Study on Identifying the Need for Personnel within Organizations and the Labor Market Tendencies from the Perspective of Required Qualifications in Centre Region

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Socio-economic changes that followed the 1990 and demographic evolutions have decisively influenced the evolution and structure of labour force in Central Region, as well as the needs for qualification. From this perspective, the present study aimed to capture the opinion of employers in Centre Region with regard to the need for personnel in the following period and the labour market tendencies from the perspective of required qualifications within organisations. The method of the research is direct, the sample being available and composed of 247 subjects. The research is supported by the SOPHRD contract 64/3.3/S/33409 „Establishment of the Permanent Technical Secretariat of the Regional Pact for Employment and Social Inclusion in Centre Region".

Keywords: labour market, personnel, qualification, education

Introduction

The labour force structure has suffered significant changes, the main direction being the diminution of primary sector (especially the

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mining industry) and of the secondary one, at the same time with the development of services and constructions. The percentage of the population employed in agriculture remains very high, despite a slow decrease during the last years. Intraregional disparities have widened recently, outlining the labour force concentration process, especially of well-qualified labour force in the large urban centres and adjacent areas – areas with a high economic dynamism and which have managed to attract significant investments in recent years. [1]

The European Union approved an employment objective for men and women of 75% for the age group 20-64 years until 2020: an ambitious undertaking for the sustainability of the European social model, social support systems, economic growth and public finances. [2]

Romania's EU accession is a major challenge for our country and therefore for the Centre Region regarding the adaptation of Romanian economic and social environment to the European one. Under these circumstances, changes to ensure competitiveness shall determine major transformations in the area of employment and professional. The development of lifelong training system that would meet the labour force requirements and knowledge-based economy require relevant information on the evolution of jobs and professions, labour market evolution tendencies, companies' needs of abilities and skills, correlation between demand and offer of labour force and identification of gaps, the offer of programmes of professional training suppliers and its suitability to the needs of applicants.

Methodology of research

The present methodology is a combination of the scientific marketing research methodology and the scientific sociological research methodology. Depending on the aimed objectives, the study was conducted on two dimensions: the *qualitative exploratory-type* dimension and the *quantitative descriptive-type* dimension.

The methods used in the qualitative exploratory-type research were the following:

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- *Analysis of secondary data*, making use of available data from different sources, aiming to identify some aspects of the skills and qualifications on the labour market.
- *Interviews / meetings with specialists* which aimed to get detailed information on employment and professional training for adults.
- *Round tables, workshops meetings* which allowed discussions on the concept, role, methodology and operationalization of the needs for abilities and skills of the labour force, which aimed: the formulation of some general, specific objectives, hypotheses, making the working instruments (questionnaire), the analysis and interpretation of data, conclusions and recommendations.

The quantitative descriptive-type research aimed to evaluate the coordinates of the needs of labour force skills and qualifications for the employers in Centre Region. The conclusions and recommendations of the specialists involved in the research aim the increase of employment in Centre Region.

The present research is part of the Regional Study on "The evolution of labour force on the labour market in Centre Region". The purpose of this research is to *diagnose the needs of skills and qualifications of the labour market for its adaptation to the labour market requirements in Centre Region.*

One of the specific objectives, presented in this article, aims to identify the need for personnel within organisations and the labour market tendencies from the perspective of required qualifications within organisations (Table 1).

The conducted research was based both on primary data sources and on secondary data sources, which allowed establishing the objectives, the sampling scheme, and the validation of the obtained sample. The sources of information were:

- Annual statistical publications and periodicals of the National Institute of Statistics;
- Data bases of the Employment County Agencies;
- Websites, through the search engines yahoo.com, google.com, national and international data bases, which enabled us to gain

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access to a series of articles from international publications, courses
or researches.

Table 1: The specific objectives, hypotheses and indicators of the research

Specific objectives	Hypotheses	Indicators
Identifying the need for personnel within organisations and the labour market tendencies from the perspective of required qualifications within organisations	H_1 – The need for personnel with secondary and higher education within organisations is low	• The need for personnel with higher education studies; • The need for personnel with secondary education studies.
	H_2 – There are qualifications that are not listed in the Classification of Jobs in Romania H_3 – The qualification that is easily found on the labour market in that of an economist, and the qualification that is found with difficulty is that of a welder	• Qualifications that are not listed in COR • Qualifications easily found on the labour market • Qualifications found with difficulty on the labour market

For the collection of information, both *direct methods of research*
(the application of a questionnaire directly to the respondents and its
electronic transmission) and the *investigation of secondary sources* were
used – which enabled a good selection of the respondents, as well as
reducing the time required for the distribution of questionnaires and of the

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costs involved. The survey was undisguised, its purpose being known by respondents from the very beginning.

