# Private and State-owned enterprises versus migration? Recruiting labor for the Asturian industry: 1828-1981

#### Julio Tascón

#### Summary

During the 19<sup>th</sup> and the 20<sup>th</sup> centuries, the most relevant aspects concerning recruitment refer to the coal mining and industrial sectors, around which the Asturian industry was built. While the role of the Principality as a source of energy was key for its own economical development, the iron and steel industry would be no less important, specially from the foundation of ENSIDESA in 1950 until the present day. It is worthy of note that the recruiting of both "labor aristocracy" and the less qualified labor, was helped by the State. Since the beginnings of its industrialization private firms were predominantly based in the Asturian basin (1828-1950). It seems they didn't help a lot in reducing "mass migration". In fact foreign human capital and a paternal recruiting policy did not stop mass migration. However protection for coal encouraged a relative deindustrialization in the region, and it did not create industrial infrastructure, capable of absorbing the surplus population. The State owned enterprises –HUNOSA and ENSIDESA- couldn't prevent migration to Europe in the 60's. By and large, recruitments didn't prevent Asturian migration because it was neither a private firms' goal nor a public firms' goal.

Key words: Recruitment, paternalistic recruiting strategies, attraction on labor, migration, emigrants, immigrants, protectionism, Asturian basin, Wallon-Asturias axis, coal mining, iron and steel industry, professional school.

### Private and State-owned enterprises versus migration? Recruiting labor for the Asturian industry: 1828-1981

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#### Introduction

The population in Asturias undergoes a slow increase from the XIX century until the 1970's. The regional growth rate experiences its lowest increase from the end of the XIX century until the 1920's, and this could be extended even until the Revolution that took place in 1934. Asturias witnessed the most important mass migration among the industrialized Spanish regions, although the rate increases at the turn of the XX century, to exceed the national average in the first two decades of the XX century, and during the 1950s. The demographic transition peaks in the 1940's, and becomes almost null during the "transition to democracy".

The workers who emigrated during the 1960's to Europe, mostly to Switzerland, Germany and France, came from the mining and general industry sectors, whereas the migration to America had been predominantly agricultural, at least in two thirds<sup>1</sup>. The population losses, leaving aside those attributable to the Civil War of 1936, were due to a relative population surplus. They were also due to protectionism, demanded both by industrialists and workers' unions. Protectionism, by the way, has never lost importance in Spain as a tool for economical policy planning, and it has been employed specially for the protection of industrial activities like mining in Asturias.

Internal migration was mainly directed towards coal mines and steel and iron industries placed in Asturias. The trend reached its peak in the 1950's. From then on, the pull of those two areas placed in the center of the region would attract more than 100.000 immigrants<sup>2</sup>. This is a large portion of the rural migrations moving towards metropolitan areas like Bilbao, Madrid and Barcelona. The movement towards the cities affected mostly the central part of the region. In the 1970's, more than a third of the Asturian population lives in the urban concentrations in that area<sup>3</sup>. In the 1980's, specially after 1983's white paper on re-industrialization, conversion will not yield the expected results, leaving, mostly in Gijón Langreo and Mieres, a tremendous depression, after a failed steel and shipbuilding conversion. Between 1981 and 1985 as many jobs were lost in Asturias (6,072), as immigrants the region had accepted in 1991 (6,282).

During the XIX and XX centuries, the most relevant aspects concerning recruitment refer to the coal mining and industrial sectors, around which the Asturian industry was built. While the role of the Principality as a source of energy was key for its own economical development, the steel industry would be no less important, specially from the foundation of ENSIDESA in 1950 until the present day.

It should be pointed out that the recruiting of both "labor aristocracy" i.e. the most indispensable workers for the industry, and the less qualified labor, was helped by the State. The intervention of the state is decisive in explaining the recruiting processes that took place in the region. I will leave aside all the processes related to consumer goods industries, such as the food and agriculture, or the textile one, and I will concentrate on mining and steel and iron. The fact that the consumer goods industry, such as cider, tobacco, preserves, and so on, attracted mostly feminine and child labor seems to have supplied a

<sup>\*</sup> This paper was shaped during my stay as a Visiting Scholar in the Department of Economics, at Harvard University, and Complutense Fellow at the Real Colegio Complutense (Harvard). The Spanish Ministry for Education and the Vicerrectorado de Investigación of the University of Oviedo awarded grants that supported this research.

The miners and industrial workers who migrated to Europe between 1960 and 1975, added up to 11.507 which are 74,01% of the total of 15.547. See Germán Ojeda, La emigración asturiana a Europa. Contribución al estudio del hecho migratorio regional, Mimeographed research paper for the obtention of the Masters Degree, presented at the Faculty of History, 1978. Also quoted in Julio Vaquero and Adolfo Fernández, "Demografía",..., 1981, p.181. <sup>2</sup> See Guillermo Morales Matos, 1986, p. 32.

<sup>&</sup>lt;sup>3</sup> More precisely, those in the central are with more than 10.000 inhabitants.

differentiating factor, although that does not seem to respond to active policies on the part of industrialists. The consequences brought about by this behavior still has a wide field of study ahead<sup>4</sup>.

#### 2. The catalysts of the industrial reaction: The state and the exiles

"It is not necessary to write History of the present day: Who among you does not know what is going on in the mining world? Who does not know that far from being a productive industry, it is a pit which has swallowed innumerable resources and efforts?5".

The idea mentioned in this newspaper report from 1868, could still hold now. However, it seems necessary, even if anachronistically, to contradict the first sentence and try to record the History of those days, at least, as regards recruiting of labor for the industry which was starting in Asturias during the first half of the XIX century. It should be noted that little is known about the process of recruiting that existed in Asturias, i.e. about the activities carried out to find people to work for certain companies<sup>6</sup>.

At the beginning of the industrial activity in Asturias, the state was the main player. In the words of Germán Ojeda: "legal privileges, tax exemptions, protective tariffs and royal favor are the main factors in this period, in which the scarce development of coal and iron industries sharply contrasts with the great initiatives and projects". As regards recruiting, it seems inevitable that the state should also take the leading role. It does so even in some unexpected ways, as it is the case with the first important character: Wilhelm Schulz, "the great German" <sup>8</sup>. His work is recognized by the Mining General Director: Fausto Elhuyar, who supports him and helps him to obtain the post of Mining Commissioner for the Spanish government (post he obtained in 1830). Schulz travels to different European mining areas to complete his education, and settles in Spain in 1831.

Schulz will more than fulfill his duties as a geologist. His first placement, Galicia, allows him to leave his successors, among many other things, the location of lignite deposits which will only be exploited a century later. Schulz's formation appears seamlessly organized to meet the requirements of a task he seems to have been destined for. Both his family and the area where he was born are connected with mining. Alberto Marcos Vallaure states that Schulz was a pioneer well ahead of his time<sup>9</sup>.

Asturias, in those years of the second third of the XIX century, lacked the human resources capable of carrying out the work Schulz does. In order to achieve a quick and successful adoption of the technology then current in the heavy industry, it is absolutely essential to have human resources capable of implementing it. However, in the case of Asturias, the really decisive factor, the one to mark the difference, is the geological mapping of the Asturian subsoil to which Schulz will devote the best years of his life as a scientist. The testimony of his helper during the years from 1850 to 1853, Eugenio Maffei, help to build the myth of the "great German". Maffei says that Schulz carried out his job by himself, with only a compass and, probably, a level<sup>10</sup>. Should Schulz not have traveled extensively across the Asturian territory, the first edition of the Topographic Map of the Province of Oviedo would not have been published in 1855<sup>11</sup>. This map shows outcrops and forecasts on certain coal deposits, like the ones on the west of Asturias, or that of Arnao, whose structure and relation with the subsoil (...) he establishes in full detail<sup>12</sup>. The absence of zinc in the Principality, together with the lesser importance of iron deposits compared, for instance, to those of

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<sup>&</sup>lt;sup>4</sup> The field has been somewhat analysed in Julio Tascón, "Industrias de bienes de consumo en Asturias, 1856-1973", Historia de la economía Asturiana, 31 and 32, 1994, pp. 481-496 and pp. 497-512.

See El Norte de Asturias, 22-V-1868, quoted in Francisco Erice Sebares, Propietarios, comerciantes e industriales. Burguesía y desarrollo capitalista en la Asturias del siglo XIX (1830-1885), t. I, University of Oviedo, Oviedo, 1995, pp. 253-254.

<sup>6</sup> Recruiting: to fill up the number of (as an army) with new members: REINFORCE (2): to enlist as a member of an armed service b:

to increase or maintain the number of: to secure the services of: ENGAGE, HIRE d: to seek to enroll <recruit students> Merriam Webster electronic dictionary http://www.m-w.com/cgi-bin/dictionary

Germán Ojeda, Asturias en la industrialización española, 1833-1907, Siglo Veintiuno Editores, Madrid, 1985, p. 9.

See Julio Tascón y Germán Ojeda, "Foreign technicians and entrepreneurs in the industrialisation of Asturias", *Mobilité du capital* humain et industrialisation régionale en Europe..., Presses de l'Université de Padoue, forthcoming, 2001. See Vallaure, 1987, p. XIV.

<sup>&</sup>lt;sup>10</sup> Schulz's soberness can be gleaned from his exposition of the German method he followed when travelling. See Vallaure, 1987, p. XV and p. XX.

11 Charles Banois, en 1882, states that his work on the stratigraphy of the region renders unnecessary any cartographic geology as it

was already complete. See Vallaure, p. XIX.

12 Vallaure, 1987, p. XVIII.

the Basque country, did not prevent de development of both industries in the region <sup>13</sup>. Certainly, without Schulz's previous work this would not have happened. He turned Asturias into the geologically best known region in Spain. This would not have happened if he had not have to move because of his appointment. He became Second class district inspector after the creation of the Mining Corps, and was destined to Asturias and Galicia. In the previous years he had worked prospecting for an Anglo-Spanish company in the Alpujarras, in the South of Spain. The push granted by the government to the industrial transformations in Asturias is crucial in the origin of the process. Fausto Eluyar is clearly behind all the well-deserved successive appointments Schulz received.

