

Statistical Analysis of the Demand of Employment of the Graduates from Andalusia

Genoveva Millán Vázquez de la Torre
Faculty of Business and Economic Sciences
Loyola Andalucía University
Spain.

Ana Hernández Román
Faculty of Business and Economic Sciences
Loyola Andalucía University
Spain.

Juan Manuel Arjona Fuentes
Faculty of Business and Economic Sciences
Loyola Andalucía University
Spain.

Abstract

The structural changes occurring in the labor market of graduates, impose a significant effort to adapt to the curriculum of schools, and the need to offer new titles that meet the demand of enterprises and public administrations. The proliferation of college graduates has coincided with a limit on the creation of the new post to the new built, causing a strain on the market that has damaged the overall situation of top professionals. The expansion of higher education in Andalusia has increased the possibilities of higher education to a large portion of the population, because the number of people likely to get a highly qualified labor and jobs that require this requirement have not experienced a corresponding increase. This paper analyzes the demand for graduates and work market Andalusian.

Key Words: work market, graduates, Andalusia.

1. Introduction

Nowadays, projected by the technological advance, the socio-cultural transformation, the constant economic changes and the integration of the states, reflect a concrete explicit reality capable of analysis and structuring.

University, as the factor that generates a summary of cultural, economic, social and technological elements, in relation to two very concrete and transcendental realities – employment and unemployment – will be the main aim of our paper.

The imbalance of the demand of university employment in our society, channelled through the work way – state and private, differs in general from the point to which, in a beginning, was destined and that demand produces a bounced effect of continuous adaptation to the work market. Not only it is faced the imbalance between two levels – the professional offer and demand of the national market – but also there is, moreover, a third element, that is, the expansion of the work market – in equality of conditions – produced by the European integration. If you add to all of this, the population, economic, cultural and social factors, it is got a complex and huge field study, which properly analysed, can offer reflection points and a solution to the tremendous challenge in our society, and within it, University, it is considered.

The adaptation of University to the new pedagogical trends, more than a great rationalization of its administrative and economic action, offers a point of serious consequences to the national economy.

The speed of transformation and the improvement in computer processes transmit a dramatic speed to the offer that the market has. This situation considered, sites University in a state of continuous challenge, in all the levels. On the one hand, the adaptation of the technological advances to the pedagogical methods and resources demands a huge and decisive human and economic effort.

The rapprochement to the reality of the plans of study and their flexibilization to a better adaptation to the demand of the society, it would be one of the first steps. On the one hand, the continuous recycling of teaching staff, related to a proper formation in the resources and needs of teachers and students. On the other hand, the teaching subjects and their respective contents would have to be the aim of the new pedagogical approach. The structural changes that are produced in the work market of graduates, impose an important effort of adaptation in the plans of study of our centres, as well as the need of offering new degrees that answer to the demand of companies and public administrations. Only in this way will be possible the incorporation to the work market of the continuous promotions, without forgetting the important re-adaptation of a great number of graduates who are working in their careers nowadays.

The search for the first job for university graduates is carried out following different lines in relation to the social, academic and personal situation of the just graduates, since the public offers of employment of state, regional and local administrations, the advertisement on press, the sending of curriculum to big companies, or the direct knowledge of the existence of a work post or the attainment of post –graduate scholarships or formation. Through the INEM (National Institute of Employment) offices about 80,000 graduates and qualified have been advertised in the last 5 years. In the future, and thanks to the promotion of the COIE and the registration of all the pupils graduated in our classes, it will be carried out a total following of these and to undertake specialised campaigns of the employment offer, with a tendency to make easier the access to the first post for an increasing number of students.

There are different hypotheses that can be considered taking into account the existing difference between the offer and the demand of university employment in Andalusia:

1. Imbalance between the existing degrees and the ones demanded by the companies and the Administration, as consequence of new needs in the created degrees by the technological innovation.
2. Lack of collaboration between University and Company..
3. Insufficient preparation of the graduates in concrete areas, due to the lack of practical and supplementary knowledge in the degree.
4. The current economic crisis.
5. Overcrowding in Universities.

To solve the previous differences, the State has to plan, next to the new educational forms, an active politics of human resources, proposing a group of ways destined to speed up the natural process of adjustment of the work market, whose essential points are: First, the supply of information and second, formal schemes of learning and improving the learning that takes place in the companies continuously. The proliferation of university graduates has coincided with a limit in the creation of new post to the new incorporated; causing a tension in the market that has damaged the general situation of the superior professionals. The expansion of the superior education in Andalusia has increased the possibilities of superior studies to a vast layer of population; due to that the number of people with prospects of getting a job highly qualified and the jobs that demand this qualification have not experimented a correlative increase. An analysis of the areas that usually held graduate staff points out the number of jobs has increased in an inferior rhythm creating an imbalance between the offer and the demand of the human resources.

