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LOCATING OPERATIONS IN HIGH LABOR COST COUNTRIES – EVIDENCE FROM SPAIN

ABSTRACT

The location of operations in high labor cost countries is increasingly discussed in the media, in part for recent declarations and actions from the president of USA, Donald Trump. While this particular instance can be labeled as populist or protectionist, the factors underlying the debate are extremely important: advances in systematic increases in productivity, low population growth, and the transfer of jobs to countries with lower labor costs are creating unemployment and underemployment in developed countries that could eventually result in protectionism and restrictions to free trade. This phenomenon has enormous social and economic implications, and has attracted considerable interest from researchers. In particular, this study provides empirical evidence of the location of manufacturing and services in the context of a European country (Spain), exploring the drivers, social implications and organizational theories that can explain it.

KEYWORDS | Outsourcing, location decision, reshoring, offshoring, inshoring.

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INTRODUCTION

In this study, we provide empirical evidence drawn from multiple industries in Spain on the factors that affect the decision of locating operations in high labor cost countries (HLCC, defined in this study as countries belonging to the OECD - Organisation for Economic Co-operation and Development). Moreover, we present some enablers of the decision of locating operations in HLCC, i.e. factors that allow that such location to have an impact on firm performance.

The literature on industrial location has traditionally focused on reducing production costs, especially those related to labor. However, recent localizations in HLCC's contradict such paradigm. For example, labor costs in the auto sector in Spain are around 25 Euros per hour, 5 times higher than Romania and almost 8 times higher than China (Expansión 2013). Nevertheless, the Almussafes industrial park of Ford, in Spain, has become a role model for other factories of Ford, soon to become its largest factory in Europe and a global innovation hub of the firm (El País, 2015). How can we explain that?

The economic recession, an increased emphasis on sustainability, and higher customer expectations for flexibility and cost performance drove firms to reconsider their location decisions. Recently, a Boston Consulting Group study concluded that over one third of large manufacturers are considering relocating their manufacturing activities in HLCC (Sirkin et al., 2011). High oil prices, increased transportation costs and the perception of global supply chain risk have contributed to move production to HLCC (Tate, 2014). The trend encompasses not only big firms, or cost-focused ones; it also is being perceived by small firms and technological-focused ones (Gray et al., 2013). Firms have moved activities to low-wage countries based on easily measured costs, and have returned to their home countries after experiencing the risks associated e.g. delivery delays, communication problems, intellectual property issues, etc (Gray et al, 2013). In a nutshell, the key premise behind bringing operations to HLCC's is that closeness to product design, reduced order cycles and lower costs of carrying inventory in the pipeline should offset higher absolute production costs (Shih, 2014).

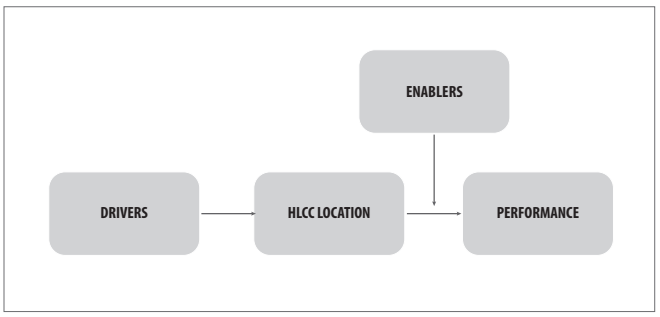
The location of operations in HLCC's has been assuming increasing importance also for national governments. For instance, the new Trump administration in US is focusing on mechanisms to stimulate firms to locate their operations in the US rather than low-cost countries. France has developed specific software (Colbert 2.0 -Direction Générale des Enterprises, 2015), that allows companies to assess whether they are better off producing in France.

However, while the literature on locations decisions in specific countries or regions is large and diverse (Ketokivi et al. 2017), empirical evidence is less common in the academic literature. This may occur because firms are reluctant to make their mistakes public, and the fact that location decisions do not constitute an item that has to be registered in official data bases (Martinez-Mora & Merino, 2014). Tate (2014) argues that research lacks empirical evidence that allows analyzing the factors explaining HLCC location. Actually, the trend is so recent that there is little empirical evidence on the factors that enable such decisions to effectively generate an increase in firm performance (Martinez-Mora and Merino, 2014). Furthermore, most of research on this area has a US-centric perspective, lacking data from other countries (Tate, 2014). One of the objectives of this study is to help fill this gap in empirical research, particularly because recent research suggests that there may be changes in the importance of various factors affecting the manufacturing location decision (Ellram et al, 2013).

