragón Cooperative. In the early 1990s, in the midst of one of its worst crises, it achieved a thorough turnaround, eventually becoming a highly competitive firm both within Spain and internationally. The restructuring began when Koldo Saratxaga became Managing Director. He based the firm's recovery on total collaboration and commitment on the part of all its members. In 1992, a new stage began with a project based on people and shared leadership. The structure adopted was very flat and the

previous individual, specialised approach to work was changed to one of teamwork with the emphasis on skills and versatility. Simultaneously, a market diversification strategy was implemented with the focus on a single type of product, the luxury coaches that Irizar produces with great flexibility based on innovation and technological development, with products being adapted to a variety of different platform designs, markets and customers' requirements. The main priority was quality. In fact, Irizar was the first European bus manufacturer to obtain, in 1994, the ISO 9001 quality certificate and, since 1995, it has been following the EFQM (*European Foundation for Quality Management*) model for business excellence. Quality, cost, service and innovation are the firm's four basic values (Sáenz, 2004).

There have been other imaginative proposals for increasing productivity. One such proposal was made by the Comisiones Obreras trade union to the Government of Catalonia and the Seat factory in Spain. Since it was difficult for workers to travel to the industrial estate where the factory was located, the trade union suggested that workers travel by train along the tracks used for sending out the finished vehicles. The idea was to reduce delays, absenteeism, accidents and stress for workers (they saved an average of thirty minutes travel time each way), pollution and energy use, to increase production by 2,000 to 2,500 cars a year, and to release land on the estate for stocking cars (Ciriza *et al.*, 2004). Similar measures have also been taken in other countries. In France, the Bosch workers worked one hour longer a week without pay to prevent the relocation of the Venissieux factory to Slovakia²³. In Germany, the Daimler-Chrysler anti-relocation agreement is widely being adopted as a model. It led to savings of 500 million euros a year, in exchange for a formal guarantee to keep on the current workforce until 2012²⁴.

Another measure that has been useful for increasing competitiveness has been the formation of industrial clusters or districts on the basis of networks or agreements for collaboration amongst different firms within a single industry and/or amongst associated industries. Esteban *et al.* (2001) state that "locating firms in the same industry close together can facilitate access to raw materials or skilled labour". For example, the Spanish Automotive Consortium CEAGA brings together over 75 firms that together generate 25,100 direct jobs and 12,500 indirect ones, all in the field of automobile components. Its turnover in 2007 was over 9.3 billion euros. The main purpose behind the creation of CEAGA was to achieve cooperation amongst manufacturers of automobile components in Galicia and make them more competitive. Most of the firms are located in Vigo and the surrounding area and, to a lesser extent, in other parts of Galicia. The main driving force is the French PSA Peugeot-Citroën Vigo group which had a total production of 456,000 vehicles in 2006. The third pillar for the industry in Galicia is the Galician Automotion Technology Centre (CTAG)²⁵. Other important industrial clusters or districts in Spain are chemicals in Tarragona, ceramics in Castellón, toys in Alicante and footwear in Elche.

There are also firms that produce a range of products for different markets through factories in developing countries or in other developed countries. Some multinationals have been able to coordinate the production of components in low-cost factories with

²³ Martí, O. (2004): "Cruzada francesa contra la deslocalización", *El País (Negocios)*, 19 September, p. 14.

²⁴ La Nueva España (2004): "El acuerdo antideslocalización de Daimler-Chrysler se impone como modelo en Alemania", *La Nueva España*, 24 July, p. 43.

²⁵ La Voz de Galicia (2004): "El sector gallego de componentes factura 2.100 millones de euros", 23 April; *El Mundo Motor* (2004): "Crece la industria gallega de automoción", *El Mundo Motor*, 14 April; available at <http://elmundomotor.elmundo.es/elmundomotor/2004/04/14/empresas/1081957970.html> (visited December 2008).

final assembly in high-cost localisations close to their customers (McGrath and Hoole, 1992). It is important that final assembly be carried out in developed countries to avoid heavy transport costs and to enable customers to identify with products made by firms that are active in their own countries. Many firms have found it impossible to achieve the coordination this requires amongst different facilities, even after years of fast international growth.