The search and the obtaining of a first job that reply to the received formation it is long and difficult, and it finishes, in many occasions, in the acceptance of a job down of the academic qualifications, which prove theoretically for the performance of functions of a higher level, or, in the worst of the cases, means a extended situation of unemployment. It is logical that the population with a high education presents more favourable positions than the medium of the community, that is, levels of unemployment lower, due to the possibilities of occupation are markedly broader. They can apply for professions that legally demand to their course a superior degree and they also have the possibility of attending to more relevant occupations, entering in competence with people who do not reach that educational level. It has to bear in mind that the low unemployment level of the graduate, opposite general population, it does not imply that the graduate employees work in occupations that are referred to their levels of qualifications. In many cases, the graduates prefer any job to the lack of employment, creating sub-employment situations that decrease the number of unemployed people in this level.

The possibilities to find a job and the time employed to do it, depend on the offer of the available posts and the number of candidates for these posts. On the other hand, not all the degrees have the same work opportunities. When we are finding a job, different factors can influence, such as the concrete situation of each profession: number of existing professionals and the number of vacant posts, and the possibility that those jobs can also be occupied by graduates of other specialities that is, the degree of replacement of each career. The university student should not establish a narrow and immutable relation between the university studies and the career that he or she will have later. The society from Andalusia will need much more than professionals well endowed than the pigeonholed graduates in a degree. The idea of total formation, received at University, which serves to the performance of a unique profession, through all the work life, tends to disappear. The “title” will serve every time more to less and the knowledge every time to more.

The new graduates should get used to the intellectual mobility, which leads them to develop their aptitudes for the learning and the application of new knowledge to the professional contents. And, eventually, to develop their ability of initiative, their enterprising spirit and their creativity, which predispose to a permanent innovation, not only in their knowledge but also in their professional life. The demand of university graduates will be then, in relation to the technological transformations that affect to the productive system. There are professions no covered by the Spanish university, they are a kind of spearhead in the modernization of the economic performance: computer, high managing, marketing, ergonomics, high-computer technologies, laser, robotics, genetic engineering, etc. They are technologies that are giving “a fourth industrial revolution”.

In Spain, in the 2010s, Special Programmes of researching and development were developed (Garcia, 2013). The aim was to relate the performances of public and private organisms, in the matter of scientific researching and technological development to the big objectives of the industrial development and the solution to the problems of the country. In Andalusia, few projects are also developing, with a tendency to lessen as much as possible, the existing imbalance between the technological development and the degrees and so reducing the high number of university graduates and qualified in unemployment that Andalusia has in relation to other regions if we make a comparison. The aim of this research will consist on carrying out a study of the educational and work market of the university teaching, which goes from a descriptive approach of the problem to the estimate of future demands of education and employment for Andalusia.

It will be tried, in this research, to analyse the existing imbalance between technological development and the degrees, (Fuentes, 2013) whereas the use of a huge number of data, which corresponds to the profile of our university graduates, and after the corresponding statistical analysis, we can know what the potential of human resources is in Andalusia, quantitatively and qualitatively, and to analyse how these human resources formed are adapted to the work market, in order to be able to know the probability of getting a job and the typology of it. They are fundamental aspects in which the education takes part in an unquestionable way, and it will give the keys which drive to offer solutions, or, in any case, elements of economic judgement about the employment and unemployment.

2. Analysis of the Economy of Education: Precedents

Although the public opinion shows a great interest in education nowadays, the exact way in which the level of studies affects to the economic activity of a country is object of debates among economists, sociologists and other scholars. The idea is that the level of studies probably has influence on the production of goods and the services of a country; it is based on the fact that it is acknowledged that teaching is a means of improving the qualification in the work Schugurensky (2006). People who have a higher level of qualifications are accustomed to contribute more in the production than people who have a lower one.

From the different existing theories: “Theory of the human capital, (which reflects that education is affecting directly to the production of the labour to favour the acquisition of qualifications; these qualifications improve the productivity of the workers and it has influence on the social welfare. The education is considered an investment, because the workers that have more studies will have, as a rule, better work posts and higher salaries Schlutz (1961) Becker (1967)); “Theory of the classification and selection” (it makes up a critic to the previous one, it sees in the education a mechanism of transmission of information about the aptitudes and the features of the behaviour that pre-exist in the individual.

These aptitudes and features of the behaviour are the ones which determine the productivity of the workers more than any cognitive development or any psychomotor qualification acquired by means of the teaching, Philips (1972) Taubman and Wales (1973)); “Theory of the Socialization”, (it applies a Marxist analysis to the relations between the educational system and the productive system assigning to the educational system the function of perpetuating a social and work system unfair); a critic of this theory is represented by Bowles and Gintis (1975; it puts forward education is an instrument of social stratification, the businessman demands educated workers because it means that the ones who have more studies, they are more inserted in the society and the professional mean and they will be more productive. This theory attributes to the education a function of classification and selection, it denies that the primordial aim of the school is the cognitive development and the formation of psychomotor qualifications; “Theory of the segmentation and the duality of work market” and the “Theory of Education and business activity”, which deal with explaining the previous relation, being the most corroborated in the researches of the last 20 years the theory of human capital formulated by Schultz (1963).

