

FDI in the automotive plants in Spain during the Great Recession

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1. Introduction

These are heady times for output in Spain's automotive industry. With official figures still pending, the national organisation of vehicle makers ANFAC (Spanish Association of Automobile and Truck Manufacturers) estimates that 2.4 million vehicles were assembled in Spanish plants in 2014. This is more than 10% up on the figure for 2013, and 20% up on 2012.

In 2011 a total of 34 different vehicle models were assembled at Spanish plants. In 2013 the figure rose to 39, and is expected to reach 45 by 2016. Almost all Spanish assembly plants have been awarded new models in the past two years, and none seems currently to be under any short- or medium-term threat of closure or drastic cutbacks in production. Indeed, the two US-based assemblers with plants in Spain (Ford & GM), under pressure after incurring substantial losses on their operations in Europe, have begun restructuring their European value chains, and they are now placing much more emphasis on their Spanish plants. Ford Valencia has been selected as the assembly plant for the company's high-end models in Europe.

At the same time SERNAUTO (Spanish Association of Equipment & Component Manufacturers), which represents 1000 automotive industry suppliers, expects sales in the Spanish components & assemblies sector to increase by 24% over the next 6 years. SERNAUTO member companies provided an estimated 309,000 jobs in 2013, and the prospects for growth suggest that a further 30,000 direct jobs could be created by 2020.

The Spanish automotive industry forms part of a Europe-wide value chain (Domanski and Lung 2009; Lampón et al. 2014). As such it has been hit hard by the slump in vehicle sales in Europe during the Great Recession. According to OICA data, 18.8 million new vehicles were registered in Europe in 2007, while in 2010 the figure was 15.6 million and in 2013 it

fell to a historical low of 14.1 million. However, aside from the quantitative effects of this short-term reduction (or is it also structural?) in EU vehicle sales on vehicle assembly operations, the question arises of what changes the Great Recession may have caused in the organisation of the value chain in the European automotive industry. The need to cut back production capacity and reorganise the sector could affect the geographical distribution of the value chain, and may therefore also be affecting more qualitative aspects of the place occupied by Spanish assembly plants in the European automotive production system. Against this background, this paper seeks to analyse the investment decisions of automotive groups with plants in Spain during the years of the Great Recession, focussing on FDI (foreign direct investment) inflows to vehicle assemblers in Spain. The analysis seeks to provide a description of the trends affecting the position occupied by Spanish vehicle assembly plants in Europe and, at the same time, to enable hypotheses to be drawn concerning potential trends in the organisation of production within Europe.

This study covers solely assemblers with plants in Spain. Specifically, it analyses the country's 13 biggest vehicle assembly plants in terms of production volumes. FDI statistics provided by international organisations and national statistics offices (UNCTAD, OECD, EUROSTAT and, in the case of Spain, the Ministry of the Economy and Competitiveness) are useful for reporting flows between countries, but are not meaningful in reporting events between medium-sized and small countries and highly specific production sectors. Moreover, such data provide very little information on the qualitative implications of FDI flows, because all that they do is to measure them quantitatively. Accordingly, the analysis presented here begins by offering generic data on FDI during the Great Recession in the EU, obtained from the OECD & covering NACE codes 34 and 35.

However, the most valuable information in both quantitative and qualitative terms concerning FDI in the Spanish automotive assembly industry is drawn from a wide range of other sources: annual reports published by transnational companies, company press releases, information published in the specialist and general media and a survey completed by shop stewards in the largest trade union at 12 of the 13 assembly plants examined. These unusual sources are used because the study looks at corporate decisions made especially from 2012-2013 onwards, which means that little supporting material on them can be found in scientific journals.

The conclusions of the study describe, albeit cautiously, a scenario in which changes that can be seen as structural are taking place. The Great Recession has substantially altered the context of the automotive sector in Europe. Indeed, the sector has shifted from opening plants in a context where the basic issue was how and where to extend the automotive value chain to a completely different approach in which the goal is now to cut back on production capacity, i.e. to decide which plants must be closed down and how production can be made more flexible to adapt to the prevailing uncertainty as to how the market will perform. In this new scenario, cost control is essential to staying in business (Amighini and Gorgoni 2014). The speed at which decisions are made differs substantially from one assembler to another, so recognising which actors are at the cutting edge of restructuring may enable us to draw conclusions concerning the future of production in various European countries, including Spain, in the value chain of the automotive industry.

2. Operations at assembly plants during the Great Recession

Any presentation of vehicle assembly operations in Spain must start by describing the Spanish plants assembling vehicles during the period covered by the analysis, i.e. 2007-2014. Table 1 lists the 13 Spanish assembly plants considered. Their main characteristics can be summed up as follows:

- They are all owned by transnational firms with foreign capital. Specifically, 2 German-based transnationals (VW Group & Daimler), 2 French-based transnationals (Renault & PSA), 2 US-based transnationals (Ford & GM), 1 Italian-based transnational (IVECO) and 1 Japanese-based transnational (Nissan) have assembly plants in Spain.
- There have been no greenfield investments in assembly plants in Spain for the past 30 years (the opening of SEAT's Martorell plant in 1993 can be seen as the transfer of the old SEAT plant in Barcelona's *Zona Franca*). This means that all investment in the sector during the Great Recession went into existing plants.
- Truck & commercial vehicle assembly accounts for a significant proportion of operations at Spanish plants. In fact there are 3 plants

specialising in commercial vehicles and trucks and 4 more where light commercial vehicles (LCVs) form part of the range of vehicles assembled.

- The total number of direct jobs at assembly plants was estimated at 58,602 in 2013 (this figure was obtained from ANFAC based on data from the Spanish National Office of Statistics (INE)), averaging out to around 4,500 per plant.

Table 1 Automotive assembly plants in Spain

Company	Plant location	Production (in thousands)		%Δ 2007-2013	Employment (number of workers)	
		2007	2013		2007	2013
	Spain	2,795.36	2,139.65	-23.46	-	-
VW-Group	Barcelona	398.69	390.04	-2.17	11,050	11,458
	Pamplona	228.42	289.58	26.78	3,926	4,491
PSA	Vigo	547.2	406.5	-25.71	9,700	6,900
	Madrid	136.5	54.8	-59.85	2,900	2,041
Renault	Valladolid	102.10	124.94	22.37	-	2,460
	Palencia	176.69	142.74	-19.21	-	-
GM	Zaragoza	489.80	281.17	-42.59	7,662	5,700
Ford	Valencia	404.74	226.72	-43.98	-	8,000 (2015)
Nissan	Barcelona/Avila	222.91	140.0	-37.19	6,033	4,850
Daimler	Vitoria	97.10	73.25	-24.56	3,075	3,500
Iveco (LCV)	Valladolid	40.32	19.16	-52.48	-	1,047
Iveco (T&B)	Madrid	25.58	28.44	11.18	2,904	3,000

Source: Company Annual Reports, OICA and information published in the specialist and general media

Over the two decades preceding the Great Recession the location of operations in the automotive value chain in Europe was characterised by two hierarchical structures: one for assembly and the other based on functions (Lung 2007; Pavlínek 2015).

The assembly-based hierarchy resulted in geographical distinctions according to technology levels and prices, with high-end models being assembled mainly in core countries – France and Germany – while the peripheral states of Europe were specialised in the assembly of smaller vehicles (as in the case of Spain).

