

## “JOB DEMANDS AND FORMATIVE NEEDS ANALYSIS IN THE SIERRA NORTE REGION (MADRID)”.

*Ana Afonso Gallegos*

*Ignacio de los Ríos Carmenado*

*Pablo Rodríguez Sáez*

*Universidad Politécnica de Madrid.*

### **1. Abstract**

This communication reports the analysis of the most important economic and business activities in Sierra Norte (Madrid) and its formative needs at a local level. Its main objective is to identify formative necessities at a local level through a monitoring process of the most demanded professional profiles required to satisfy local labor market needs. The final aim is to improve efficiency in the design of future educational programs in the area through policy-makers advice.

The “Sierra Norte” region presents a strong rural character. It is the region with the most important natural heritage. It is composed by forty four municipalities. Service sector represents the most important part of local economy market. During the past three years an important number of construction and industry companies - normally SMEs - have been closed. Traditional agriculture and livestock farming levels are lately remaining at a constant level. Tourism associated to rural and leisure activity has grown importance in the past times and is now a key sector for the future local development.

The methodology used for this research process was the municipal statistic data analysis, complemented with a participatory process based on non-directive interviews with the main actors involved in the local labor market and the final report writing.

*Key words: employment; territorial identity; rural formative plans.*

### **2. Introduction.**

Education is both channel and achievement by itself in rural development. It is a main objective in human development in every environment (Sanz, 2000). However, there are structural and conceptual differences between rural and urban environments, which should be always taken into account in a qualitative analysis. Rural conditions are sufficiently different from urban ones to warrant being examined independently (Stern, 1994). It is obvious that forming is internationally recognized as a development tool, both in human and rural dimension.

Competence focused training represents a crucial strategy in rural communities, especially after the economic situation assumed in the past two years in the studied territory. There is also a new concept of rural territorial identity, which constantly increases in importance. Places with rural characteristics are now seen as a new economic opportunity, some people are already moving life from urban to rural areas.

Rural schools represent one of main development actors in rural communities. They improve access to educational opportunity in isolated local communities (Hobart L. Harmon, 1996). It is necessary to identify successful strategies to recruit qualified personnel to rural schools. As urban schools, they face many pressures, with the decrease in number of students plus other inconveniences largely due to their geographical situation (Arnold & Newmann, 2005). The need to retain highly qualified teachers, for example, is especially pronounced in rural schools.

Rural communities have frequently weaker labour markets than urban ones (Green, 2005). They present some disadvantages for instance in their institutional structure. In many metropolitan areas, intermediaries help match the demand for and supply of labour in a region, which represents a higher effort in rural cases. The demand and supply of workers in these areas are often much more distanced through the territory, while population density rates are smaller.

Some enterprises have already moved into rural territories in the province of Madrid. Depending on factors such as accessibility, terrain value, work salaries, etc some of these employment sources turn into very important rural actors. These employment flows generate new activities associated to rural areas, in which the capacity of creating new workplaces and jobs depends on the territory capability for generating complementary services and labour activities (Puig-Calvó, 2006). This new activities can represent a base from which different personal competences can be implemented, such as entrepreneurship, opportunism, or rural identity.

The assumption of these new activities is powered always by formative and education rural programs. New jobs require new formative planning strategies, while their success is based on a territory-focused contextual approach (Benjamin T.B, 2005).

### **2.1. Geographical situation:**

The Sierra Norte represents the area with a higher rural character in Madrid. It is situated at the north part of the province, and composed by 44 municipalities. The population of the county is 38.808<sup>(1)</sup>, which means 0, 6% of total Madrid inhabitants. The area covers a surface of nearly sixty hundred thousand hectares, representing almost 25% of province surface. From these data we can define the population density: 28, 8 inhabitants per km<sup>2</sup>. Madrid's region average is 795, 37 and Madrid's city average is 5.374,62.

The region has always conserved an important rural identity. It represents the biggest natural heritage in Madrid, including one National Park (Guadarrama) and one UNESCO Natural Heritage area, named "Sierra del Rincón". It is the most mountainous part of the province of Madrid, and it also offers the visitor an important human rural environment, just some kilometres away from the big city. All these facts combined with others, such as HORECA facilities and proximity to the big metropolitan core, act as the guideline for local economic development based on local tourism.

National motorway (N-1) crosses the area from south to north, generating a led growth in every municipality which is next to the road.

---

<sup>1</sup> : Data from the regional statistic institute (2009).