Thus, the main academic contribution of this study is to provide empirical evidence of decisions on the location of operations in the context of a European country (Spain), exploring its drivers and enablers.

The theoretical framework used in the study is depicted in Figure 1.

Figure 1. **Theoretical framework**



The paper is structured in the following way: First, we provide a brief literature review on location decisions, with special emphasis in HLCC's. Then, we present a case analysis of location decisions in four Spanish and multinational firms, contrasting them under the theoretical lens of organizational theories. Finally, in the last part of the paper we discuss the social conse-

quences of location decisions in the context of developed countries, and provide some policy implications.

RESEARCH BACKGROUND

There are many theories that have been used to explain manufacturing location decisions, such as Transaction Cost Economics (Williamson, 2008) or the Internalization theory in the make-or-buy decision (Coase, 1937). The classical theory of international trade bases this decision on the differences of production costs between countries, factor endowment, or transportation costs. Other factors include the "economies of agglomeration", where firms cluster together to enjoy advantages of skilled labor, favorable climate, etc (Martinez-Mora and Merino, 2014). However, previous studies generally focused on Western nations establishing subsidiaries in low-wage countries (Gray et al, 2013), thus neglecting the manufacturing location in HLCC's. After a diminishing interest in the manufacturing location decision literature in the last decades, this area has re-emerged with a new focus. Whereas previous research focused on low labor cost, today it is focused on value creation (Ellram et al, 2013).

In this study, we use the eclectic theory of international production (Dunning, 1988, 1998), because, differently from previous theories, it is focused on international location decisions. More specifically, it investigates "whether a firm should internalize its intermediate product markets within its home country or in a foreign country, and the outcome of this choice is primarily determined by the costs and benefits of adding value to these products in the two locations" (Dunning, 1988, p. 45). In his theory, Dunning categorizes the location factors in four types: resource seeking advantage (availability of raw materials and infrastructure), marketing seeking advantage (access to domestic markets), efficiency seeking (production cost-related factors, industry clusters and removal of trade barriers), and strategic asset seeking advantage (knowledge-related assets and synergies).

Why to locate operations in HLCC?

Contrary to the commonly studied location in low-cost countries, several examples of location in HLCC have attracted the interest of the media recently. For example, the repatriation of textile and footwear industry in Spain, as well as the call centers of main Telecom firms from Latin America (Martinez-Mora and Merino, 2014); General Electric (Tate, 2014); and some Macintosh lines of Apple (Gray et al, 2013).

Gray et al. (2013) identified two main research streams that deal with location decisions of operations: the International Business literature (Dunning, 1980), and the make-or-buy decision (Williamson, 1991). In both cases, there is vast literature analyzing the multiple factors that affect such decisions.

Location decisions are usually justified by labor costs (Tondolo, Kaynak, de Souza, & Bitencourt, 2011). However, increases in transportation costs, stagnation of infrastructure, and labor cost differential changes could hinder decisions of location purely based on the low cost of labor. Moreover, most of the literature focuses on a few elements of cost (e.g. transportation and manufacturing costs in García & Díaz (2012)), but actual costs of location decisions can be much higher than imagined by managers. For example, Platts & Song (2010) performed an extensive cost analysis of sourcing from China that included set-up costs, extended price, administrative, logistics, inventory, quality and supplier management costs. These trends are motivating firms to redesign their supply chains in the developed world, in order to remain cost competitive and in this way avoid offshoring.

In addition, proximity to local production networks provides important operational advantages. For example, it favors logistics responsiveness, reducing on-transit inventory and transportation costs and improving lead times. Being close to suppliers reduces the length of ordering cycles, enabling companies to respond more quickly to market changes (Shih, 2014). Furthermore, Jain, Girotra & Netessine (2013) found that a 10% shift in sourcing from domestic to global suppliers increases the inventory investment by 8.8%. Having a supply chain close to the final consumer also favors communication and reduces complexities associated with global networks. For example, Lenovo, formerly a subcontractor of IBM, surprised the business world when it acquired in 2005 the laptop unit of IBM (The Wall Street Journal, 2012b). Facing a declining and quickly changing market, the company has decided to follow a contrary path to most electronic producers by increasing vertical integration to 50% (from around 30%) to reduce lead times. In a striking similar comment to those of the founder of Inditex, Amancio Ortega (case analyzed below), CEO Yuanquin has declared that "selling PCs is like selling fresh food". Location in HLCC's also favors flexibility, because it

is associated with proximity to consumer markets and lower lead times. The results reveal that this phenomenon is a response to changes in the market, which is demanding smaller batches in shorter time frames (Martinez-Mora and Merino, 2014). Such constraints limit production in low-wage countries, because firms in these countries often require large production lots, in order to obtain economies of scale. Also, local operations facilitate access to local markets, and the prompt identification of consumer trends that would be hard to identify if production was in other countries (Gray et al, 2013).