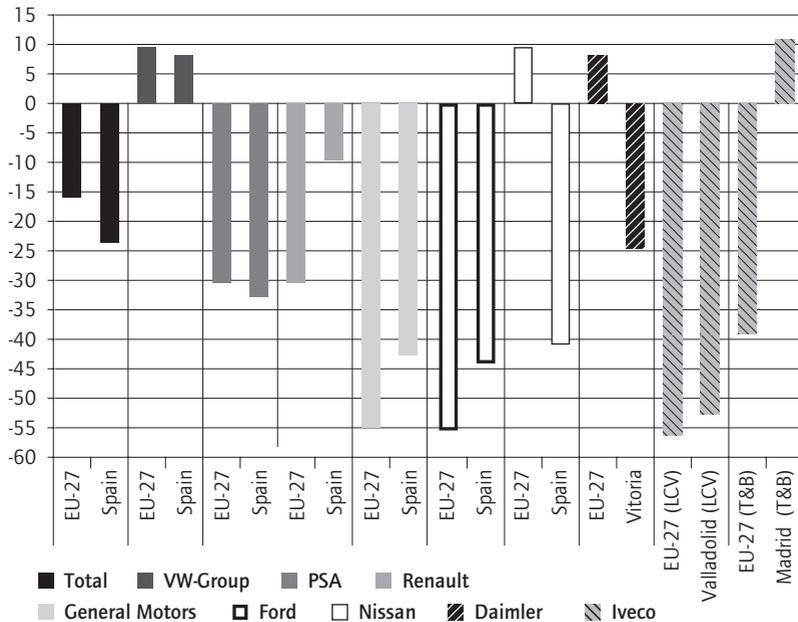
The function-based hierarchy is similar to that found in most sectors, with the exception of operations that require products to be localised for each domestic market. In the automotive industry, R&D was concentrated in the core regions of the EU (mainly in each company's country of origin), home to development centres for assemblers, suppliers and engineering firms, while actual assembly work was more widely scattered (in line with the hierarchy of locations mentioned above).

An examination of the data on vehicle production and exports from Spanish plants during the Great Recession (2007-2014) corroborates that the features considered by previous publications (Aláez-Aller et al. 2009) as characteristic of the vehicle assembly business in Spain are as follows:

- The output of Spanish plants is destined mainly for export: in 2013 exports accounted for around 87% of the total (ANFAC 2013), which is about the same level maintained since 2008. The equivalent figure for 2004-2007 was 82.1%. A geographical breakdown of trade flows clearly shows the place occupied by Spain within the European automotive industry, i.e. that of a country focused on the assembly of smaller vehicles (Lung 2003, 2007; Jürgens and Krzywdzinski 2009). The situation did not change during the period under investigation, and the main destinations of exports in 2013 (according to ANFAC, 2013) were France (27.5%), Germany (15.0%), the UK (13.0%) and Italy (7.9%). Altogether the EU-27 accounted for 78.3% of vehicle exports from Spanish plants. If the rest of Europe is added (mainly Turkey, Switzerland and Russia), the figure rises to 88.4%.
- The place occupied by Spanish automotive producers in the EU value chain has been limited to the assembly of vehicles with medium/low added value. A breakdown by segment of the data for passenger car assembly in Spanish plants (ANFAC 2013) reveals that this fact remained true in 2013, when 777,991 small vehicles, 371,241 medium-sized vehicles, 227,975 small people-carriers, 18,700 large people-carriers and 323,793 SUVs were assembled. However this situation seems to be changing, judging from the new models allocated to Spanish plants for which assembly is to begin in 2015. As indicated below, this could mark the beginning of a change in the production specialisation of Spanish plants within the European automotive value chain.

The trend in Spanish automotive production, measured in terms of the number of vehicles assembled per plant per annum, can be seen in Figure 1 (see Annex 1) and Table 2. From 2007 to 2013 the total number of units assembled fell by more than 23%, compared to a fall of just under 16% in the EU-27 as a whole. This relatively poor performance by Spanish plants can be attributed to a) the fact that the assemblers who performed worst in the EU-27 (Ford & GM: see Figure 2) have a relatively stronger presence in Spain, and b) to the high proportion of output accounted for by industrial vehicles and LCVs, the types of product hardest hit by the cutback in demand in the EU-27 during the Great Recession. Of the 8 transnational assemblers with plants in Spain, 2 performed substantially worse here than they did over the whole of the EU-27 (Nissan & Daimler, explained in both cases by the type of product assembled in Spain), 2 slightly worse (VW Group & PSA) and the other 4 significantly better (Renault, GM, Ford & IVECO).

Figure 2 Automotive Assemblers with plants in Spain: EU-27 and Spanish plants production, percentage change 2007-2013



Source: Company Annual Reports and OICA

Table 2 Vehicle production in the Spanish assembly plants (in thousands)

		2007	2008	2009	2010	2011	2012	2013
Total	EU-27	19,018.15	17,710.13	14,963.66	16,494.99	17,302.22	16,047.27	16,045.95
	Spain	2,795.36	2,466.37	2,143.81	2,350.75	2,299.76	1,932.30	2,139.65
VW-Group	EU-27	4,100.01	4,124.82	3,612.38	4,109.50	4,617.51	4,680.05	4,499.61
	Spain	627.12	629.38	544.78	671.39	706.77	664.6	679.63
	Barcelona	398.69	370.29	301.28	335.05	353.42	377.34	390.04
	Pamplona	228.42	259.09	243.49	336.33	353.35	287.28	289.58
PSA	EU-27	2,742.91	2,477.81	2,146.33	2,343.55	2,302.16	1,988.92	1,918.71
	Spain	683.7	554.3	512.7	524.6	451.6	374.7	461.3
	Vigo	547.2	439.6	384.9	399.3	355.8	298.3	406.5
	Madrid	136.5	114.7	127.8	125.3	95.8	76.4	54.8
Renault	EU-27	1,828.05	1,510.97	1,457.72	1,622.20	1,569.65	1,331.33	1,275.52
	Spain	367.62	327.32	374.63	398.52	406.87	343.49	332.93
	Valladolid	102.10	93.15	94.80	95.10	97.79	83.74	124.94
	Palencia	176.69	164.79	255.28	262.07	239.75	202.39	142.74
General Motors	EU-27	1,928.32	1,643.31	1,137.85	1,246.53	1,198.14	927.51	867.27
	Spain	489.80	427.05	340.67	380.87	365.41	264.85	281.17
Ford	EU-27	2,303.94	2,142.49	1,660.01	1,304.29	1,173.96	1,029.16	1,031.20
	Spain	404.74	357.64	300.34	256.65	229.91	149.74	226.72
Nissan	EU-27	576.63	543.79	390.72	528.12	635.26	653.73	633.60
	Spain	222.91	157.23	52.57	104.86	154.75	143.16	140.0
Daimler	EU-27	1,309.23	1,372.90	1,024.57	128.00	1,355.64	1,713.14	1,421.78
	Vitoria	97.10	102.39	54.60	70.30	90.22	76.15	73.25
Iveco (LCV)	EU-27	91.38	73.77	35.78	47.99	—	42.04	39.90
	Valladolid	40.32	30.78	12.33	15.07	—	18.18	19.16
Iveco (T&B)	EU-27	101.46	99.28	39.88	48.41	34.02	53.08	62.03
	Madrid	25.58	24.30	7.38	9.85	—	19.35	28.44

Source: Company Annual Reports, OICA and information published in the specialist and general media

As can be seen in Figure 1 (Annex 1), output at Spanish plants continued to follow a similar trend to that at assemblers across the EU-27 as a whole in the Great Recession. Specifically:

- The performance across Europe of the German-based assemblers with plants in Spain (VW Group & Daimler) is better than the general average trend for the EU-27. Similarly, the Spanish VW plants have performed at levels very similar to those of the EU-27 as a whole, and the Daimler plants only slightly lower (as mentioned above, the relatively poor performance in general of the

LCV market during the Great Recession may have been influential here, as this type of vehicle accounts for a relatively large proportion of the total output of the Daimler plant in Vitoria). The trend over time for German-based assemblers is linked to the relatively good performance of vehicle sales on the German market during the Great Recession.