From the economic point of view, Education is a sine qua non for the economic development. In an individual level, education is considered as an effective mode of increasing the productivity of individual, consequently, he or she receives superior incomes, finds easier job and has more possibilities of keeping it. Despite some economic advantages that education provides to the individuals have been very qualified (Thurow, 1975, Bowles and Gintis, 1976; Gordon, Edwards and Reich, 1982), it does not seem that education is a basic tool, not only to make possible the adaptation of labour to the work world changing technologically, but also to develop that technology and to adopt systems of productive organization more efficient. In these moments, as consequence of the needs of formation of capable labour in order to the use of new technologies and the ways of production, a renewed interest in education is appearing in the developed countries. Education and advanced technologies have become central strategies of the economic expansion and the raising of the productivity (Campos, 2008).

In the current moments of a rising international competitiveness, in which new industrial countries emerge, the unique solution more reasonable that the most developed countries have to keep their level of competitiveness without damaging their socio-work conditions is through the improvement of the productivity, joined to the technological development. Levin and Rumberger (1983, 1987). Education, as essential element for the rising of productivity, is one of the key elements to face a future economic growth, technological development and social balance. The referred studies to the demand of superior education in Spain are in the 1980s. One of the first one is the one of López Lubian (1981), which analyses the demand of high education at Barcelona university, using as observation the reflected data in the registration forms. Apodaka, Grao and Martínez (1986) carried out an analysis of the influence that the curriculum of the bachillerato students on the demand of a post at university. The study only limits to the University of Basque Country.

Modrego (1986) analysed through a biotopic probit model the demand of education in the province of Vizcaya, starting from data of the census 1981. Mora in 1988, carried out a study about the behaviour of the demand of high education in Spain, in a spatial level, considering the models of Hopkins (1974), Tannen (1978), Knudsen and Servelle (1978) and Stafford (1978), obtaining the following conclusion: the demand of high education depends on the valuation of people with studies, the family income available and the valuation of unemployment. In relation to the regions, there is a study carried out by Carneiro, García and all (1990) about the offer of employment for university graduate in Galicia, and the relative prediction of the structure of employment by means of qualifications and occupational levels. However, in Andalusia there is no any econometric study about the demand of education and employment of the university graduates and qualified; there are studies of qualitative type about provinces as the one of the Ceular (2007) in the province of Córdoba, or descriptive as the one that the Institute of Statistics of the Junta of Andalusia carries out, but in none of them, models are developed to determine the profile of the andaluz graduate.

3. Descriptive Univariant and Bivariant Analysis of the Demand of Employment of the Graduates from Andalusia

Data come from a population by data with a cross section containing information belonging to 43.200 different individuals, whose main characteristics are: first, being in possession of a university degree, second, having registered in the National Institute of Employment.

The percentage of population covered by the sample is 50.54 per cent for the region, changing the level in each of the cities depending on the degree of computerization in each of them; so, Seville is the one with the highest percentage (expressed it as a percentage of mechanical registered over the total of the province) with a 66.13 per cent of the unemployed graduates, followed by Almería with a 57.77, Málaga with a 54.95 per cent, Córdoba with a 54.73, Granada with a 46.6, Jaén with a 45.31, Huelva with a 43.45 percentage; and in the last position Cádiz with the lowest percentage: 35.4 per cent. The original data of leaving were collected by the Ministry of work and Social Security (National Institute of Employment) in 2000, having done different up-dating and being the last one on November 2006.

From each selected individual the following qualitative variables have been analysed: age, sex, marital status, academic level, number of degree that owns, languages, work experience, date of registration in the INEM, date of termination in the INEM. We have to highlight, before beginning the analysis of the characteristics of the university unemployment, which the unemployment global tax in Andalusia is of 12.22 per cent and, next to Galicia, the highest in Spain. We can declare that it is the lowest unemployment tax in the last period of five years. All this, and due to the continuous growth of the activity, points out that the figures of unemployment are decreasing.

In the university levels of Andalusia, the unemployment problem is not so serious because the unemployment tax decreases more of a four percentage terms depending on the province and sex. Analysing sex variable, it can be observed that the 56.2 percent of the unemployed graduates are women opposite to the 43.8 per cent of the men. It is observed that there is a high unemployment tax in women, more than 50 per cent due to the discrimination that university woman suffers when she wants to accede to a post, because the private employment offer, in equality of conditions, prefers men, due to the costs that maternity-leave can mean, apart from the problem of finding a person with enough preparation only for a substitution of sixteen weeks. Other variable is the graduate marital status, which is divided in five categories as it is shown in the following chart:

Table 1: Marital Status

Marital Status	Frequency	Percentage
Married	14,835	34.3
Divorced	301	0.7
Religious	39	0.1
Single	27,942	64.7
Widow	83	0.2
TOTAL	43,200	100.0