Other factors in HLCC location decisions include more intangible factors. For example, supply chain risks. Risk and vulnerability are implicit in all operations, but are particularly critical when they extend beyond the borders of the firm. According to Wagner & Bode (2008), "modern supply chains seem more vulnerable than ever", citing recent crisis and catastrophes that have impacted supply chains world-wide, both man-made (e.g. terrorist attacks) and natural (e.g. hurricane Katrina). Kumar et al. (2009) have analyzed supply chain risks, proposing a classification of causes that include country risks (e.g. political instability), reputation (as in the Corporate Social Responsibility cases mentioned below), strategic, operational, credit (recovery of accounts receivable) and of compliance (laws and regulations). Moreover, by locating in HLCC's, firms can decrease the risks related to losing control of intellectual property, or positively affecting product quality and brand image (Tate, 2014). We can add to these the cultural risks. Cultural differences among countries and groups have been considered by some authors as an argument against placing operations away from consumer markets, culture being here defined as "the collective programming of the mind distinguishing the members of one group or category of people from others" (Hofstede, 2010). Likewise, Metters (2008) cites studies reporting cultural differences as a major problem in manufacturing location.

Moreover, productivity and innovation can be improved by locating operations in HLCC's. A common thread of research on the formation of networks (Brito & Carvalho, 2014) is related to knowledge diffusion, firstly proposed by Marshall over a century ago. The effect can be both positive and negative. For example, Fischer, Scherngell & Jansenberger (2009) reported a disproportional co-location of patent citations, as evidence of localized knowledge spillovers, and Christoph (2005) analyzed labor poaching in the German high tech industry. The effect of governmental policy and proximity to higher education institutions on the creation of high-tech clusters is another example (Bretonès & Scheel 2011; Frenkel, Shefer & Roper, 2003; Woodward, Figueiredo & Guimarães, 2006).

Finally, new trends such as sustainability are encouraging location in HLCC. One factor is related to the increasing standardization of sustainability regulation over global supply chains, which dissuades firms from seeking less restrictive legal environments (Gray et al, 2013). More importantly, location in countries with low labor costs can increase reputation risks (and implicit customer backlash) due to unethical practices at remote suppliers, as the recent case of the tragic death of over 100 workers at a supplier factory in Bangladesh of garments for Walmart and others dramatically show (The Wall Street Journal, 2012c). Also, it can increase the risks of indirectly supporting slave or child labor in other supplier countries, together with environmental degradation, or support of dictatorships, with significant damages to corporate image. Thus, firms are encouraged to avoid offshoring and engage in local operations. After all, it is easier for buying firms to control the sustainability of their supply chains in their own country (Tachizawa & Wong, 2014).

When it makes sense to locate operations in low-wage cost countries

Locating operations in mature economies is not naturally without caveats, making offshoring a desirable option for given types of industries. A strong determinant of global network design is corporate taxation. While corporate tax in the USA (federal plus local) is about 40%, it is only 26% in Canada, 30% in Mexico, 25% in China (down from 30%), 30% in Spain, 18% in Switzerland, 12.5% in Ireland, and even zero in fiscal paradises, or very small with taxation loops (KPMG, 2013). Thus, setting part of the operations in a country that offers better fiscal conditions make fiduciary sense for large corporations. Companies such as Apple and Google reportedly pay little in corporate taxes by using such loops, but in at least one high profile case (Starbucks) the company has agreed to increase their tax payments due to public backlash (Bloomberg, 2013).

Low labor cost is still another important consideration in offshoring decisions, especially in labor-intensive industries (e.g. textiles and electronic assembly). For instance, in the 2011 survey of primary textile (Werner International, 2012) the hourly labor cost in Switzerland is almost $50, compared to

$2.1 in China (and over $18 in Spain, where some textile firms manage to stay highly competitive – see case Inditex, further in the text).