- The performance across Europe of the French-based assemblers with plants in Spain (PSA & Renault) is worse in terms of output than the general average for vehicle production in the EU-27. PSA's plants in Spain have performed very similarly to those of the group in the EU-27 as a whole. In the case of Renault, the Spanish plants have performed better than the average for the EU-27 as a whole. Here also it must be mentioned that the output of French-based assemblers has been largely influenced by vehicle sales in France during the Great Recession.
- The worst performance across the EU-27 during the Great Recession is that of the US-based assemblers, with the number of vehicles assembled dropping by more than half from 2007 to 2013. For both Ford and GM the falls in output at their Spanish plants were somewhat lower than for the EU-27 as a whole, but even so production at their Spanish plants is down by more than 40% on their 2007 figures in terms of the number of vehicles assembled. It is precisely these assemblers that have reacted most strongly, cutting back their production capacity in Europe with a view to becoming profitable again as quickly as possible.

3. Quantitative analysis of FDI during the Great Recession

Investment activity by transnational corporations is usually measured via information on foreign direct investment. FDI flows usually include three main components: holdings in capital stock (purchases of shares in foreign companies), reinvestment of profits (including that part of corporate profits not distributed as dividends or received by foreign owners of companies) and intra-company loans (granted by parent companies to subsidiaries). FDI *stock* refers to the value of the holdings of parent companies in their subsidiaries plus the net debt owed by the subsidiaries to their parent companies.

When general figures on FDI are presented, a distinction is usually drawn between stock and flow variables, and inflow and outflow data are given for each category. Inflows of FDI to a specific country refer to the variation over the period considered (normally one year) in the value of the assets which (depending on the definition of FDI) are controlled by foreign firms in that country. The stock variable deals with the value of all the FDI by foreign firms into a country at a specific time (the inward stock of that country).

The data on FDI flows available from official statistics do not usually offer detailed breakdowns by areas of activity. In the case of the automotive industry, Figure 3 and Figure 4 are based on statistics provided by the OECD on FDI in the field of 'Motor and Other Transport Equipment' (NACE 3400 and 3500).

Figures 3 and 4 are drawn up on the basis of the inward stock of FDI for 2005, which is allocated a value of 100 as the base year. The data for the subsequent years up to 2012 are calculated by adding the inflows of FDI from the ongoing year to the position calculated for the previous year. The graphs are drawn up in this way for two main reasons:

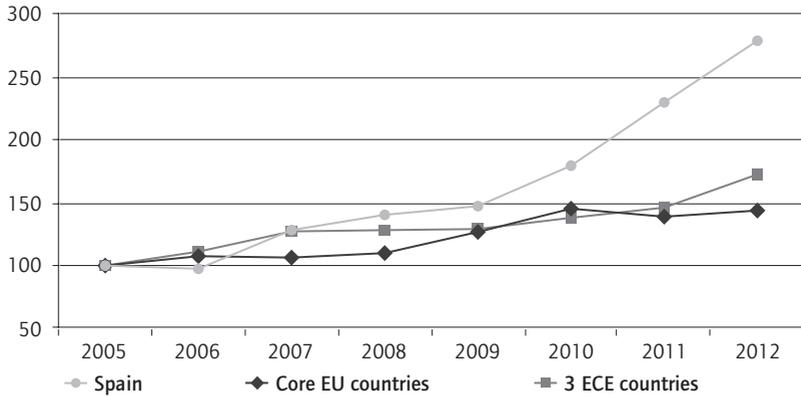
- Not all the stock data are considered, because they are valued at the market prices of each year, so positions can change substantially even if there is no new investment.
- Inflows are not considered because they do not measure how significant the entry of new investments is in proportion to the stock of FDI (e.g. a country with FDI close to 0 in the base year could show extraordinary growth in percentage terms even though that growth is not truly meaningful for its FDI stock).

The data are grouped by country in an attempt to draw conclusions concerning the effects of the Great Recession on changes over time in the FDI stock of the automotive industry in different EU Member States. The countries for which data are available are thus grouped into three categories: core EU countries (the sum of Germany, France, Italy and the UK), three countries of central-eastern Europe (CEE – the sum of the data for Poland, Czechia and Slovakia) and Spain.

Figures 3 and 4 should be interpreted solely in terms of trends. They show clearly that FDI behaved consistently across the countries of the EU during the early stages of the Great Recession, i.e. up to 2009. However,

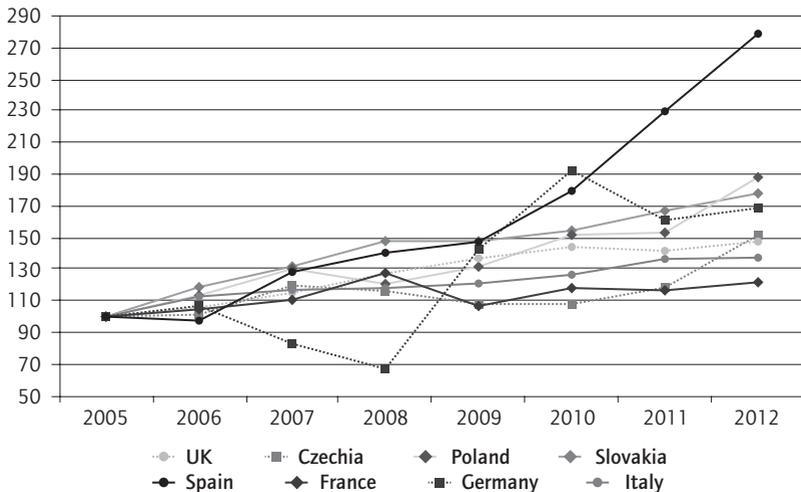
from 2011/2012 onwards FDI in this sector behaved more dynamically in Spain than in the other countries considered (although the behaviour of FDI in Poland in 2012 is similar to that in Spain).

Figure 3 FDI in Motor and Other Transport Equipment



Note: Inward stock of FDI for 2005=100. Data for the subsequent years are calculated by adding the inflows of FDI from the ongoing year to the position calculated for the previous year. Core EU countries (Germany, France, Italy and the UK). Three East-central Europe countries (Poland, the Czechia and Slovakia). Source: OECD

Figure 4 FDI in Motor and Other Transport Equipment by country



Note: Inward stock of FDI for 2005=100. Data for the subsequent years are calculated by adding the inflows of FDI from the ongoing year to the position calculated for the previous year. Source: OECD

In any event, this compilation of general figures on the dynamics of FDI does not provide sufficiently detailed information on the qualitative aspects needing to be examined to tell whether the FDI inflow process may be reflecting a change in the location of activities in the value chain of the automobile industry in the EU, and specifically whether there is any significant variation in the position of the operations located in Spain. To that end, the following sections present an individualised analysis of investments in the 13 vehicle assembly plants located in Spain.

4. Investments in Spanish assembly plants during the Great Recession

Investment in automotive assembly plants tends to be associated with the awarding of new models: when a plant is awarded such, this usually entails an assurance that it will remain operational at least for the lifetime of that model (6-9 years). Once the decision is made it can therefore be considered that the transnational corporation in question intends to keep that plant open.

