Protection revisited: The development of the automobile industry in Argentina, Spain and South Korea, 1945-87.

Jordi Catalan
(University of Barcelona)

Paper presented at the Seventh Conference of the European Historical Economics Society
29 June – 1 July 2007, Lund, Sweden

Protection revisited: The development of the automobile industry in Argentina, Spain and South Korea, 1945-87.

Jordi Catalan
(University of Barcelona)

1. Introduction

Strategic policies are usually blamed for creating substantial inefficiencies in the allocation of resources. This study suggests that protection for infant industries could contribute to change the comparative advantage of backward economies. The case under consideration is the automobile industry in medium-size economies.

After World War Two many late comers around the world tried to promote industrial growth in order to foster development. As it is well known, forced industrialization led to long-term dramatic losses of welfare in central planned economies. Inward-looking industrial policies in developing market economies also caused tremendous inefficiencies, partially hidden by the tremendous expansion of the world economy taking place during the Golden Age, but emerging after the generalized recessions of 1974, 1980 or 1983. Nevertheless, the experience of the three medium-size countries selected in our study indicates that the adoption of protectionist policies to support the domestic the automobile industry appeared to be an acceptable strategic option to promote growth and structural change in the early stages of the sector's development. This turned to be the case not only during the years of international expansion but also throughout the phase of growth slow-down which followed the first oil shock.

The three selected countries in this study are Argentina, Spain and South Korea. The comparison of their three respective automobile industries has been undertaken from a sociological perspective in earlier studies, which argued that the different outcomes in development of the industry resulted from uneven social conditions in each country[1]. The present paper confirms the significance of the proposed comparison to establish the potential development of the automobile industry in late-comer economies. Nevertheless, this paper differs from the previous research in three main areas. First, it takes the perspective of traditional economic history, by identifying some specific periods of analysis and focusing on the long term performance of quantitative data. Second, the paper tries to prove that policies mattered more than social structures in the final outcome. Third, South Korea, rather than Spain, appears as the best performer within the club, given that it was able not only to create a competitive automobile industry but also to overcome technological dependence[2].

[1] Biggart & Guillén (1999), pp. 722-747. Guillén (2003), pp. 159-182.
[2] See Amsden (1989), pp-139-188. Chang (1993), pp. 144-154. Jenkins (1995), pp. 636-642. Chang (2002), pp. 553-557.

2. Nationalism, foreign exchange scarcity and adoption of strategic policies, 1945-62

The actual choice of countries was made for two reasons: the similarity of their size and the similarity of their political priorities. Argentina, Spain and the Republic of Korea can be considered medium-size countries. Economies of scale in the automobile have been significant, in particular, since the eve of World War One, when Henry Ford succeeded in combining interchangeable parts, continuously moving assembling line and supervision of the productive process by engineers. Such innovations made possible mass production but required a relatively large market. Therefore, mass automobile manufacturing appeared unsuitable for countries with few potential costumers or low per capita income. This was not the case in our selected economies. In 1953 Spain had 28 million inhabitants. South Korea had 21 million after the partition of the peninsula and Argentina, the least populated country in the club, had about 17 million. However, the Plata Republic had a substantially higher per capita income, i.e. around 5,000 Geary-Khamis 1990 dollars, compared with less than 3,000 in Spain and about 1,000 in the Republic of Korea. If the GDP is considered as indicator of potential economies of scale, then Argentina was the best placed of the three, with about 90,000 Geary-Khamis 1990 dollars. Spain, with 80,000, was a close second, but Korea, with 23,000, lagged behind[3].

The three countries adopted industrial policies to promote the development of domestic automobile manufacturing during the Golden Age. In Argentina, under the lead of General Peron, the First Five Year Plan of 1946 considered the promotion of the domestic automobile production a priority[4]. Coinciding with the suspension of sterling convertibility, exchange controls were strengthened in late 1947. Car imports were severely curtailed[5]. In 1951 the government decided to create a public firm to undertake automobile manufacturing with a factory in Cordoba, which had been devoted to aircraft production since 1927[6]. *Industrias Aeronáuticas y Mecánicas del Estado* (IAME) received funding of 60 million pesos. It was declared an undertaking of *national interest*, which meant that it was exempt from paying duties on imports of machinery, parts and raw materials. In 1952 IAME already employed 8,000 workers. In April 1952 the company presented its first model, *Justicialista*, a sports sedan, with a plastic body. A few months later it launched *Rastrojero*, an off-the-road vehicle. In 1953 IAME obtained a government-backed 533 million pesos loan from *Banco Nacional*. It produced 2,001 units. Half of the output corresponded to *Rastrojero* equipped with a Willys engine. The firm was manufacturing six different models. By 1958 the firm had produced 13,464 units, but with seven models.

In 1946 the Spanish public holding *Instituto Nacional de Industria* (INI) bought *Hispano-Suiza*'s factory in Barcelona in order to directly undertake the production of trucks[7]. A more significant step towards the development of the industry took place in

[3] Data on population and per capita GDP came from Maddison (1997).
[4] Belini (2003), p.453. Belini (2006), pp. 114-116.
[5] Sourrouille (1980), p. 26.
[6] Frenkel (1992), pp. 97-112. Belini (2003), p. 459.
[7] Catalan (2000), pp. 124-125. García Ruiz (2001), pp. 141-144.

1948 when the public holding forced *Banco Urquijo* to transfer the contract signed with FIAT to provide technical assistance for car production in Spain. This led to the creation of *Sociedad Española de Automores de Turismo* (SEAT*)*, in which 51 percent of capital was owned by INI and 7 per cent by the Italian company[8]. The plant, located in the duty-free zone of the port of Barcelona, launched its first model (the sedan *1400*) in 1953. The enterprise not only received tariff and other tax exemptions but also benited from its status as firm of *national interest*. The company's first president was a military engineer, José Ortiz Echagüe, who was also the head of *Construcciones Aeronáuticas*, Spain's main aircraft manufacturer. SEAT produced 2,551 units in 1954, the first complete year of activity. By 1958 it had manufactured 58,549 cars of two models (*1400* and *600*)[9].

In the Republic of Korea, the mechanic Mu-seong Choi and his brothers constructed the first domestic car in 1955 under the rule of Syngman Rhee. They founded *Shibal Automobiles*. The firm used parts of old army jeeps and modified engines. *Shibal* went into the taxi business. A shortage of fuel led the government to ban the ownership of private cars and caused a crisis in the company[10]. It folded after having produced about 3,000 cars. *Ha Dong-Hwan* emerged as a competitor specialized in commercial vehicles but it was not able to overcome the condition of artisan producer either[11].

Rhee was overthrown in April 1960. Another coup led to the presidency to General Chung-hee Park, who took office in March 1962. The new government approved the *First Five Year Development Plan,* which attempted to support the creation of a modern car industry. Under the *Automobile Protection Act* imports of assembled cars were prohibited and imports of parts received tariff exemption. The Minister of Trade and Industry was made responsible for deciding which companies would specialize in car production. It decided to choose just one firm to take better advantage of economies of scale. Originally *Sammi Corporation* was selected, but it seems that the *Saenara Automobile Company* made larger contributions to finance the party of the army and, was eventually appointed[12]. *Saenara* signed a technical assistance agreement with *Nissan* and assembled parts imported from Japan. One of the founders of *Saenara*, which means *New Nation*, was Jong-pil Kim, then director of the Korean Central Intelligence Agency (KCIA).

In short, authoritarian regimes in the three countries coincided in launching programs and supporting firms in order to promote the domestic production of automobiles. Behind this priority lay a nationalist concern with the backwardness of the country together with a military attraction for the automobile industry. They used a rather broad range of instruments: tariff exemption for part imports, direct subsidies, preferential credit or public participation in the capital of firms. However, in all three countries imports of complete cars experienced serious restrictions and investments were subjected to licensing. Moreover, the North-American firms which had operated in Argentina and Spain since the twenties, experienced particular difficulties for importing parts, obtaining permission for plans of expansion and sending profits abroad.

---

8 San Román (1995), pp. 149-155. Catalan (2006), pp. 143-150.
9 Catalan (2006), p. 190.
10 Greenbaum (2002). Note 2.
11 Lee (1996), p. 169. Guillén (2001), p. 163.
12 Ravenhill (2001), p. 6.

During the fifties and early sixties, the three economies experienced a period of highly concentrated oligopolistic competition. The number of firms licensed to undertake the manufacture of cars and obtaining permission for equipment and parts import remained rather low.

In Argentina, the early *Peronist* administration allowed the entry of *Automotores Argentinos*, a small Italian firm, which would build a plant in Tigre in 1949, and launch a small van the year after. A more significant project turned out to be *Mercedes Benz Argentina*, in which a leading figure in the regime, Jorge Antonio, had a large stake[13]. This company, created in 1949, gave priority to commercial vehicles but also won a competition to create a new the taxi fleet of Buenos Aires. A new assembly plant was set up in San Martin and another was planed in González Catán. Between 1952 and 1955 the company assembled nearly 6,000 vehicles. Expansion proceeded until the moment of Peron's fall in late 1955, when the company employed 530 people.

Last but not least another important project from first *Peronism* was *Industrias Kaiser Argentina*. Increasing foreign exchange scarcity led the Peron administration to welcome foreign capital in 1953[14]. The US businessman Henry Kaiser was looking for alternative uses from his Michigan and Ohio plants, which were experiencing serious difficulties in the original American market[15]. In August 1954 Kaiser made a proposal to the Argentinian government, considering a joint venture to manufacture cars which aimed at 90 per cent consumption of local parts. The problem of obtaining reliable components was a major obstacle for the expansion of IAME's activities. In addition, due to the acute scarcity of foreign exchange, the regime was keen to stimulate the substitution of parts. After some bargaining, the society was created in January 1955 with the participation in the capital of *Kaiser Motors*, IAME and other Argentinian shareholders. The plan was to produce 20,000 jeeps, 10,000 *Manhattan* sedans, 5,000 vans and 5,000 rural vehicles. The North Americans wanted the plant to be built in Buenos Aires, but the government insisted that the location should be in the province of Cordoba. The factory was finally built at Santa Isabel.