An example of this type of localisation strategy can be found in the Basque firm Keller, one of Spain's largest manufacturers of musical instruments, mainly Spanish guitars, in Spain. In view of increased competition in the production and sale of new guitars by Chinese and Korean manufacturers, in May 2009 it began to produce guitars in Cochin (India) with the aim of competing with the Chinese manufacturers who now lead the market for new guitars. This move enables the firm not only to reduce wage costs but also to access cheaper wood supplies, India being one of the world's leading suppliers of the wood used in guitars. The aim is also to increase the firm's trade within India itself. Meanwhile, the factory for classical guitars remains in Spain (the home of the world's top guitar craftsmen) because this is a product that cannot be made industrially. In this field, the Asian manufacturers cannot compete because with mass production they are unable to achieve the necessary quality²⁶.

Another example is the Majorcan pearl and jewellery manufacturer Majorica that recently closed down its jewellery factory in Spain and restructured its pearl factory. 227 of its 400 workers were made redundant, and the firm started to produce in the factories owned by its new strategic partner, Drasen Ltd., in Asia (three in China, one logistics centre in Hong Kong and the management in Taiwan). The new owners considered that Majorica was in a crisis situation and that it was struggling to compete with Swarovski, Agata, Monet and Tous, which had "invested more in distribution channels and had been particularly successful in design". The aim is to transfer standard, non value-added production activities to low-cost countries and to retain in Europe just those activities that provide added value, while keeping the brand associated with the image of Majorca. This reorganisation has been successful and in 2007 the firm increased its sales by 20% over 2006²⁷.

3.2. Increasing the competitiveness of Spain's industrial fabric: Challenges for the authorities

Relocalisation involves the restructuring of business fabric. This is a process that is not exclusive to the current situation nor is it necessarily an international one, but it has become more intense in recent years and more distant localisations are now being considered. In Spain, relocalisation should be accepted as normal in a globalised world. A positive way of seeing it is that relocalisation by Spanish firms to developing countries (where labour costs are lower) is proof of the country's economic development over the last decades.

Firms close down factories because of product or business changes (making them obsolete), tricky processes of collective bargaining (making the firms and/or factories unfeasible) or lost competitiveness (in some case because of technological problems). They may move to a different factory or a new localisation in the same or a different country. The multinational Dupont, for example, closed down its THF (the substance used to make Lycra) factory in 2004. This was one out of four that it had at the time in

²⁶ Vadillo, J. (2006): "La empresa vasca Keller fabricará guitarras españolas en India", *Cinco Días*, 8 March (www.cinco dias.com).

²⁷ Manresa, A. (2004): "Líos de perlas", *El País (Negocios)*, 4 April, p. 8.

Asturias, because it had become less competitive after the sale of the Koch Industries' textiles division.

In the current economic situation, many firms are taking measures to reduce production in line with falling sales, adopting redundancy schemes and closing down factories. The automobile industry is having a particularly hard time, which affects many suppliers. The German Freudenberg components group announced, in September 2008, that it was closing down its factory in Barcelona, and dismissing 141 workers. Freudenberg España Componentes is a subsidiary of the Freudenberg Group and had been in Spain since 1968 producing automobile parts, especially plastic-coated pipes for brakes. The group reported losses of 12 million euros between 2004 and 2007, and losses in 2008 at the Barcelona factory of 1.7 million. This realignment was part of a general restructuring of the group's global brake production activities²⁸.

This process has had clear consequences for Spain in general. Relocalisation is destroying jobs, generally those of unskilled workers for whom it is very difficult to find new jobs. By way of example, in the textiles industry in which China has become the EU's leading supplier for clothing and its second supplier for textiles, Spain's UGT trade union calculated that 70% of production was at risk. In just two years (2002-2004), 20,000 jobs were lost in this sector. The effects on firms depend on their size. Large firms can consider relocalisation but most small ones have no alternative but to close down. And the impact is not the same in every industry. In 2003, the sectors that were affected most were automobile components, computers and textiles but in 2004 the main impact was in consumer electronics. Nor is the impact the same in every region. Catalonia and Valencia are the regions that have seen the largest number of relocalisations, but they are by no means the only ones affected²⁹.