The analysis of investment in Spanish automotive plants can therefore be seen as equivalent to a study of awards for the assembly of new models during the period under analysis (2008-2014). Awards of new models can be grouped under two headings, with clearly different implications. The first case is that of a model which is a new version of one already assembled at that plant, while the second is that of a new model which is significantly different from the type of vehicle assembled there to date. This categorisation system is used below to characterise the awarding of models to Spanish plants during the period under analysis (Table 3).

We look first at the awarding of new generations of models already assembled at plants. Such decisions should be seen as merely maintaining the status quo by renewing models as necessary. The trend in output of each plant as from the time of the award depends on the life cycle of the model and, evidently, on how successful it is in terms of sales. The following plants can be included under this heading:

- **VW in Pamplona** (assembly of the VW Polo A05 began in 2009, and that of its upgrade – the Polo A05GP- in February 2014).

- **Seat in Barcelona** (assembly of the replacement for the Seat León began in 2014, and that of the replacement for the Seat Ibiza is due to begin in 2016).
- **Renault Palencia** (this plant has been awarded the fourth-generation Mégane, assembly of which is due to start in 2016).
- **Mercedes Vitoria** (this plant was awarded the assembly of the Class V people carrier and the third generation of the Vito Mercedes, assembly of which began in 2014).
- **Opel Zaragoza** (this plant has been awarded the new version of the Corsa, production-run assembly of which will begin in 2015, replacing the model which began to be assembled there in 2007; and the fifth generation Corsa, assembly of which will begin in 2017. It was also awarded the second-generation Meriva in 2010 and its update in January 2014, and is to make the new Meriva, assembly of which is expected to commence in 2016).
- **PSA Vigo** (the new generation of the C4 Picasso and the Grand C4 Picasso began to be assembled at this plant in 2013. It has recently been awarded the K9, production-run assembly of which is expected to begin in 2018, assuring the continuation of production of LCVs, which began in 2007).
- **IVECO** (the company's Valladolid plant is to make the third generation Iveco Daily Van as from 2015).
- **IVECO** (the Madrid plant began to assemble Stralis and Trakker trucks in 2013).
- **Nissan Ávila** (this plant began assembling the NT500 truck, the replacement of the Atleon, in 2014).
- **Nissan Barcelona** (this plant has been awarded the new pick-up model replacing the current Nissan Navara. It was also awarded the Pulsar, which it began assembling in 2014, and the NV200, which it began assembling in 2009).
- The awards of new electric-drive versions of those models which were being assembled at PSA Vigo, Nissan Barcelona and

Mercedes Vitoria should also perhaps be included under this heading. This is the pattern followed by most assemblers which have decided to launch electric versions of existing models. In any event, such awards are essentially symbolic as the low sales of these plug-in electric versions mean that they have very little weight in the total output of the plants.

The second heading covers the awarding of completely new models to Spanish plants. Such decisions can be interpreted as more significant evidence of change in terms of the position occupied by Spanish plants in the automotive value chain in the EU. The changes involved may be quantitative (affecting the volume and value of the output awarded) and qualitative (affecting the type of product assembled, i.e. the market segment into which the vehicles awarded fit in comparison with those previously assembled at the plant). The following decisions can be placed under this heading:

- Assembly of the Audi Q3 at the **Seat Barcelona** plant as from 2011 (this plant has also been awarded the replacement of the Q3, assembly of which is expected to commence in 2017). This decision entails not just a greater volume of work but also the awarding of a model which is qualitatively superior to those previously assembled in Barcelona.
- The award of the assembly of the Cactus model to the **PSA** plant in **Madrid**, which entails a considerable change in the activities of a plant whose future was in doubt. In commercial terms the model awarded can be seen as a bold strategy by PSA: models with uncertain futures in terms of sales have tended to be awarded to highly flexible plants with low adjustment costs which are capable of dealing with broad fluctuations in demand.
- The awarding of the Opel Mokka, assembly of which began at the **Opel Zaragoza** plant in 2014, can also be considered as a new model, as it is a vehicle whose characteristics are unlike those of any previously assembled at the plant.
- A special mention must also be given to Ford's reorganisation of production in Europe, which has resulted in the shutdown of three plants (Dagenham and Southampton in the UK and Genk in Belgium). This reorganisation has entailed radical changes for the

Ford Valencia plant, which has been awarded Ford's top-of-the-range models for assembly in Europe: the new Mondeo (assembly of which began in late 2014, with the plant also due to assemble the hybrid HEV version and a deluxe version known as the Mondeo Vignale), the S-Max (summer 2015) and the Galaxy (summer 2015). The plant has also held on to the assembly of the Ford Kuga (which began in 2012) and the Transit Connect (which began in 2013).

- The **Renault Valladolid** plant can also be placed under this heading thanks to the awarding of the Captur (Renault's first small crossover vehicle, assembly of which began in April 2013) and the Renault Twizy (a genuine plug-in electric vehicle, production of which began in 2012, albeit with low sales - 9020 vehicles in 2012 and 3025 in 2013). This plant also assembles engines for the group, and was awarded the assembly of two new engine models in 2011. It also assembled the Modus from 2005 to 2012/2013.
- The **Renault Palencia** plant was awarded a new medium-sized crossover vehicle (which will probably be sold under the name Renault Kadjar), assembly of which is expected to begin in 2015.
- The commencement of production-run assembly of the Citroën C-Élysée and the Peugeot 301 at the **PSA Vigo** plant in 2012 also resulted in an increase in the range of products assembled at that plant.

Decisions on awarding new models are being made more and more directly in the form of auctions between the plants belonging to a company. Assemblers are using their options for awards as a bargaining chip for obtaining cuts in labour costs and increased work flexibility at their various plants. This form of bargaining is much more effective in a context of production cutbacks such as that brought on by the Great Recession. The information available concerning awards refers directly to the plants bidding to obtain each model, and corporate executives have even stated in public the reasons why their companies have opted for particular plants rather than competing ones. In the case of Spanish plants the information published in the press mentioned the following competition processes involving specific plants:

- Seat Barcelona competed with the VW Group plant in Brussels for the award of the assembly of the Audi Q3. It also competed, this

Table 3 Awards of new models to the Spanish plants*.
Investment associated with the award of new models

		2007-09	2010-12	2013-15	2016→	Investment (million €)
VW-Group	Barcelona		Audi Q3 (2011)	Seat Leon (2014)	Seat Ibiza (2016) Audi Q3 (2017)	830
	Pamplona	Polo A05 (2009)		Polo A05 GP (2014)		
PSA	Vigo	C4 Picasso (1)	C-Élysée (2012) Peugeot 301 (2012)		K9 (2018)	1162
	Madrid			Cactus (2014)		30
Renault	Palencia	Mégane (2008)			Mégane (2016) Kadjar (2015)	190
	Valladolid		Twizy (2012)	Captur (2013) New engines (2013)		170
General Motors	Zaragoza	Corsa (2007)	Meriva (2010)	Meriva (2014) Corsa (2015) Mokka (2014)	C3 Picasso (2016) Meriva (2016)	775
Ford	Valencia	Focus (2007)	Kuga (2012) Transit Connect (2013) C-Max(3) (2010)	Mondeo(2) (2014) S-Max (2015) Galaxy (2015)		1100 (2009/12) 1200 (2012/14)
Nissan	Barcelona	NV200 (2009)		Pulsar (2014)	Pick-up (Navarra)	305
	Ávila			NT500 (2014)		120
Daimler	Vitoria			Clase V (2014) Vito (2014)		190
Iveco (LCV)	Valladolid			Van Iveco Daily (2015)		15
Iveco (T&B)	Madrid			Stralis&Trakker (2013)		500

*New version of a model already assembled at that plant figure in italic. Completely new models figure in bold. (1) Grand C4 Picasso is also included. (2) The HEV hybrid car and Mondeo Vignale are included. (3) From 2013 on it will be also a PHEV version.