The overthrow of Peron in 1955 led to the paralysis of *Mercedes Benz* investments, given that the company was intervened by the government until 1958. IAME ran into difficulties because of its reduced series, heavy financial requirements and excessively ambitious expansion plans, including the production of motorcycles. IKA launched its first jeep manufactured in Argentina in 1956, being considered the first automobile with standardized production of the country. IKA took the lead as first Argentinian automobile producer. Production climbed from 5,000 units in 1956 to more than 23,000 in 1959[16]. *Kaiser* can be considered *national champion* of the moment, with a market share of 72 per cent in the latter year.

Nevertheless, the *Revolución Libertadora* dramatically changed automobile policy in Argentina. Automobile imports were eased and doubled between 1955 and 1957[17]. The North-American subsidiaries took advantage of this policy and began redirecting their production towards automobile manufacture, which had been abandoned since World

---

13 Frenkel (1992), p.95-97.
14 Torre & De Riz (2001), p. 235.
15 Mac Donald (1988), p. 333-340.
16 Mac Donald (1988), p. 341.
17 Sorrouille (1980), p. 26. Barbero & Rocchi (2003), p. 285. Torre & De Riz (2001), p.241.

War Two. In 1957 *Chrysler Argentina* undertook the assembling of trucks and small tourisms at its plant in San Justo. *Ford* re-assembled its first commercial vehicles.

The government of Arturo Frondizi continued the path of liberalization and tried to stimulate foreign investments with requirements of local contents. From late 1958 onwards it radically simplified the participation of foreign capital in the creation of new automobile plants by means of the *Law of Foreign Investment and Industrial Promotion* and the decree of *Promotion of Automobile Production*. The idea behind it was that free competition would select the most efficient firms and would favor the establishment of new companies in the country. In fact, many international car producers answered to Frondizi's invitation. In May 1959 *Citroën Argentina* was created with a program to produce 20.000 vehicles by 1964. In September FIAT obtained approval to construct a new plant in Caseros. The same month IAFA obtained the permission to produce the *Peugeout 403* with the support of the French matrix. *Chrysler* decided to manufacture the *Pick Up D-100* and the truck *D-400*. In 1960 Ford began to build a new plant in Pacheco, where it would produce the *Falcon* from 1962 onwards. *General Motors obtained* approval for an investment of 45 million dollars to build a new body-printing plant.

If the policy of *Revolución Libertadora* and Frondizi revitalized foreign investment in the car industry, it also stimulated new domestic initiatives which licensed foreign technology. The most important was *Di Tella*, which presented its project to manufacture under BMC license, a 1500 sedan in 1959. *Metalmecánica* signed a technical agreement with BMW in 1959 and launched the utilitarian *De Carlo 700* in 1960. *Cisitalia Argetina* planned to assemble utilitarian and sports models with Italian technology.

In Spain, the automobile policy of the fifties combined preferential support for the *national champion*, SEAT, with an extremely cautious policy of licensing of a few rivals. Not only did car imports continue to be very seriously restricted but industrial policy aimed to ensure that the contents of automobile production were almost entirely local. Licenses for new undertakings were given in a discretionary way, but attempting to favor specialization.

The project of producing the *Renault 4CV* in Valladolid received the green light of the government in October 1951[18]. Permission implied that production should reach 100 per cent of local contents in the fourth year following to the launching of the new vehicle[19]. At late 1951 the firm *Fabricación de Automóviles Sociedad Anónima* (FASA) was founded with the object to build the factory of Valladolid. The president of the firm resulted to be Nicolas Franco, the brother of the head of the state. Local shareholders subscribed about 70 per cent of the capital of the new firm, whereas SAER, a *Régie Nationale Renault* subsidiary, acquired the rest.

Public promotion of specialization can be seen from the fact that FASA obtained permission to manufacture a small utilitarian meanwhile SEAT was then preparing the launching a car for a wealthier segment (i.e. 1.400 cc). Additional significant licenses granted until the late fifties were limited to commercial vehicles such as trucks and tractors (*Motor Ibérica*), diesel engines and trucks (*Barreiros*), vans (*IMOSA*, *FADISA*

[18] Sánchez (2004), pp. 149-158. Fernández de Sevilla (2006), pp. 10-26.
[19] Fernández de Sevilla (2007), p. 7.

and SAVA) or jeeps *(Santa Ana).* A few very small producers of artisan cars were also allowed[20].

The passenger car market in the fifties became practically a duopoly in the hands of SEAT and FASA. Both began production in 1953. By 1956 SEAT's output passed the threshold of 10,000 vehicles and FASA that of 5,000 units. The rest of passenger car assemblers together produced no more than 2,500 vehicles. SEAT's share of passenger car production amounted to 60 per cent, against FASA's 32 per cent. In 1955, the Barcelona's company decided to jump into the cheapest segment by producing a 633 cc model, the *600*, also licensed by FIAT. It obtained government permission and, launched in 1957, experienced terrific success. It remained SEAT's blockbuster product until 1968 and was produced, and exported, until 1973. FASA reacted to the launching of the *600* by undertaking the manufacture of a new vehicle for a wealthier segment, the *Dauphine*. The new model, whose production was launched in 1958, again depended on *Renault* license. The French company supplied licenses during the early sixties and showed an interest in increasing its participation in the capital of the Spanish firm.

In 1956 the government accepted a proposal by *Citroën* to produce the *deux chevaux* van in Spain[21]. Again 100 per cent of local contents of the car, after the fourth year, it was required. In 1957 *Citröen-Hispania* was created, under the presidency of a former Franco's collaborator during the Civil War years, Pedro Gonzalez Bueno. The *deux-chevaux* would be produced in the duty free zone of the port of Vigo. Production was launched in 1961 and reached nearly 4,000 units in 1962. Although it was a van, the Galician *deux-chevaux* was under great demand, given the limited availability of utilitarian models during the period.

The Spanish production of automobiles jumped from less than 7,000 vehicles in 1954 to more than 100,000 in 1962. The *national champion* and main producer, SEAT, had reached local contents of 99 per cent. FASA and *Citroën* remained far below that share, but had been forced to gradually decrease the amount of imported foreign parts. The government had succeeded in its two nationalistic goals of promoting domestic production of cars and encouraging local manufacture of parts. The main tools had been restriction on car imports, licensing of investment, subsidies and direct public participation in production by means of majority participation of INI in the capital of the *national champion*.

South Korea did not have so much experience as Argentina or Spain in assembling or manufacturing of automobiles. Before the wars, when the country belonged to Japan, Korea only had some repair workshops for trucks and cars produced overseas and rolling at the peninsula, Manchuria or inner China. Since World War Two, small workshops used to repair and provide parts for the Army. Experience acquired with the repair of Japanese vehicles was transferred to the workshops working for the American forces. One of these workshops was own by Ju-yung Chung, a mechanic in 1940 and future founder of the *Hyundai* conglomerate[22]. Mu-seong Choi constructed the *Shirbal*, the first car produced in Korea, as noted above. *Ha Dong-Hwan*, founded in 1954, shared a similar experience. *Shinjin Motors* began by undertaking the construction of

---

[20] Catalan (2000), pp. 131-137. García Ruiz (2001), pp. 143-144. García Ruiz (2003), pp.36-37.
[21] Carmona & Nadal (2005), pp. 332-334.
[22] Hyun (1995), p. 11. Lee (2005), pp. 8-9. Ju-yung Chung founded the *Hyundai Engineering and Construction Company* in 1947.

minibuses. Accumulation of know-how was of paramount importance, but both domestic consumption and production remained extremely low throughout the fifties. The number new registered automobiles each year rarely surpassed 3,000 units up to 1962. That year about 2,100 units were produced in the Republic of Korea. Nevertheless, from an evolutionary perspective, it has been defended that the first stage in the development of the automobile industry in South Korea took place between the late forties and the early sixties. The number of domestic parts suppliers rose from 13 before 1950 to 500 by 1962[23].

A further stage of development would have been focused on assembling. In fact, the *Automobile Industry Protection Law*, enacted in 1962, gave tariff and tax exemptions to importers of parts and restricted imports of cars[24]. *Saenara* was created to benefit from these new conditions. The company received a 35 million dollar loan and technical assistance from *Nissan* and built a factory at Bupyoung[25]. The firm used to import kits from Japan and assembled them in Korea. *Saneara*, the only car assembler in the early sixties, was accused of raising funds for the KCIA, and charging excessively high prices in relation to the cost of imported parts. *Saenara*'s cars could hardly compete in price and quality with foreign models. Small workshops producing parts experienced many difficulties and were forced to restructure. *Saenara* could not avoid bankruptcy in 1963.

A more patient long-term strategy was followed by *Kia Motors Corporation.* The company had been founded, under the name of *Kyunsung Precision Industry*, at Seoul in 1944. Originally, it produced steel tube and bicycle parts. It began to manufacture complete bicycles in 1951. Five years later *Kia* produced the first motor scooter, establishing a new factory at Shihung. In 1961 it jumped into motorcycle production. The postwar accumulation of know-how and the new legislation created favorable expectations to undertake manufacturing of larger vehicles. In 1962 *Kia* launched its first truck, the *K-360*. As the way to car production remained temporary closed, *Kia* concentrated on industrial vehicles.

3. Growth, exports and political unrest in the late Golden Age, 1962-73

The Argentinian automobile industry had experienced substantial growth since the early fifties and, in the medium term, liberal policies with *Revolución Libertadora* and Frondizi favored a further marked increase in productive capacity of the Argentinian automobile industry. During the decade after 1955, Argentinian output of cars multiplied by 30, reaching nearly 200,000 vehicles in the mid-sixties. However, the intensification of competition significantly squeezed the profitability of existing firms. Many of the new producers were not profitable either.

In 1963 *Ford*, *General Motors*, *Chrysle*r, IAFA, *Citroën*, *Mercedes Benz* and IASF recorded losses. The leader in sales up to 1962, IKA, experienced a fall in profit margin (profits/sales) from 5.5 per cent that year to only 1.0 per cent in 1963. *Automotores Argentinos*, *Cisitalia*, *Borgward* and *Peugeot* closed their plants. During the following two-year period IKA, FIAT and the three North American sisters declared profits, but *Citröen*, *Mercedes Benz* and *Di Tella* went into the red.