Source: National Institute of Employment (Inem) & authors

The 64.7 per cent of the registered graduates in the INEM are single with more than 30 points of difference in relation to the second category, which is the married one. The 52.4 per cent of the unemployed graduates are medium degree 22,656 opposite to 47.6 of high degree (20,544). Due to the current economic situation, these figures seem a bit contradictory because in theory, would be easier for a qualified one than for a graduate one to get a job, due to the fact that in Andalusia the small and medium-sized business and these companies need medium degree graduates to solve their daily problems, and to face problems of higher complexity, it is cheaper for them to hire study departments to solve a concrete problem, instead of having in their payrolls hired to a graduate all the year, so these data should be inverse, more unemployed in high degree graduates and less unemployed in medium degree graduates.

The reason of these figures is due to many people who have finished their medium degree, keep on studying a high degree, and whereas they are registered in INEM to get seniority when they accede to the public offer of the first job for the just finished graduates because it is more important the permanence on it than the curriculum. Other determining variable of the unemployment structure is the age. It has been subdivided in six intervals with the same size, having differentiated, in academic levels. The results appear in the following chart:

Table 2: Age

Age	Medium Degree		High Degree	
	Frequency	%	Frequency	%
21-25	2.392	11,9	251	1,3
26-30	8.781	44	8.213	44,7
31-35	5.173	25,9	6.824	37,1
36-40	1.467	7,3	1.884	10,2
41-45	864	4,3	546	2,9
+ 45	234	7,6	631	3,4

Source: National Institute of Employment (Inem) & authors

The unemployment tax is focused more on people between 26 and 30 years with a similar percentage (44 per cent) in the medium and high degree. However, there is a difference of more than 10 points in the intervals of 21-25 and 31-35. In the first of them, the medium degree ones have a 11.9 per cent opposite 1.3 per cent due to the duration of the studies, in the medium ones people finish their studies between 21 and 22 years, whereas the high ones are between the 23 and 24 of the degrees and 24-25 of the engineerings and architecture, always and when the real years of study coincide with the theoretical, that is, the university student who doesn't last more time to finish her or his degree than the time established in the plans of studies. The fact is only kept by the 7 per cent of the graduates. So they should be in different age intervals, because there are concrete degrees belonging to technical schools where the real years of study are usually (in about a 80 per cent of the cases) two years more than the theoretical ones. If we consider the variables, marital status, academic level and sex, we try to see if they are associated, we find the following results:

The 38.06 per cent of the unemployed women are medium degree graduates and single opposite 28.51 per cent of graduates. On the contrary, the highest percentage of graduate men in unemployment who are found in high degrees it is a 34.77 opposite to a 27.48 of medium degrees.

Table 3: Marital Status – Academic Level – Sex (Male)

Marital Status	Academic Level				
	Medium Degree		High Degree		TOTAL
	FREC	%	FREC	%	
Single	5.200	27,48	6.577	34,77	11.777
Religious	2	0,01	6	0,03	8
Divorced	49	0,26	51	0,27	100
Married	3.491	18,45	3.520	18,61	7.011
Widow	13	0,07	9	0,05	22
TOTAL	8.755	46,27	10.163	53,73	18.918

Source: National Institute of Employment (Inem) & authors

Table 4: Marital Status – Academic Level – Sex (Female)

Marital Status	Academic Level				
	Medium Degree		High Degree		TOTAL
	FREC	%	FREC	%	
Single	9,242	38.06	6,923	28.51	16,165
Religious	29	0.12	2	0.01	31
Divorced	124	0.51	77	0.32	201
Married	4,462	18.37	3,362	13.85	7,824
Widow	44	0.18	17	0.07	61
TOTAL	13,901	57.24	10,381	42.76	24,282

Source: Authors

In relation to the second marital status with higher number of graduates is the married one, it is observed that there are similar percentages in values between the different academic levels, 18.45 medium degree and 18.61 high degree. However, in women there is a difference of 5 points. Married women who appear unemployed are, the most, women who studied a medium- degree instead of a high degree. It can be due to the fact that in Andalusia, women, apart from their work and study obligations, have to do housework and they prefer to study less number of years in order to combine both things. The statistician of Pearson for the board where we cross marital status, academic level and sex (male), a value of 59.427 and 4 grades of freedom. That is, sex and marital status are related to the type of studies in unemployment population.

In the case of women, it happens the same due to the fact that the statistician of Pearson of the sample is high, 24,022, going beyond the critical value of the χ^2 for four grades of freedom (9.4). To conclude with the analysis of these variables, we can point out that women, according to their marital status, will choose a medium or high degree, being these variables intrinsically related. However, log-linear models have been used, to see the possible interactions between the three variables sex, marital status and academic level, (due to the frequencies of the categories of marital status, religious, widow, divorced are small, have been grouped next to the category of single, with the name of "others" in the following table (bis).