There are as well operational reasons to offshore operations. Wharton Professor Mauro Guillen (Knowledge@Wharton, 2011) cites the example of the Spanish maker of cigarette lighters Cricket, which operates three factories - one in Spain, one in India and a third in China. Although labor costs are higher in Spain, the per-unit production costs are lower than in China as the plant is fully automated. Still, the company keeps the plant in China to facilitate filling orders for customized lighters, as it is cheaper to retool in China where the lines are not automated.

Lastly, another factor that justifies locating in low-wage countries occurs when the supply base is located in other countries. For industries such as electronics, that means a global shift of the supply base towards China. In such industries, moving production to a country such as the United States often means a manager will face a weak supply base. For example, in the United States, there are no domestic suppliers of touchscreen displays or batteries, and most of the circuit boards and components had to come from abroad as well. This implies higher logistics costs than if the phone had simply been assembled in Asia (Shih, 2014).

METHODOLOGY

In this study, we use a multiple case study methodology. Case research is being increasingly used to study industrial location. Gray et al (2013) argue that public secondary data is difficult if not impossible to obtain, and standard surveys face difficulty disentangling decision biases and actual costs. On the other hand, in-depth case studies are necessary to facilitate an understanding of the context and real drivers of location decisions (Gray et al, 2013). Furthermore, Ellram et al (2013) make a call for more case research that indicates that more strategic factors such as value capture are becoming a more important issue than cost savings.

In order to add more empirical evidence to the research field, we provide four examples from firms operating in Spain, a HLCC and particularly interesting country to focus on, for several reasons: The country is suffering the aftereffects of a financial and banking crisis, and a housing bubble explosion that has created an unprecedented 26% unemployment rate (reduced now to about 19%, but much higher for those under 25). Thus, trying to understand mechanisms for the location of operations in HLCC (and the implicit creation of employment) is a critical priority for Spain.

In this study, we analyze four cases in different industries that have located or expanded operations in Spain. The firms have different sizes and strategical priorities, in order to have a more complete picture of location of operations in a HLCC. Two of the cases (NGA and CHEP) are service companies, and two (Ford and Inditex) manufacturing companies, and all have been able to create, attract, or keep operations to the country, creating employment in spite of the crisis. All cases have been documented from secondary data available in Internet and from personal communications with the companies by the authors and extended semi-structured interviews in the cases of NGA and CHEP.

In our study, a driver is a factor that affects the decision of locating operations in HLCC's (e.g market pressures). In addition, an enabler is a factor that facilitates that such location have an impact on firm performance (e.g. R&D investments). Accordingly, Table 1 synthesizes the drivers for locating operations in Spain identified in the cases. The drivers are classified according to the typology proposed by Dunning's (1998) eclectic theory of international production. Finally, Table 2 depicts the enablers that were identified in the study. The enablers are divided according to the stakeholders that are affected in each case.

Table 1. **Drivers for HLCC location**

FIRM	TYPE OF DRIVER (DUNNING, 1998)	DRIVER
NGA Human Resources	Resource-seeking	• High availability of skilled workers, with low local demand for such resources • Low cost of living compared to big European cities
	Market-seeking	-
	Efficiency-seeking	Same time zone as Europe
	Strategic asset-seeking	Cultural affinity to European consumer market

CHEP	Resource-seeking	• Low employee rotation • Availability of skilled workers, with low local demand for such resource
	Market-seeking	-
	Efficiency-seeking	-
	Strategic asset-seeking	• Madrid as a center of excellence • Previous existence of planning and financial teams in Madrid
Inditex	Resource-seeking	-
	Market-seeking	Proximity to consumer markets allows prompt detection of demand patterns
	Efficiency-seeking	• Need to reduce lead time • Unstable, hard-to-forecast demand • Low labor intensity
	Strategic asset-seeking	High capacity of response / flexibility due to proximity of suppliers
Almussafes industrial park, Ford	Resource-seeking	Proximity to suppliers
	Market-seeking	Geographical proximity to consumer markets
	Efficiency-seeking	Labor unions moderation and flexibility
	Strategic asset-seeking	• Cultural affinity to consumer markets • Competitive auto parts industry

Table 2. **HLCC location enablers**

Firm	Stakeholder	Enabler
NGA Human Resources	Employees	• High unemployment level decreases employee turnover • High quality of life incentivizes labor force to stay in the region
	Universities	• University with an active participation in Erasmus program • High quality of courses in the Language area
CHEP	Employees	• High unemployment • High quality of life • High unemployment level lowers employee turnover • Competitive salaries and soft benefits
	Universities	Erasmus Exchange program
Inditex	Suppliers	Close relationship with local suppliers
	Universities	Close ties with local universities
Almussafes industrial park, Ford	Universities	Heavy R&D investments
	Government	Local government support