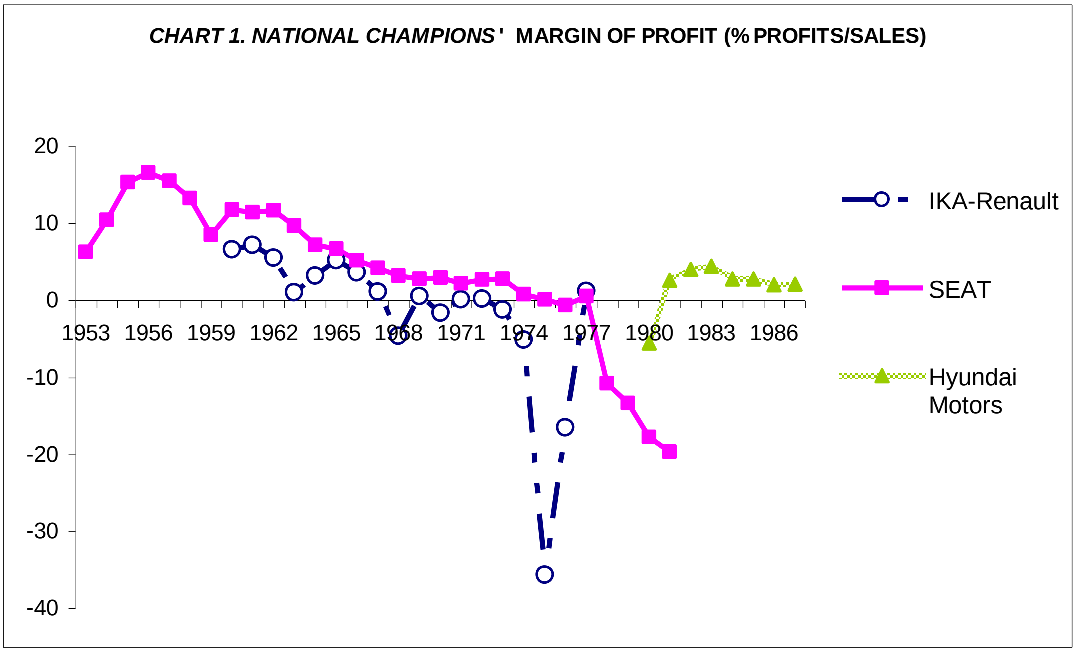
---

[23] Kim (1999), pp. 31-33. Yang, Kim & Han (2006), p.22.
[24] Green (1992), p. 414.
[25] Kang, p. 5.

Citroën was producing the *deux-chevaux* and the AZU van with 961 workers. Although the French company exported some units to Uruguay, its total output reached only 4,687 units, about 57 per cent of planned capacity. *Mercedes Benz*, under total control of *Daimler Benz*, focused its activity in the production of engines and trucks, but its 1,000 workers only produced 4,800 vehicles, distributed in ten models. *Di Tella* had launched four models, although its total output remained below 14,000 units.

Many modest manufacturers, which obtained production plans approved under Frondizi's legislation, fought to subsist. The most important were *SAFRAR* (before *Peugeot*), *Industria Automotriz Santa Fe* and *DINFIA* (the new name of *IAME*), manufacturing about 5,000 vehicles each. The rest of firms remained artisan companies which constructed less than 1,000 units per year. In 1965 no fewer than 68 models (artisan units excluded) were produced in Argentina, a figure that implied an average of 2,860 units per model.

At the top of the pyramid, the main producers in 1965 were *IKA*, *Ford Motor* and *FIAT Concord*. The leader, with an output of 56,625 vehicles had seen its share of automobile production fall to 29 per cent (from 60 per cent in 1958). As Chart 1 shows, *Industrias Kaiser's* margin of profit suffered its first marked crisis in 1963[26]. The firm tried to fight against share-squeezing by exploring export markets and launching new models. It inaugurated Argentinian exports by sending jeeps to Paraguay. It also tried to attract additional consumers with new models: in 1965 the firm produced seventeenth different ones, with an average of 3,331 units per model. Nevertheless, the figure did not significantly differ from the country's average.



[26] Data on Argentinian firms' profitability come from Sourrouille (1981), p. 216.

Ford Motor opted for a rather reduced scope of products, with six models. Total production remained below *IKA* in number of units (30,474) but profit margin was superior (8.4 per cent). Profitability was based on a better average of units per model, which in the case of *Ford* reached 5,246 vehicles. The *Ford Falcon*, produced at the new plant of Pacheco, was rather successful during the period.

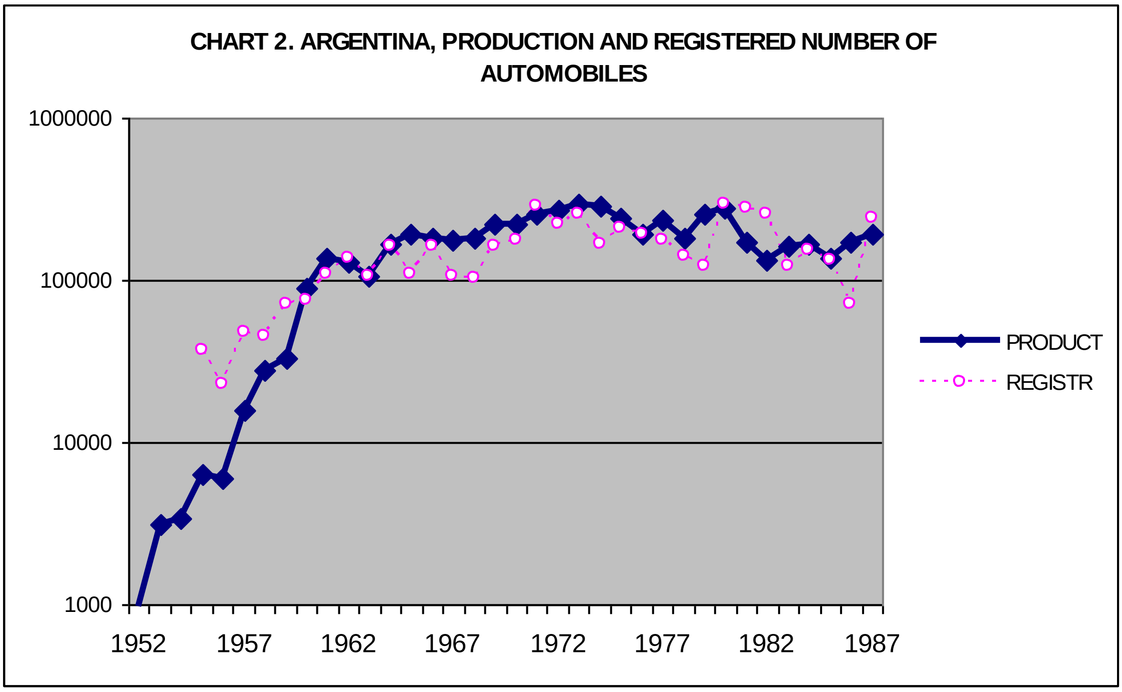
FIAT, whose activities in Argentina had been devoted originally to supply technology for the manufacture of tractors and railway equipment, had launched the *600* in 1960, the first car at its plant in Caseros. Up to 1965 it commercialized five models, reaching an output of 28,868 units. It also undertook some exports to Chile. *Fiat Concord*'s ratio of units per model (5,798 vehicles) appeared to be significantly larger than the corresponding to IKA, but profits from sales remained far below *Ford* (3.8 per cent).

In short, the sudden increase of competition, as it could be expected, led the Argentinian automobile industry to lower profits and a much larger scope of models than before. A larger amount of producers and too many models contributed to cause bankruptcies, takeovers and fusions. In 1965 *Citroën* joined *Peugeot* to create SAFRAR. IKA attempted to rescue *Di Tella* by acquiring 65 per cent of its capital. *Metalmecánica*, which had assembled *Di Carlo* 700 with BMW technology, closed its doors.

The *national champion* was not immune to new difficulties. Even if IKA was able to launch a fashionable model designed by Pininfarina in 1966, i.e. *Torino*, profit margin squeezed to only 1.1 per cent in 1967 (Chart 1). Sinking profitability led to the takeover of IKA by *Renault*, which some years ago had already licensed some of its products to be constructed by the firm located in Santa Isabel. Since late 1967 the company was renamed *IKA-Renault.* It declared huge losses the year after. Profitability of the new company remained very poor until 1973 and collapsed afterwards.

Both *Fiat* and *Ford* passed *IKA-Renault* in sales, profits and profitability. In 1972 current sales of *Fiat Concord* more than doubled those of *IKA-Renault* and profits were ten times higher in the Italian subsidiary. Nevertheless, profit margin at *Fiat Concord* did not leave too much room for optimism, being only 0.5 per cent. At the end of the Golden Age, *Ford Motor* followed *FIAT* as the second car producer in Argentina. Even if *Ford* sales were much more modest (one third lower), its relative profitability resulted higher, reaching 2.2 per cent in 1972.

During the late Golden Age, social unrest spread within capitalist economies, as a result of two decades of exceptional growth and low unemployment. However, in Argentina class conflict reached particular intensity due to recurrent political instability and non-cooperative strategies adopted by political actors. A new coup brought the army back into power in 1966, now in the name of *Revolución Argentina*. On 29 May 1969 Cordoba, the main province where the automobile industry was located, became the scene of direct confrontation between *Peronist* workers and forces of order. In March 1972 a director of *Fiat Concord* was kidnapped by a *guevarist* organization, to be killed on 10 April. On 21 May 1973 a top executive of *Ford Motor* was shot dead. In August 1973 another *FIAT Concord* executive was injured by a bomb which exploded at his home. All the main car companies recorded losses in 1973, except *Ford*.



On balance, it should be said that automobile production developed significantly in Argentina during the late Golden Age, albeit more slowly than in the previous period. It can be seen from the change of slope in Chart 2 that growth was much less intense than during the take-off phase of the fifties. However, a remarkable average rate of expansion of about 7 per cent per year was reached between 1962 and 1973. On the other hand, car makers located in Argentina began to explore neighboring markets[27]. It can also be seen in Chart 2 that in the late sixties production climbed above the number of registered automobiles. In fact, Argentina began to export automobiles throughout the sixties and reached the thirteenth position in the world ranking around 1973 (see Table 1 below).