Table 5: Sex –Academic Level- Marital Status

SEX	NIACAD	M. STATUS		TOTAL
		SINGLE	MARRIED	
MAN	MEDIUM	5202	3553	8755
	HIGHER	6583	3580	10163
	TOTAL	11785	7133	18918
WOMAN	MEDIUM	9271	4630	13901
	HIGHER	6925	3456	10381
	TOTAL	16196	8086	24282

Source: Source: National Institute of Employment (Inem) & authors

Getting the following results:

EFECTO	D.F.	χ^2	PROB
M.A.	1	26.39	0.0000
M.S.	1	100.10	0.0000
A.S.	1	523.54	0.0000

(*) M.A. Interaction between Marital Status and Academic Level.

(**) M.S. Interaction between Marital Status and Sex.

(***) A.S. Interaction between Academic Level and Sex.

There are interactions between all the variables, so such as the interaction between the marital and the academic level the statistician χ^2 has the value 26.39 being the limit probability of that statistician inferior to a ten thousandth, there are also interactions between the marital status and sex having the statistician the value 523.54 being in this way a saturated model. With the available data, only the medium and high degrees have been analysed, not the third level. In order to make easier data processing the degrees have been grouped in branches which are referred to the scientific field the degree belongs to. So, in the medium degree, there are five branches:

1st) Technical Teaching.

2nd) Human Sciences.

3rd) Nature and Mathematical Sciences.

4th) Health Sciences.

5th) Social Sciences. Whereas in the high degrees there is an additional branch:

6th) Legal Sciences.

Each person registered in the INEM, as we have mentioned before, can have some degrees, in table 6, it can be observed the distribution of university unemployed people according to the number of taken degrees. The 11.53 per cent of the registered graduates in the INEM have two degrees, a 1.01 per cent three and a 0.20 per cent four.

Table 6: Number of Degrees of the Unemployed Graduates From Andalusia.

N. Negrees	Frequency	%	Medium Degree	High Degree
First Degree	43,200	100.00	52.09	47.91
Second Degree	4,982	11.53	48.35	51.65
Third Degree	436	1.01	43.94	56.06
Fourth Degree	88	0.20	48.86	41.14

Source: Authors

If it is observed the distribution by thematic fields of the first stage, it can be said, there are concrete branches where the unemployment taxes are higher. So the medium degrees are the Human Sciences the ones that stockpile a 55.78 per cent of the employed graduates and within this the primary teacher. However, the other branches have similar percentages, so the technical teaching has a 15.24 per cent, the Social Sciences, a 15.29 per cent and the Health Sciences a 13.55 per cent whereas in the area of Nature Sciences, the number of graduates is zero practically, a 0.13 per cent, this percentage so small can be because the three degrees that are in this area, Statistics qualified, Sea Sciences and Civil Marine are very recent, so the market has not been saturated yet.

In the following sections, the existing relations between the first degree, which is the most relevant, and the sex, age, seniority in the unemployment and work experience variables are pointed out:

A. Degree – Sex

There is a clear difference in relative terms between the degrees in which men dominate and those ones in which women do. In the medium degrees, men study technical (architecture, engineering) with superior percentages to the 80 per cent except to farming engineering and women in social Sciences (Social Work qualified 88.4) Human Sciences (Primary teacher 75 per cent). So, in the superior studies men outstanding in Technical Teaching (Architecture, Superior engineering), in Physics, Geology, Mathematics and Physical Education, all them with a superior percentage to the 70 per cent of the participation. On the other hand, women outnumber in percentage to the men in the Human Sciences (Educational Sciences 78 per cent, Psychology 71.5 per cent, Philology 70.28 per cent) and in Pharmacy with a 72 per cent.

In the rest of the degrees, there is a higher balance or the differences are inferior. As you can see, not only there is a discrimination in the work posts and positions that men and women have but also in the starting point of selection of a determining degree is potentially discriminatory too. Men study degree with more possibilities in the work market, and it let them accede to managing posts and responsibility in business and administration. On the other hand, woman orientates to the Teaching degrees (Primary teacher 75.18 per cent, Philosophy and Letters) with a high unemployment taxes, Auxiliary Health tasks (nurse 68.18 per cent) or medium careers such as Social Assistant 88.4)

B. Degree - Seniority

With the bivariant analysis, it is tried to show degrees have more possibilities in the work market. Seniority variable is referred to the time that the individual is registered in the INEM offices looking for a job. It has been classified in three groups. The first of them refers to people who are registered less than 365 days, the second one refers to those individuals who are registered between 365 and 730 days, and the last one to those who are more than 730 days. The degrees that have more possibilities in the work market will be those where the higher percentage of unemployed people focused on the first group because they stay less than a year without working.