NGA Human Resources

NGA Human Resources, a Human Resources service company (part of group Northgate - http://www.ngahr.com), originally centralized in Poland its technical back-office for Europe, Middle East and Africa. But the location had its caveats: it took 3-4 years to train the workers (initially through conventional training, then on-the job training with mentoring) only to see them leaving, resulting in high employee turnover. The company then relocated their service hub to Granada, Spain, where the advantages of lower employee rotation and know-how more than offset higher labor cost. NGA Human Resources has expanded their Granada operations from 15 employees to more than 500, plus 100 more in a back-office

related organization. Talent availability for this type of service center that requires skilled workers is critical, and Granada has a multicultural university that provides technical training and graduates with good language skills. Technical and language expertise are partially due to the European exchange program Erasmus (Granada is one of the most active universities in this program) and the high quality of its courses in the language area (El Mundo, 2015). High unemployment levels and a labor force who wants to stay in the region due to the high quality of life also help to minimize turnover. Although offshoring activity in the sector is high, competition for global resources that are not backed by strong brand name (as NGA Human Resources feels was their case, vis-à-vis the likes of Microsoft or Google) is fierce, and there is currently little competition for these resources in Granada. There are also many advantages in the location for serving the European market: cultural affinity, less change management and supervision required, and same time zone. The advantages of the larger Spanish cities (Madrid, Barcelona) would be less significant in this particular case, due to higher cost of living and more local competition for resources.

CHEP

CHEP is the world leader in the pooling of pallets (readily recognized by being painted blue on the side) and containers. The company, owned by Brambles Limited, an Australian company, employs 7700 persons, owns over 285 million pallets and containers, and has over 300,000 customers in more than 50 countries. With 440 service centers, it performs over 2.5 million movements of pallets and containers every day.

García and Díaz (2012) described the transformation of the European unit of CHEP, from a country-based organization, to a pan-European organization. As a result of this reorganization, strategic, tactical and operational activities, that were performed locally at each European country, were centralized in Madrid, where 50% of the European staff is located (the other half reports to Madrid but is decentralized at the country base as this allow proximity to markets and improvements in sales and operations -S&OP). CHEP Europe has also recently centralized the execution of transportation for all of Europe, the last function that remained decentralized; relocated some seventy additional specialized staff to Madrid. Among the reasons argued for the centralization of operations in Spain are the previous existence of planning and financial teams in Madrid, which operated as a center of excellence, assuring control and supervision for the next processes to be centralized, especially activities critical for their impact on customer service. The availability of skilled labor in Madrid is cited as another location factor, as young workers with higher education and languages expertise, in a country with high unemployment, find motivating the opportunity to work in an international company that offers progression opportunities.

The Department of Transport Execution required that a significant percentage of the new employees were natives of the country they were to serve, and the student exchange program Erasmus facilitated the recruiting of international workers, as many participants in this program welcomed the opportunity to stay in Spain after finishing their studies. The country and the city quality of life are frequently mentioned as differential elements in international recruitment.

The company recognizes that the economic situation in Spain makes employee rotation to be very low, and that this circumstance can change in the future. However, the company expects that offering competitive salaries and other soft benefits will make these workers stay:

> "a good working environment, opportunities to grow here or in the 50 countries where we operate, sustainability message, Corporate Social Responsibility policies…".

The company did analyze alternative location for the centralized functions (particularly in Eastern Europe), but were dismissed due to issues with recruitment. The company cites data from the Economist in which over 40% of Polish or Hungarians companies have difficulties in filling jobs, while the same figure for Spain is less than 15% (The Economist, 2015).

Inditex/Zara

In a sector (garments) traditionally characterized by offshore production, Inditex has adopted a different approach. Zara, the flagship company of the Inditex group, consists of a network of producers in a concentrated area (Northern Spain) that allows the company to respond more quickly and with more flexibility than its competitors. This Spanish integrated

manufacturer-retailer of apparel has been defined as 'Armani for the masses' (Díaz & Solís 2002). Sales and profits make Inditex/Zara one of the largest and most successful fashion companies in the world. Net profits of Inditex were 2.36 billion Euros in 2012, out of sales of 15.9 billion Euros, both registering growths of 16% with respect to 2011.