Nevertheless, the pattern of development of the Argentinian automobile industry during the late Golden Age suffered three main weaknesses. First of all, companies were producing extremely reduced series of each model to benefit enough from economies of scale. This derived from the sudden liberalization of the industry during the earlier phase of growth, which resulted in a excessively large number of firms and, especially, of models launched by each company. The final outcome was that firms operated with a very reduced profit margin (if any at all).

A second negative outcome, related to the previous one, was that the *national champion* had experienced a dangerous erosion of its profitability. The take over of *Di Tella* only made things worse. Finally, *Renault* increased its stake in *IKA* and the champion became more dependent. With less autonomy, the policy of looking for a national vehicle was jeopardized.

[27] Sourrouille (1980), p.27. Barbero & Rocchi (2003), p. 286.

A final source of vulnerability came from the institutional framework. Political convulsions tended to poison social bargaining. Firm managers, as representatives of capital, were seen as government collaborators and had to pay for it. As the car industry stood out among the fast growing sectors, it suffered the turmoil of the late sixties and early seventies with particular intensity.

Before 1972 the Spanish industrial policy showed strong continuity with the strategic options of the fifties. Imports continued severely restricted by contingents. Investment continued submitted to licensing. Ninety per cent of the parts used by car constructors had to be local.

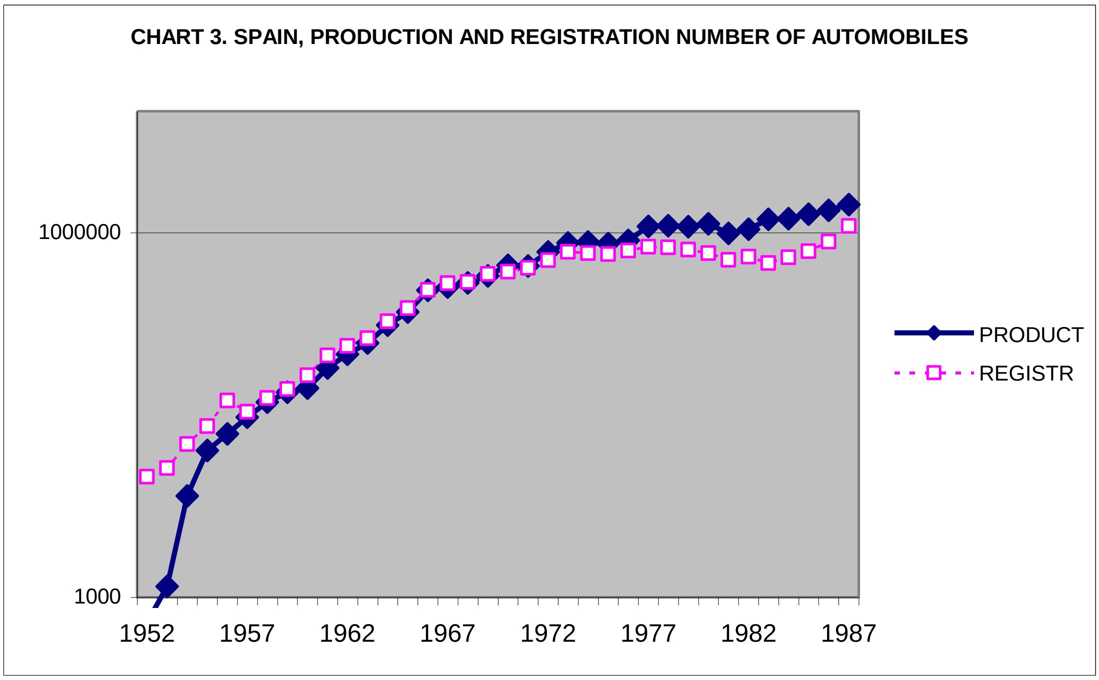
Up to 1972 the continuity of strategic policy was compatible with some cautious moves. Two new projects received permission to assemble cars in Spain during the sixties and prudently introduced more competition in the industry. The first authorization was granted to Eduardo Barreiros, an entrepreneur who previously produced engines and trucks in Madrid and would finish in the hands of *Chrysler*[28]. The firm would manufacture two new models: the *Dodge Dart*, for the top segment of the market and the SIMCA 1000, for the medium-cheap class.

Permission was also given to AUTHI, which would build a new plant in Pamplona to manufacture cars under a *British Leyland* license. AUTHI should specialize in the medium segment. It launched the *Morris 1300*, *MG 1300* and *Morris Mini 1250*.

Moreover, the Ministry of Industry gave priority to export promotion. During the late seventies it subsidized car exports. In the case of the main producer, SEAT, sales abroad were originally prohibited by the contract signed with the licensing partner, FIAT, in 1948. Long negotiations between the government and the Italian firm led to an agreement signed in 1967 which entitled SEAT to export in exchange for increased participation of Turin in its capital. As a consequence, the public holding INI reduced its capital from 51 to 35 per cent, whereas FIAT expanded its share from 7 to 37 per cent[29]. In 1970 SEAT also obtained the green light to create its own R+D Center and to use FIAT export network to sell abroad. The same year, Madrid signed a Preferential Agreement with the EEC, which established the gradual reduction of tariffs on Spanish cars. Altogether this favored a rapid increase in SEAT's sales abroad. Its exports climbed up to 55,167 units by 1972, accounting for 54.5 per cent of total Spanish passenger car exports[30].

---

[28] García Ruiz & Santos Redondo (2001), pp. 121-212.
[29] Catalan (2006), pp. 160-162.
[30] Catalan (2006), p. 169.



Régie Renault also succeeded in increasing its degree of control of the firm which produced its models in Spain. In 1965 *Renault* bought up 49.9 per cent of capital of FASA, the maximum allowed by the *Spanish Foreign Investment Act*. This move made the factory of *FASA-Renault* in Valladolid, the firm's most important undertaking from outside France[31]. FASA-*Renault* also benefited from the export promotion policy of the late Golden Age and sold abroad 11,087 units in 1972 abroad, about 10.6 per cent of total exports.

Both *Chrysler* and *Citroën* also took advantage of the export promotion incentives in a significant way. Together were responsible for 32.3 per cent of Spanish passenger cars exports in 1972. As it can be seen in Chart 3, Spain departed as a car exporter during these years of the late Golden Age.

The protectionist policy of the Golden Age can be considered as a success given that automobile production rose at a rate of 20 per cent per year between 1962 and 1973. Spain climbed to the tenth position in the world ranking of automobile producers. The industry began to compete abroad and Spain became the eleventh world exporter of automobiles in value.

Nevertheless, attention should be given to the fact that the market had become more competitive than at the beginning of the sixties given that already existing firms increased the number of models and new entrants had launched alternative products. In fact, AUTHI, *Chrysler* and *Citroën* experienced difficulties to overcome the threshold of production of 50,000 units and tended to run losses.

On the other hand, labor conflict had also intensified in Spain since the late sixties, because the economy was approaching full employment and clandestine unions attempted to link the improvement of living conditions with the fight against Franco's dictatorship. Workers' leaders were sacked. In 1971, workers of SEAT occupied factory

---

[31] Loubet (2000), p. 221. Fernández de Sevilla (2006), p. 69-85. Fernández de Sevilla (2007), p. 26.

workshops. A man was killed when the police charged against strikers. New dismissals and further strikes took place. As a result, labor costs increased sharply and profitability declined. Between 1967 and 1971 profits out of sales in SEAT declined from 4.2 to 2.2 per cent (see Chart 1)[32].

In 1972 SEAT's margin of profit improved a little, ito 2.7 per cent. The rate appears to be modest, but not very different from contemporary French and Italian car companies in the original countries. By this moment SEAT was producing 335,340 units, with five basic models. The Spanish national champion was benefiting from economies of scale and prepared the launching of a new model, *127*, the first one with front drive wheel.

The second passenger car firm, FASA-*Renault*, also had to deal with labor conflicts though not so intense. Perspectives were even better than in SEAT, given that in 1969 it had launched a successful product for the medium-high segment, R-12, and in 1972, would present another future star product of the cheap segment, R-5[33]. Although its market share was nearly half of the corresponding to SEAT, its profitability was slightly higher.

In South Korea the failure of *Saenara* led to a fall from 1,000 to 200 in output of passenger cars, whereas the production of commercial vehicles decreased from 1,100 to 900 units. A nadir was reached in 1964. The government supported the takeover of *Saneara* by *Shinjin*, helped by an additional substantial contribution to the political party in power. The approval of the Ministry of Trade and Industry implied a second attempt to promote a single firm in the car industry. *Shinjin* which had had experienced assembling *Mitsubishi* kits, shifted to *Toyota* as technological partner.

On the other hand, *Ha Dong-hwan Motor Wokshop* took over *Dongbang Motor Company* in July 1963. The new company *Ha Dong-hwan Motor Company* focused its business in trucks and buses construction. In May 1966 *Ha Dong-hwan* exported its H7H R-66 bus to Brunei for the first time.

Shinjin launched its *Corona* in 1966 and also produced trucks. Total Korean production reached 7,400 units. The year after, *Ha Dong-hwan* established partnership with *Shinjin Motor*. *Ha Dong-hwan* also began to export large buses to Vietnam.