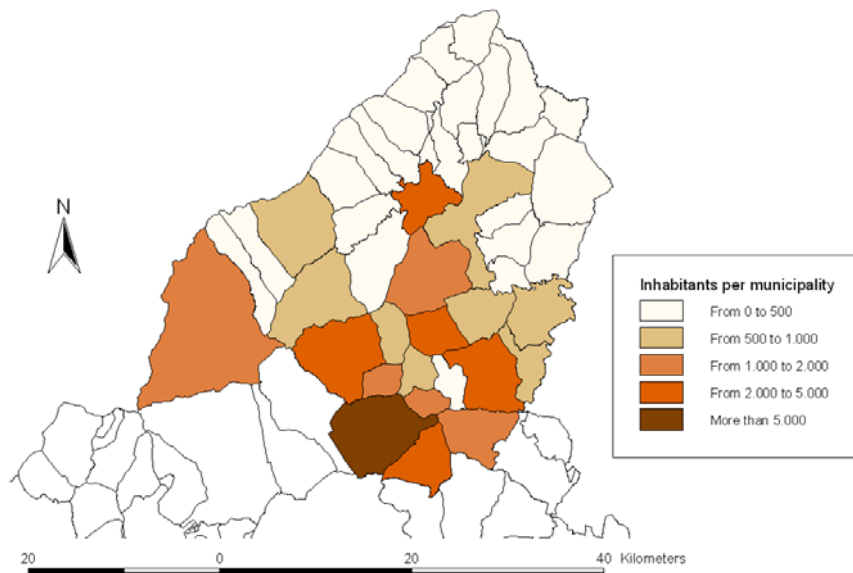
## 2.2. Demographic distribution.

**Table 1: Municipal demographic distribution.**

Population rank	Nº municipalities	% of total	Nº inhabitants	% of total
Less than 500	25	56,81	4.367	11,25
From 500 to 1.000	8	18,18	5.379	13,86
From 1.000 to 2.000	5	11,36	7.593	19,57
From 2.000 to 5.000	5	11,36	15.710	40,48
Over 5.000	1	2,27	5.759	14,84
Total	44	100	38.808	100

Source: Own elaboration. IES data.

**Figure 1: Distribution of the local population:**



Source: Own elaboration. IES data.

We noticed an evident proximity factor related to the metropolitan distance. The biggest municipality is Guadalix de la Sierra, with a population of 5.347. There are only six of the forty four municipalities which are over 2.000 inhabitants. More than fifty five percent of these municipalities have less than 500 inhabitants. The average value of population in the municipalities of the region is around 800 inhabitants.

**Table 2: Demographic Significant Rates.**

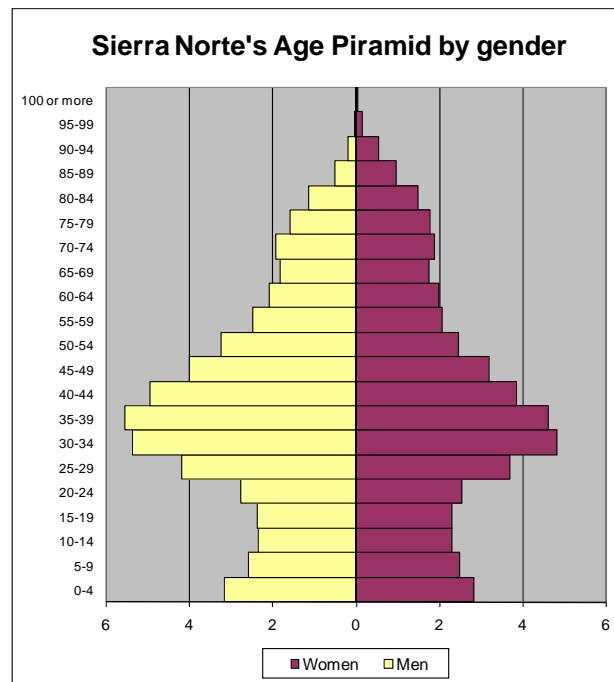
Masculinity ratio per age.			Aging rate
35 – 49	50 – 64	65 – 79	(%)
1,24	1,20	0,98	16

Source: Own elaboration. IES data.

The masculinity ratio is the highest one over the entire province, with more than 1,2 women per men during working-life period. Between 35 and 49 years old, there are 124 men per hundred women. We found that this data affected in an important way to the local labour market, dominated by men in an age where active workers are majority.

We found relative positive relation between higher occupation in services and industrial sectors and female labour activity rate. Masculinity rate was related to high occupation levels of construction sector.

**Figure 2: Local Population Distribution by Age and Gender.**



Source: Own elaboration. IES data.

The age pyramid has a narrow base zone which explains the fast aging local population characteristic. More than 16% of the local population is over 65 years old. Nevertheless, it is the area with the higher aging rate in Madrid's province.

We observed that the percent of population between zero and five was higher than both age ranges five to nine and ten to fifteen. This indicates a positive evolution of birth rate, probably due to the inclusion of emigrant population at a local level.

On the other hand, we found that this region is the older one in our province, with an aging rate (percent of population over 65 years old) smoothly over 16%. In the rest of the Community, aging rate is situated around eight to ten percent. The population between thirty and forty five represents around 30%, and almost 37% of the population is over forty five years old.

### 2.3. Labour market local indicators.

**Table 3: Labour indicators of the study area.**

	Unemployment per 100 inhabitants.	Members of social security on 1.000 inhabitants.	Female activity rate (%).	OCCUPATION (%) 2007			
				Agriculture	Industrial	Construction	Services
Community of Madrid.	3,61	493,71	42,59	0,41	8,73	10,02	80,84
Sierra Norte	3,18	243,22	38,48	4,14	13,70	16,64	64,53

Source: Own elaboration. IES data.

The highest value in comparison to province rates is observed in agriculture sector. The rate of the primary sectors, agriculture and farming, is almost four times higher than average. We found agriculture and farming more important in municipalities situated far from N-1 road. In some cases, agriculture occupation rate represented up to 12% of total labour activities. As municipality geographic situation is higher, agriculture activity turn into livestock farming. The main local activity in this sub sector is related to cattle and flock.