The impact of the pendular migrations, or rather the "job mobility" across the Walloon-Asturian corridor throughout the XIX century was very important for the industrialization of the Principality of Asturias. The scarce number of specialists in the region who could be able to start mines and blast furnaces grants an exceptional importance to those few workers who were recruited to do it at the beginning of the XIX century. In the first place we should mention the migrations of those who were exiled for their liberal ideas and for their commitment against Fernando VII's absolutism. All of them took part in the Cadiz Parliament or in the movements during the three-year liberal period from 1820 to 1823. The need to make weapons inside the country would allow them to return from their exile, because Spain depended on foreigners for their supply, and yet, it was rich in coal and iron. Liege is the focal point of attraction for that dependency on foreign heavy industry, and Asturias will be the most important region in Spain, subordinated to it. Between these two regions, and due to that traffic of exiles, who mostly go to that Belgian region, there is a network of connections and technological transference which will influence the Asturian industry <sup>14</sup>. Mr. José María Ferrer y Cafranga, Mr. Martín de los Heros and Mr. Francisco Antonio de Elorza y Aguirre, are among the most valuable exiles for the industrialization of Asturias. The first links in the chain are established by the concern of Mr. Luis María de Salazar, the Spanish minister for the navy from 1825, about the enormous Spanish dependency on foreign powers, specially as regards weapons. Salazar wanted to establish in the north of Spain, given the abundance of raw materials, a modern steelworks industry which would ensure a national production of weaponry. Salazar contacts Ferrer to transmit these worries. Ferrer had invested part of his fortune in helping other compatriots who suffered exile, among which we can find Martín de los Heros. Both will go back to Spain under the 1832 amnesty, and will take up jobs in the Foreign Office and the Ministry of the Interior respectively during Espartero's regency.

Ferrer knew the excellent connections his friend de los Heros had in Liege, then the continental capital city of the coal and iron industry. Both Ferrer and de los Heros ask Nicolas Maximilien Lesoinne to introduce them to industrialists. Among these we find Guermondt, a Liege businessman, and John Cockerill, who are considered indispensable for the introduction of the steelworks project. A meeting is urgently arranged in Val Benoît, attended by Felipe Riera y Roses and the Marquee de Pontejos, freshly arrived from Spain, apart from the aforementioned people. An agreement was promptly reached to found a society with an initial investment of one million francs. Great advantages referred to mining concessions and further state guarantees were offered, but this did not stop Adolphe Lesoinne, the son of Nicolas Maximilien, a mining engineer from the School of Paris, and lecturer of metallurgy at the university of Liege, from making a prospecting journey into Spain. This journey was promoted by, among others, his own father and Cockerill, and he went into Spain accompanied by a Duval<sup>15</sup>, an engineer who worked for the latter. Two technicians, two mining engineers, to carry out the field work necessary to find out about the veracity of the natural resources which made the investment of Belgian capital in Asturias so attractive<sup>16</sup>. Before that field inspection there is an intermediation carried out by Spanish exiles. This intermediation is between the Spanish government and the Belgian human and financial resources.

The initiative of the government causes a few patriotic exiles to serve their country, even if they oppose its government. This is a clear illustration of the role of the exiles in supporting both a technological

<sup>&</sup>lt;sup>13</sup> See Ojeda, 1985.

<sup>&</sup>lt;sup>14</sup> The words come from Oliver Ravux, as it is evident that this is not a case of applying the misleading concept of technological dependency between North and South, even more evident in the case of the Mediterranean basin. See Raveux, 1994, pág. 159. <sup>15</sup> See Niembro, 1996, p. 21-22.

<sup>&</sup>lt;sup>16</sup> These, by the way, and as regards the sea access via Aviles were not as attractive as they had been told. This was collected in the reports written for the Real Compañía Asturiana de Minas.

transfer and a movement of labor from Belgium to the north of Spain. This transfer and mobility would have been impossible without their assistance.

#### 2.1. Technicians, Businessmen and "labor aristocracy" to begin with

If we look at the origins of the recruiting process, we come across one paradigmatic case: that of Mr. Francisco de Elorza y Aguirre, who is another illustrious exile, born to an aristocratic family <sup>17</sup>. The state, as in the two previous cases, will be interested in Elorza's services. The whole interest of the government stems from Fernando VII's wishes to reconstruct the national iron and steel industry. In order to achieve it, the Madrid government sends professor González Azaola to the continent, in 1828. He publishes in Paris a leaflet in which he "calls all capitalists, both national and foreign". It is addressed to those who had returned from America, but it is less forward to political exiles 18. Azaola asks for technical and financial help to rebuild the national steel and iron industry. Elorza comes forward to answer this call, and Manuel Agustín Heredia, hires him, thanking in, a letter to the secretary of War affairs 19, their good fortune that he was a Spaniard. In this way, and also thanks to family connections, General Elorza, who like Schulz will end up carrying out a great work for Asturias, would start his career as a technician in the South of Spain.

Although Elorza's presence in Málaga is due mostly to his work as a technician, it is necessary to underline the interest of the state, as main agent, in a recruiting policy which affected him directly 20. In the relationship of Elorza with the state, professional qualifications will overrule any concern about his political ideas. Thus, he will be called, on Francisco de Luxán request, to direct the then already reestablished factory at Trubia, which Luxán himself refuses to direct for several reasons, Luxán considers Elorza the only person in Spain capable of completing the project<sup>21</sup>. Elorza's greatest difficulty was to find workers to start his projects. He mentions the total absence in Asturias of the human resources necessary to start the steel and iron industry specially geared towards the production of war material:

"one of the greatest difficulties setting up of a factory offers, specially in a country that lacks resources and has no industry whatsoever, is the gathering of the workers for the essential jobs. This is an enormous difficulty for the Trubia factory, which, apart from having been established in a country with no tradition, it is directed at covering, so to speak, all the iron industry, and its applications to the war industry, 22.

Elorza created in Trubia's workshops a free school for officers and apprentices, so that, one day, he would have all the human resources necessary to manage the factory without the help of foreign workers, who claimed huge wages:

"I do not just want workers for Trubia, I want to teach a number of workers, who, like the foreign masters who have come here, will go out to replace them in all the dependencies of the corps. As soon as I have workers capable of performing as masters, I will send all the foreigners to their countries the moment their contracts run out",23.

<sup>20</sup> In fact Fernando VII granted him, on Heredia's request, a favorable report for his return. Later on he was granted the post of supernumerary captain. See Suárez 1997, p. 9.

21 The Royal Order of May 26, 1884 re-establishes the old factory at Trubia, and adds to the extant fabrication of ordnance, that of cast

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 $<sup>^{17}</sup>$  For a larger coverage on Elorza, see "Elorza's paradigm", in Julio Tascón y Germán Ojeda, "Foreign technicians and entreprenneurs in the industrialisation of Asturias", Mobilité du capital humain et industrialisation régionale en Europe, Presses de l'Université de

Padoue, forthcoming, 2001.

18 See Suárez, 1997, p. 8-and note nº 18, p. 9.

<sup>&</sup>lt;sup>19</sup> See Suárez, 1997, p. 9

iron pieces for cities, ships and coast batteries. The purpose is to replace the closed factory of La Cavada in Santander. See Suárez,

See Francisco Antonio de Elorza y Aguirre Consideraciones sobre la marcha de la Fábrica de Trubia desde su restablecimiento en 1844 hasta fines de octubre de 1860, y estado del Establecimiento desde esta última fecha>>, << Memorial de Artillería, serie 1a, t. XVII, pp. 17-18. Quoted in Suárez, 1997, p. 27.
<sup>23</sup> See Suárez Menéndez, 1992.

Specialists for the Trubia factory recruited during Elorza's directorship

	Dates of first contracts	Place where contracts were signed	Annual/ Salary (francs)	Name and origin of specialists
Master founders for blast				
furnace	1845	The Hague		Jorge and Julio Puyh
Molders and bushers				Julio and Pedro Kessler
	1845	Liege		
Molding Master			(8/daily)	Carlos Bertrand Demanet
_	1846	Liege	1920	
Clay and sand molder			(100/month)	Santiago Somer
	1846-1848	Liege	1200	-
Sculptors and Bushers	1850-1855	Liege		Jacinto Bergeret and Carlos
	1850-1851	Duai	3.500	Delmez (France)
Molder and master				J. de Lupe and Carlos Berber
Molder	1847-1851	Belgium	28rs./daily	(Graux, Belgium)

Source: Roberto Suárez Menéndez, Fábrica de Trubia, 1794-1987. Historia y producción artística, Centro de Cultura de Candás, Carreño, 1993, pp. 119-130 and pp. 144-148.

Elorza projects were largely successful, and "in a few years he managed to form in Trubia a core of masters and intelligent and hard laboring workers, who were, at the same time, honest and learned citizens, 24. Since human resources, as opposed to coal, reproduce and can move, everything seems to confirm the determining role natural resources have in the industrialization of Asturias. This will cause an enormous wealth and development in the XIX century <sup>25</sup>. Human labor does not need to be too abundant. It is enough that they be productive to generate, in a very short time, the desired effects. The history of the Real Compañía Asturiana de Minas (RCAM), which we will shortly see, seems to prove it.

Elorza was named director of the factory from August 18, 1844, by Royal appointment, and moved to Valladolid in 1863, after 25 years of hard work, and after his appointment as Chief sub-inspector general for the Castilla la Vieja area<sup>26</sup>. During this period, and at the same time as he worked for the public sector setting up the factory at Trubia, Elorza works very actively with the private sector. This can be seen in his work with the marquees of Campo Sagrado, José González Alegre, marquees of Pidal, Gil, Carlos J. Bertrand, and others, to found, among other companies, the foundry "La Amistad" in Oviedo. This was a factory for iron re-melting, and whose first corporate name was "Quirós, Bertrand, Elorza, Compañía".