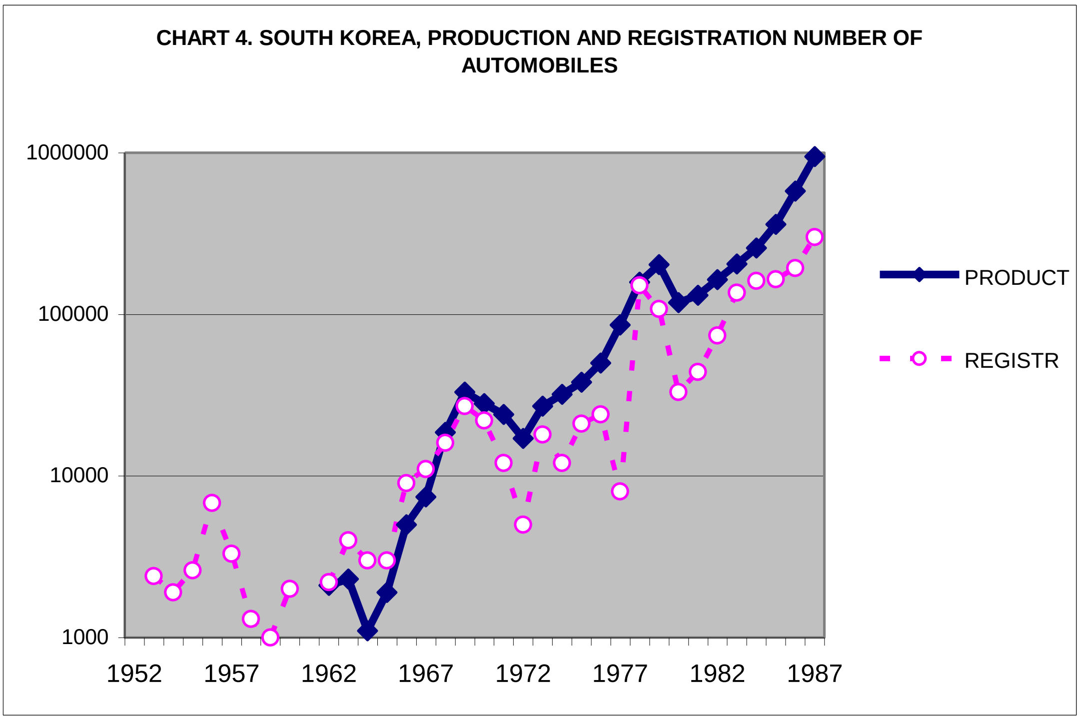
The government, under the pressure from the parts manufacturers, decided to increase the number of final producers of cars and announced the *Automobile Plant Permission Standards*, which encouraged technological alliances with foreign partners[34]. In December 1966 the government decided to end the monopoly of *Shinjin* by authorizing three new companies to undertake passenger car production: *Asia Motors*, *Kia* and *Hyundai*[35]. *Asia Motors Company* had been founded in 1965. It had specialized itself in the production of medium-sized trucks for military use. *Hyundai*, under the lead of Ju-yung Chung, had become one of the most prosperous *chaebols* thanks to public works under Rhee's and Park's governments. The subsidiary *Hyundai Motors Company*, created in 1967, would manufacture under license by *Ford*, launching the Korean *Cortina* the year after.

---

[32] Catalan (2006), p. 189.
[33] Sanchez (2004), p. 164.
[34] Yang, Kim & Han (2006), p.22.
[35] Lee (2005), p. 9.

The end of the monopoly in passenger cars together with the new technological alliances encouraged South Korean output. In 1969 production of automobiles reached 33,000 units, with passenger cars accounting for 57 per cent. At this stage, assembling dominated. A new fall back of production took place during the early seventies. As it can be seen in Chart 4, production reached a new nadir in 1973 with only 17,000 units being manufactured.

Confronted with slow growth of output, the government decided to encourage new initiatives. It gave permission to *Kia* to increase the capacity of production of cars in 1971. It also allowed the purchase by *General Motors* of *Toyota*'s shares in *Shinjin* in 1972[36]. In spite of two significant recessions, output had increased at a rate of 24 per cent since 1962.



In addition, both parts producers and assemblers were becoming more technologically sophisticated. In 1968 *Hyundai* imported 79 per cent of its parts. Seven years later imports had been fallen to 40 per cent. *General Motors Korea* also reduced its imports of parts down to 26 per cent[37].

In short, during the late Golden Age, the highly protectionist South Korean automobile market experienced an upwards trend in car production, but with high instability. The monopoly in private cars, initially granted to a single firm, not only induced rent-seeking but caused intense perturbations to production. The relaxation of this policy was beneficial, although it appeared unable to completely eliminate sharp fluctuations in output. Nevertheless, the policy of preserving the market for domestic firms and

---

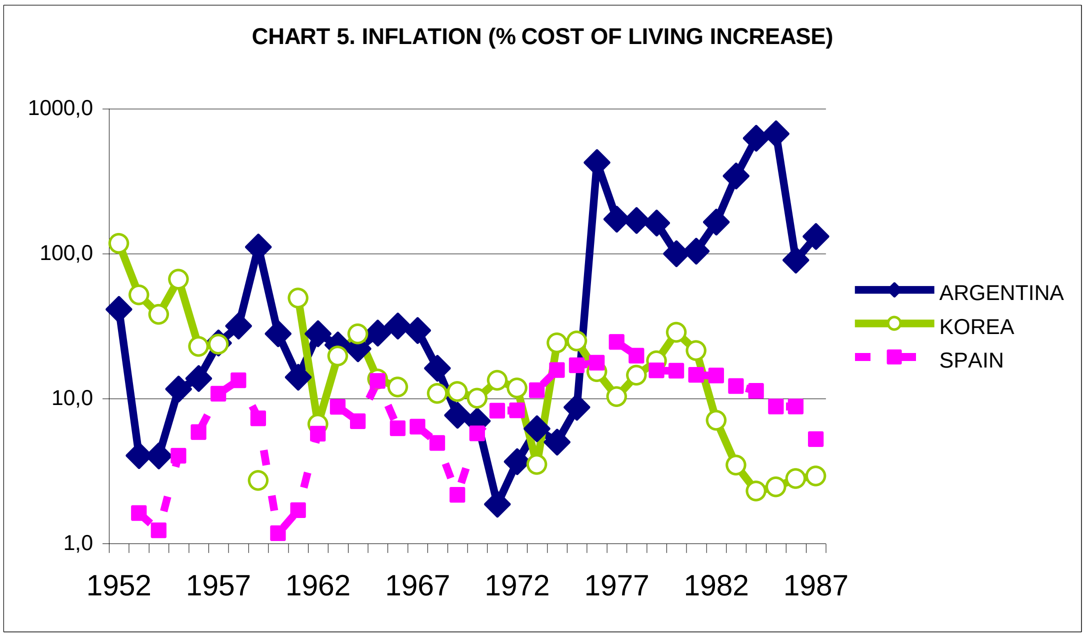
[36] Greenbaum (2002).
[37] Yang, Kim & Han (2006), p. 22.

favoring license agreements with foreign producers helped local firms to develop strategic capacities of paramount importance for the future of the industry.

4. Economic crisis, restructuring and uneven paths, 1973-87

The expectations created by the development of a domestic automobile industry during the Golden Age came to nothing in Argentina. As shown in Chart 2, the zenith of Argentinian car production was reached in 1973 with an output of 289,000 units. In 1987 production had sunk to 193,000 automobiles, i.e. only 67 per cent of the previous maximum. In addition, Argentina which reached the sixteenth position as an automobile exporter in the early seventies would disappear from the list of the twenty top exporters in the late eighties.

The main reason for the Argentinian failure in this period was the volatility in macroeconomic policies[38]. Although Argentina had not been very stable during the Golden Age, macroeconomic disturbances in the following years resulted much more intense and harmful for industrial development.



The rate of inflation can be considered the main indicator of the acute macroeconomic volatility of demand management in Argentina. The Plata Republic had suffered some inflationary outbursts during the Golden Age, the most important taking place in the late fifties. Nevertheless, as Chart 5 shows, before1973, variations in the rate of inflation in Argentina do not appear to have been more intense than in South Korea. Moreover in the early seventies, Argentina recorded a moderate level of inflation and comparable to that of the Asian and Iberian economies.

Between 1975 and 1987 Argentina experienced two inflationary bursts without parallel in either in Spain or Korea. Both episodes ended with the adoption of radical restrictive

[38] Della Paolera & Gallo (2003), p. 372.

policies to de-accelerate inflation, which caused real recession. The performance of the Argentinian industry during those years tends to confirm the findings of authors who had stressed the existence of a point of no return in Argentina's long-term economic growth around 1975[39]

In fact, neo-*Peronism* in power led to nominal wage increases of 40 per cent in 1975[40]. The cost of living began to accelerate. Multiple exchange rates fostered black market operations. General strikes led to the paralysis of manufacturing activities. The army left the barracks again and seized power in 1976. Political repression under General Videla was much more brutal than in previous authoritarian periods. Inflation rose to three digit levels. The peak of inflation coincided with a nadir in automobile production.

The Finances Minister, Martínez de la Hoz, attempted to fight against domestic and external disequilibrium by dramatically reducing fiscal deficit and decreasing tariffs. Contraction of domestic demand together with lower protection of the industry led the automobile production to a second minimum in 1978, when the Argentinian output reached only 62 per cent of the volume of units produced five year earlier. At this point, *General Motors* decided to quit the country. Since the previous year *GM*, *Fiat*, *Chrysler*, *SAFRAR* and *Citroën* had declared huge losses.

A restrictive macroeconomic policy temporary succeeded in de-accelerating inflation to 100 per cent per year during the biennium 1979-80. Automobile production also seemed to experience transitory recovery, rising from 179,000 to 282,000 units from 1978 to 1980. Nevertheless, the expectations appear to have been so negative that some of the automobile companies opted to leave Argentina or to restructure their activities. *Chrysler* was ready to quit and sold its subsidiary to *Volkswagen* in May 1980. *Peugeot* and *FIAT* merged into *Sociedad Europea de Vehículos (SEVEL)*. *Industrias Mecánicas del Estado* (the old IAME) closed its doors.

But things could also get worse. The restrictive policy was abandoned under the government of General Viola in 1981. Under General Galtieri, the Finances Minister Roberto Aleman again attempted sudden liberalization and showed itself in favor of equilibrating the budget. The Falklands War again fostered public deficit and pumped new money into the market. Inflation accelerated again in 1982. Imports and registered cars expanded for a while but production sank to only 132,000 units. At this moment, the absolute lowpoint of the depression for the Argentinian car industry, output reached only 45 per cent of the level of 1973. As a result of the crises, most automobile firms ran up huge foreign debts. This was the case of *Renault*, *Mercedes Benz* and *Ford Motor*, which appeared as top foreign debtors in 1982. Foreign borrowing had been encouraged by exchange insurance guaranteed by the government. Nationalization of private debt in 1982 converted Argentina into one of the top foreign debtors in the world.