Degrees with a higher percentage of unemployed during a year or less are those of medium degrees in the Technical Engineerings and within them electromechanism with a 66 per cent followed the Health Sciences (Optics and Physical Therapy qualified with a 56.5 and 47.8 respectively), less than 40 per cent are the Computer and Business qualified, Tourist business technicians and the engineerings. Degrees in which the graduate can need more than three years to get a job are: Sea Science qualified with a 33.3 per cent, Social Work qualified with a 32.9 per cent and Primary Teacher with a 32.12. However, Sea Sciences qualified are two in the total of six registered, whereas the primary teachers are 3,473 from a total of 10,812.

In a higher level, degrees with more possibilities to get a job are superior engineerings, getting telecommunication a 54.5 per cent, Naval a 50 per cent, Civil Marine a 47 per cent, Political Sciences a 40.4, Business 38.9, Veterinary 38 and Mathematics 37.3. In the other side, that is, those degrees in which you can be more than three years without getting a job, are the degrees related to Human Sciences with 30 per cent of their individuals; within this branch the degrees of Beaux-arts, Psychology 34.4 per cent, Philology 33.2 per cent. Then, the branch of Social Sciences and within it the Information Sciences would follow with a 30.5, and Geography and History with a 28 per cent. There is only an exception within the engineerings, concretely forestry with a 38 per cent of people who last more than two years in getting their first job.

In a survey carried out to different companies in the staff selection in Andalusia, shows us the more demanded degrees in the work marked during the period of this survey are: economical and business sciences and the degrees with formation in computers (not only computer graduates, but also Telecommunication Industry Engineerings, or Physics Sciences or Mathematical graduates), both of them, as it has been pointed out above, don't require much time to find a job.

C. Degree - Work experience

According to the survey carried out to different companies by the Education and Science Ministry in 1990, in order to know the features and the profile graduate who is going to be hired, emphasises the requirement of the work experience. A 51 per cent of the companies prefers to hire graduates with work experience, only a 49 per cent chooses a recent graduate to give him or her the specialised formation to the concrete work post, because, although the chosen candidates have the most optimum conditions and qualities, they are not enough to begin to work in a company immediately; the university title is not a guarantee of the knowledge of the company structure where people are going to work or of the post they are going to develop.

From the analysed sample 43,200 individuals, it is only possible to analyse the result of 38,303 qualified or graduate individuals, because the rest, 4,897 didn't answer this section. Only a 29 per cent of the 38,303 have professional experience. In the following table, it is observed that this percentage is very variable, being higher in the medium degree with a 32.7 per cent.

Table 7: Work Experience

Work Experience	TOTAL		Médium Degree		High Degree	
	Frec.	%	Frec.	%	Frec.	%
Yes	11429	29.9	6536	32.7	4893	26.6
No	26874	70.1	13418	67.2	13456	73.3

Source: Authors

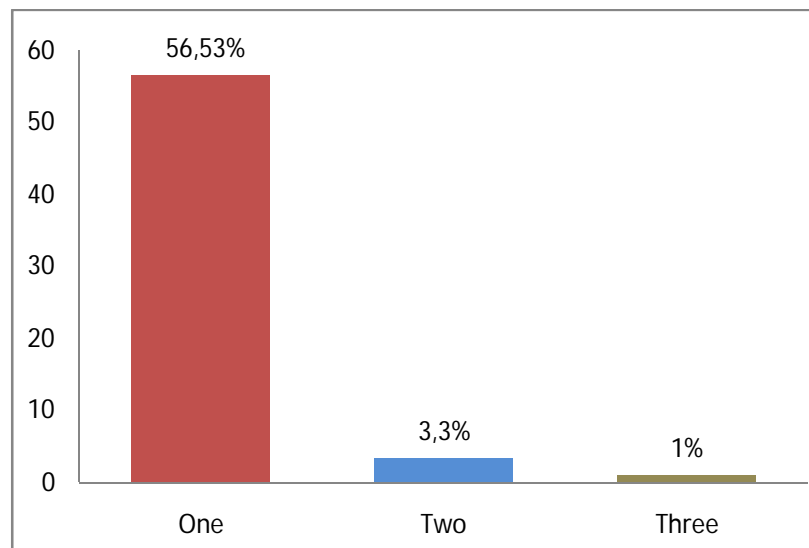
The group formed by non-work experience graduates (70.1 and 73.3 per cent respectively for medium and high degree) is of a very heterogeneous composition, because there are the ones who look for their first job, the ones who have just finished their studies and the ones who finished some time ago and they didn't have any opportunity to work. By degrees, Technical engineerings have the highest percentage of individuals with work experience overcoming 60 per cent and getting the 84.6 per cent in the technical topographer engineers, followed by the Health Science graduates with superior values to 50 per cent, being Nurse qualified people the ones with a high value, 68.1 and physical therapy qualified 52.2 per cent. Further, Social Sciences are with value slightly superior to 30 per cent (Tourist Business qualified with a 31.8 per cent, Social graduate 30.8 and Business 30.7 per cent).