Bertrand had been born in Liege in 1805. His family was connected to the steel and iron industry, and he had been Elorza's classmate<sup>28</sup> in Liege. Bertrand lived through the replacement of the traditional catalan style forge by John Cockerille's English system. This change was being endorsed by the Belgian state. This technology, well known by Bertrand, arrives with him to the port of Gijón in 1846. He is filled with the ideals of Elorza to build, in a land rich with coal, the Spanish industry. Bertrand stays on and the Walloon technician becomes the industrialist who will set up iron factories in Asturias, after the one at Trubia. He attracted investors from his own country, and founded a mining company in the coal basin. Bertrand attributes all the merit of the creation of the industrial network to his friend Elorza, he is the technician who builds the new factories at Trubia and Oviedo. Besides, he is an entrepreneur who manages to convince some wealthy people from Asturias, and the rest of Spain, to build iron works in the mining area, the one who convinces Pedro Duro, the one who also builds foundries in Biscay<sup>29</sup> to build the factory at La Felguera. Two Asturians, says Bertrand, namely the Minister Pidal y Mon, and the marquees of

<sup>27</sup> When Elorza leaves Trubia, the economic difficulties of the factory make the state lease it out to Duro & Cia. It should also be noted that Elorza was temporary Military Governor for Asturias in 1856.

<sup>&</sup>lt;sup>24</sup> See Francisco de Luxán, Viaje científico a Asturias..., Madrid, 1861, p. 86. Quoted in Suárez, 1997, p. 27, note 70.

This development has its counterpart in the industrial re-conversion in the last third of the XX century.

<sup>&</sup>lt;sup>26</sup> Royal Order from November, 29, 1862.

<sup>&</sup>lt;sup>8</sup> It is not due to chance then that Bertrand should refer to Elorza as "The Spanish Cockerille".

<sup>&</sup>lt;sup>29</sup> See Carlos J. Bertrand, El verdadero librecambista. Estudio teórico práctico del desarrollo de la industria metalúrgica y carbonera en Asturias, Oviedo, 1881. See Ojeda, 1985, p. 3.

Camposagrado, back Elorza with public money and political support. They also become investors, as they supply their own capital to private ventures established in Asturias.

In 1860, according to Francisco Luxán's information, there were 2,494 workers in the private factories in the Principality of Asturias, 1,637 of which were in that of Trubia 30. The question is how many of them came from abroad? It is almost certain that only a few do, a small proportion out of the total amount. Most of them come from Liege. This is due mostly to the work of Elorza, which was starting to yield results. Trubia was becoming "a school for the working population". The most significant case of all was that of the Real Compañía Asturiana de Minas - RCAM- which implements the idea of bringing only a very small number of hand-picked workers.

#### Belgian specialists at the RCAM

	contract period	Average length of	Wages/Salaries	Origin of specialists
		contract (years)	(francs)	
9 masons	1855-1870	2,55	8,55	Belgium (Liege)
49 foundry workers	1855-1879	3,21*	3,59**	Belgium (Liege)
8 others	1856-1861	2,6	5,19	Belgium

Source: Antonio Niembro Prieto, La presencia en Asturias, 1996.

Note: Masons can earn up to 10 francs if they work Sundays (Niembro; 1996, 89).

#### Other Belgian specialists at the RCAM

	contract period	Average length of contract (years)	Wages/Salaries (francs)	Origin of specialists
2 Creuztiers	1856	3	4	Liege
1Chaudronnier-		1	6	Seraing (Liege)
Ajusteur	1858			
2 Surveillants- mineurs		3	5,25	Mons/ Jemeppe
	1860			
1 Machiniste	1860	3	5,5*	Jemeppe
2 Ouvriers-mecaniciens	1860-1861	3	210fr/month	Jemeppe
TOTAL	1856-1861	2,6	5,19**	Belgium

Source: Antonio Niembro Prieto, La presencia en Asturias, 1996.

#### Belgian specialists in the RCAM with responsability for teaching

	contract period	Average length of contract (years)	Wages/Salaries (francs)	Origin of specialists
1 Cizallista*	1863	3	8	Prusse-Rénanie
2 Maîtres- lamineurs**	1864-1865	3	12	Grivegnée/Tilf
1 Chimiste/Aux. Direction Tech.	1867		8.000 rs. v./year	Sane
6 Plombiers- zingueurs	1880-1885	1,33	291,67/month	5Paris/1(Arôme) Valence

Source: Antonio Niembro Prieto, La presencia en Asturias, 1996.

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<sup>\*</sup>This is the arithmetic average without taking into account 2 of the 49 workers with contract during the period, i.e. only 47 contracts are considered, and two are excluded because in one of them, the periods are 3 years plus 2 other, and in the second case, 3 years plus 3 other. Should the 49 cases be considered, the average would be higher: 3,37 years.

<sup>\*\*</sup> It has been considered, as a restrictive hypothesis, that the premium is 0.5 reales in all contracts.

<sup>\*</sup> The salary of the mechanic includes also lodging fees.

<sup>\*\*</sup> The average has been worked out excluding the monthly salary of the mechanical laborers.

<sup>\*</sup> This is the only case in which the worker did not honor his contract (Niembro; 1996, 91).

<sup>\*\*</sup> These are very important for the company, as the treatment given to their families proves. (Niembro; 1996, 92-93).

<sup>&</sup>lt;sup>30</sup> See Ojeda, 1985, pág. 57.

The 10 specialists from the factory at Trubia, added to the 66 of the RCAM, yield the figure of 76 workers which belonged to what Hobsbawm termed "labor aristrocracy", and which worked in Asturias during the XIX century. Although the number does not include all those recruited for similar jobs, it does seem significant, and it should not rise much more, should all be included, due to the very size of the industry in Asturias. There are little foreign human resources and few industrialists in the Asturias of the coal and iron years. This is not different from many other industrialization processes in other European regions in the XIX century, where the future did not belong to those who did not know how to nationalize the British model<sup>31</sup>. The Asturian oligarchy that controls the national iron and coal market held an "entrepreneurial" attitude which centered in the obtainment of tariffs to protect their merchandise. The human capital exiled during the reign of Fernando VII seems to play a major role in making possible future recruitment of businessmen, technicians and specialists, indispensable to start the industrialization process.

#### Foreign human capital and a paternal recruiting policy did not stop mass migration

Observation of the migration process in the Asturian region confirms Hatton and Williamson thesis, which states: "as soon as industrialization or modern economy begins, so does mass migration" This is supported by evidence available for the second half of the XIX century, which, besides, grants Asturias the first place among the industrial regions in Spain, mostly because of the seriousness of the social cost of its trans-Atlantic migration A rural nature has predominated in this migration trend, which finds its main cause in a relative population surplus. Yet, demand for protection on the part of mining industrialists, and even on the part of workers, for the Asturian coals must be taken into account as one of the factors that reinforce pressure to encourage the aforementioned surplus to migrate. The governments answered favorably to the petition of protectionist tariffs, and this, on its turn, encouraged industrialists' lobbies to obtain rents through this procedure. However, that preservation of national coal for national consumption, will place the country out of the international markets, and will also drive to a reduction of the offer and an increase of the prices which, on its turn, will produce industrialization rhythms which will be slower than those for other European countries. Protection for coal encouraged a relative deindustrialization in the region, and it did not create industrial infrastructure, capable of absorbing the surplus population<sup>34</sup>.

The study of the most essential industrial activity among those carried out in the Principality: coal mining, underlines the fact that neither foreign specialists, nor the local workers trained by them, or the paternalist recruiting carried out by the big concerns until WWI, were capable of stopping the traditional mass migration, or that produced during the first third of the XX century. It is obvious that this recruiting process was loaded from the beginning with company policies which did not lead to an enlargement of the industry, but, rather, tended to restrict the expansion of industrial activity in Asturias. This recruiting, given the rural character of migration to America, would not have been too easy in the second half of the XIX century. One engineer from Duro and Company, the first factory in the region, stated in 1883, that "there is nomovement from the rural areas to the industrial ones. The reason is well known, the worker who does not own a small plot of land or his own house, simply cannot live with the wages he earns". Agricultural

<sup>32</sup> See Timothy J. Hatton y Jeffrey G. Williamson, "What drove the mass migrations from Europe in the Late Nineteenth Century?", Harvard Institute of Economic Research, Discussion Paper, 1614, Harvard University. "The more backward a country is, the smaller the migration will be". Quoted in Julio Tascón, "Les migrations asturiennes dans le contexte espagnol (XIXe-XXe siècles)", Migrations et migrants dans une perspective historique. Permanences et innovations, Peter Lang, Bruxelles, 2000, pp. 219-241, p. 226.

<sup>&</sup>lt;sup>31</sup> See Leboutte, 1997, p. 30.

<sup>226.

33</sup> Trans ocecanic migration from the industrial regions, classified according to the intensity of departures, sets Asturias in the first place among regions with a high migration rate, whereas Catalonia and the Basque Country appear with an intermediate rate. See César Yáñez Gallardo, *La emigración española a América (siglos XIX y XX)*. *Dimensión y características cuantitativas*, Fundación Activo de Indianos, Colombres, 1993, pp. 238-239.

<sup>&</sup>lt;sup>34</sup> See figure 7 Capital aggregate per active worker, 1886-1950, in Julio Tascón, "Les migrations asturiennes dans le contexte espagnol (XIXe-XXe siècles)", *Migrations et migrants dans une perspective historique. Permanences et innovations*, Peter Lang, Bruxelles, 2000, pp. 219-241, p. 234.

<sup>35</sup> See Francisco Gascue, "La industria carbonera en Asturias", Revista Minera, 1883, p. 372. Quoted in Germán Ojeda and José Luis

<sup>&</sup>lt;sup>33</sup> See Francisco Gascue, "La industria carbonera en Asturias", Revista Minera, 1883, p. 372. Quoted in Germán Ojeda and José Luis San Miguel, *Campesinos, emigrantes, indianos. Emigración y economía en Asturias, 1830-1930*, Ayalga Ediciones, Salinas, 1985, p. 70.

workers from the center of the region hardly ever migrate because they have work. The reduced size of the industrialization process in the Nalón and Caudal basins had little effect on the people living on the countryside<sup>36</sup>. The opinion of those living at the time underscores the small scale of the aforementioned operations when they mention that the problem –for the investment of the years between 1857 and 1863-lies in the creation of true companies capable of lobbying for the administration to build the port and road infrastructure necessary<sup>37</sup>. The scarce profitability stemmed mainly from the absence of a metallurgic demand, as we can see from Restituto Alvarez Buylla statement in 1861. Yet there were mining exploitations which were not ruled by projects looking towards the future, but just by a predatory logic, these were the exploitations of "moonlighters".