Construction and industrial sectors are both higher than province average value, even though they do not have a big specific weight in local employment scenario. Nevertheless, there are regions inside Madrid province (especially southeast region) where construction sector has represented occupation rates close to forty percent during the past years. Locally, construction occupation rate is between ten to twelve percent. There exists industrial activity at a local level; it is possible to find disseminated industries in the most populated parts of the region. There are no industrial complexes. We found that industrial activity is not linked to geographic situation in the study area.

The total occupation activity is dominated by services. In Sierra Norte, this sector is lower than in the rest of the Community, but it still the most important. Service sector is normally divided into commerce and HORECA sector activities. In this region, HORECA activities are considered more important than commerce ones, due to its rural tourism potential. We found that services sector had a growing tendency at a local level since 2001.

We also analysed data from the Regional Statistic Institute for 2005 regarding the desegregations of the service sector:

**Table 4: Occupation per 1.000 inhabitants.**

Occupation per 1.000 inhabitants.							
	Commerce	HORECA	Transports and communication.	Financial intermediation services.	Real estate activities.	Public administration and health care services.	Other services.
Community of Madrid.	74,26	23,50	29,99	18,30	80,13	61,50	23,89
Sierra Norte	24,99	26,09	7,11	6,62	9,35	36,09	8,03

Source: Own elaboration. Data from the regional employment observatory.

We noticed that occupation per 1.000 inhabitants in the service sector is generally lower than the Community average. The highest rates of service occupation are related to education, health, and public services, inside the category of public administration services.

There are also higher HORECA occupation rates compared with the Community average, due to tourist activity, generally focused on weekends. Commerce is the third sub sector in occupation; even though, data is substantially lower than average.

#### 2.4. Unemployment rate evolution.

We analysed unemployment rate per municipality. We made an analysis of unemployment rates between 2005 and 2009, using months where we didn't find significant seasonal peaks. We used March and September data for the comparison, due to the non-stationary character of this month's data. We compared unemployment data for these months between 2005 and 2009.

We found that unemployment rate had an impressive increase since last three months of 2007 to 2009. In the analysed region, the increase rate is constant from 2007 to 2009, while in other regions inside our province, the unemployment increase rate was still growing each month.

**Table 5: Local unemployment rate evolution.**

MONTH	Sectors					
	TOTAL	Agriculture	Industry	Construction	Services	Without earlier employment.
Community of Madrid						
sep-05	202.276	1.300	18.639	15.076	154.724	12.507
mar-06	223.820	1.810	20.692	17.808	171.475	12.005
sep-08	288.972	1.819	21.801	43.152	209.877	12.323
mar-09	405.673	1.888	38.963	77.215	274.717	12.890

Sectors						
MONTH	TOTAL	Agriculture	Industry	Construction	Services	Without earlier employment.
2005-09 % increase	201	145	209	512	178	103
Sierra Norte						
sep-05	1.074	12	79	148	785	50
mar-06	1.112	10	68	147	836	51
sep-08	1.825	27	122	364	1.254	58
mar-09	2.321	44	182	561	1.451	83
2005-09 % increase	216	367	230	379	185	166

*Source: Own elaboration. Data from the regional employment observatory.*

The overall unemployment increase was 216%. It is a clear indicator of involution in labour market, and consequently of economic activities. It is also an increase smoothly higher than province average, which unemployment rate has been doubled from 2007 to 2009.

A general variation in unemployment evolution was identified in the last three months of 2007. Unemployment rate grows from this period onwards in a much higher way than previously. This grow is even higher from September 2008 to March 2009. Normally summertime seasonal employment creation remains in a residual way in September.

Analysed by sectors, agriculture and construction had the higher increasing rates, both of them over 300%. Increase in construction sector was more important for local economy, due to the bigger number of inhabitants working in this sector. Construction was the most affected sector in this period, with an average increase of 512% in the Community of Madrid. Consequently, it is fair to assume that construction unemployment rate was lower in Sierra Norte than in most of local economies of the province.

Regarding the unemployment evolution of service sector we found that it duplicated in this period, from 785 to 1.451 unemployed persons. Service sector is the one with less increase in unemployment rate, both at a local and regional level.

The economic scenario during this period had a clear negative evolution. The global economic crisis affected the construction sector in Spain, and unemployment rate increased in almost every region of the country. We also found that this situation affected in a stronger way to municipalities under 20.000 inhabitants. General unemployment rate in these municipalities was almost triple, while the urban area unemployment increase was not so notorious.

### 3. Contents.

#### 3.1. Objectives

The final objective of the communication is to improve employability at a local level providing assessment to the Regional Government relative to formative actions required by municipalities beneath 20.000 inhabitants in Sierra Norte.

The specific objectives are:

- To make a business and economic activities regional analysis.
- To identify the labour demands and professional profiles required for the local labour and economic activities.
- To propose formative actions which are required by these labour demands.

#### 3.2. Methodology.

The methodology process was substantially based on a participatory process made through interviews to local experts. It was complemented with a statistic local data analysis.