Flexibility is key in Zara's business model. It launches over 100 collections per year (11,000 new garments) and has a total design-to-store cycle time of less than 4 weeks. Interestingly, driven by "fast-fashion" retailers like Zara, some apparel manufacturers are relocating production back to the United States, aiming at shortening lead times and increasing responsiveness (Sheng 2015). Every garment in Zara will be on sale for a maximum of 5 weeks, after which it is removed and sent to discount stores or destroyed. Zara invests close to zero percent of its sales in advertisement (5% of sales for Gap), relying instead on keeping customers perpetually interested in finding new surprises (Zara´s customers visit the conveniently located stores an average 17 times a year). While Gap brands, Zara intrigues.

Two distinct flows can be appreciated at Inditex. One consists of long-term cycles, i.e., purchasing of raw materials and the other a short-term cycle, i.e., design, fabrication and distribution. The long cycle starts three to six months before each fashion season and consists in the acquisition of two thirds of the raw materials required, mainly cloth (sourced mainly from India, China, Morocco –a main sourcing central is located in Tanger-, Mauricio, Korea, Italy, Germany and Turkey), and about one half of all garments. These are those items that are thought to be stable, i.e., basic products for which demand is fairly predictable, or have a high labor component (e.g., embroidered garments). The rest of the garments (those thought to have a higher risk) are produced in-house in the short cycle described below.

The short cycle starts with design, an in-house affair with over 200 designers. A key aspect of the process is related to the area managers, who decide based on local knowledge (e.g. the Caribbean or Eastern Europe) how much of a particular product they estimate will be required for four to five weeks of demand in their area of expertise. Patterns are scanned and sent electronically to the manufacturing plants, all located in the same area for in-house production (Arteixo, in Northern Spain where headquarters are located). Here capital-intensive activities such as dying and cutting are performed, while sewing is manually done mostly by outsourced local micro-companies. Production is then pushed into the stores, where the manager sends feedback in close to real time about what moves and what doesn't (colors, sizes, models), allowing for fast adjustments of the production plan. Replenishment of stores is done twice or three times a week, with a lead-time for existing (or subject to slight design modifications) items of two weeks, and of five weeks for new products. This vertically integrated, centralized approach to fashion is strikingly different than the more usual offshoring used by Gap and others, and requires a higher level of asset utilization. Nevertheless, it allows for a fast response system that minimizes error in forecasting and thus waste. In sectors like clothing, furniture or household appliances, where product launches are frequent, reducing the time gap between design, production and distribution is critical. In such context, keeping manufacturing close to customers and suppliers is an effective strategy to assure control over these stages in production and assure a highly responsive system. Strong ties with local universities are also important to assure a constant inflow of specialized workers and specific knowledge. For example, the Inditex Chair of Corporate Social Responsibility at the University of Coruña.

Almussafes industrial park, Ford

Spain is the second largest producer of autos (and first of industrial vehicles) in Europe, and the 12th worldwide. Ninety percent of the production is exported to over 130 countries, generating the largest contribution of all sectors to exports, over 17% of total (ICEX, 2013). The activity of the automakers is accompanied by an important auxiliary sector (6th in the world), led by companies Gestamp and Antolín. The sector represents a contribution to Spanish Gross Domestic Product (GDP) and employment as large as that of tourism (around 10% of total). In spite of an important contraction in the European auto market, the industry has experimented a notable comeback, with Ford Spain absorbing part of the production of Belgium, PSA (Peugeot Citroën) Spain part of the production of France, Renault absorbing production from France and Turkey, and Nissan investing $170m.

Labor costs in the auto sector in Spain are around 25 Euros per hour, almost half of that in Germany, but 5 times higher than Romania and almost 8 times higher than China (Expansión 2013). How

to explain then the success of the sector? One explanation can be found in the case of the evolution of the Almussafes industrial park of Ford, in the proximity of Valencia. Over the years, the plant has evolved into a large industrial park, with over 90 suppliers connected to the assembly line via conveyors allowing for just-in-sequence production, an initiative that has been successfully adopted in other factories of Ford (e.g. Saarlouis, Germany and Genk, Belgium). Labor and Union moderation and negotiation flexibility, know-how, and the proximity to suppliers (due in part to incentives from the local government) will soon make Almussafes the largest factory of Ford in Europe, as it absorbs the production of other European plants (Cinco Días, 2013). Other explanations come from the heavy investments in Research & Development (89 robots for each 10,000 workers). The President of Ford has recently declared that the company plans to make the Spanish plant a "global innovation center" of the firm, focusing on models of higher size and sophistication for the export market (El País, 2015). Moreover, other factors that explain this decision are a competitive auto parts industry (which obtains 60% of its revenue from exports), and the geographical and cultural proximity to consumer markets (Spain is a privileged export platform for European, North Africa and Latin American markets).