Moonlighters just extracted the coal, because they lacked the capital necessary to start industrial size concerns. They only wanted, as Sampayo<sup>38</sup> states, a wage higher than that which could be expected from other jobs. According to Buylla the country moonlighters produced almost half of the coal, and their "conspiracy" against the coal industry, apart from selling the coal at lower prices, affected directly the hiring of laborers. What happened was that on top of handing in fuel to hoarders in Sama at a lower price than many legal companies, they could pay higher wages. It is clear that the possibility of paying higher wages comes from their lack of investment. Miners obtained higher productivity in those small concerns. Thus recruiting of labor suffered from the competence between legal concerns and moonlighters.

Engineers and companies alike kept complaining of the lack of laborers, they say that during the summer this was due to agricultural tasks, which attracted higher wages, paid by farmers. The most widely used system of mine exploitation was that of subletting and exploitation contracts known as "letting to the quarter" by means of which the company granted the rights of extraction in exchange for a 25% of the product obtained. The system was employed even by medium-size companies, in "those pits far from their center of operations". As can be seen from the Mining Statistics from 1863, the system meant handing in the mines to the "destructive voracity of simple workers", and "blocks" the properly organized exploitation and good classification of their products<sup>39</sup>. There was a wide variety of contractual formulae, as, for example, when the company paid a certain amount to the direct exploiter for every measure of extracted coal. This supposes the existence of piecework. Moonlighters used this type of contracts, although larger companies also used them occasionally <sup>40</sup>. There may also have been subletting, i.e. many lessees did not exploit the mines directly, but they did it with sublet employees who, in a certain way, were just above piece workers. Existing precariousness starts to disappear after 1860. Modernization and change of these conditions occurred in an unstructured labor market, where free contract between the parts was the most abundant element. Larger companies start to appear, and profitability increases in some exploitations, yet the need of recruiting labor still persists<sup>41</sup>

WWI is the end of this period. After the middle of the XIX century the education of Spanish specialists started to yield results in the highest levels of qualification. For the last quarter of that century, engineers like Adaro, Ibrán and Gascue were not Asturian, but they were Spanish. The School for overseers was started in Mieres in 1854. Until 1879 it issued 118 diplomas of overseers and 47 sub-overseers. Thus, Gascue can say that Asturias had, in the 1880's, an excellent group of mine overseers. In the lower ranks of qualification, during the 1850's, "full time miners were few" as Shubert stated. Buylla's words will be confirmed as the century advances, and until WWI. The creation of a large and disciplined work force,

 $<sup>^{36}</sup>$  Be it exploitation of coal or steel making in Langreo (Nalón river) or Mieres (Caudal river). Ibidem.

<sup>&</sup>lt;sup>37</sup> See German Ojeda, Asturias en la industrialización española, p. 83.

<sup>&</sup>lt;sup>38</sup> See Sampayo, "Sobre el estado de la minería...", p. 480. Quoted in Germán Ojeda, Asturias..., p. 84.

<sup>&</sup>lt;sup>39</sup> As Erice states, and proves this type of contracts appears very frequently in the documents in the years between 1850 and 1870. See Estadística Minera, 1865, p. 92. Quoted in Francisco Erice Sebares, *Propietarios, comerciantes e industriales*,..., p. 255

<sup>&</sup>lt;sup>40</sup> The system also worked in the following sense: there was the possibility of paying a fixed amount to the owner by the lessee. Ibidem.

<sup>&</sup>lt;sup>41</sup> "It no longer happens in Asturias what had happened in 1859. Now there are many exploitations, and on top of that, companies are increasing their size, together with their credit, with large profits". El Carbayón, 22-XII-1883. Quoted in Francisco Erice Sebares, *Propietarios, comerciantes e industriales*,..., p. 256

<sup>42</sup> Revista Minera, 1879, p. 24 and Francisco Gascue, "La industria...", in Revista Minera, 1883, p. 373. Quoted in Francisco Erice

<sup>&</sup>lt;sup>42</sup> Revista Minera, 1879, p. 24 and Francisco Gascue, "La industria...", in Revista Minera, 1883, p. 373. Quoted in Francisco Erice Sebares, *Propietarios, comerciantes e industriales*,..., p. 251.

stated Buylla, is the most outstanding challenge for the companies: "to attract, adapt and organize a large working force which is, at the same time, docile and obedient".

The scarcity of labor force, which will become very important in the 1880's, contrasts with the presence of excellent overseers. It should be noted that before, and after, this scarcity of miners was felt, the most abundant type of miner was the mixed worker, and this was so until the 1930's. The mixed worker shared his job in the industry with a farm of some description, while the urban worker would be completely proletarized. This type of worker was more afraid of loosing his farm than of loosing his salary. This labor force is more significant for industrial jobs offer than for agricultural ones, due to the small size of the former. It was the abundance of that mixed worker that caused many complaints. Some of them even reinforced the idea of its importance, and the hatred of locals to work in the mines, and, of course, the tremendous attraction provoked by the myth of easy riches in America. Yet the characteristics of the entrepreneurial structure and the size of the Asturian industrial basins, caused coal mining to depend on local workers of a reduction in the migration to America from the mining areas of the center of Asturias is precisely the need to recruit local labor force. Mieres and Sama de Langreo and Trubia, had a lower numb er of emigrants, and some of them went to Palencia where "they were appreciated because they were hardy and experienced workers."

There seems to be a coincidence in acknowledging that there is an awareness of the need to recruit labor for the mines in the 1880's, and it becomes more urgent with the expansion at the end of that century. A widely known text from that time, it was even distributed as a leaflet, is paradigmatic as a description of the lack of labor. It was written by Mr. Francisco Gascue, RCMA engineer, and it is dated 1883. "up until to 2 or 3 years ago, nobody was concerned about the lack of labor force. Today it is totally different. The labor force, which had not been taken into account places itself in the foreground as a very serious problem. The complaint is universal, We all complain about the same things 46: concern for the absence of labor which runs hand in hand with the possibility that the backward technology employed in Spain did not allow a rise in production. In 1887, the chief engineer of Hullera Española bitterly complained that they could not fire a group of workers who had taken a day off without permission. In May 1898, the same company had to re-hire a group of workers who had been previously fired for having joined the local socialist trade union. Some time later, as Shubert points out, when the industry has to go through the depression of 1905-1906, the situation changes, and companies can indulge in the firing of workers, even against the rising coal mine trade unionism. But when circumstances start to improve again, from 1909 onwards, labor scarcity starts again. In 1912, another large company, Hulleras de Turón, a Basque owned concern, clearly understands that the absence of workers prevents them from increasing production. The importance of the excess of demand for miners is so great that from 1909 onwards, Asturian coal deposits will be the only ones in Spain to present that problem. This is, in fact, a problem of recruiting policy, rather than that of success in the recruiting strategy, depending on how one looks into it. In 1913, Hullera Española is forced to send a recruiting officer to find workers outside the province<sup>47</sup>. This illustrates a common practice for mining companies at the time Ojeda has termed of steel, i.e. after 1885. The turn of the century will start with strikes and problems in the industry. There is now a serious concern for the workers' productivity, which should be increased to stop thinking about wage reductions, which had been proposed as an alternative in order to sell coal at a low price. There were proposals to apply mechanical procedures, and use of electricity. As late as 1929, only 30% of the product is obtained through mechanical extraction,

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 <sup>&</sup>lt;sup>43</sup> See Adrian Shubert, *The road to Revolution in Spain. The coal miners of Asturias 1860-1934*, University of Illinois Press, Urbana and Chicago, 1987, p. 34.
 <sup>44</sup> Gérard Chastagnaret, "Contribution à l'étude de la production et des producteurs de houille des Asturies de 1861 à 1914", *Mélanges*

 <sup>&</sup>lt;sup>44</sup> Gérard Chastagnaret, "Contribution à l'étude de la production et des producteurs de houille des Asturies de 1861 à 1914", Mélanges de la Casa de Velázquez, t. IX, 1973, pp. 581-631.
 <sup>45</sup> Of course, some did go to America, and also towards Castille and Extremadura as farm hands, as Shubert states. "Seasonal

<sup>&</sup>lt;sup>45</sup> Of course, some did go to America, and also towards Castille and Extremadura as farm hands, as Shubert states. "Seasonal migrations show the relative overpopulation". See, Adrian Shubert, *The road to Revolution in Spain. The coal miners of Asturias 1860-1934*, ..., p. 33.

<sup>1860-1934, ...,</sup> p. 33.

46 The text was published for the first time in *Revista Minera*, 1883, p. 371, It was reprinted in Anales de la Construcción y de la Industria, 1883 and 1884. It was later published as a leaflet. See José Sierra Alvarez, "Política de vivienda y disciplinas industriales paternalistas en Asturias", *Ería*, 8, 1985, pp. 61-71, p. 62. In 1892 businessmen complained of the difficulties found to create a mining population, these are not limited to Asturias, but are increased in the region due to the traditional migrations to America of the people living on the coast. See *Estadística Minera y Metalúrica de España*, Madrid, 1892, p. 248. Quoted in Adrian Shubert, Ibidem; and in Julio Tascón, "Les migrations asturiennes dans le contexte espagnol (XIXe-Xxe siècles)", *Migrations et migrants dans...*, p. 230.

47 Adrian Shubert, *The road to Revolution in Spain. The coal miners of Asturias 1860-1934*, ..., p. 35.

whereas the percentage goes up to 90% in the Belgian and Ruhr valley mines, and in French mines it is up to 70% for this date 48.