The return to democracy under the *radical* presidency of Alfonsín brought neither economic growth nor domestic equilibrium to the country. Growth was jeopardized by the burden of servicing foreign debt service and additional volatility in the fight against inflation. Both registered automobiles and production figures remained far below the

---

[39] Bertola & Porcile (2000), p. 77. Katz & Kosacoff (2000), pp. 307-309. Barbero & Rocchi (2003), p. 289. Sanz (2004), pp. 199-200.

[40] Torre & De Riz (2001), pp. 285.

1973 level. Automobile firms continued in the red. Again survivors tried to restructure by merging. In 1987 the leader of the market since 1975, *Ford Motor*, merged with *Volkswagen Argentina*, to create *Autolatina*.

To sum up, during 1973-87 the automobile industry undertook deep restructuring guided by market forces under high volatility of macroeconomic policy and dramatic demand shocks. Of the four main producers of the country, *IKA-Renault*, *Fiat*, *Ford* and *General Motors*, the last left the country. *Fiat* and *Ford* proved unable of maintaining autonomous business. The ancient *IKA* felt under complete control of *Renault* in 1975. Although *Renault Argentina* kept the production of the *Torino*, the only remaining local model, it limited itself in the future to introduce French models.

As has been argued, the overwhelming responsibility for the decline of the automobile industry in the Plata Republic after 1973 was the highly volatile macroeconomic policy, within an extremely polarized society. Nevertheless, the difficulties of the industry were increased by the lack of industrial policy tending to support the exploitation of economies of scale by firms. The latter is clear if we take into account the limited amount of units produced of the most successful car models. In *Fiat Concord*, the leader up to 1975, the most produced model was the *600*: 365,768 units between 1960 and 1982. This gives an average below 16,000 units per year. In SEAT the same model (produced from 1957 to 1973) recorded averages above 46,000 units. *Ford Motor Argentina*'s blockbuster model turned out to be the *Falcon*, with 494,208 units produced during 1962-91, that is about 16,000 units per year again. In Spain, a comparable car, the *R-12* was produced from 1969 to 1983, with a total output of 455,006 units and annual average of above 30,000 units. Without benefiting from economies of scale, Argentina's exports could not sustain competition in the world market. Table 1 shows that the expectations opened up for the Argentinian exports during the Golden Age were not fulfilled afterwards.

Spain returned to democracy in the mid seventies and experienced accelerating inflation up to 1977. The Moncloa agreement between political parties and unions together with restrictive demand management brought inflation under control (Chart 5). Centrist governments until 1982 and social-democratic ones afterwards, coincided in giving priority to the price stability. Although Spain experienced dramatic economic recession and rising unemployment, expansionist macroeconomic management was out of question during the decade which followed to the signature of the Moncloa pact in 1977. In short, the volatility of macroeconomic management was low.

	Table 1. Exports of passenger cars and commercial vehicles				
	Thousand dollars				
		1973			1987
1	GERMANY	6483517	1	JAPAN	44288960
2	CANADA	3103489	2	GERMANY	37442083
3	JAPAN	3494511	3	CANADA	15669396
4	FRANCE	2825848	4	BELGIUM	10502252
5	USA	2613063	5	USA	10131876
6	BELGIUM	1872860	6	FRANCE	9684875
7	ITALY	1378487	7	ITALY	4947497
8	UK	1314852	8	SWEDEN	4890615
9	SWEDEN	867996	**9**	**SPAIN**	**4116020**
10	NETEHRLADS	219683	10	UK	3911305
11	**SPAIN**	**175271**	11	BRAZIL	3059590
12	AUSTRALIA	167368	**12**	**KOREA**	**2788923**
13	**ARGENTINA**	**61555**	13	MEXICO	1120465
14	AUSTRIA	55459	14	NETHERLANDS	716188
15	MEXICO	39659	15	DENMARK	543025
16	BRAZIL	37043	16	AUSTRIA	510104
17	FINLAND	31416	17	YUGOSLAVIA	489669
18	SINGAPORE	28659	18	FINLAND	385307
19	LEBANON	21527	19	NORWAY	242004
20	DENMARK	21516	20	PORTUGAL	232071
	Source: *International Trade Statistics*				

On the other hand, Spanish industrial policy showed a marked contrast with that corresponding to the Golden Age. The shift began in 1972 when the policy of high local contents in automobile manufacturing came to an end[41]. Henry Ford II obtained a change of legislation from the Spanish government which implied the reduction from 90 to only 50 per cent of local contents for new automobile firms established in Spain. In addition, the firm of Dearborn was also granted permission to build a new plant in the country. The factory, located in the surroundings of Valencia, would produce the *Fiesta* model, a small front-drive car, a direct competitor for the SEAT blockbuster of the moment, the *127*. The *Fiesta* was launched in 1976. Two years after, *Ford* was producing 260,939 units in Valencia.

The shift of 1972 was consolidated in 1979, when the local content requirement was reduced to 60 per cent for all industry firms. At the same time, Madrid gave permission to *General Motors* to establish a new factory near Saragossa. Again a small utilitarian woul be produced for the medium-cheap segment, the *Opel Corsa*. The new vehicle would be ready in 1983. By 1986 GM was manufacturing 304,090 units in Saragossa.

[41] Catalan (2000), pp. 141-144. García Ruiz (2001), pp. 147-150. Pérez Sanchó (2003), pp. 131-143.

Last but not least, controls on automobile imports began to be relaxed. The number of new imported passenger cars went up from 12,070 units in 1978 to 57,229 units in 1980[42]. This increase meant that the supply of imported cars tripled in only three years. The process would go on during the following years, in particular after 1986, when Spain joined the EEC.

The new industrial policy intensified competition within the domestic market and improved the efficiency of producers located in Spain. Both *Ford* and *General Motors* made large investments in Spain to take advantage of Iberian countries' impending entrance in the Common Market. At the end of the period, Spain had risen to ninth in the list of car exporters (Table 1) and improvement would go on afterwards.

The firm most damaged by this policy was SEAT, the old *national champion*, which had focused its efforts on the popular segment. Its share of the Spanish market sank dramatically from 51 per cent in 1973 to only 26 per cent in 1980. Losses rocketed since the *Ford Fiesta* arrived on the market (Chart 1). SEAT had taken over AUTHI in 1975 against the promise of a government veto on GM setting up in Spain. Nevertheless, the transition governments did not keep previous compromises and authorized GM to set up in Spain at the moment when SEAT was recording the deepest losses of its history (Chart 1). As a result, FIAT decided to leave Spain and gave SEAT back to INI in 1981. SEAT, owned completely by INI, tried to survive as an independent producer but suffered again from the launch of the *Corsa* in 1983. Its output recorded then 240,005 units, only 66 per cent of its 1974 level. SEAT had signed an agreement of technical cooperation with Volkswagen in 1982. In 1986, under the Socialist administration, the INI transferred 51 per cent of SEAT's capital of SEAT to Wolfsburg. The policy of supporting a *national champion* in the automobile industry was definitively over.

FASA-*Renault* did not suffer as much as SEAT because it was not so dependent on the cheapest segments of the market. R-12 and R-6 continued to sell well throughout the seventies[43]. Even R-5 performed very satisfactorily before the launching of the *Corsa*. *Renault* became the new leader within the Spanish market between 1980 and 1983, but later it was overtaken by *Opel*, which took the first place during 1984-85.

To sum up, after 1972 Spain experienced relative macroeconomic stability and completely changed its industrial policy. Protectionist policy came to an end and efforts were made to attract the main American automobile producers to Spain and to prepare the integration within the EEC. The policy of supporting the creation of a *national champion* in the industry was also abandoned. This change implied the consolidation of Spain as a world exporter of cars in the medium-low segment. Efficiency and competitiveness improved. However, this decision also implied giving up the chance to overcome technological dependence on foreign manufacturers. In addition, the progression of the automobile industry experienced a significant slow-down in relation to the Golden Age.

The stability of macroeconomic policy in the Republic of Korea during the 1973-87 period recalls Spain more than Argentina. As Chart 5 indicates, the low volatility of demand management in the Asian country helped to create the necessary conditions for

[42] Anfac, Memoria 1980, p. 59.
[43] Sánchez (2004), p. 164.

the development of the automobile industry which where lacking in the Plata Republic. Moreover, in contrast to Spain, Korean industrial policy did not experience dramatic shifts and contributed to overcome significant weaknesses in the development process. Unlike Spain, South Korea remained very cautious in accepting new foreign investments and import liberalization and concentrated its efforts in encouraging domestic producers to take full advantage of economies of scale and to decrease technological dependency.

After the Yushin, soft coup, nationalistic policies were strengthened in South Korea[44]. The *Heavy and Chemical Industries Project* designated a pack of strategic activities for export promotion, including the automobile industry[45]. In 1973 the *Long-Term Automobile Promotion Plan* invited producers to submit plans for launching an indigenous people's car[46]. Large series of productions were required. Local contents for parts should reach 95 per cent. *Kia*, *Hyundai* and *General Motors Korea*'s proposals were accepted but the *Asia Motor* project was rejected. Public policy promoted specialization of firms according to segments: cars with 1.000 cc engines for *Kia*, 1.300 cc for *Hyundai* and 1.400 cc for *GMK*[47]. *Asia Motor* had to focus in Jeep production.

In 1973 *Kia* produced its first gasoline engine at its new Sohari plant, the first factory to incorporate a conveyor system in Korea[48]. Soon afterwards it launched its new passenger vehicle, *Brisa,* which borrowed *Mazda* technology. In 1975 *Kia*'s output exceeded 10,000 units for the first time in Korea and became the transitory market leader. It also produced the *Peugeot 604* and the FIAT *132*. In these markets, it was faced competition from the *Opel Rekord* launched by *Shinjin-GMK* in 1974. *General Motors* licensed *Shinjin* to produce some new models and carried out important investments to expand productive capacity. In 1976 when the firm was renamed *Saehan Motors* its capacity had increased up to various thousands of passenger vehicles. It replaced *Kia* as Korea's main constructor of cars[49].