In order to facilitate the cross-case analysis, we categorize the main drivers for locating operations in Spain of each case. The cases are analyzed according the eclectic theory. A summary table can be seen in Table 3.

Table 3. **Drivers for HLCC location**

Type of driver	NGA	CHEP	Inditex	Ford
Resource-seeking	X	X		X
Market-seeking			X	X
Efficiency-seeking	X		X	X
Strategic asset-seeking	X	X	X	X

These cases are analyzed under the theoretical lenses of the eclectic theory of international production (Dunning, 1980, 1988, 1990). In this theory, three determinants of international production are proposed: ownership advantages, location advantages, and internalization advantages. In this study, we are particularly interested in the location advantages suggested in the eclectic theory. Our aim is to use this theoretical lens to analyze the location decisions of the companies mentioned in the study.

DISCUSSION

Empirical evidence of the location of operations in HLCC is scarce in the academic literature (Ellram et al, 2013; Gray et al, 2013; Tate, 2014). While location decisions are usually justified by labor costs (Baker & Roberts, 2006; Martinez-Mora & Merino, 2014; Tondolo et al, 2011), the results of the study suggest that location decisions include a much broader set of drivers than just cost. Furthermore, results of this study are in line with previous studies concerning the cross-sectorial nature of location decisions in high-cost countries, i.e. the fact that it encompasses multiple a diversified array of industrial and service sectors (Gray et al, 2013).

While location in low-wage countries remains a natural option for specific types of industries (e.g., labor intensive, or located in countries that offer important tax advantages) or when it is important to guarantee trade compliance (e.g. some countries prevent importing from certain others), business cases are often oversimplified by considering only labor costs or taxation considerations. Locating operations in HLCC may offer many cost, risk and agility advantages, plus a positive effect in job creation that could produce a hedge against protectionism. In particular, although local operations risks are often lower than offshoring since firms have more knowledge and are closer to local markets, they tend to be more concentrated (i.e. the array of potential location alternatives in the case of problems is more limited.)

A key driver of the cases is the reduction of employee turnover. This is in line with recent research: stabilizing the workforce has been detected as one of the main motivations for bringing back production to HLCC's. Indeed, high worker turnover is a problem

on the shop floor because it injects variability and unpredictability into production schedules (Shih, 2014). Another important driver detected in the study is skill availability. Many authors are considering the scarcity of non-strategic resources in areas with high economic growth, especially trained and motivated workforce (Tate, 2014). In our study, the broad availability of linguistic skills in Granada favors the location of operations in the city, in the case of NGA. However, even more critical is the gap of skills in the manufacturing sector. This is important as the resources used by firms in their traditional manufacturing operations (e.g. suppliers, workforce, and even the company's own internal product design capabilities) can atrophy, creating a generational skills deficiency in most developed countries. Accordingly, the position of Spain in the World Ranking of Economic Complexity has been decreasing steadily in the last decades (from the 18th position in 1995 to the 27th position in 2013). The Economic Complexity Index (ECI) is calculated yearly by the Center of International Development of Harvard University, and measures how diversified and complex a country's export basket is (for more information, see http://atlas.cid.harvard.edu/rankings/).

In order to solve this problem, increasingly common in the developed world, many companies in the United States are hiring more experienced manufacturing engineers or working with local community colleges to incorporate industry credential systems and/or training into the schools' programs to attract students (Shih, 2014).

An interesting result of this study is related to labor intensity. While most studies assume that labor-intensive activities are prone to production in low-wage countries, our findings show that this may not be true, since even highly labor-intensive (e.g. call centers) activities can be moved to HLCC. Thus, an implicit assumption that only automatized activities should be kept in the developed world (because of the high labor cost) is questioned.

Although much of previous research suggests that cost-related factors play the most important role in location decisions, our study suggests that other factors (e.g. employee turnover, links with supply base) may be equally important. Actually, the risk of supply interruption, together with the movement of manufacturing to various regions suggests that supply base is becoming an important location factor (Ellram et al, 2013).

As the Inditex case shows, positioning manufacturing close to the market minimizes the inventory of goods in the pipeline and reduces delivery times. More importantly, the closeness reduces the length of ordering cycles, enabling companies to respond more quickly to market changes (Shih, 2014).