Large companies will develop paternalistic recruiting strategies to solve the problem of absence of labor between 1880 and WWI, which will mark the end of the predominance of the mixed worker. Businessmen, engineers and doctors are the main agents of these recruiting strategies, the objective of which is, in words of Mr. José Sierra, "the reproduction of labor forces". I.e. engineers and doctors start to worry about the feeding of workers, their clothing, their accidents, diseases, the places where they live, their marriage habits, their instruction, education, what they spend their money on, what they read, their vices and virtues. They are interested in doing everything in their hands to implement, between 1880 and 1914, a wide program of social reforms and a complete project to discipline workers through the control of their reproduction. It is a perfectly engineered recruiting effort, in order to ensure the existence and availability of that precious commodity which are workers. One of the pillars of that paternalistic policy was the building of houses for workers. It seems that the policy yielded results, despite the intensification of the migrations to America. It is paradoxical that in order to supply the workers necessary for the industry, even in a time of increasing concentration, it would have been enough with just one of the contingents emigrated to America (see figure)

Migrations (into and from Asturias, 1890-1934

Trigrations (into and from ristarias,		
Miners Immigrants in	Asturian Emigrants	Emigrants
Langreo y Mieres	to América	(annual average for the period)
3.574	333.064	7.086

Sources: Shubert, 1987, pp. 40-41. Anes, 1993, p. 112 and own work. Note: Emigrants (1888-1934).

If we weigh the myth of the "nabob" against the hatred of locals to work in mines, we find out that the previous figures certainly endorse the popularity of the myth. It seems clear that the behavior of the so called mixed worker made little economic sense, i.e. these workers did not seem to respond to monetary incentives. Gascue himself showed clearly how during the 1883-84 boom, the scarcity of workers and the refusal of those available to work over-time prevented his company from reaping all the benefits markets offered<sup>49</sup>. After WWI, conditions eased up for companies, and there was a reduction of the need for workers. From 1920 onwards the scarcity will be of experienced workers, and the most appreciated will be those who are indispensable because of their qualifications require a long learning period. Even so the dependency of mine owners on local population is out of the question. Thus it is proven in Ramón Pérez González's PhD, where he terms the process as "intensive drainage area" and, as we know, labor was very intensive in this type of exploitations<sup>50</sup>. In the councils of Mieres and Langreo, immigration was mostly from Asturias, and to a lesser extent from other provinces, with a few workers from abroad. (see the following figures).

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<sup>&</sup>lt;sup>48</sup> See René Leboutte, *Vie et mort des bassins industriels en Europe, 1750-2000*, Editions l'Harmattan, Paris, 1997, p. 427.

<sup>49</sup> Carriers refused an offer of 20 cents to move extra loads after the end of their shift at 3:30, preferring to "sit around the main square doing nothing for two hours". See *Revista Minera*, 1883, 146, p.388. The average salary in those days was 2.40 pesetas. Quoted in Adrian Shubert, *The road to Revolution in Spain. The coal miners of Asturias 1860-1934*, ..., p. 44.

<sup>&</sup>lt;sup>50</sup> For example the councils of Siero, Bimenes and the South west area of the region were the available reserve area for the companies that operated locally, such as Hulleras de Rosellón, Minas de Langreo y Siero, Solvay and Cia., and Duro-Felguera In the same way, when La Montañesa started to operate in the Council of Aller anxiously expected to employ local people. See Adrian Shubert, *The road to Revolution in Spain. The coal miners of Asturias 1860-1934*, ..., p. 35-36.

#### PROCEDENCE OF MINERS IN LANGREO, 1890-1934

	Before 1914 (in %)			Af	fter 1914 (ir	ı %)
Company	Basin	Asturias	Immigrants	Basin	Asturias	Immigrants
Minas Sta. Ana	88,7	5,0	6,3	84,0	4,1	11,9
Minas La Justa	95,0	2,9	2,1	84,6	8,0	17,4
Minas de Saus	90,3	9,7		71,1	15,3	13,6
Mosquitera	94,7	3,0	2,3	83,0	9,0	8,0
Coto Sama				44,0	15,0	41,0

PROCEDENCE OF MINERS IN MIERES, 1914-1934				
		(In %)		
	Basin	Asturias	Immigrants	
Minas de Olloniego	68,9	14,5	16,6	
Tres Amigos	39,8	8,6	51,6	
Riquela	63,0	6,8	30,2	
Baltasara	66,0	10,3	23,7	
Hulleras de Riosa	78,2	4,3	17,5	
Ortiz Sobrinos-Clavelina	51,2	11,2	37,6	

Source: Adrian Shubert, The road to Revolution in Spain. The coal miners of Asturias 1860-1934, ..., p. 39.

In order to obtain a clearer picture of the figures I have elaborated the following chart

In order to obtain a clearer picture of the figures I have elaborated the following chart			
Workers employed in coal mining in Asturias in 1934			
25.895			
Immigrant miners in the coal basins in 1934*			
3.574			
Immigrant miners/total employed in 1934			
14 %			

Source: Adrian Shubert, The road to Revolution in Spain. The coal miners of Asturias 1860-1934, ..., pp. 29 and 40-41.\*This estimate overrepresents the total number of immigrants. It is based in the addition of all the data available from all the sources for the basin of Nalón and Caudal (Langreo, 1890-1934 plus those for Mieres 1914-1934).

## Immigrant miners in mieres, 1914-1934

Place of origin	%	Number
Galicia	39	875
Leon	37	812
Castille	2	45
Extremadura	1	14
Andalusia	2	47
Others	6	131
Abroad	13	275

# Inmigrant miners in langreo, 1890-1934

Place of origin	%	Number
Galicia	29	400
Leon	46	635
Madrid	7	94
Extremadura	1	7
Andalusia	6	86
Others	6	79
Abroad	5	74

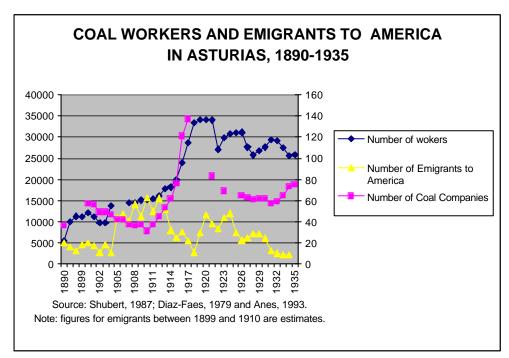
Source: Adrian Shubert, The road to Revolution in Spain, ..., pp. 40-41.

In the figure where I put in relationship the total amount of immigrant workers from 1890 until 1934 with the total of workers employed in mining in that year in the coal mining, I subject the figure to a restriction, and that is that the families which settled in the 1890's, and later, remained and adapted to the paternalistic nature of recruiting, should it be patriarchal or liberal. I have to point out that, on the other hand, the figure for 1934 slightly exceeds the average of workers employed obtained with the data available for the period 1890-1934; 21,610 workers. On the whole I believe that immigrant miners, coming mostly from Galicia and León, were a contingent which would be around the indicative figure of 14%, and that that figure would be a reasonable estimate for that reality. By grouping workers with their families, they were being fixed to the land after having been moved. It this way a steady and stable source of workers was guaranteed, they had "a race of miners"

It is evident that paternalistic recruiting was successful, even if the contradiction between migration to America and employment in mines still continues. The contradiction reaches its peak in the years of the Great War, when marginal mining exploitations flourish, and while the 1911-1920 decade shows the highest average of emigrants for the first third of the XX century, with 9,023 per year, the years of the Great War have the greatest number of jobs in coal mining for those thirty years, with a maximum of 34,177 in 1919. From the 1890's decade onwards, paternalistic strategies had to shift to include also the prevention of conflicts, i.e. how to manage in order to prevent strikes 52. The population surplus was not absorbed, neither by the emigration to America, nor even by exponential increase of mining companies during WWI (see graph below). Therefore during the 1920s there were a series of strikes and revolutionary general strikes whose most significant precedent was that of 1917, with its subsequent repression to return to normality. The manipulation of the mining trade union (socialist) during General Primo de Rivera's dictatorship causes bitterness in the unemployed, who, at the same time, perceive the impossibility of migrating to America or exiling into France. This is the road towards 1934 revolution in Asturias 53. The migratory turnover for the period that goes from 1921 to 1930 is the largest in all the history of Asturian migrations. It is a premonition of the terrible events of the revolution of 1934, which will be one of miners and socialists. The miners members of the trade union were a majority, and they did not migrate, neither did free-riders in the coal sector, not to the same extent workers in agriculture did, They did not emigrate because they had the expectation of being hired by other companies. Besides, from 1920 onwards, reports coming from Cuba, the main destination of Asturian emigration, are not very promising. It is no longer a very good option. After the postwar crisis, the sequence of strikes, repression, salary reductions, and job reductions, cause a big rise in unemployment in the region. All claim for protection for coal: industrialists and workers, even the socialist leader Manuel Llaneza. But the unrest caused by a faithful union representation of workers' interest, and the cutting off of the American migration will bring about the October revolution of 1934.

<sup>&</sup>lt;sup>51</sup> See José Sierra Alvarez, << Política de vivienda y disciplinas industriales paternalistas en Asturias>>, Ería, 8, 1985, pp. 61-71, p. 64 52 See José Sierra Alvarez, El obrero soñado. Ensayo sobre el paternalismo industrial (Asturias, 1860-1917), Siglo Veintiuno Editorial, Madrid, 199, p. 253-254.

See note 22 in Julio Tascón, "Les migrations asturiennes dans le contexte espagnol...", pp. 226 y 240.



Paternalistic policy carried out by the large companies, granted their workers a certain privileged status, as regards welfare. I refer here to the staff of those companies which Chastagnaret, according to a report carried out by engineers in 1892 (EMME, 189-1892), terms as the most important ones, the ones with the largest production, approximately over 100,000 annual metric tons<sup>54</sup>. The Companies Fábrica de Mieres, Hullera Española, Unión Hullera y Metalúrgica de Asturias, Hulleras del Turón and Duro Felguera, were, already in 1900, among the twenty most important coal companies in Spain, according to Coll and Sudriá<sup>55</sup> classification. The relative failure to attract foreign labor to these companies, due to the scarcity of work within the region, during the coal boom of the turn of the century, becomes a success due to the salary rises during the WWI period. The successful recruiting, although not very efficient, during WWI, supports the theory that the salary is the most determining factor when deciding whether to migrate or not.