In this context of increasing relocalisation of Spanish industrial activities and increasing competition from products made in developing countries, measures should be considered at institutional level. Apart from thorough transformation of manufacturing firms in Spain to strengthen their international competitiveness, there are many calls today for effective industrial policy measures. Esteban *et al.* (2001) state, "Today much of the responsibility for industrial policy falls on regional governments, and this has given rise to a proliferation of regional development agencies, which are accountable to the regional governments. They are taking an active role in the development and implementation of cross-cutting measures". However, whether measures are taken at national, regional or local level, they all aim to support the creation of a favourable environment for industrial development. Measures include the following: (a) promoting strategic industries or activities using tools to attract firms (administrative facilities, the offer of land with suitable infrastructure and services, etc. (b) improving technological and transport infrastructure and services, to facilitate communication with markets and suppliers, (c) encouraging firms to invest in R&D+i and training (with support, not only tax breaks), (d) establishing training policies to provide the necessary human capital, (e) strengthening links between universities and firms leading to the creation of research or innovation centres, (f) promoting the creation and development of collaboration networks within and between industries, (g) increasing labour market flexibility, (h) establishing policies to promote entrepreneurial activities and provide support for setting up firms, and (i) establishing and improving instruments to promote and support foreign trade. For some years now, some regions of Spain, such as Catalonia and

²⁸ www.lavanguardia.es, 17 September 2008.

²⁹ Mallol, E. and Navarro, R. (2003): "Juguetes y textil sufren la presión de la competencia China", *El Mundo*, 3 November, p. 39; Cortés, J. M. (2004): "Los sindicatos temen este año otras 1.500 bajas laborales en el sector de la electrónica", *El País*, 18 January, p. 57; Mallol, E. and Marcos, J. J. (2004): "La deslocalización lastra el mercado laboral de la industria manufacturera", *El Mundo*, 29 March, p. 34.

Asturias, have been taking measures to promote loyalty by the multinationals working in them –including visits to the firms by regional authorities, and have been implementing policies to attract new firms and creating agencies to attract new investments³⁰.

Conclusions

This paper analyses the impact of market globalisation on industrial firms' localisation strategies, with special reference to Spain. This being a very topical subject, information is given about the recent experience of many firms.

Globalisation is a dynamic process that makes business decisions, including those on localisation, increasingly complex. Although there may be many reasons why a firm decides to move to a foreign country, there are two main ones. The first is access to new markets and/or following customers. This decision is usually right if demand has been correctly estimated. The second is to reduce production costs, especially labour costs, by choosing an emerging (or developing) country. In fact, many relocation decisions over the last decades have been taken for both reasons, and have concentrated on two paradigmatic geographical areas –China and Eastern Europe, especially some of the new members of the European Union, where the combination of low labour costs with a potentially large market (or proximity to large markets) make investment attractive.

The paper carries out a specific analysis of relocation to such developing or emerging countries, especially in order to reduce costs and, sell the products made there in developed countries. Some factors are mentioned which advise against relocation. The final decision will depend on the degree to which such factors apply. If the firm's competitive priorities focus on cost, if the type of product is a standard one with little added value and if the production process mostly requires unskilled labour, then a relocation decision may be correct. However, if the products have a high added value, with the emphasis on adapting to the customer's needs, quality, innovation and/or the inclusion of high technology, service, speed and reliable delivery, then it will be more appropriate to produce in the country where the product is to be sold, usually a developed country. Only under such conditions can products compete successfully with those produced in developing countries, where the advantage is usually low costs. This means there is a degree of "specialisation" in the manufactured products.

Finally, the effects of relocation on firms located in Spain and on the economy as a whole are analysed, as well as the measures that firms and the authorities could take to maintain and improve the competitiveness of the business fabric. The most immediate consequence for practically all industrialised countries and especially for Spain is that, in some industries, mainly traditional ones with low added value and high use of labour, the process of relocation is weakening the industrial fabric and causing serious job losses. However, this is approached not as a problem but as a strategic challenge for firms.