Source: author's own elaboration

time unsuccessfully, with the Kvasiny plant in Czechia for the award of the new SEAT brand SUV. According to an interview given by SEAT Chairman J. Stackmann to Bloomberg in June 2014, when this decision was made public, the reasons why the award went to the Kvasiny plant were its lower labour costs and the fact that there was more space for production at the Czech plant. It might be thought that in these processes the decision is already made in advance, based on a number of factors other than the comparative labour costs of the plants. However, assemblers always have an incentive to use labour costs as an argument because this strengthens their bargaining position in drawing up future agreements with workers.

- The process of inter-plant competition was also mentioned specifically in the awarding of the K9 commercial vehicle to the PSA plant in Vigo. In this case the Spanish plant is thought to have been bidding against the plant in Trnava, in Slovakia. PSA Vigo also competed (unsuccessfully) in 2012 with the French SevelNord plant for the updated versions of the Jumpy and Expert commercial vehicles. The fact that SevelNord was already assembling the previous models did not prevent PSA from reaching an agreement with the workers there that entailed a two-year wage freeze and measures to increase work flexibility.

In an effort to find out how the workers themselves view this inter-plant competition for the awarding of new models, shop stewards from the UGT trade union at Spanish assembly plants were asked to complete a brief survey on the matter (Annex 2).

Replies were received from 11 of the 13 plants. An examination reveals that nine out of the 11 plants were aware of having bid against other plants belonging to the group for the awarding of models. Moreover, in the opinion of the workers themselves, the main advantages of their plants for the awarding of models lay in establishing agreements to foster flexibility (in functions, timetables and production schedules), the acceptance of wage freezes in all cases and the elimination of certain special conditions enjoyed by workers. All the replies obtained stressed the importance of greater work flexibility for the awarding of new models to their plants; indeed this was the top-rated factor in 7 cases. The setting up of a two-tier wage scale enabling companies to pay less to newly recruited workers at plants was also rated as a significant factor in 7 of

the replies obtained, and as the most significant factor (over and above increased flexibility) in 4 of the 10 surveys in which this question was answered.

5. Have there been changes in the location of the value chain in the EU?

On the basis of the decisions concerning the awarding of models presented above, the question that must now be asked is whether the Great Recession has brought changes other than adjustments in production capacity that can be considered as structural changes in the location of the automotive value chain in the EU, and how exactly the plants in Spain fit into the new scenario.

The most striking thing about the geography of the automotive value chain in the EU is how the core regions have managed to avoid losing their relative importance in the location of assembly operations (Lung 2003, 2007). In this context, Spain's main competitors for small vehicle assembly operations have tended to be CEE countries. As a result, automotive plants in Spain might be expected to be among those hardest hit by the opening of new plants in CEE countries.

In the years leading up to the Great Recession the key issue for the future of production at Spanish plants was whether they would be able to maintain existing operations and prevent their relocation. The likelihood of relocation was linked to the vulnerability of these plants which, according to the relevant literature, depended on factors such as sunk costs, operating costs and territorial anchoring factors (Alález-Aller and Barneto-Carmona 2008). This analysis concluded in general and for the case of Spain in particular with a prediction that assemblers were unlikely to shut down plants in Spain and transfer production to greenfield plants in east-central Europe. However, it still made sense to open new plants in CEE countries in terms of increasing total assembling capacity and starting up operations in Europe for assemblers who were not already making vehicles in the EU.

This scenario of increasing output changed radically with the onset of the Great Recession, when the key issue became how to cut back production capacity, which meant deciding which plants to keep operational and which ones to close down. Vehicle assembly in the EU was characterised

by an overcapacity that was detrimental to assemblers' profitability, leading them to consider how this problem could be corrected. In that context there were three types of production environment in the EU, each with its pros and cons as regards maintaining vehicle assembly operations: the core countries, the CEE countries and, basically, Spain.

As expected, restructuring has affected some assemblers more than others, with those who were under most pressure from the drop in profitability induced by the Great Recession being affected most. Distinctions must be drawn between the following reactions on the part of assemblers with plants in Spain:

- The German assemblers (VW Group & Daimler) seem to have felt the least pressure to adjust their production capacity and restructure their business. This is consistent with the relatively good performance of the German market, which is the main market for sales in the EU for both corporations. There have been no major changes in the status quo at the Spanish plants operated by these assemblers, and they have been awarded new models to replace the ones they were already assembling. The Barcelona plant owned by SEAT, the brand hit hardest by the Great Recession, was awarded a new model (Audi Q3), offsetting the decrease in the plant's capacity utilisation.
- It is the American assemblers (Ford & GM) which have undertaken the most far-reaching restructuring of their assembly operations in the EU. At the end of 2012, Ford announced the closure of three plants in Europe (Genk in Belgium, and Southampton and Dagenham in the UK), forcing the company to reorganise its production in Europe with a view to bringing its European operations back into profit by 2015/2016. This restructuring has resulted in the Spanish plants in Valencia taking over the assembly of the models previously made in Genk. In short, the Spanish plant has improved its position both quantitatively and qualitatively (it is now to assemble vehicles with more added value). The small vehicle assembly operations previously handled by Ford in Valencia have been transferred to the Saarlouis plant in Germany. For its part, GM has also restructured its operations in Europe, seeking to bring them back into profit in the same timeframe as Ford. GM has shut down 2 plants in the EU (Bochum in Germany in 2014 – making this the first automotive plant to shut down in

that country since World War II – and Antwerp in Belgium in 2010). The Opel plant in Spain seems to have come out of the process stronger thanks to the awarding of three models (one update and two new models).

- In an intermediate position, French assemblers have also found it necessary to cut back their production capacity in Europe, though the extent of that need depends on the operating results of each firm and the proportion of their production capacity in use. PSA has the worse figures, and has closed down a plant in France (Aulnay near Paris, where the last vehicle rolled off the assembly line at the end of 2013). Renault has not had to resort to traumatic plant closures but has reached agreements with its workforce to cut back their numbers and freeze wages. Both companies have awarded new models to their Spanish plants, which in some cases have resulted in improvements in their positions in the European value chain.
- The need to cut back and rationalise the use of production capacity has provided a stimulus for further agreements between assemblers regarding the sharing of plant capacity (e.g. the agreement between GM and PSA under which vehicles for both brands are assembled at their Opel Zaragoza and PSA Vigo plants in Spain).

A review of the decisions made during the Great Recession by assemblers with production plants in Spain brings to light trends in the geographical distribution of the value chain of the industry in Europe. Indeed, falling sales across Europe and an increase in the relative importance of other regions of the world in the industry's turnover have accelerated capacity adjustments in Europe (Pavlínek, 2015). The main trends observed can be summed up as follows:

- The R&D centres of assemblers continue to be located mainly in the country of origin of each transnational corporation (and are sometimes even more centralised at specific locations – Aláez-Aller et al. 2009), though expansion into other regions (Latin America, the USA, Asia) has resulted in the setting up of secondary R&D centres there with a view to adapting products to local tastes and regulations (Sturgeon et al. 2008).