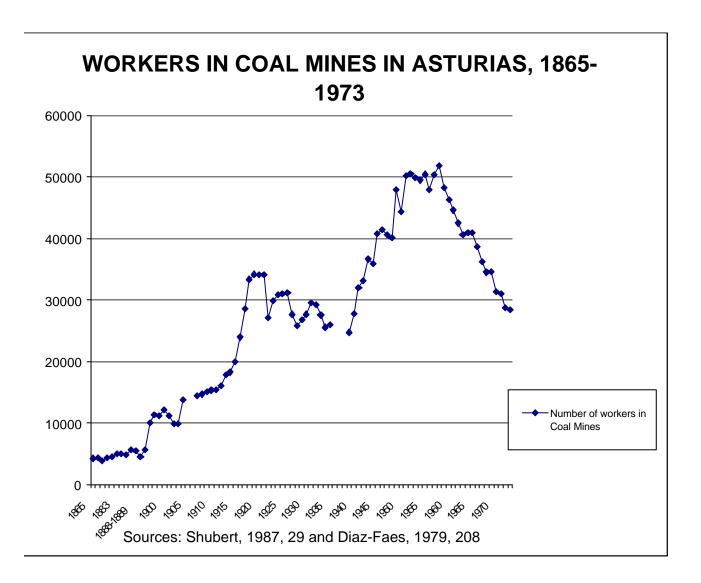
#### Atraction without recruiting strategy: HUNOSA and ENSIDESA do not prevent migration to Europe in the 1960's

Miners will become the most representative group of the Asturian industrial population, and their relevance in the active population of the Spanish national coal turned them into the most important group in the whole country 56

<sup>&</sup>lt;sup>54</sup> See graph 3 in Gérard Chastagnaret, "Contribution à l'étude de la production et des producteurs de houille des Asturies de 1861 à 1914", Mélanges de la Casa de Velázquez, t. IX, 1973, pp. 581-631, p.604-605.

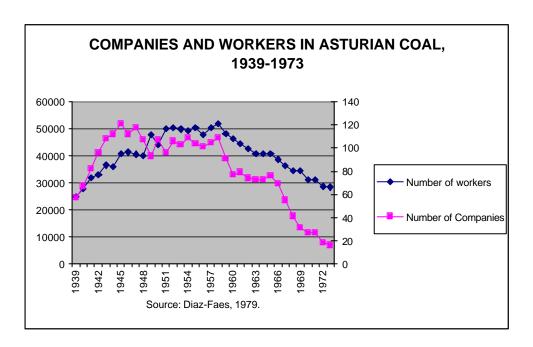
55 See Sebastián Coll y Carles Sudriá, El carbón en España, 1770-1961, Madrid, 1989.

<sup>&</sup>lt;sup>56</sup> See Manuel Día-Faes Intriago, La minería de la hulla en Asturias (un análisis histórico), Servicio de Publicaciones de la Universidad de Oviedo, Oviedo, 1979, pp. 46 and 48.



State intervention, which during Primo de Rivera's dictatorship is similar to the one at the end of the XIX century, that Manuel Jesús González daubs "border type", is reinforced during the II republic and will continue under Franco's dictatorship, until it is embodied in HUNOSA, which is the ultimate state intervention: its nationalization<sup>57</sup>.

<sup>&</sup>lt;sup>57</sup> The solid fuel sub-commission, created in 1939 will yield its functions to the Regulatory commission for the distribution of coal, which depends directly from the Technical Secretary of the Ministry for Industry. Its main function will be, from 1941 onwards, the direction and control of the national coal policy. See Manuel Díaz-Faes Intriago, *La minería de la hulla en Asturias (un análisis histórico)*, Servicio de Publicaciones de la Universidad de Oviedo, Oviedo, 1979, p. 129.

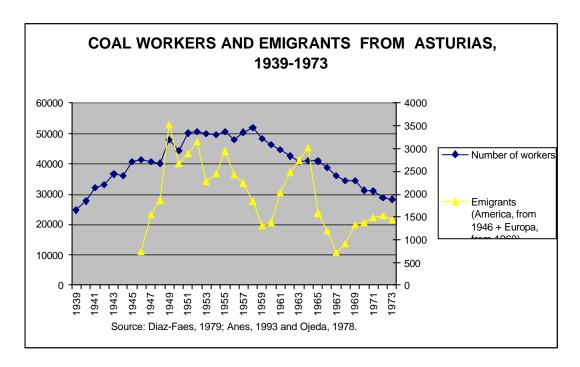


During WWI, according to Shubert, "immigration created a new group of proletarian miners" and the main attraction for that mass recruiting lay in salary rises. During the first period of Franco's dictatorship, and until the economic liberalization of the 1960's, intense state intervention will create a closed market with quotas and fixed prices. The expansive phase of the coal ends with the decade of "development" in Spain, to enter a regression due to the great competition from the lower prize of oil derived products. The hidden nature of the crisis the sector suffers from the 20's rears its head in all its power when the energy market opens up to other products. Coal demand suffers a slow decline among the fuels to generate energy, in favor of oil. In 1960, coal demand was 46.6%, and ten years later it is only 21.9%. Oil rises from 28.8% to 61.8% for the same period<sup>58</sup>.

During the first years of Franco's regime, mining continued to be labor intensive. The existence of little capital in coal mining, and thus the low level of investment in the sector made mechanization persistently scarce. It may be said that increases in production were obtained only thanks to the increase in the number of producers. The continuity of the mixed worker, as an important part of the work force employed in the mines during the thirties, the ruralization of the country –specially after the '36-'39 war and until the 1950s encounters the migratory valve closed until a limited opening in 1946, and it will not be opened completely until 1960<sup>59</sup>. Immigrants had complemented, but never substituted the mixed worker. It is easy to state that during the after-war period, and thanks to state intervention and the autarchic policy, there was no need of having a recruiting policy to obtain the necessary labor. The number of companies increased thanks to state intervention, and the number of workers in the sector in Asturias also increased (see the previous graph).

<sup>5g</sup> See Adrian Shubert, *The road to Revolution in Spain. The coal miners of Asturias 1860-1934*, ..., p. 42 and Julio Tascón, "Les migrations asturiennes dans le contexte espagnol...", p. 236.

<sup>&</sup>lt;sup>58</sup> The other source of energy in the sixties was hydraulic energy, which accounted for 24.6% and in 1970 it was 15.5%. In 1970 natural gas and nuclear energy were already being used. See graph 3.48, in page 130, in Manuel Díaz-Faes Intriago, *La minería de ...*, pp. 129-130.



The lack of a structural transformation in the Asturian agricultural sector (even after the war), created under-employment in that activity. The internal logical of exploitations was ruled by full employment, and not by the obtention and re-investment of benefits. The scarce mercantile structure of the agricultural sector encourages the existence of mixed workers, specially because of the few possibilities of emigrating, and the expansion of a mining industry which required labor which was still scarce, particularly as regards specialists. The output obtained per day per worker in the coal producing countries, when compared to the Asturian ones, indicate the low performance of the latter. Comparison with Belgium, whose deposits, given their similarities, allow a clearer picture of the differences. Thus, for 1956 they have an output which is 70% higher than that of Asturias <sup>60</sup>. There is no intention of investing in the modernization of the sector, not even in the '60s, and that even considering the evolution of the installed power, and taking into consideration how obsolete machinery was. The number of coal companies created in the period 1945-1959 is below that of those created during WWI. However, the number of workers in the sector during the first years of Franco's regime, reaches its highest point in 1958, with 51,852 workers. During the autarchic years, Asturian coal basins had been areas of immigration, for two main reasons: on the one hand, the political interests geared towards neutralizing a stronghold of political opposition, and, on the other because of economical interest in increasing production of what had become a national commodity of prime interest. In this way migration towards Asturias coal mining was favored in years in which marginal exploitations, abandoned since WWI, were opened. From 1959 onwards, exploitations start to close. Asturian coal starts to compete with foreign coal thanks to the liberalization of imports <sup>61</sup>.

Just in the first years of the 1960's, 8,000 jobs were lost in the coal sector. The evolution of the professional categories shows, for the 1957-1967 period, a 120% increase in the effective recruiting of technicians and clerical staff, and only 55% in the coal face workers. While workers outside the mine suffer a 36% reduction<sup>62</sup>. Possible re-conversions for the sector, and for the time, are yet to be researched. It must be remembered that because of the strikes of '62 and '63, and as result of the fear to subsequent repression, some miners exile to France or Belgium. It should be remembered that in 1956 Spain and Belgium had signed an "Arrangement for the migration of miners", to be covered by workers from Jaén and Asturias. When the state of exception is declared again in 1962 –for the first time after the 1958 strike- deportations of miners are included in order to favor repression. From then on laying off miners is easier and their readmittance becomes more difficult. Emigration becomes then one forced alternative <sup>63</sup>. The graph that shows migration to Europe clearly indicates that its strength is higher in those first years.

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<sup>&</sup>lt;sup>60</sup> See Manuel Díaz-Faes Intriago, *La minería de ...*, pp. 124-125.

<sup>&</sup>lt;sup>61</sup> This is a general crisis, "a crisis of capital, of technique, of productivity, of size of industrial plants" which clearly illustrates the end of a historical situation which had been the base of Spanish capitalism. It had been based on the low cost of labor, and in tariffs, which rendered business modernization unnecessary. See Arturo López Muñoz, *Capitalismo español: una etapa decisiva*, Madrid, 1971, pp. 105-106.

<sup>&</sup>lt;sup>62</sup> Op. cit. pp. 135-136 and p. 225.

<sup>&</sup>lt;sup>63</sup> See Germán Ojeda, *La emigración asturiana a Europa. Contribución al estudio del hecho migratorio regional*, mimeographed research paper for the obtention of the Masters Degree read at the Faculty of History, Oviedo, 1978, p. 74.