The first stage is referred to the local economic activities identification. The official data were mainly obtained from the Regional Statistic Institute of Madrid. After the statistic analysis was completed, and we found which economic activities were the most important at a local level, we turned into the study of professional occupations linked to the identified economic activities.

In order to identify these professional profiles, we opened a participatory step relaying on local experts. It was based on informal discussions between experts and us. This method was always implemented by members of the research team, due to the difficulty of analyzing the results by external participants. The objective of these interviews was to identify the most required professional profiles at a local level, and to reassure the data analysis results.

This interviewing method lasted during April, May and June 2009, considering both public and private key actors. The interview was divided into three main epigraphs – main economic activities of the local market, labour demands and formative offer – concordant with the specific objectives defined. Experts consulted were people with the following profiles:

- People working for public institutions in the framework of local empowerment employment programmes.
- Enterprise actors, mostly focusing on Small and Medium Enterprises. This kind of enterprise profile is the most frequent in the region, with over 80 % of SMEs penetration rate.
- Local enterprises collective members. These professional associations or collectives were representative of a large number of small sector business activities.

After the discussion with all the relevant actors was finished, we started a compilation and organization process for all the obtained information. At the same time we made a value scale in order to be able to classify the different identified professional profiles depending on their employability level. We made the classification through a three-dimension analysis.



First, we took into account the number of times that one occupation was mentioned in the published local labour demands, focusing both in local newspaper advertise and internet job searches. Second, we analysed the number of mentions of every specific professional profile during the participatory process. Finally, we valued the quality of the associated employment to the occupational profile, in terms of stability, seasonal fluctuation, etc.

The final document was written at the last methodology stage. In this report, we identified the most demanded labour profiles in the region under our three-dimension classification method.

#### 4. Results.

The obtained results of the study were classified following the National Professional Occupations Catalogue (CNO-94) and according to the National Institute of Professional Qualifications (INCUAL), which classifies in professional families every occupation defined in Spain. This Institute is working as a certified organization depending on the Ministry of Education.

INCUAL database relates the qualification required, the competence units needed and the formative actions to be implemented for the correct realization of every specific professional occupation.

##### *Representative employers.*

We found that most representative employer entities at a local level are:

- **Town halls:** Creating employment for both high-qualified and low-qualified applicants.
- **Public services depending on town halls:** Some examples are:
  - 55 CAPIS (Internet Public Access Facilities) disseminated through all the territory.
  - Sport halls.
  - Suppression Forest Squads, especially in summertime.
  - Local Public Corporations (National Employment Institute).
  - Public rural tourism accommodation facilities.
  - Other public tourism enterprises.
- **Local tourism enterprises.** The most characteristic profile of these employers is a freelance worker dedicated to tourism related activities. Bars, restaurants, accommodation facilities and complementary tourism activities, such as handicraft commerce, trekking guides, hunting related activities, etc, are the most important ones. There also exist a few SMEs and some more Micro-SMEs.
- **Social Services.** These services are offered by both public and private enterprises. Some activities related to this services are geriatric and handicapped accommodation facilities and public and private kinder gardens.
- **Services to population coming from the private sector:** gardening, catering, administration support offices. The most common pattern is micro SMEs business unities, which are normally not able to contract new employers. In this line, tourism

sector is the one with bigger public support. Some activities linked to this sector are partially financed by public actors, such as town halls and municipality councils. Some of the co-financed activities are rural accommodations, tourist natural routes and generally every activity focused on local tourism improvement.

- **Small construction enterprises.** Normally handled by freelance workers. Even though this sector is actuating under a deep economic crisis, there are still some occupations with work levels such as plumbers, electricians, and some other construction related occupations.
- **Small industry and food-industry enterprises.** There are some punctual industry enterprises acting at a local level. Some industrial activities are conditioned by environment legislation in the region, such as car mechanic business. Some food industry enterprises are representative of the local industrial scenery, such as an olive industry in Torremocha and some cheese elaboration SMEs.
- **Agriculture and livestock farming.** As seen before, these activities are higher in the study region than in the rest of the Community of Madrid. Work opportunities in these activities have an important stationary character.

#### *Demanded occupations.*

We classified occupations and professional profiles in relation to the three-dimension analysis specified before. We obtained as a result four categories regarding employability. We analysed the information recovered during the participatory process regarding three different variables, which are classified as follows:

**Table 6: Occupation and employability rate values.**

	Value scale		
	(from less to more frequency)		
	1	2	3
a) Occupations mentioned during the participatory process.			
b) Employment offers identified (both in local papers and online).			
c) Occupations that provide quality and long duration employment.			

*Source: Own elaboration.*

Each classification criteria was valued in a 1 to 3 scale.

Regarding our first criteria, occupations mentioned during the participatory process, it was valued with one if it was only one time mentioned during the participatory process. We valued with two occupations which were mentioned more than once and with three occupations mentioned regularly.

For the second criteria, the value method was very similar to the first criteria. We numbered with one occupation seen only in one job vacancy, with two occupations appearing more than one time and with three occupations seen regularly during the job vacancies analysis.

The third field was the most difficult to classify. We numbered with one those occupations with high seasonal and temporal rates, with two when occupations were discontinuous but

constant every year – this means occupations lasting, for instance, eight months per year, but existing each year regularly -. We valued with three those occupations which provide stable employment during the whole year.