Hyundai took the government policy more seriously and spent more time trying to create a people's car, focusing its efforts in developing its own hybrid technology. The *chaebol* had been negotiating for three years with *Ford* to make Dearborn accept a joint venture with minor American participation[50]. Finally negotiations broke down. In 1973 *Hyundai* cancelled its joint venture with *Ford*[51]. The president of the company, Se-yung Chung, opted to build a new indigenous vehicle independently, creating his R+D center in 1974[52]. The outcome was the *Pony,* a new model partially conceived as reverse engineering from *Ford Marina*. George Turnbull, former Director at *British Leyland*, was hired as vice-president to contribute to develop the product. The prototype was redesigned by Giorgetto Giuggiaro and the engine and transmissions supplied by *Mitsubishi*[53]. Chung-goo Lee, who made a significant contribution to the conception of

---

[44] Jenkins (1995), p. 637. Lee (2005), p. 9.
[45] Ravenhill (2001), p. 7.
[46] Green (1992), p. 414. Ravenhill (2001), p. 7. Hyun (1995), p. 7. Yang, Kim & Han (2006), p. 23. Kang, p. 5.
[47] Yang, Kim & Han (2006), pp.23-25.
[48] Kang, p. 5.
[49] Greenbaum (2002).
[50] Hyun (1995), p. 7.
[51] Lee (2005), p. 10.
[52] Hyun (1995), pp. 7-10.
[53] Green (1992), p. 416. Yang, Kim & Han (2006), p. 23.

the *Pony*, had studied engineering and product development at *Ital-Design*, Giuggiaro's headquarters in Turin during 1973-74[54]. It should be stressed that *Pony* was not very modern product for the time, because it still had rear-wheel drive at a moment when front-wheel drive was taking the lead. Nevertheless, the *Pony*, launched in December 1975, turned out to be a hybrid but indigenous Korean model from a firm under independent managerial control. The production capacity of Ulshan plant went above 50,000 units per year for the first time in Korea and took into account the idea of flow production[55]. Hyundai became the Korean *national champion*.

The success of the strategy behind developing the *Pony* led *Hyundai* to conquer the Korean car market. Its output jumped from 7,092 units in 1975 to 61,239 in 1980. Its share in local production rose from 19.1 to 49.7 per cent in this period[56]. Local contents of the industry rose above 90 per cent[57]. On the other hand, the domestic hegemony of *Hyundai* created substantial trouble for the rest of Korean producers. *Brisa* experienced very hard times and *Shinjin* and *Asia Motor* both faced financial difficulties[58].

Hyundai Motor also tried to sell the *Pony* in foreign markets, beginning with Ecuador[59]. Other markets such as Belgium, the Netherlands and Greece, were also explored. In 1978 *Hyundai* exports reached 12,000 units, but the company appeared unable to expand much more above this threshold before 1984[60].

A new coup in 1980 put General Chun in power, but nationalist policy did not end. On the contrary, the *Order of Automobile Industry Unification* attempted to strengthening specialization within the industry by direct government pressure. The military government attempted to support further exploitation of scale economies by promoting mergers[61]. The *national champion* was to take over *Saehan*. *Kia,* then the smallest firm, was to merge with *Tong-a* (name of *Ha Dong-hwan* since 1977) and specialize in trucks and buses. *Asia* should devote itself to military vehicles. *Kowha* would produce civilian Jeeps.

However, firms tended to resist the previous plans of the government, in particular *General Motors*, which controlled *Saehan*. An agreement was reached in 1981, under the *Order of Automobile Industry Rationalization*. Finally, passenger cars production would be restricted to two companies: on the one hand, *Hyundai*, on the other, *Saehan*[62]. *Kia* was to quit passenger car production and focus on heavy vehicles with the promise of future permission in case demand conditions improved[63]. *General Motors* would continue to have a stake in *Saehan*, but the Korean partner, *Daewoo* would assume managerial responsibility. The name of the firm changed again into *Daewoo Motor Corporation* in 1982[64]. Continued cooperation with GM led to the

54 Hyun (1995), p. 13.
55 Kang, p. 7.
56 Hyun (1995).
57 Stern (1992),p. 154. Greenbaum (2002).
58 Lee (2005), p. 10.
59 Green (1992), p. 414.
60 Chung (2000), p. 196.
61 Jenkins (1995), pp. 637-639. Lee (2005), p. 10.
62 Chung (2000), p. 177.
63 Chang (1993), p. 149.
64 Green (1995), p. 416. Lee (2005), p.10.

launching of new products such as the *Pontiac Le Mans*, based on *Opel'*s developments[65].

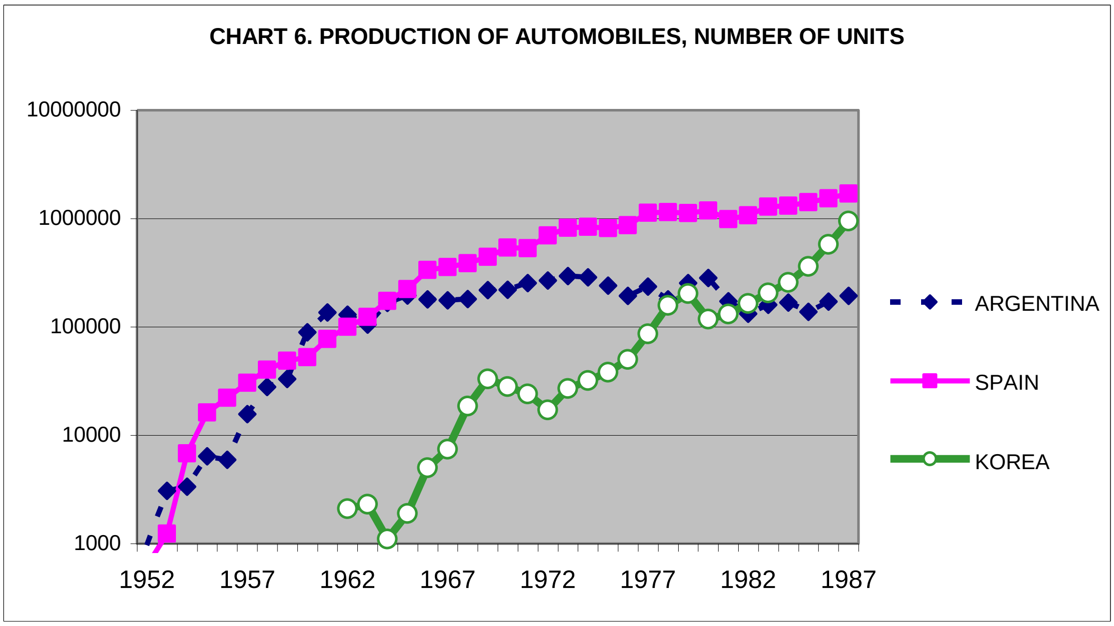
The government's reduction of the number of firms coincided with the improved profitability of *Hyundai Motors*. As can be seen in Chart 1, the profit margin, negative in 1980, went into black afterwards[66]. In the meantime, the *national champion* had been working on the creation of new capacities, the improvement of its blockbuster product, the development of new models and the conquest of new markets. The number of people engaged in R+D increased from 197 in 1975 to 1,422 in 1985[67].In 1982 *Pony-II* was launched. Some moths later *Hyundai Stellar*, *Pony Excel* and *Hyundai Presto* were ready. *Excel* was already a front wheel drive car. The company was aiming at the American market and had established *Hyundai Auto Canada* in 1983. Production rose from 78,071 units in 1982 to 545,100 in 1987. The share of the domestic market kept on above 50 per cent[68]. Exports rocketed after 1984 and surpassed the threshold of 400,000 units by 1987. Its main market was North-America. It must be added that the firm was not very profitable given such a radical expansion (in fact, the profit margin resulted very similar to SEAT figures in the early seventies). However, a margin above 2 per cent can be considered satisfactory, if the reduced profitability of the international automobile industry is taken into account.

Once the Korean car industry had established a significant presence in foreign markets, the government began an extremely cautious process towards liberalization. In 1984 tariffs on car imports rose to 60 per cent with prospects of reduced imports controls. Nevertheless, the following year the Ministry of Commerce and Industry decided to postpone liberalization of imports. In 1986 the automobile industry was selected by government to undertake further rationalization. *Kia* obtained permission to return to the production of passenger cars from 1987 onwards. A partial reduction of controls on commercial vehicles imports was introduced, but the liberalization of imports of passenger cars was again postponed until the end of the decade.

In 1987 the Korean passenger car industry had been consolidated as a highly oligopolistic market with the same producers as in the late nineteenth sixties but with changes in names: *Hyundai* (56 per cent of output), *Daewoo* (31 per cent) and *Kia (*12 per cent). All three had foreign technological partners, but control was in domestic hands. This was especially the case with the champion of the market, *Hyundai Motors*, in which *Mitsubishi* had an stake but only with 10 per cent of capital[69].

---

[65] Green (1995), p. 417. Kang, p. 8.
[66] Chung (200), p. 196.
[67] Hyun (1995), p. 17.
[68] Chung (2000), p. 196.
[69] Greenbaum (2002), p.7.



In short, even though Korea experienced both political turmoil (with assassination of President Park) and economic recession (with a fall on real per capita GDP in 1980) during the period under consideration, no government attempted to suddenly give up protectionist policy in support of an indigenous car industry. This strategic option together with a wise management of demand contributed to transform South Korea into a leading car producer and exporter. In addition, *Hyundai* took the lead as *national champion*, which gradually overcame its initially high technological dependence. As Chart 6 shows, during the 1973-87 period the Republic of Korea caught up with the two other countries under consideration. The basis for convergence where created throughout the Golden Age, when the main agents of transformation came on to scene, but the public support for a *national car* and the strategic regulation of competition strengthened the domestic industry. After 1973, when the Argentinian industry collapsed and the Spanish slowed down, South Korea caught up and overcame its technological dependence.

Conclusions

The automobile industry in the three countries experienced significant growth during the period under consideration. Strategic policies, more than social structures, were crucial in the early stages of development of this industry. The present research confirms Friedrich List's defense of protection to infant industries in countries with a medium (or large) domestic market.