HUNOSA was founded in July 1967. Its capital was up to 77% state owned, and the rest was participated by Duro-Felguera (10%), Hullera Española (6%), Fábrica de Mieres (2%), Nueva Montaña Quijano (2%), Carbones Asturianos (2%), Industrial Asturiana Santa Bárbara (0,79%), Compañía de Carbones Industria y Navegación (0,26%) and Compañía Industrial Minero-Astur (0,04%)<sup>64</sup>. In successive years, until 1970, up to a total of 18 mining companies will join in. These companies had experienced, already before joining the company, losses both in their respective productions and in the number of employees. They had been reducing their staff, except three of them. From 1957 to 1966 that reduction reached 21% (see previous graph, especially the point of inflexion of the curve for 1958, and the negative slope from that year onwards). The reduction of employees will continue even after the constitution of HUNOSA, because the number of workers was too high. There will be no adequate re-conversion plan for miners, just the system of early retirement benefits. Instead of recruiting, we have a series of restructuring movements, which show a serious lack of balance in the personnel. The lack of balance is indicated by the predominance of exterior workers, around 40% of the inside workers in the '70s, but, at the same time, the importance of face-workers, just 19% in 1973 does not diminish<sup>65</sup>. Common diseases, conflicts and working accidents are the most serious causes for absenteeism. This is bigger among face-workers, the workforce which more directly affects coal extraction, and therefore the final output of the company. The results account is, therefore, always negative.

In the 1950's, more than 50% of the coal is consumed locally by the steelworks, which, with the creation of ENSIDESA, increases demand. During the same years, the steelworks show an evolution and move from their early settings in the interior of the region, close to the coal mines, to the coast, where the new integral plants will be built. The reason for this change within the region from the central area towards the coast is due to the wish to reduce shipping costs, and to simplify the dispatch of finished products. At the same time, it offered the possibility of selecting the quality of raw materials <sup>66</sup>. The first location was that of ENSIDESA in Avilés, and later UNINSA in Gijón. Both very close to the ports of Avilés and El Musel. In 1966 the three extant steelworks: Mieres, Duro-Felguera and Moreda-Gijón concentrate in UNINSA. To create an integral steel factory.

ENSIDESA was created in 1950 and it is the result of a national restructuring of the steel industry. It will become the largest integral factory in the country, and will absorb UNINSA in 1973. However, I will not take UNINSA into consideration when talking about recruiting, neither will I consider other mergers, or its privatization process with the constitution of Aceralia, nor its take over by the Luxembourg company Arbed<sup>67</sup>. It is the recruiting of ENSIDESA-Avilés, or rather the attraction exercised on labor, predominantly Asturian, what I want to underline, and link with the decadence of the coal sector, and with the migration to Europe in the '60s. Comparison with the recruiting of specialists in the XIX century is evident, even if both countries of origin and recruiting techniques vary.

56% out of the 22,846 workers in ENSIDESA-Avilés during the years 1950-1978, came from Asturias, 43% from the other provinces of Spain, and only 1% from abroad. It is likely that during those 29 years the percentage of Asturians in the staff was higher, but the source of information only mentions place of birth. We cannot take into account the place of residence immediately before the entrance in the factory for the age bracket considered active population, i.e. between 14 and 65. The question is that given the very strategy of attraction carried out by the company, many children of the workers who figure in the registration book were also hired later on. Thus it is the case that people who had been born in other provinces of Spain, but when they started to work for ENSIDESA, they had already gone to school in Asturias. The total amount of those inscribed as workers in the company, as Bogaerts states, is trustworthy, because the company never re-used the numbers of those who retired or died, or just stopped working for the company. Under the heading "other provinces" there are 2,244 workers of unknown origin, which

<sup>&</sup>lt;sup>64</sup> I have rounded the figures of the participation in the capital except for those who appear with decimals. See Op. cit. p. 146. 65 These figures, and other graphs with the personnel at HUNOSA can be seen in Manuel Díaz-Fæs Intriago, *La minería de ...*, p. 163-

<sup>&</sup>lt;sup>66</sup> Both breaking load cost, and the displacement of raw materials to the interior are eliminated. The general model followed by the structural transformation of Asturian steelworks can be seen in Guillermo Morales Matos, "Introducción al estudio geográfico de la siderurgia asturiana", *Boletin del Instituto de estudios Asturianos*, año XXX (May-December), 88-89, pp. 309-430, pp. 309-310. <sup>7</sup> I will concentrate on the first years after the constitution of ENSIDESA, as neither Jorge Bogaerts' PhD, nor our own figures contain information on that period.

reduces the risk of considering the ones from Asturias as such. The cities in the North of Africa: -Melilla, Ceuta, Tánger and Tetuán- were considered under the heading "provinces" for the years where they appear<sup>68</sup>.

Place of birth of ENSIDESA workers, 1950-1978

Asturias	Other provinces	Abroad	Total number of workers
12.738	9.930	178	22.846

Source: Jorge Bogaerts, El mundo social de ENSIDESA..., October-1999, pp. 28-29.

The hypothesis that there was a simple attraction towards the company, instead of a recruiting policy, is confirmed by the observation of the beginnings of the process of conditioning the firth of Avilés. These works, previous to the installation of ENSIDESA, were carried out, among others, by Entrecanales y Táyora, and Huarte and Company. Both companies had in 1958, when the first furnace starts to operate in ENSIDESA, 3,910 and 2,428 workers contracted outside respectively, besides the 7,300 who worked for the National Industrial Institute, in the region at the time. Although 3 years before their number was 16,043, which, in their greatest part, were from other provinces in Spain<sup>69</sup>. These workers, and therefore their families, received the name of "coreanos", and the places where they lived were called "coreas" in Spanish. Undoubtedly there is a close link between the pictures of the refugees from the Korean war, which was being fought at the time, and that name. The derogatory name reflects the attitude of the people from Avilés towards these people, whose working life would start with a temporary job for any of the contractors building ENSIDESA. But the proportion of the so-called "coreanos" who joined the regular staff of ENSIDESA cannot have been very big due to the discrimination against them. Many of them died building the coffers in the marshes where the factory was being built 70. The employment of these workers not by ENSIDESA directly, but by auxiliary companies or outside contractors, is their most common access to work. The next graph shows that the strongest attraction of ENSIDESA, is for the Asturians, and especially for those living in the central area, precisely in those places where, at the same time, there is a reduction in the mining industry jobs.

#### Asturian full time staff in ENSIDESA, 1950-1979

Council of origin*	
Aviles	1922
Oviedo	1062
Gijon	710
Carreno	646
Mieres	466
Langreo	447
Gozon	437
Grado	414
Soto del Barco	404
Corvera	404
Pravia	308
Castrillon	245
Cudillero	232
Llanera	186

<sup>&</sup>lt;sup>68</sup> See Jorge Bogaerts, El mundo social de ENSIDESA. Estado y paternalismo industrial, (1950-1973), mimeographed, PhD Thesis, Oviedo, October-1999, p. 24.

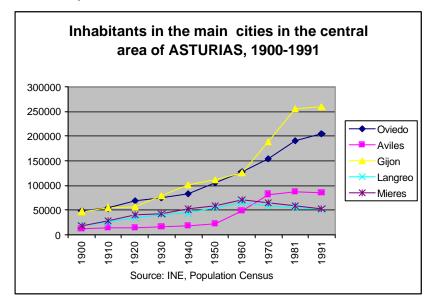
69 Summaries on Purposes and Actions of the INI, 1955 y 1958. Quoted in Jorge Bogaerts, opus cit., p. 25.

The construction of the factory and annex buildings was carried out on marshes, and the soil had to be reaffirmed. To do so, large concrete coffers had to be made, and many workers died when they had to work inside them to build them.

Candamo	169
Luarca	154
Aller	154
Siero	134
Las Regueras	130
Salas	101
Total	8725

Source: Jorge Bogaerts, El mundo social de ENSIDESA, p. 35.

<sup>\*</sup> It only includes those councils with 15 or more workers.



"Word of mouth" was the normal way of spreading the news at the time: "In Avilés there jobs, you can earn wages there". On top of the wages, there were perks which were part and parcel with the job in the state company. This was known as social action, and they included extra benefits for the full time staff members, and were an attractive complement to wages. The great importance of those perks turned out to be a deciding factor for the attraction of workers for the company. Among these perks there was the one considered essential in the paternalistic policy of the XIX century: the offer of a house. In general terms, it could be said that being in the staff was a privilege for those workers, and this was specially acknowledged in the '60s, with the crisis in the coal sector, by the absence of strikes in the steel sector. The effects of that attraction, without the need of recruiters, can be seen in the tremendous growth of the population of Avilés, and in the population of Gijón '1 (see the following table).

It should be noted the greater importance of immigration in Avilés, compared with that to other villages in the region. Between 1950 and 1970, the increase of population was more due to immigration than to normal growth, but this was the case specially during the first decade, as it represented 80.41%. During the "Development" years, it only grew 17.91%. The case of Avilés, with the attraction of the building of the factory first, and then ENSIDESA itself, is paradigmatic. Gijón had been the great industrial city of the XIX century, and therefore, its immigration figures are greater than those of Avilés for 1950. Therefore, it is normal that Avilés, because it had a limited number of immigrants in 1950, would show an enormous growth, larger than that of Gijón. In relative terms, the increase of the number of immigrants as compared with the native population of Avilés has an impact unequalled in any other area of the region. It rose up to 36% and 33%, figures never reached in the other industrialized councils (see table below)

<sup>71</sup> For the case of Avilés note the slope of the curve in the period 1950-1960, much steeper than that for the period 1960-1980 in Gijón (UNINSA was installed in 1966, and merged with ENSIDESA in 1973).