With respect to the enablers, an analysis of the impact on stakeholders provided interesting results. The most relevant stakeholders in the analyzed firms were the employees and local universities. On the other hand, other stakeholder categories such as consumers or media were not mentioned. A possible explanation is that the main drivers of the firms in the study were in Dunning's resource-seeking category thus stakeholders who could potentially provide such resources would acquire greater importance. The reasons for that should be further investigated.

Finally, an important gap in the literature refers to the potential differences between services and goods location decisions. Are there different drivers for service and manufacturing firms? Our study does not indicate a significant difference between the drivers of service and manufacturing location decisions. However, it would be interesting to have more research specifically designed to investigate this issue.

Social and political impact of location decisions

The HLCC location enablers depend heavily on the social and political contexts. It can be argued that developed countries are suffering a structural destruction of employment (Díaz 2012), resulting from systematic increases in productivity that have displaced labor from the primary sector of the economy (agriculture, mining) to the secondary sector (manufacturing), and then again to the tertiary sector (services).

While the four cases discussed above show the potential for job creation in Spain, much remains to be done to achieve unemployment values closer to other countries in the OECD. Some enablers, induced from the gathered evidence, are sketched below:

Rebuild companies' supplier ecosystem and some basic core competencies (in line with Shih, 2014). For instance the creation of local clusters, following the examples of Ford Almussafes and of the technological cluster of Granada, discussed above.

Incentivize technical education and stimulate young talents in this area. In the same vein, reduce the mis-

match between the unemployed skills and what employers need, through educational reform: according to the OECD, over 45% of all College graduates in Spain are working at jobs of low skills requirements, twice the OECD average (Economist 2010). In multilingual Europe to speak at least a second language is also critical. In a study of US-based firms who brought back their operations to the country, few of the new hires were prepared for the expectations placed on them or the environment in which they would be working (Shih, 2014). While Chinese firms have been developing vast pool of technical resources in manufacturing, HLCC have lagged behind (Shih, 2014).

Reduce corporate taxes. Corporate taxes in Spain are between 20 and 25% for small companies and 30% for companies with more than 25 employees and profits over 300,000 Euros. A flat rate, closer to 20% will stimulate re-shoring, employment and state income (as most tax revenue all over the world come from personal taxation).

Simplify regulation. Spain occupies the position 74 in the Ease of Doing Business ranking of the World Bank, and despite recent advances, but much remains to be done to facilitate hiring and firing, improve productivity, reduce public holidays and assorted worker benefits, and simplify procedures for the creation of companies. Related to this is improved access to credit, especially for SME.

But eventually job creation and competitiveness have to come from the Spanish workers themselves. As one director of an automobile assembly plant told one of the authors:

> "We are aware that this factory was located in Spain because of the advantages of a weak currency and cheap labor. These advantages are now lost, and we have to substitute for productivity, efficiency and innovation to keep our jobs".

CONCLUSION

Free trade promotes innovation and competition, grants access to much larger markets, and to the exchange of ideas. Tragically, faced with a combination of global economic slowdown, increased unemployment/underemployment, and migration pressures many countries are being tempted by populist and protectionist short-term political solutions that could result in the erection of barriers to global trade. This is a complex issue and in this paper we focus at providing more empirical evidence on the location of operations in HLCC, grounded on previous literature and organizational theories. This issue is increasingly relevant, being object of intense discussion at practitioner, academic and policy levels. As a matter of fact, the location of operations in HLCC's does not only present relevant repercussions at supply chain decisions, but it also is characterized by important social implications. We believe that an integrated discussion of both dimensions, usually neglected in the literature, can raise a more fruitful debate of how such decisions affect stakeholder management, and can lead to industrial policies that counter populist and protectionist political behaviors, assuring the sustainability of global supply chains.

Although this paper constitutes a contribution in this direction, we acknowledge the limitations of being based on a small sample of companies located in Spain, and of the secondary nature of the data. Obviously, firms don't like to broadcast previous bad decisions. Thus, collecting more quantitative data on location decisions is recognized by academics as a complex task (Martinez-Mora & Merino, 2014). However, more cross-sector and geographically diversified studies on this area are important to support more grounded conclusions. Moreover, tt would be interesting to study the supplier location decision as well. To what extent are the location drivers for manufacturers the same as those for their suppliers? Overall, a better understanding of total factors involved in location decisions is needed to support business and political decisions. In particular, the application of different organizational theories can provide some useful insights about locating operations in high labor cost countries and policy implications. We hope to have contributed on this direction as well.

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