The measures that individual firms can take to deal with globalisation are, firstly, a proper study to search for the most appropriate localisation. Keeping factories in developed countries to help create value, focusing on quality and design, is a good strategy. For this to be possible, firms need to promote R&D+i activities, improve their human capital in order to achieve greater versatility and qualification through training, with increased participation and motivation, create business networks and internationalise their activities. Localising factories in emerging countries when they are

³⁰ Martínez, M. (2004): "El Principado ultima un plan para evitar la fuga de multinacionales como en Catalonia", *La Nueva España*, 22 April, p. 46; Expansión (2004): "El Govern creará una agencia para atraer inversión extranjera", *Expansión Catalunya*, 6 February, p. 6.

labour-intensive and make generic products is also a good strategy, providing firms do not neglect their corporate social responsibility.

The authorities should not set up barriers to relocalisation, which in fact act as barriers to localisation, but should adopt industrial policy measures to promote the development of the sort of manufacturing that creates added value and focuses on high technology, quality, service and innovation. This requires measures to promote R&D+i, training, the creation of business networks and exports. In essence, it is a question of creating a favourable environment for industrial development.

The authors would like to express their thanks to Esteban Fernández Sánchez for all his comments and suggestions, as well as the Spanish Ministry of Science and Innovation and the European Union for financial aid under projects SEJ2006-04753 and SEJ2007-63706, and CIT 3-513420 (REFGOV).

Berry, B. J. L.; Conkling, E. C. y Ray, D. M. (1993): *The Global Economy. Resource Use, Localisation Choice and International Trade*, Prentice Hall International, Londres.

Ciriza, R.; Miguelez, E.; Suarez, L.; Hernandez, A. y Jimenez, J. (2004): “¿Se Puede Evitar el Desierto Industrial?”, *Actualidad Económica*, 5 de febrero, pp. 28-36.

Esteban, L.; Hernandez, J. M. y Lanaspá, L. (2001): “Patrones de Localización de la Producción y Efectividad de la Política Industrial”, *Economía Industrial*, nº 342, pp. 163-174.

Feentra, R. C. (1998): “Integration of Trade and Disintegration of Production in the Global Economy”, *Journal of Economic Perspectives*, vol. 12, nº 4, pp. 31-50.

Ferdows K. (1997): “Making the Most of Foreign Factories”, *Harvard Business Review*, marzo-abril, pp. 73-88.

Fernandez, E.; Avella, L. y Fernandez, M. (2003): *Estrategia de Producción*, McGraw-Hill, Madrid, Capítulo 6, pp. 259-304.

Fruin, W. M. (1997): *Knowledge Works. Managing Intellectual Capital at Toshiba*, Oxford University Press, Oxford.

Kotkin, J. (1988): “Made in the U.S.A.: The Case for Onshore Manufacturing”, en INC (Ed.): *The Best of Inc Guide to Business Strategy*, Prentice-Hall, Nueva York.

McCormack, A. D.; Newnman III, L. J. y Rosenfield, D. B. (1994): “The New Dynamics of Global Manufacturing Site Localisation”, *Sloan Management Review*, verano, pp. 69-80.

McGrath, M. E. y Hoole, R. W. (1992): “Manufacturing’s New Economies of Scale”, *Harvard Business Review*, mayo-junio, pp. 94-102.

Markides, C. C. y Berg, N. (1988): “Manufacturing Offshore is Bad Business”, *Harvard Business Review*, vol. 66, nº 5, pp. 113-120.

Mercer, W. M. (2001): *Worldwide Benefit and Employment Guidelines 2001/2002*, Mercer Human Resources Consulting, Nueva York.

Nieto, M. y Fernandez, R. (2004): “Responsabilidad Social Corporativa: La Última Innovación en Management”, *Universia Business Review*, primer trimestre, pp. 28-39.

Saenz, F. (2004): *Implantación y Eficacia del Sistema de Trabajo en Equipo: Un análisis de Casos de Empresas Industriales en España*, Tesis Doctoral No Publicada, Universidad de Oviedo.

Schmenner, R. W. (1979): “Look Beyond the Obvious in plant Localisation”, *Harvard Business Review*, enero-febrero, pp. 126-132.

Stobaugh, R. y Telesio, P. (1983): “Match Manufacturing Policies and Product Strategy”, *Harvard Business Review*, vol. 61, nº 2, marzo-abril, pp. 113-120.

Young, S.; Hamill, J.; Wheeler, C. y Davies, J. R. (1989): *International Market Entry and Development: Strategies and Management*, Harvester Wheatsheaf, Nueva York.