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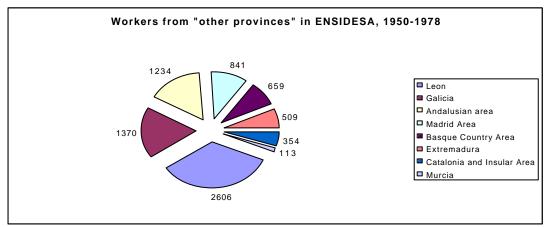
Immigrants and Immigrants/ total population (%). Central Area of Asturias, 1950-1970

	Oviedo		Gijón		Avilés		Langreo		Mieres	
	Number	%	Number	%	Number	%	Number	%	Number	%
1950	12.556	11,84	18.246	16,44	1.392	6,24	7.174	13,22	7.327	12,56
1960	20.821	16,49	20.689	17,23	17.698	36,29	13.426	20,38	12.805	18,04
1970	25.925	17,00	40.123	21,72	27.759	33,67	11.613	19,52	11.111	16,85

Source: INE, Population. Quoted in Julio Vaquero and Adolfo Fernández, "Demografía",..., 1981, p.184.

To Avilés flocked Asturians who had some kind of industrial experience, many other workers and their families from the rest of Spain, and, above all, those from neighboring regions, specially León and Galicia, with an immigration tradition that acquires certain importance after WWI, (see next graph). The 7,686 workers who appear singled out by industrial areas do not include those 2,244 of unknown origin. I have not included those 178 who had been born abroad, as they will be analyzed in greater detail<sup>72</sup>. But before, I want to state that in the parallelism established between the evolution of ENSIDESA's staff, and that of the population of Avilés (see graph below), the increase of 94% experienced by the state owned company is due to the absorption of UNINSA in 1973. As it was located in Gijón, which is only 30 km away from Avilés, it is normal that the small increase in population should not reflect that event<sup>73</sup>.

Up till now, current research on the topic has not supplied evidence of a recruiting effort, not even at the beginning, to attract workers from the areas further away from Asturias, for example from Andalusia or Extremadura. Although it seems convenient to point out the existence of two different strategies to attract workers, and which differ in its implementation as follows. The first one cannot be properly termed recruiting, as it was a mere selection of staff, when it was feasible to carry it out. Workers did not receive a formal message from recruiters, they had received the information by "word of mouth", and should spend some money to check the truthfulness of that information. The job openings offered to cover sick leaves or dismissals (at the medium qualification levels) found its strongest attraction in the privileged status ENSIDESA offered to those directly in its pay roll, or those who worked for the company indirectly. This status was based on two main components: the salaries, and the perks, either as payments in kind or



 <sup>&</sup>lt;sup>72</sup> Bogaerts data supplies 35 foreigners more than the ones I include, but the difference comes from the period of contract, which, in my case, only covers up to 1959.
 <sup>73</sup> The graph's data are collected in the following table:

The graph's data are collected in the following table: ENSIDESA staff and the population of Avilés, 1951-1975

Ensidesa Avilés Ensidesa Avilés 1951 21655 2.1 1955 37349 3834 72% 1959 81% 17% 6938 43832 1963 10504 53470 51% 22% 1967 12831 74268 22% 39% 1971 14023 83950 9% 13% 1975 27244 85298 94% 2.%

Source: Holm-Detlev Kohler et al., 1996: and own work.

financial advantages, and, above all, those related to housing. The salaries seem to be well above the national average, even if they are not large by any account. The fundamental advantage of those salaries lies in the rights the worker and his family acquired, thanks to its condition of worker for a state owned company (achieved mostly through the welfare department), and it was increased by the fact that it is almost impossible to lose the job.

The market for the highest technical levels was directly attended by the company itself in order to attract workers with high qualifications. Here we find a specific recruiting strategy, but it only affected the highly qualified specialists. Some of them were found in the weapons factory at Trubia (the nearest factory with steel technology available), and some professional soldiers for the managing level in order to ensure both the control of the workforce, and the direct state intervention in the activity. These workers were recruited both in Spain and abroad. The examples of the engineer and the engineer's aide who came from Mexico and Cuba, or the chemist from Argentina (see table below) would illustrate this strategy. However, I can only have absolute certainty in cases like that of Mr. Manuel de Luxán y Vergara. He was a soldier who had reached the rank of artillery captain before leaving the army, and who organized the welfare department in 1954 and was its head until his appointment as Chief of the General Department. In 1955 a professional economist is appointed director of the welfare department: Mr José Luis Martín Menéndez. He had been born in Morocco, but he had family connections with Gijón<sup>74</sup>. The aforementioned engineers and the chemist come from countries in which the network of Asturian connections is stronger, mostly due to the mass migrations of the XIX century. This makes us think that their recruiting may not necessarily have been caused by a specific organized effort, but by a simple selection of those workers, who had been attracted to the company. The second table shows that the old XIX century relation through the Walloon-Asturias axis is practically lost.

Foreigners in ENSIDESA, 1951-1959

1951	1
1952	3
1953	10
1954	29
1955-56	78
1957	5
1958	4
1959	3
Total	143

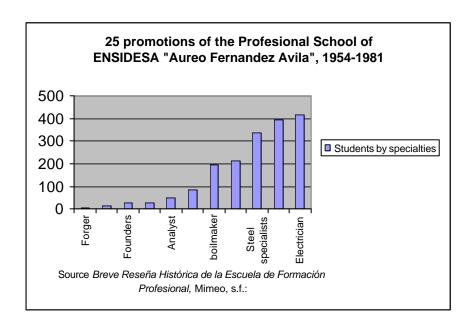
Country of origin of ENSIDESA workers, 1951-1956

Countries	ranking	Workers		
Cuba	1	49		
Morocco	2	14		
USA	3	11		
France	4	10		
Argentina	5	6		
Portugal		6		
Italy	6	3		
Belgium	7	3		
Holland	8	2		
Mexico		2		
Brazil	9	1		

Source: ENSIDESA data base, Aceralia Documentation Center.

<sup>74</sup> The welfare Department was inside the General one. It seems that the structure of the former was included in Staff and General. This was in charge of the distribution of houses, the operation of schools and factory shops, and the composition of rule books. Toys were distributed to children, sports activities organized, and so on. This department affected nearly 30,000 families, and around 6,000 houses were built. See Jorge Bogaerts, opus cit., pp. 163-169.

The place of origin shows a great similarity as regards clerical staff and highly qualified technicians, who are mostly come from Madrid and Valladolid. Recruiting does not seem to have played any role in attracting them. However, there is an exception in the case of workers with medium specialization, we are talking about draftsmen, (first and second class), and project workers. Not many Asturians occupy these jobs in the first years. There were no specialists formed in the region, and demand was covered with immigrants from Madrid, Biscay or abroad. After 1961 the entrance of draftsmen is very limited<sup>75</sup>. The Professional School "Aureo Fernández Avila" starts its activity in 1954 with 52 students and with the stated aim of achieving a promotion which will join the company in 1957. Among its purposes it was not to teach medium qualifications or clerical ones. The Government order which authorized the school was issued in 1961, and its status would change then. Students started to be considered as such, and not as apprentices. It should be pointed out that until 1961 the "students" had an apprenticeship contract. The promotion of 1961 only joined the company when they finished their studies as apprentices in the fourth year. In 1981 the different specialties had formed 1,744 apprentices <sup>76</sup>.



This other type of recruiting, and later selection, was also applied by the company from its beginnings. It consists in an incentive to attract and keep the workforce, for their children would obtain a probability of avoiding unemployment, at least as high as that of their parents. For the companies this procedure ensures a very faithful workforce which will also have the exact qualification it requires 77

<sup>&</sup>lt;sup>75</sup> See Jorge Bogaerts, opus cit., pp. 42-43.

<sup>&</sup>lt;sup>76</sup> The 1958 reform was made to fit in with the plans of the Ministry for Education, in order to obtain the official status. For this reason the length of the studies changed from four to three years. See Breve Reseña Histórica de la Escuela de Formación Profesional, Mimeo, s.f. Centro de Documentación Aceralia.

77 Of those 25 promotions the first was that of 1957 See graph by specialties in *Breve Reseña Histórica de la Escuela de Formación* 

 $Profesional, \dots$ 

Workers from abroad who were in the pay roll of ENSIDESA 1951-1956

	1951	1952	1953	1954	1955-56
Concierge	1 Brazil				
Janitor			1 USA		
Telephone oper	ator		1 Cuba		
Waiter					1 Cuba
Guard			1 Cuba		1 Cuba
Driver			1 Cuba	1 Cuba	3 Cuba
auxiliar Clerk			1 Cuba	3 Cuba/ 2 USA/ 1 Morocco	
auxiliar technici	an				1 Cuba
auxiliar analyst					2 Cuba/ 1 USA/ 1 Morocco *
draftsman				1 Cuba/ 1 Morocco	
Draftsman aide				1 Morocco	
Engineeer aide		1 Cuba			1 Cuba
engineer			1 Mexico	1 Cuba	1 Cuba
chemist		1 Argentina			
apprentice				1 France	2 France
navvy			2 Cuba/ 1 Argentina	6 Cuba/ 2 USA/ 1 Portugal	9C/ 2US/ 1M/ 3Gr/ 2Ar/ 4F/ 3I/ 2LC/ 2H/ 4P/ 1Br**
quartermaster					
mechanic		1 Cuba			
Workshop super	rvisor				1 Cuba/ 1 USA/ 1 France
1 <sup>st</sup> officer					2 Cuba/ 1 Mexico/ 2 Morocco / 1Portugal
2 <sup>nd</sup> officer				3 Morocco / 1 Cuba	1 Morocco
3 <sup>rd</sup> officer				1 Cuba	1 Cuba
teacher				1 Belgium	
1 <sup>st</sup> specialist				1 Morocco	1 Cuba/ 2 Morocco / 2 Argentina/ 1 Germany
2 <sup>nd</sup> specialist					2 Cuba/ 1 USA/ 2 France
overseer			1 USA		1 USA
warden				1 Cuba	

Source: ENSIDESA data base , Aceralia Documentation Center.

<sup>\*</sup> There is an auxiliary analyst from Tetuan, but the city was considered Spanish at the time. In the case of the workshop supervisors from 1955-56, the one from France had Spanish nationality. This migration from abroad, being a Spaniard only happens in few other cases.

\*\* 9 Cuba/ 2 USA/ 1 Morocco / 3 Germany/ 2 Argentina/ 4 France/ 3 Italy/ 2 The Low Countries/ 2 Holland/ 4 Portugal/ 1 Brazil.

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