Monopoly turned out to be harmful for the development of the industry, as the experience of *Saenara-Shinjin* in Korea suggests. On the other hand, sudden de-regulated competition also created inefficiencies such as it happened in Argentina with the *Revolución Libertadora* and *Frondizi*'s governments.

Foreign licensing helped to technology transfer and was conducive to growth. It turned out to be the main instrument of technological learning in the three countries under consideration. All *national champions* during the flourishing phases of the industry depended on foreign partners: IKA on Kaiser and Renault; SEAT on FIAT and *Volkswagen*; or *Hyundai* on *Ford* and *Mitsubishi*.

Foreign investment could contribute to the development of the sector, but it was not always the case. Because of large economies of scale in the industry, too many firms producing reduced series could jeopardize long term expansion as it happened in Argentina. Foreign investment could also increased foreign technological dependence by undermining the *national champions*' technological self-reliance, as was the case of the failure of IKA *Argentina* in the sixties or SEAT in the late seventies.

Support for a *national champion* could help to overcome technological dependence provided that the market preserved some degree of competition. Nationalist concern in favor of indigenous technology might succeed, but required that foreign interests should not have full control of domestic firms and that there should not be too many firms. This was the case in Korea with *Hyundai Motors* throughout the seventies and eighties. The Korean government even forced *Kia* to temporarily withdraw from passenger car production.

The high volatility of macroeconomic demand management was extremely harmful for the development of the industry. Even though Argentinian automobile industry was confronted with significant diseconomies of scale before 1973, it had improved its place in the ranking of world producers and exporters throughout the Golden Age. The complete collapse of the industry came afterwards due mainly to the macroeconomic instability of the country caused by violent changes of policy under neo-*Peronism*, Military Juntas and the transition to democracy.

Industrial policy also experienced sudden shifts in Argentina, in 1957, and Spain, in 1972, which reduced protection and encouraged the settlement of foreign rivals. As a result, both countries fostered overproduction and contributed to jeopardize the companies with more potential to develop autonomous R+D. In contrast, the Republic of Korea always moved extremely cautiously and subordinated liberalization to national interests. The industrial policy of South Korea, far from being immobile, evolved gradually in spite of the changes of political regime and economic recessions.

In a nutshell, the experience of Argentina, Spain and South Korea confirms that the success of late-comers in the automobile industry depended on the long-term adoption of policies which openly departed from free trade. The Republic of Korea recorded a remarkable success in developing the industry up to 1987. Spain also succeeded but policy discontinuity during the transition to democracy made it more dependent. The Argentinian industry, in spite of a promising beginning during the early Golden Age, sank completely after 1973 because of the tremendous volatility of its macroeconomic management.

BIBLIOGRAPHY

AMSDEN, Alice H. (1989): *Asia's Next Giant. South Korea and Late Industrialization*, Oxford U.P.

BARBERO, María Inés & ROCCHI, Fernando (2003): "Industry", DELLA PAOLERA, Gerardo & TAYLOR, Alan M. (eds.), *A New Economic History of Argentina*, Cambridge U. P.

BELINI, Claudio F. (2003): *La industria durante el primer peronismo: un análisis de las políticas públicas y su impacto (1946-1955)*, Tesis doctoral, Facultad de Filosofía y Letras, Universidad de Buenos Aires.

BELINI, Claudio F. (2006): "Los orígenes de la industria automotriz argentina", *Revista de Historia Industrial*, 31, 2, pp.109-133.

BÉRTOLA, Luis & PORCILE, Gabriel (2000): "Argentina, Brasil, Uruguay y la economía mundial. Una aproximación a diferentes regímenes de convergencia y divergencia", BÉRTOLA L. (ED.), *Uruguay y la región en la economía mundial, 1870-1990. Ensayos de Historia Económica*, Montevideo.

BIGGART, Nicole Woolsey & GUILLEN, Mauro F. (1999): "Developing difference: social organization and the rise of the auto industries of South Korea, Taiwan, Spain, and Argentina", *American Sociological Review*, 64, pp.722-747.

CATALAN, Jordi (2000): «La creación de la ventaja comparativa en la industria automovilística española, 1898-1996», *Revista de Historia Industrial*, 18, pp. 113-155.

CATALAN, Jordi (2006): "La SEAT del Desarrollo, 1948-1972,", *Revista de Historia Industrial*, 30, pp. 143-193.

CARMONA, Xoán & NADAL, Jordi (2005): *El empeño industrial de Galicia*, Fundación Pedro Barrié de la Maza.

CHANG, Ha-Joon (1993): "The political economy of industrial policy in Korea", *Cambridge Journal of Economics*, 17.

CHANG, Ha-Joon (2002): "Breaking the mould: an institutionalist political economy alternative to the neo-liberal theory of the market and the state", *Cambridge Journal of Economics*, 26.

CHUNG, Myeong-Kee (2000): "Les deux stratégies industrielles de Hyundaï face à la globalisation des marchés", FREYSSENET M., MAIR A., SHIMIZU K. & VOLPATO G. (eds.), *Quel modèle productif ?*, La Découverte, Paris.

DELLA PAOLERA, Gerardo &GALLO, Ezequiel (2003): "Epilogue: The Argentine puzzle", DELLA PAOLERA G. & TAYLOR A. M. (eds.), *A New Economic History of Argentina*, Cambridge U. P.

GARCÍA RUIZ, José Luis (2001): «La evolución de la industria automovilística española, 1946-1999: una perspectiva comparada», *Revista de Historia Industrial*, 19-20, pp. 133-163.

GARCÍA RUIZ, José Luis (2001): "La industria automovilística española anterior a los "decretos Ford" (1972)" en GARCÍA RUIZ J. L. (ed.): *Sobre ruedas*, Síntesis, Madrid, pp.13-93.

GARCÍA RUIZ, José Luis & SANTOS REDONDO, Manuel (2001): *¡Es un motor español! Historia empresarial de Barreiros*, Fundación Eduardo Barreiros-Síntesis, Madrid.

GREEN, Andrew (1992): "South Korea's Automobile Industry: Development and Prospects", *Asian Survey*, 32, 5.

GREENBAUM, Alex (2002): "The Globalization of the Korean Automotive Industry", Economic Strategy Institute, Washington.

GUILLÉN, Mauro (2003): *The limits of convergence. Globalization and organizational change in Argentina, South Korea and Spain*, Princeton U.P.

FERNANDEZ DE SEVILLA, Tomàs (2006): De ensambladores a fabricantes. Historia económica de FASA, 1951-1965, Treball d'investigació del Programa de Doctorat en Història i Institucions Econòmiques, Universitat de Barcelona.

FERNANDEZ DE SEVILLA, Tomàs (2007): "Els fruits de la política estratègica: FASA en l'arrencada de la indústria de l'automòbil a l'Estat espanyol, 1951-1965", *Recerques*, forthcoming.

FRENKEL, Leopoldo (1992): *Juan Ignacio San Martín. El desarrollo de la industria aeronáutica y automotriz en la Argentina*, Buenos Aires.

KANG, Jong-yeol: "The Production System of Korean Automobile Industry", International Motor Vehicle Program, M.I.T., FY97 Working Paper.

KATZ, Jorge & KOSACOFF, Bernardo (2000): "Import-Substituting Industrialization in Argentina, 1940-1980: Its Achievements and Shortcomings", CÁRDENAS E., OCAMPO J.A. & THORP R. M. (eds.), *An Economic History of Twentieth-Century Latin America. Volume 3. Industrialization and the State in Latin America: The Postwar Years*, Palgrave-St Antony's College, Oxford.

HYUN, Young-suk (1995): "The Road to the Self-Reliance. New Product Development of Hyundai Motor Company", Working Paper Han Nam University, Taejon.

JENKINS, Rhys (1995): "The political economy of industrial policy: automobile manufacture in the newly industrialising countries", *Cambridge Journal of Economics*, 19, pp. 625-645.

LEE, Hyun-young (2005): "Strategic Alliances and Trade Dispute in Automobile Industry", *Far Eastern Studies*, 4.

LOUBET, Jean Louis (2000): *Renault. Histoire d'une entreprise*, Boulogne-Billancourt, ETAI.

MAC DONALD, Norbert (1988): "Henry J. Kaiser and the Establisment of An Automobile Industry in Argentina", *Business History*, XXX, 3, pp. 329-345.

MADDISON, Angus (1997): *La economía mundial 1820-1992. Análisis y estadísticas*, Perspectivas OCDE, Paris.

PEREZ SANCHÓ, Miguel (2003): "La industria del automóvil en la Comunidad Valenciana: el caso de Ford España", en GARCÍA RUIZ J. L. (ed.), *Sobre ruedas*, Síntesis, Madrid.

RAVENHILL, John (2001): "From National Champions to Global Partnerships: The Korean Auto Industry, Financial Crisis and Globalization", MIT Japan Program Working Paper 01 04.

SAN ROMÁN, Elena (1995): "El nacimiento de la SEAT: autarquía e intervención del INI", *Revista de Historia Industrial*, 7, pp. 141-165.

SÁNCHEZ, Esther M. (2004): "La implantación industrial de Renault en España: Los orígenes de FASA-Renault, 1950-1970", *Revista de Historia Económica*, I, pp.147-175.

SANZ, Isabel (2004): "Las tendencias a largo plazo de la economía argentina: 1875-2000", *Revista de Historia Económica*, I, pp. 177-205.

SOURROUILLE, Juan V. (1980): *Transnacionales en América Latina. El complejo automotor en Argentina*, Instituto Latinoamericano de Estudios Transnacionales, Editorial Nueva Imagen, México.

TOLLIDAY, Stephen (2003): «The origins of Ford Europe: From multidomestic to transnational corporation, 1903-1976», BONIN H., LUNG Y. & TOLLIDAY S. (eds.), *Ford, 1903-2003: The European History*, vol.I, Paris, P.L.A.G.E., pp.153-242.

TORRE, Juan Carlos & DE RIZ, Liliana (2001): "Argentina desde 1946", LYNCH J. (ed.), *Historia de la Argentina*, Crítica, Barcelona.

YANG, Joo-mo, KIM, Ta-wan & HAN, Hyun-Ok (2006): "Understanding the Economic Development of Korea from a Co-Evolutionary Perspective", Yonsei University Working Paper.