- The adjustments made to correct overcapacity at assembly plants seem to have focused mainly on plants located in the core areas of Europe, with plants being shut down in Belgium, the UK, France, Germany and Italy (the Termini factory in Sicily). With regard to the awarding of new models, Spanish plants have not only consolidated their position but also seem to be filling the gap left by capacity adjustments in core EU countries. In this respect, it is the restructuring decisions made by US assemblers (Ford & GM) that provide the clearest guidelines for understanding the new trends. Within these US transnational corporations with operations in the EU, circumstances have arisen with the greatest power to catalyse potential geographical readjustments in assembly operations: in particular negative operating results in Europe and a position more insulated from political interference in corporate decision-making concerning the distribution of activities between countries (it must be recalled that the French state owns 17.93% of voting rights in Renault and has recently taken a stake in the capital of PSA which gives it 14% of voting rights, while the state of Lower Saxony holds 20% of voting rights in the VW Group). The restructuring of Ford and GM in Europe has strengthened the position of Spanish plants in both qualitative and quantitative terms: Opel Zaragoza is expected to account for 40% of the company's assembly operations in Europe and Ford Valencia has become the US corporation's most important plant in Europe in terms of the awarding of new, high-end models and volume of investment.

In their award processes transnational corporations try to get workers at different plants to compete for the new model, awarding points for medium-term commitments to maintain a system of industrial relations that involves cost cutbacks and increased flexibility and adaptation in the current context of uncertainty as regards market trends. Workers at plants in Spain seem to have contributed enough in terms of labour cost cutbacks for the sum of other factors (logistical costs, availability of suitable suppliers, proximity to end markets, production experience, quality of assembly, etc) to tip the balance in favour of deciding to award models to them.

There seems to be no doubt that the distinctive situation prevailing in Spain during the Great Recession has undermined trade union bargaining power. Indeed, numerous company closures, unemployment

rising to close to 25% of the working age population, the lack of expectation of any positive changes in the job market and widespread cutbacks in wage levels in Spain have produced a context in which workers react purely defensively in bargaining processes, seeking to maximise the likelihood of retaining their jobs. Moreover, the labour market reforms that came into force in Spain in mid-2012 brought in institutional changes to the job market which catalysed wage decreases as a fundamental tool for increasing competitiveness abroad in the context of the single currency.

According to the statistical information available, during the Great Recession Spain has behaved in a way that seems to be helping to increase its relative advantages in terms of labour costs in the EU. Nominal unit labour costs (Table 4) have decreased in the Spanish economy, especially in 2009-2013, while the equivalent costs have increased in core European countries with automotive assembly plants (Belgium, France, Germany, the UK and Italy) and also in CEE countries (though in this latter case the main increase was between 2007 and 2009, since when levels have remained steady).

Information on hourly costs in the field of manufacturing motor vehicles, trailers and semi-trailers (Table 5) places Spain in an intermediate position. During the Great Recession hourly costs in core countries moved further away from Spanish costs in both absolute and relative terms, while hourly costs in CEE countries rose from 2008 to 2012, but more moderately than the increases in costs per hour in Spain. It must be pointed out that the moderation of labour costs in Spain was especially noteworthy in 2013-2014 (Table 6), following the entry into force of the aforementioned 2012 labour reforms.

The geographical distribution of assembly plants in Europe seems to have shifted from a hierarchy in which high-end models were made in core countries and cheaper models on the periphery to a more scattered pattern of assembly of high-end models in which Spain holds a bigger share. In the medium and long term this could lead to a reduction in the number of vehicles assembled in core countries, with the slack being taken up by plants on the periphery of Europe. In any event, although the trends mentioned seem to have moved more quickly during the Great Recession, they are still only observable in those assemblers which are least profitable and which are held back by political resistance when it comes to reducing assembly operations in the core countries of the EU.

Table 4 Nominal unit labour cost (2005=100)

	2007	2008	2009	2010	2011	2012	2013
Belgium	104.2	108.8	113.0	112.7	115.7	120.4	122.8
Czechia	103.0	106.5	108.9	108.5	109.0	112.6	112.5
France	103.5	106.8	110.7	111.5	113.0	115.3	116.8
Germany	97.2	99.4	105.0	103.9	105.0	108.2	110.4
Hungary	108.4	113.1	116.3	115.6	118.3	121.3	126.0
Italy	103.6	108.3	112.6	112.4	113.5	116.0	117.4
Poland	101.6	108.9	111.4	113.0	114.3	116.1	–
Romania	120.9	148.6	152.9	149.2	138.8	144.9	148.5
Slovakia	102.2	106.7	112.8	111.8	112.7	113.8	112.8
Slovenia	103.7	110.3	119.8	120.3	119.4	120.3	119.3
Spain	107.4	113.4	115.1	113.0	111.9	108.6	106.8
United Kingdom	105.5	108.8	115.6	117.5	118.9	122.0	123.6

Source: Eurostat, Annual National Accounts, ESA-95

Table 5 Total labour cost per hour (€). Manufacture of motor vehicles, trailers and semi-trailers

	2000	2004	2008	2012
Belgium	28.38	34.29	32.97	44.91
Czechia	4.37	6.52	10.08	11.38
France	24.84	33.24	33.38	38.51
Germany	37.78	41.39	43.14	47.91
Hungary	4.62	7.08	8.86	9.41
Italy	20.45	23.08	25.50	30.11
Poland	–	4.70	7.52	8.09
Romania	–	2.16	3.90	4.86
Slovakia	2.72	3.77	7.77	9.54
Slovenia	–	–	12.73	13.74
Spain	18.63	20.34	23.66	25.39
United Kingdom	25.81	24.99	23.82	24.17

*NACE_R1 (2000 and 2004) and NACE R2 (2008 and 2012). Manufacture of motor vehicles, trailers and semi-trailers.

Source: Eurostat. Four-yearly Labour Cost Survey (LCS), total labour cost (excluding apprentices), for enterprises with at least 10 employees

Table 6 Total labour cost per hour (€) in manufacturing, Spain

	Total labour cost (€)	2007=100
2007Q3	19,80	100,00
2008Q3	20,74	104,75
2009Q3	21,68	109,49
2010Q3	21,43	108,23
2011Q3	22,32	112,73
2012Q3	22,79	115,10
2013Q3	23,19	117,12
2014Q3	23,11	116,72

Source: Quarterly Labour Cost Survey (INE)

6. Conclusions

Automotive assemblers in Spain expect a considerable increase in production in the coming years in terms of the number of vehicles assembled. This expectation is based on the awarding of new models and on the substantial investment made in Spanish plants in the past three years. The most striking aspect of these optimistic forecasts is that they are made in a context of overcapacity in the automotive industry in Europe, plant closures, cutbacks in the capacity of existing plants and uncertainty as to how demand for vehicles will develop in the EU in the years to come. Why is it that Spanish plants seem to have become more attractive as candidates for being awarded more production in the European value chain of this industry? Apart from quantitative changes, have there also been qualitative changes in Spanish assembly plants during the Great Recession?

Seeking to answer these questions, this study has analysed trends in production and investment decisions at the 13 automotive assembly plants in Spain during the Great Recession. An examination of the facts clearly reveals that Spanish plants have been allocated a considerable number of new models, including the investment that this entails. The models in question are not just new generations of vehicles already assembled in Spain but also brand-new vehicles, and there seems to be a trend for the assembly of high-end models to be transferred to Spain. Given that assemblers have set up the award processes as de facto auctions in which their European plants bid against one another, the next question that arises is what advantages Spanish plants have

demonstrated in order to attract these FDI flows, particularly in the past three years.

The advantages of locating assembly operations in Spain may be linked to the distinctive performance of the Spanish economy during the Great Recession, which has resulted in substantial reductions in the bargaining power of Spanish trade unions, as a result fostering the spread of agreements that entail decreases in labour costs and greater work flexibility. Although similar processes can be found in other EU countries, the data available indicate that they have been more intense in Spain, as might be expected in view of the country's poor situation in economic and labour terms (following the bursting of the real estate bubble and its effects on employment, banking and public finances in Spain).