We analysed the professional occupation classification, under the umbrella of the official national organizations seen before. We found four different professional families related to the demanded occupations:

1. Tourism and HORECA.
2. Socio-cultural and Community service supply.
3. Agriculture and farming.
4. Others.

Occupations are normally related in a horizontal way inside the area. Inside every professional family listed before, we found both freelance and employed workers. A big percent of local economic activity is held by familiar enterprises which are not able to contract new workers, and consequently the labour scenario is dominated by freelance workers.

Inside these four main professional families we identified 36 occupations which were mentioned or judged by interviewed experts as potentially interesting for local labour market. We selected the most important ones under employability point of view.

The identified occupations were ranked in four different levels according to employability rate. The four categories classified are very high, high, medium-high and medium employability levels.

**Table 7: Identified occupation employability rate values.**

Employability rate for identified	Value			Total employability value
	a	b	c	
<i>CNO – 94 classification codes.</i>				
5030 Chefs and kitchen managers.	3	3	2	8
5020 Waiters, barmen and similar.	3	3	2	8
5010 Cookers and kitchen assistants.	3	3	2	8
8630 Lorry drivers.	2	3	3	8
9121 Hotels and offices cleaning personnel.	2	3	2	7
5129 Personal care assistants and similar employees	2	2	2	6
5113 Home assistance workers.	2	1	3	6
9440 Forest health maintenance workers.	2	1	3	7
5330 Shop assistants.	1	2	3	6
5143 Tourist guides and assistants.	2	2	1	5
3532 Leisure monitor.	2	2	1	5
5121 Children care employees.	1	1	3	5

Employability rate for identified	Value			
4400 Administrative assistants with public attention tasks.	1	1	2	4
8530 Agriculture specific machinery operators.	1	1	2	4
7230 Construction electricians and similar.	1	1	2	4
7220 Plumbers and tube installing workers.	1	1	2	4
7210 construction operators and masons.	1	1	2	4
6021 Qualified contracted workers in gardens, greenhouses and agriculture exploitations.	1	1	2	4
5291 Pool supervisors.	1	1	2	4
9800 transport and delivery processes workers.	1	1	2	4
9700 Manufacturing industry workers.	1	1	2	4
9430 Agriculture and farming workers.	1	0	3	4
9110 Home care employees.	1	1	1	3
9220 Security personnel and guardians.	1	1	1	3
9122 Accommodation facilities cleaning workers.	1	0	2	3
6129 Other qualified workers contracted in farming exploitations.	1	0	2	3
4522 Receptionists in tourism local facilities.	1	0	2	3
4510. Information employees and office reception workers.	1	0	2	3
9420 Farming workers.	1	0	2	3

*Source: Own elaboration.*

(\*): Employability range (1 to 3): A: interviewed experts perception; B: published employment advertises; C: Stability characteristics of occupations.

All listed occupations were mentioned during the participatory process or were identified as demanded at a local level. That means workers are needed in these activities. Consequently, they should be taken into account in the formative planning design process.

We found that kitchen managers and chefs, barmen and waiters were the professional occupations with a very high employability rate. We also identified cleaning personnel and transport operators as high rated employability professional profiles.

Some tourism related occupations, such as administrative officers with tourist attention tasks, leisure assistants and tourism guides were also identified with a high employability rate.

Service sector is represented by a high number of occupations in the area. On one hand, geriatric centres employees were identified as occupations with high employability rate, both for residences and for home assistance. On the other hand, forest care workers – which have forest cleaning and fire prevention tasks – had also high employability rate. Shops and other services assistants appeared as well in the same rank classification.

We found there is still demand associated to construction sector with high employability rates, such as plumbers, electricians and even masonry workers. Industry and transport workers are also included in this employability rate.

Regarding agriculture and farming, we observed that associated occupations had a medium and medium-high employability rates. This is due to the low labour market penetration of this sector. The most typified business of this sector is a micro SME or very small – almost familiar – enterprise. Consequently, the employer demands of these enterprises are very low, and employability rate remains also at a low level.

*Employability barriers.*

Economic crisis situation and unemployment increase during the past time period were identified as the main employability barriers. We found that, even though employees were searching for new jobs in the same number than before, job vacancies were continuously decreasing since 2007. This fact was the main cause for the instability of labour market equilibrium.

Job vacancies number decreased to very low levels, producing a saturation of candidates and applications for each vacancy. In the past, there existed some professional occupations which were really complicated to fill up, but this problem does no longer exist in the region. Every vacancy is nowadays covered without problems and in a very small time period. However, we still could find some local characteristic employability barriers:

- Seasonal activity peaks.

We found it as a common characteristic in many of the identified job vacancies. Many visitors are normally travelling to the region during weekend, summer time and holiday periods. Visitors and seasonal population are motors of a big amount of local economic activities. This affects almost every analysed sector, with the exception of public services supply. Even geriatric residences activity has an increasing peak in summertime.

Agriculture and farming activity, as well as forest care services are also under seasonal effects. Forest workers are normally employed during summertime, and agriculture workers' activity depends on the crop cycle.

- Dependence on public grants for new contracts.