The target population for the study is composed of employers (commercial companies, government business enterprises, public institutions, NGOs) in the counties of Alba, Brasov, Covasna, Harghita, Mures and Sibiu.

In order to establish a proper basis for the survey, data from the County Employment Agencies in the counties of Alba, Brasov, Covasna, Hargita, Mures and Sibiu and from the National Institute of Statistics in Romania were used. Therefore, we obtained information on the names of the entities in Centre Region, address, phone number, e-mail address, full name of the legal representatives, allowing quick and easy access to the target group.

The sampling method consists of combining the *multistage sampling method* with the *disproportional random sampling method.*
To calculate the size of the sample, the below formula was used [3]:

$$n = \frac{t^2 \times p \times q}{e^2}$$

Where:

n = the size of the sample;

t = the coefficient corresponding to the probability that guarantees the results of the research (it can be found in the statistical tables of the Student distribution); therefore, it takes different values, depending on the level of trust set by the researcher: for a level of trust of 94% , the value of t will be 1,88, and for a level of trust of 99%, the value of t will be 2,58;

p = the proportion of the components in the sample which have the studied characteristic (because, usually, the value of p is not known, it is considered equal to 0,5, in order to make the dispersion have the maximum value possible);

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q   =   non percentage proportion of the sample's components which are not characterised by a particular feature, is determined by the 1-p relation;

e   =   acceptable error limit.

In the conducted selective research, for a 94% level of trust and a margin of error of 6%, the sample will be:

$$n = \frac{1,88^2 \times 0,5 \times (1-0,5)}{0,06^2} = 246$$

Thus, the minimum number of questionnaires duly completed which should be collected and processed is 246. Keeping the 94% level of trust and considering that a number of 247 questionnaires have been collected and validated, we have determined the maximum margin of error ($\Delta_{\omega \max}$):

$$\Delta_{\omega \max} = t\sqrt{\frac{p \times (1-p)}{n}} = 1,88\sqrt{\frac{0,50(1-0,50)}{246}} = 5,99\%$$

We considered setting a sample that would include the relevant employers from the six counties of the Centre Region.

The collection of information was made online, using the computer application provided by the Kestionare.ro platform and also by going to the employer. We tried to minimize errors owed to non-responses, inconclusive samples, incorrect answers of respondents, and the influence of the operator. For the processing and analysis of the data, SPSS 19 programme – Statistics Base for Windows and Microsoft Office 2010 were used.

We believe that the most important limit of the research is due to *the size of the sample* (247 respondents) and to the quite high margin of error (6%) for a 94% level of trust. Certainly, a larger sample, with a lower margin of error might have been considered more relevant. We mention however that when the size of the sample was established, the objectives of the selective scientific research were considered, although the chosen sample is small.

Another limitation of the research derives from the choice made in filling in the size of the sample, i.e. our choice for the *disproportional option*.

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Therefore, we would like to state that, even if by using the disproportional option the subjects of the sample do not correspond to the statistical reality in terms of their percentage within the entire number of employers from the counties of Centre Region, we started from the assumption that certain groups, namely that of the large, medium and small employers are more important for the purpose and context of the selective scientific research, each of them having its own beliefs and perceptions. As a consequence, a greater importance was given to these groups, materialised in a bigger number of selected components, without however eliminating the microenterprises.

Data analysis and interpretation

The most important entry data focused on the organisations' main field of activity, the number of employees, the type of ownership and capital, the type of organisation and the number of years of activity.

With regard to the field of activity, *the highest percentage is found in the field of other service activities (18,50%), a percentage of 14,50% of the organisations operate in the manufacturing industry, the public administration is represented in a percentage of 12,80 and the education sector holds a percentage of 12,30 from the total of respondents*. For the wholesale and retail trade, the calculated percentage was 8,50% and the constructions field is represented by 6% of the respondents. *Lower percentages* have been identified for the field of real estate transactions (0,40%) and the production and supply of electricity, heat, gas, hot water and air conditioning (0,90%).