This apparent increase in the advantages of locating assembly operations in Spain can be seen particularly clearly in the decisions made by Ford and GM to restructure their European operations. The foregoing sections describe how Spanish plants have benefited most in terms of workload and the quality of the models that they have taken on as both firms seek to quickly return their European operations to profitability. However, other major European assemblers have not made such radical changes in the location of the operations in their value chain, so it remains to be seen whether greater pressure on the profit margins of those assemblers that have not clearly restructured their European operations will result in a similar process of relocation of high-end models from previous core areas towards the old periphery. Only then will it be possible to state whether the Great Recession has brought about a structural change in the geography of the value chain in the EU and whether the place occupied by Spain in particular in that value chain has changed.

References

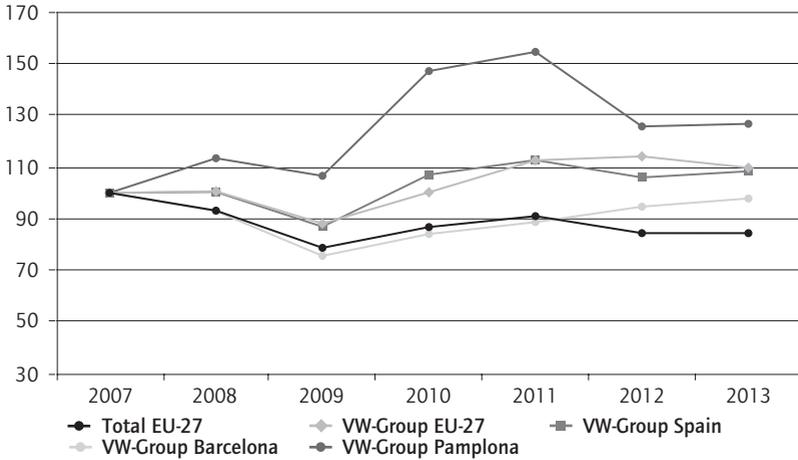
- Aláez-Aller R. and Barneto-Carmona M. (2008) Evaluating the risk of plant closure in the automotive industry in Spain, *European Planning Studies*, 16 (1), 61-80.
- Aláez-Aller R., Bilbao-Ubillos J., Camino-Beldarrain V. and Longás-García J.C. (2009) Reflexiones sobre la industria española del automóvil y sus perspectivas, *ICE. Revista de Economía*, 850, 41-56.
- Amighini A. and Gorgoni S. (2014) The international reorganisation of auto production, *The World Economy*, 37 (7), 923-952.
- ANFAC (2013) Memoria Anual 2013, Madrid, Asociación Española de Fabricantes de Automóviles y Camiones. <http://www.anfac.com/documents/tmp/memoria2013.pdf>
- Domanski B. and Lung Y. (2009) The changing face of the European periphery in the automotive industry, *European Urban and Regional Studies*, 16 (1), 5-10.
- Jürgens U. and Krzywdzinski M. (2009) Changing East-West division of labour in the European automotive industry, *European Urban and Regional Studies*, 16 (1), 27-42.
- Lampón J.F., Lago-Peñas S. and Cabanelas P. (2014) Can the periphery achieve core? The case of the automobile components industry in Spain, Paper in *Regional Science*. doi: 10.1111/pirs.12146
- Lung Y. (2003) The changing geography of the European automobile system, *Cahier du GRES*, 2003-10.
- Lung Y. (ed.) (2007) *Coordinating competencies and knowledge in the European automobile system - CoCKEAS*, Luxembourg, Office for Official Publications of the European Communities.
- OICA (1998-2013) *Production statistics*, Paris, International Organization of Motor Vehicle Manufacturers.
- Pavlínek P. (2015) The impact of the 2008-2009 crisis on the automotive industry: global trends and firm-level effects in Central Europe, *European Urban and Regional Studies*, 22 (1), 20-40.
- Sturgeon T., Van Biesebroeck J. and Gereffi G. (2008) Value chains, networks and clusters: reframing the global automotive industry, *Journal of Economic Geography*, 8 (3), 297-321.

All links were checked on 17 June 2015.

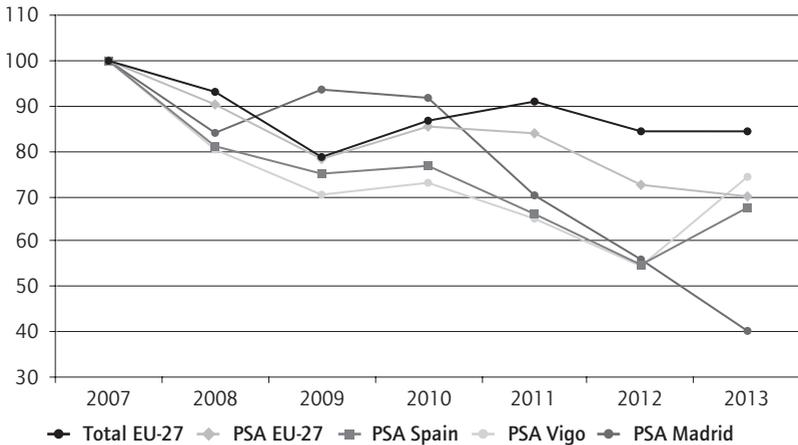
Annex 1

Figure 1 Vehicle production (2007=100)