We found a second seasonal character depending on local public grants. Town hall contracts are mainly temporary. There is a notorious percent of inhabitants who normally organize their lives in 6 to 8 month public-grant depending working periods. For instance, there are people working in forest care units during summer, in a public service job during winter and staying some months – normally three – unemployed. They are installed in temporary public job character and generated a big dependence to public grants. Within economic crisis context, some of these grants have been recently removed, with important labour consequences.

- High rotation level.

Seasonal activity peaks work as well as an important rotation level conditioning factor. Weekends' labour peak acts as a negative task. People do not like to work during weekends, and as long as they find a new job where they do not need to do it, they change. High rotation level affects mainly to service sector, concretely to HORECA and accommodation activities.

- Education lack.

In the region of Sierra Norte, near forty percent of population has not got secondary grade studies. Some of the analysed municipalities have a population rate – between 15 and 24 – with an important lack of formative background. There are some public supported insertion programmes.

We also observed a different formative lack, referred to immigrant population. It affects mainly to HORECA activities. During the participatory process, we had some answers related to this aspect, arguing the importance of fluent language knowledge for the correct performance of these labour activities. We found that high rotation level influences directly in language knowledge background.

Regarding Public Internet Access Points (CAPIS) we identified a lack of specific formation for workers. This job requires medium to high computer level studies. Workers having this professional profile are in some municipalities hard to find.

One more occupation identified as hard to cover y local inhabitants is swimming pool personnel. There are no locals enough with a formative background in this workplace. During summertime the demand of this occupation suffers a big increase, which turns into job vacancy covering problems. There are some enterprises that supply pool workers, but there are still some vacancies which are not covered. Some non-local people have to cover these vacancies every summer.

A new formative lack was identified relating children care professionals. There are not enough professionals at a local level, and it's normal to have children care personnel from abroad.

- Local intern transport deficiencies.

Transport facilities at a local level are not fluent enough in some municipalities. There are decent connections between the local municipalities and Madrid, but inside the region municipalities are not properly connected. Consequently, work place access is daily generating a big amount of interregional trips. In many cases, there are not public transport connections between two municipalities not far from each other, which make car use very common. We found this labour barrier was much related to municipalities which were far from N-1 motorway, and is not affecting municipalities which are close to the road.

- Hidden labour market economy.

An important part of work made at a local level is hidden. We observed this was a typical fact in domestic care employers, night construction security personnel. Seasonal activity peaks and high rotation rate are both factors which also have influence in this barrier. People who contract workers for periods of just a few months are more likely to use these unethical methods.

- Environmental and construction legal limitations.

Environmental protection is both a limitation and an opportunity for local labour and economic markets. There are lots of people with great ideas and big entrepreneurship capacities, and they have created employment and even employed people. Some of these ideas have been limited due to the environmental conservation legislation of the area. This limitation, according to the answers of interviewed experts, is in some cases negative for local economy development. For instance, every water activity programmed in water

reservoirs, lakes and dams is completely forbidden in the region, even though it has been identified as a local business opportunity.

#### *Local formative resources.*

As our last result, we made a monitoring process of local formative actions which were being implemented. We typified the ongoing formative courses in groups:

- Courses for freelance workers. Some formative actions for freelance worker were implemented with the objective of increasing competitiveness of small enterprises and to adapt these workers to new technologies. The most common ones which have been implemented are informatics basic handling and web sites creation, due to the easy accessibility of Informatics Public Access Points. For HORECA sector, formative actions have been made, such as bar and restaurant basic management courses and public attention and HORECA protocols.
- Obligatory courses. Focused both to small enterprise managers and to employees of enterprises and organizations. Basically, labour risk prevention and food manipulation courses. These actions are legally necessary for every enterprise – especially SMEs – and are normally offered by local authorities.
- Combined formative – employment actions. The most extended format regarding this course typology is professional schools. These formative actions are mainly over 600 hours, based on real cases and for students from 16 to 18. Basic competences for specific occupations are assimilated through practice. The most mentioned local professional schools during the participatory process were carpentry and gardening ones. Other professional school that have been already implemented in the area are: building maintenance,

## **5. Discussion.**

During the project implementation process we found a deep change in labour scenario at a local level. Equilibrium between employment offer and demand has suffered an important change during the past years, according to the interviewed local experts' opinion. The unemployment rate was next to three percent up to 2005. This data represents structural unemployment. Since 2007 unemployment rate has increased up to values around eight or nine percent. A big amount of jobs have been lost during the past years. Temporal jobs were usually offered by private and public administrations, acting as a local labour motor, but some of these jobs have been lost, both by business activity decrease or public budget cuttings.

The labour market trends per sector are the following:

- Service sector should remain as the most important one. In the most remote parts from the area tourism and leisure activities will remain as the most important ones, whereas in areas near the metropolitan core commerce and social services will be the dominant activities.
- Construction sector will constitute in a decrease trend, while industry will remain at normal local levels.
- Agriculture and farming have an important traditional character in the region. These activities' evolution during the last years is not negative. Consequently, they will remain with similar activity rate or even they can suffer a smooth growing evolution.