On the contrary, between the degrees whose graduate hardly had work experience, Human Sciences stands out, all overcoming the 70 per cent (Library-Economics 90.3, primary teacher 78 per cent, Language School qualified 73 per cent). Seeing the results and the ones in the section B, we can show that there is a clear correlation between work experience and unemployment seniority, because the degrees that last more to get a job, they are the ones that have not work experience. In a superior level the same happens; the unemployed graduates in technical teachings are the ones who have a higher work experience, even the 100 per cent in some degrees, such as aeronautical engineers or electro mechanic engineer from ICAI. This percentage decreases until a 89 per cent in the Naval Engineer or a 75 per cent in the Mining Engineer, as an exception we can mention Agriculturist and forest engineer where only the 30 per cent and 33.3 per cent respectively, have work experience. They are followed by Nature Sciences with percentages slightly lower than in the medium degrees, but none of the degree has more than a 40 per cent (Physical Education 40 per cent, Medicine 36.5, Pharmacy 25.3 per cent)(Mariño, 2012). However, it is the same with the Human Sciences, having a lower percentage of unemployed people with work experience 26 per cent Philosophy, 23 per cent Beaux-arts, 21.2 per cent Psychology.

Nowadays, with the new law (LOU), it is tried to fill up the hole of the lack of practical knowledge giving the graduate a work experience that will be carried out during the study years, promoting practical subjects by means of university-business agreements, establishing a dual system of formation through the learning, in order to avoid this high percentage of graduates who finish University without work experience. The following variable, and which is acquiring more importance every day, is language knowledge, because it is a supplementary subject to the studied degrees, and next to computerising, can be decisive if you go to accede to a work post, because, according to a survey elaborated by the State Secretary of University and Researching about the preferences of choosing a candidate on the part of Spanish big companies; these companies emphasise a 36 per cent the languages in the total curriculum of the individual, decreasing the importance of the student record being in the 1970s in about 89 per cent and nowadays in about a 56 per cent.

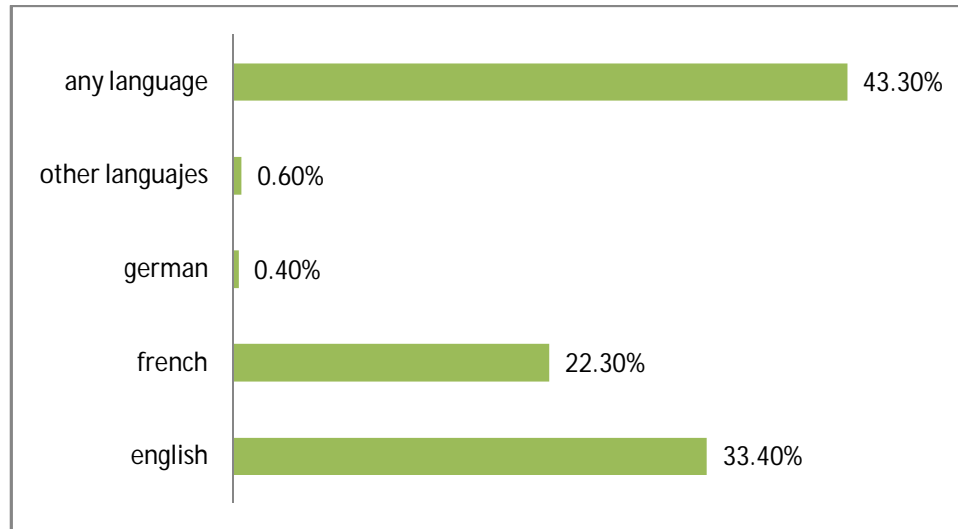
The unemployed graduates from Andalusia who speak and write different languages, appear in the graphic I.

Graphic I: Number of language learnt by unemployed university graduates in Andalusia.



Source: Authors

From this graphic we can obtain that the 56.53 per cent (24,467 individuals) of the analysed simple knows a foreign language, the 3.3 per cent (981) two, and 1 per cent (448) three languages. Given so low percentages in knowing two or three foreign languages, we only analyse the group with only one foreign language. Within this group, all the languages existing in the world have been analysed, the most relevant, as they appear in the following graphic. We deduce of it that the 43.3 per cent of the unemployed graduates in Andalusia (18,733) don't speak any foreign language. The rest of the individuals (24,467 (56.7 per cent)) speak a foreign language.

Graphic 2: First Language

Source: Authors

To end this section we will analyse the looking for a job. A following of the sample has been carried out, from 2000 until 2006, considering the university people who were registered in the INEM and leaving this situation because they have found a job. In the high degrees the high percentage of employee in the Technical Teaching stands out, with a 55.28, followed by the branch of the Nature and Mathematics Sciences (37.85 per cent) where the degree with a high percentage of people who found a job were the Maths graduates 43.77 and the Physics graduate 41.89 per cent. The recent created degrees from this branch have a percentage of getting a job higher than the medium as it is shown in the Sea Sciences with a 50 per cent. The branch of Legal Sciences is grouped only Law Degree with a 37.32, followed by the Human Sciences with a 35.72 per cent, Social Sciences 35.46 and Health Sciences 35.19, all of them with similar percentages. Political Sciences with a 45.23 per cent, Physical Education with 41.89 per cent and Information Sciences degrees with a 38.92 per cent, stand out within each branch.