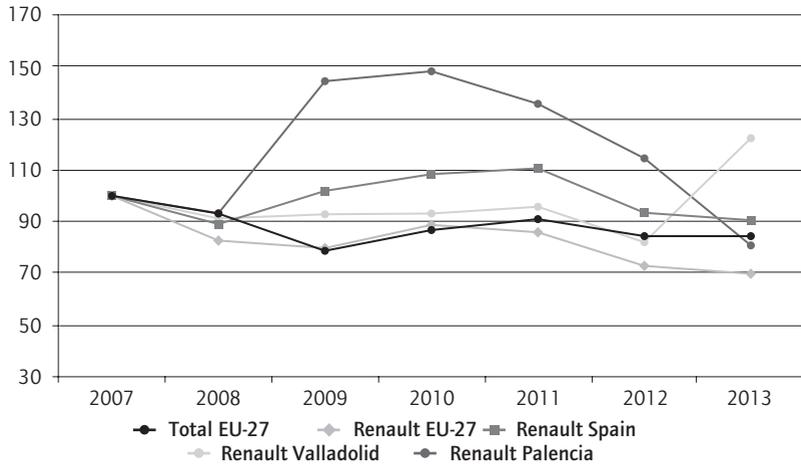
VW-Group



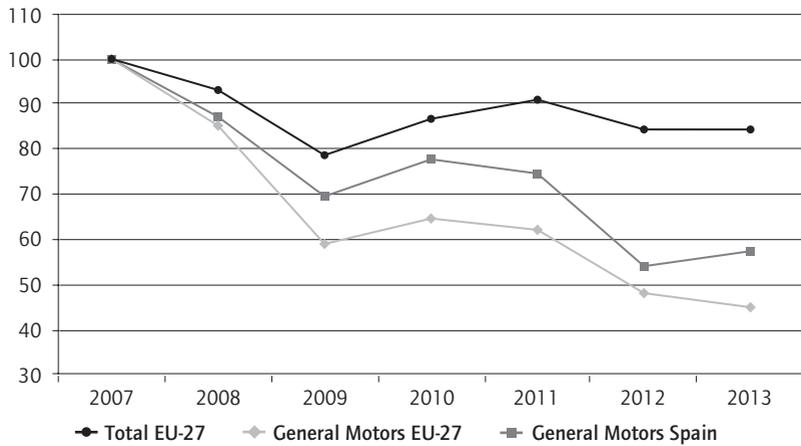
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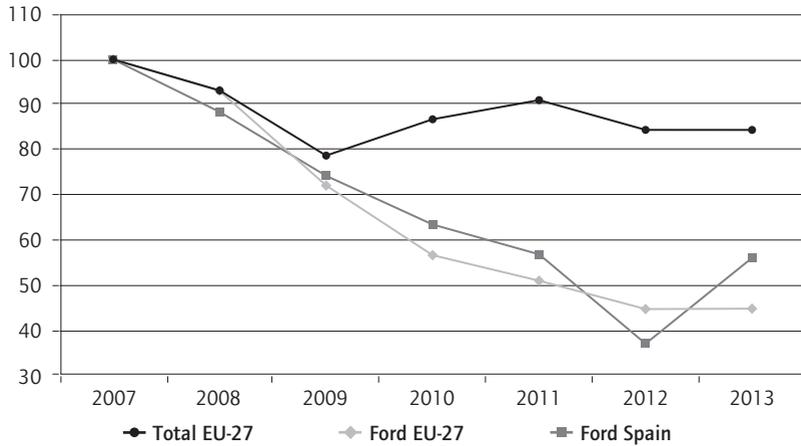
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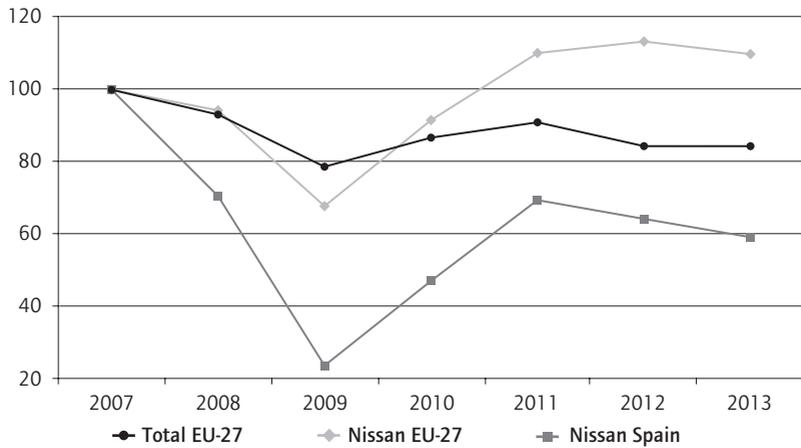
General Motors Group



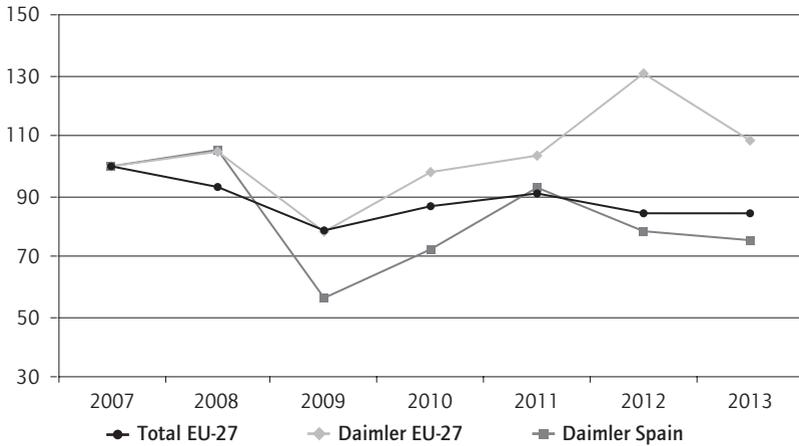
Ford Group



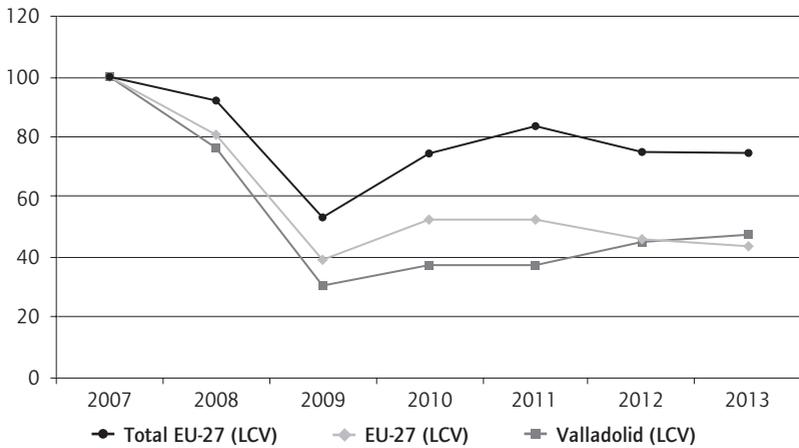
Nissan



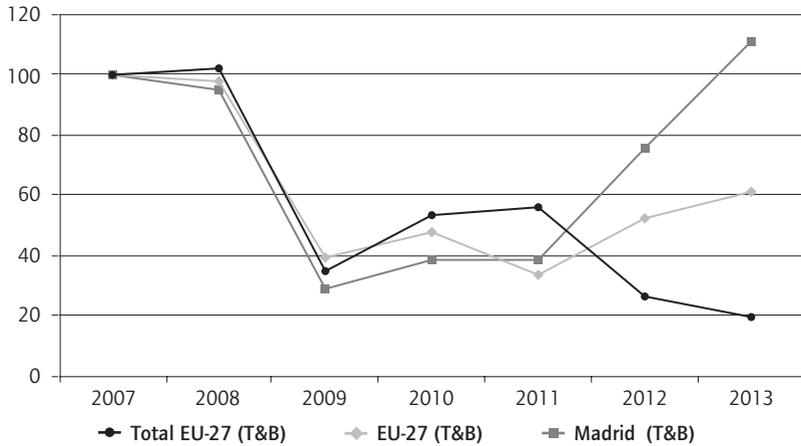
Daimler



Fiat-Iveco LCV



Fiat-Iveco. T&B plants production



Source: OICA and Annual Reports

Annex 2

Survey conducted on trade union shop stewards at assembly plants

1. Have there been any changes in the models produced at your plant since 2008? Are there any changes approved for the near future? Please indicate the year of introduction and the name of the new model. If you have any information on the matter please indicate the approximate amount in Euros that has been/is to be invested in your plant to cater for the assembly of the new model. Please also indicate whether there have been any other major capital investments in the plant (aside from those linked to new models) since 2008, and if so their approximate amount and year of implementation.

New model? (since 2008):

Year of commencement of production (past or envisaged):

Approximate amount of investment for new model (in millions of euros):

Other investments: approximate amount:

2. Are you aware of any competition between your plant and others belonging to the same multinational firm to secure the allocation of the model or other investments? If so, please indicate where the plants with which you competed for investment are located.

Did you bid against other plants for the awarding of the new model?

Where (in what country) are the plants with which you competed?

3. Have you had to negotiate changes in working conditions in connection with the allocation of new models or other investments? If so indicate which of the following were involved:
 - Wage cuts
 - Greater flexibility in working hours & calendars
 - Greater functional flexibility
 - Different wage scales
 - Others (please specify)

4. Please rate the above issues on a scale of 0 to 9 in terms of which you consider most influential in securing the new model for the plant (0 = no influence; 9 = decisive):

- Wage cuts
- Greater flexibility in working hours & calendars
- Greater functional flexibility
- Different wage scales
- Others (please specify)