Some of the conclusions reached after the implementation of the study are:

Local tourism activities will turn into the regional economic motor. The main value of the area is its natural heritage, which represents a key local economic resource. The growth of natural sustainable exploitation is conditioned by some factors, which should implement local public authorities, in collaboration with public and private partnerships. Some of these factors are:

- Taking care of local cultural heritage, through churches and emblematic building restoring.
- Creation of Environment Protection Education centres.
- Establishment of the different areas of Natural Special Protection, as “National Park of Guadarrama” and “Biosphere Reserve of Sierra del Rincón”.
- Promotion of natural tourism activities (trekking, mountain bike routes, etc).
- Local food business promotion, local restaurants, bars, etc. where the essence of the area can be found.

The social services performance can increase. The area offers great conditions in relation to social service facilities. It remains calmed and not too far from the metropolitan core. Consequently, it is a perfect geographical situation for recuperation centres and third-age residences.

We also found an increase in the establishment of permanent inhabitants, which normally work in Madrid and travel every day to their jobs, coming back to their homes after the working journal. This fact will surely increase the commerce and other services, mainly for leisure activities.

Local population age rate is the highest in the Community. This is the reason of the increasing demand of home assistance. Especially small villages, far from the big communication infrastructures have many third-aged people living at home, and demanding home care assistance services. There are many services to be offered in these cases, such as homework help, health assistance, leisure activities, interaction with public services, etc.

Construction sector will loose importance in the next few years. Unemployment rate is now three times more than in late 2007 in many municipalities. The area was traditionally used as a second-home place, where plenty of people living in Madrid used to spend their holidays or even weekends in a natural environment. The global economic crisis has produced a deep decrease in the building sector, and nowadays these second-home sector has almost disappeared. There are still some houses unoccupied and local building market is saturated at this moment. However, urban development rate will never reach communities' average level, due to the environmental limitations of the studied area. We found that no construction enterprises in our area were demanding new employers, and that the overall building scenario has changes. No new houses are being built, and construction sector is now turning to retrofitting activities.

New information and communication technologies are also seen as an important employment improvement tool. These technologies could make easier some labour activities, especially for local freelance workers. These tools are able to make the worker geographically independent, and can serve as an incentive for the establishment of new SMEs located in the Sierra Norte.



Local agriculture and farming seem able to maintain or even increase their business activities. These will be directly influenced by generational relay. If local exploitations can be inherited by young people, this sector will remain important in the next few years at a local level. This will be possible only with a clear local public administration support, through new protected designation of origin food products, local honey, meat, vegetables, etc.

It is equally important to differentiate the local agriculture through implementation of ecological agriculture and farming models. There are potential ecologic products consumers coming from the city of Madrid every weekend, and local market economy can take advantage of this situation.

The most attractive identified local business opportunities we found are the following:

- Feeding and farming centres.
- Cleaning assistance services.
- School-farm for children environmental education projects.
- Local active tourism facilities.
- Geriatric residence.

*Proposed formative local actions.*

We analysed the relation of the monitored formative actions with local formative needs. On one hand we studied the impact level of each course, directly related to the number of participants and exit rate of each course – number of students which finished the course in relation of those who began it –. On the other hand we analysed the course thematic in relation with the number of students which applied for it. This indicator was studied to find the relation between the local formative needs and the local course supply.

Local formative needs should be defined by a previous analysis of economic and labour activities, identified through a multidimensional consulting process. Every local economic actor should be taken into account before the planning of formative scenario.

When a specific course has not reached the minimum number of participants an evaluation process should be implemented. We studied the different factors which could cause the decrease of exit indicators. Some of the most influencing factors we found were:

- Lack of adequate teachers. Some of the courses analysed suffered from a lack of experts and could not be implemented. Local experts are few and with a big amount of work.
- Thematic offset. Some of the formative courses have been repeated during the past few years, which produces a decrease in general interest rate.
- Labour unsatisfactory repercussion due to territorial reasons. Territory is in some cases not enough to above the big amount of new formed employees.
- Student lack. This was identified as one of the biggest local problems. Public financed courses should have at least fifteen students. It is hard to find fifteen students for a specific formative action in some of the municipalities.
- Movement limitations. Normally people from surrounding municipalities are not keen to travel from their hometown to the place were the course is being implemented.

- Schedule. The availability of time in participants was identified as one of the main limitations affecting formative actions. When actions are oriented to housekeepers, they are normally during scholar time. If actions are focused on workers, normally they take part during the evening. Courses for unemployed people are normally in morning time.
- Grant depending factor. We observed that a very high percent of formative actions are subjected to public grant support. These produces, in some cases, a lack of interest both from teachers and participants sides.

The proposed local formative actions were divided into different categories:

1. Depending on thematic:

- Account, administration and communication for SMEs. These courses should be valid for SMEs of almost every sector. We found that administrative procedures are really a difficult step to overcome for the majority of SMEs managers, who are frequently paying for these services.
- There should also appear the possibility of an open budget for “on demand courses”. Consequently, SMEs managers will have the opportunity to apply for this formative budget choosing thematic.
- HORECA formative actions. We found this sector has one of the biggest growing potential. Three occupations related to this sector activity were identified as the most demanded ones, - and classified with the higher employability rate in previous analysis -. These formative actions can be both oriented to bar or restaurant activities and to residence and local tourism accommodations. Food manipulation courses should be maintained, due to their legal obligation character.
- Personal care courses. Related to this sector, home assistance courses should be implemented. In accordance to the interviewed actors, these courses have not been yet made in the region. There is also a necessity of advanced formative actors for geriatric care personnel, due to the increasing number of this type of facilities at a regional level. The last proposed formative actions related to personal care is a children care course. A lack of this occupation was also identified during the study.
- Administrative formative courses. The identified necessary courses regarding this thematic area are employees’ payroll administration. It was also identified a necessity of electronic administrative management course for SMEs.
- Construction and industry courses. During the past years, a high number of courses focused on these two sectors were implemented. Now they have been almost eliminated due to the big sector crisis. We found that a bio-construction course could be really interesting in the region, especially due to the local natural heritage and character.
- Agriculture and farming. Ecologic agriculture courses could represent a new local professional profile with a positive future trajectory due to the market and environmental resources of the area. They can be made by traditional agriculture or by new inhabitants, mainly coming from the big city and trying to find a new rural labour life.
- Tourism and leisure activities. Formative actions related to local tourism and leisure activities should report labour and employability benefits in the area.

Pool and water leisure activities supervisors could provide new – seasonal – employment to local youth.

2. Depending on purposed modality (learning methods, schedules, etc.)

- Online and semi-presential modalities. These courses should be taken into account in SMEs formative planning schemes. Some presential classes could be offered before beginning the online part in order to explain the course following-up methodology.
- Granted specific formative action. If the course is demanded by a small number of people some complementary grant, for example covering transport costs, could be offered to them. In case of completing a full class, grant could be applied for the formative costs.
- Formative itineraries. Consecutive formative modules focused on similar themes could be offered for unemployed or young people who have finished their primary studies. It should be a good support for people working on third-age or dependent people health care services. These people need a wide formative background and special title for residences working.
- Free courses with fee. The identified perception of some of the interviewed people is that in order to make things work in a more efficient way some kind of obligatory tax is necessary. We proposed this modality to make participants assume a higher presence responsibility. We found assistance rate was smaller in free courses.
- The continuity of professional school methodology. It was classified as the most effective formative modality.

We discussed factors which could be sensible to influence local employability. At first place, local economic and human resources should be monitored. This could make easier and more efficient the relation between vacancy creators and applicants. A local resource guide could be made and disseminated between local authorities. Grants and public economic support should be given just after a specific economic and labour municipality-level analysis. A labour market diagnosis could be elaborated for the main employment-generation municipalities of the area before planning local formative itinerary.

Employment public programme monitoring could be made in accordance between public and private sectors. Multi-annual planning guidelines should be accorded every couple of years. Impact indicators for local implemented courses could be designed and completed every year, in order to achieve a complete monitoring programme for local formative actions.

Building retrofitting and renewable energies should be supported by public grants. These sectors provide a great innovation opportunity for local professionals. Building retrofitting should be made in accordance to general esthetical local profile, and new local experts in this activity should be formed. Occupations related to renewable energy introduction at a local level such as solar panel installation or biomass generator maintenance services could represent a new professional profile with a high employability rate.

Agriculture and farming activities should be protected by local authorities. They represent an important part of local heritage and have been implemented in the region for a long time. It is a risk sector which could easily loose competitiveness.

Environmental legislation represents in some cases a barrier for local entrepreneurship labour activities. It acts indirectly as a limiting factor for new local enterprises. Regional

transport infrastructures are deficient. This works also as a local employability barrier and should be monitored and corrected by local public and private transport main actors.

Youth has been identified as a weak population sector. A formative plan for local population between sixteen and twenty five is crucial to protect these inhabitants and assure the future population levels. It is important to introduce rural concept in local youth education. People should now how to create benefits from their local identity, how to value their natural, social and human heritage and how to grow up and create employment in their region.

## 6. References.

- Arnold, M., & Newmann, J. (2005). A Look at the Condition of Rural Education Research: Setting a Direction for Future Research. *Journal of Research in Rural Education*, 20(6), 60-85.
- Benjamin T.B, C. D. (2005). Factors influencing family physicians to enter rural practice. *Canadian Family Physician*, 51. 1246-1247.
- Green, G. (2005). Work-Based Learning in Rural America: Employer Participation in School-To-Work Programs and Apprenticeships. *Journal of Research in Rural Education*, 20 (16)., 3 - 28.
- Hobart L. Harmon, C. B. (1996). Doctoral research in Rural Education and the Rural R & D Menu. *Journal of Research in Rural Education*. , 12 (2) 68-75.
- Puig-Calvó, P. (2006). LOS CENTROS FAMILIARES DE FORMACIÓN POR ALTERNANCIA: DESARROLLO DE LAS PERSONAS Y DE SU MEDIO. *Tesis doctoral*. , 1-389.
- Sanz, F. (2000). "Razones y motivos para una reflexión sobre la educación rural". *Revista de Educación de la Secretaría General de Educación y Formación Profesional del Ministerio de Educación, Cultura y Deporte de España*. , n ° 322, pp. 7-10.
- Stern, J. D. (1994). The condition of Education in Rural Schools. *Information Analyses, U.S*, 1-15.

**Contact person** (For further information please contact to):

Secretaría VIX Congreso Internacional de Ingeniería de Proyectos.

Phone: + 0034 91 336 5838

E-mail: [pablo.rsaez@gmail.com](mailto:pablo.rsaez@gmail.com)

URL: <http://www.grupogesplan.com/>