In the medium degrees the branch with a high tax of work in Nature Sciences and Mathematics with a 59.25 of their unemployed university people found a job, outstanding Statistic qualified with a 66.6 per cent. The following branch would be Health Sciences with a 45.08 emphasizing the Optics degree with a 56.52 per cent and the Chiropody with a 50 per cent. The third branch according to the percentage of employed people is Technical Teaching, whose degrees do not offer a homogenous group with employed taxes, because Technical Aeronautics engineer stands out with a 83.33 per cent and, in opposition to the Technical Electromechanic engineer with a 16.66 per cent. Moreover, in this branch there are six degrees that overcome the 50 per cent of the employees in relation to the total of unemployed. It shows that not all the technical engineerings have the same possibilities of finding a job.

To sum up, the degrees with which it is easier to find a job in a short-term, would be high engineering such a Telecommunication, Aeronautics and Industrial; and the Technical engineerings such as Aeronautics, topographer, mining and Statistics qualified; they are the degrees with more than a 60 per cent of employed. It will depend on the planned politics of the Junta de Andalusia; if the development that it is planned for the future Andalusia is becoming this region in an agricultural region very developed with a great tourism, then, those technical degrees such as forestry and Agricultural will dominate apart form the ones related to Tourism and pleasure. On the other hand, if it is planned to become this region in an advanced area in communication, information and high technology fields where the intellectual work substituted the manual, degrees in those areas will stand out apart from the degrees that are being prepared and appear in the new study plans, which are ready to be adapted to the new needs demanded by the new work market.

5. Conclusions

1st) There is an unbalance between concrete degrees and the existing demand and business potential, especially from the irruption of the new technologies, (there is an excess of graduates in the branch of Humanities and a shortage in concrete degrees of Technical Teachings.)

2nd) The city of Andalusia where the university people live is determining in their unemployed situation (as you can see according to the coefficient value of this variable in the regression and logistic models). Córdoba is the province where there are more difficulties to find a job, being Málaga the one that has more probabilities of employment.

3rd) In Andalusia, there are more unemployed graduates of medium degree (52.4 per cent) than of high degree (47.6 per cent). These figures do not fit with the economic reality, because the medium studies should have more possibilities, due to the fact that this region has small and medium-sized business, with more capacity to employ qualified people than graduate ones. The reason of this contradictory percentages, is due to many people who have finished the medium degree, keep going a higher one and whereas, they are registered in the INEM, in order to be taken into account in relation to seniority to accede to the Public offer where it is predominant the time registered in the INEM instead of the curriculum.

4th) There is a close tie between the chosen degree and sex. Women have chosen, in the recent past degrees related to reading characterised by a high unemployment tax or auxiliary health tasks. Men, on the contrary, choose technical teaching and they have more possibilities to accede to managing posts.

5th) In equality of academic conditions, qualified and graduated people of Andalusia, woman have more difficulties to find a job than men; it confirms the different taxes of unemployment for the same degree, being higher between women.

6th) One of the main difficulties of an “andaluz” graduate who looks for a job, is the lack of work experience to get a job, due to, on the one hand, old study plans that do not have demanded areas in the work market, and, on the other hand, the lack of the business in this region and the necessary means to form the recent graduates.

7th) There is a general tendency to the auto-regulation of the education and university work market; the excess of unemployed people in a degree means the decrease in the demand of applications of them, some years later.

8th) The unemployed university people of Andalusia younger – in opposition to the older ones – choose degrees that demand computer and telecommunication knowledge because they are useful to the technological development.

9th) The university people of Andalusia who finished their studies in the number of years pointed out in the respective study plans are found in an inferior proportion of unemployment, than the ones who last more in finishing them.

10th) The academic level influences on the level of unemployment; the more you study, the less possibilities to be unemployed you have, over all in the sub-sample of women

11th) The index of educational offer influences on the demand of high education and, then, on the university employment demand. If the educational offer increases, the demand of education and employment will increase, too.

12th) There are important differences in relation to the time to find a job according to the degree, so, there are degrees in which more than 30 per cent of their individuals are unemployed and they last more than two years in getting a job, being the unemployed graduate ready to do any type of work, demanding different careers or inferior degree posts.

13th) The university graduates of Andalusia need, if they want to decrease their probability of being unemployed, apart from their academic title, language knowledge, work experience and, in some cases, additional degrees, as it is proved by the negative coefficients got to these variables in the logistic models.

14th) The high number of unemployed graduates in Andalusia is due to, mainly, a few economic progress, being this process the determining factor of productivity and employment (more than 79.4 per cent of the business of Andalusia are commercial places with less than 10 workers, only the 20.6 are industrial places what it can be proved by the industrial census). The primary sector is, moreover, in a regressive stage in relation to the possibilities of employment.

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