Regarding the type of the company according to the number of employees, it could be noticed that the highest percentage of respondents belongs to the organisations that have 10-49 employees (37%), and those with 50-249 employees (27%).

Small and medium-sized enterprises are classified, according to the average annual number of employees, into the following categories [4]:
 a. up to 9 employees – microenterprises;
 b. between 10 and 49 employees – small enterprises;
 c. between 50 and 249 employees – medium-sized enterprises.

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Given these provisions, the respondents are classified as it follows: micro enterprises – 21%; small enterprises – 37%; medium-sized enterprises – 27%; big enterprises – 15%. Depending on the type of ownership, 59% of the organisations are privately owned, 35% are state owned, 2% fall into the category of organisations with mixed capital and 4% mentioned the category of non-governmental organisations.

Most respondent employers have Romanian capital (82%). Depending on the type of the organisation, 45% are organised as limited liability companies (LLC), 33% are public institutions, and 15% are joint - stock companies (S.A.), 6% non-profit organisations and 1% government business enterprises.

A final criterion of identifying the organisations was the number of years of activity. From the analysis of the information, it can be noticed that *the highest percentage of respondents* (42%) *have more than 15 years activity in the business*, followed by those which fall in the category of 3-6 years (18%) and 6-9 years (14%).

The difficulties of the entire economy have a direct impact on the human resources in terms of job supply. Usually, one of the job requirements is the level of education. Either internal or external recruitment sources are used, education has to be mentioned for the vacancy.

Under these circumstances, one of the objectives of the research was to identify the need of personnel on the labour market, the following questions being introduced in the questionnaire: "*To what extent does your company need in the following period employees with higher education studies in the following departments?*" and "*To what extent does your company need in the following period employees with secondary education studies in the following departments?*".

With regard to the identification of the need for personnel with higher education, on the types of compartments, the collected data are shown in table 2.

The analysis of information leads us to the conclusion that, generally, employers believe that they need employees with higher education either in a very small, or in a small measure, regardless of the compartment. Thus, for the *production* compartment, 44% of the employers

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consider that the existence of a demand of personnel is very low, and 10% of
them consider that they will need in small measure employees with higher
education. With regard to the *management* compartment, 57% of the
respondents consider that they need employees with higher education in a
very small or small measure, for the *administrative* compartment, the
percentage of those stating this is of 58% and reaches 60% for the *human
resources* compartment.

Table 2: Identifying the need for personnel with higher education

Compartment	Very large (%)	Large (%)	Neither / Nor (%)	Small (%)	Very small (%)	Score
Research-development	10	9	19	10	52	2,15
Production	11	12	23	10	44	2,34
Supply, acquisition, logistics	7	14	18	17	44	2,21
Sales	6	14	19	11	50	2,15
Marketing	10	16	18	11	45	2,35
Financial-accounting	9	19	15	14	43	2,39
Human resources	10	12	18	12	48	2,25
Legal	9	17	21	8	45	2,36
Administrative	13	10	19	13	45	2,35
Management	13	15	15	10	47	2,38
Overall score	2,29					

The conducted analysis, based on the calculated scores (from 1 – In a very small measure to 5 – In a very large measure) shows that the score for each compartment is situated approximately at the same level, starting from 2,15 for the compartments of *Research-development* and *Sales*, up to 2,39 for the *Financial-accounting* compartment. These values demonstrate the employer's low requirements for personnel on jobs that require higher education, regardless of the compartment, with the specification that for the Financial-accounting compartment the highest requirements are estimated. The overall score for this question is 2,29 (from 1 – In a very small measure, to 5 – In a very large measure), and in conclusion, *the need for personnel with higher education is low*, the score being close to the value 2.

With regard to the identification of the need for personnel with secondary education, on the types of compartments, the collected data are shown in table 3.

Table 3: Identifying the need for personnel with secondary education

Compartment	Very large (%)	Large (%)	Neither / Nor (%)	Small (%)	Very small (%)	Score
Research-development	0	1	18	9	72	1,49
Production	3	15	17	14	51	2,05
Supply, acquisition, logistics	0	8	18	12	62	1,71
Sales	4	5	16	17	58	1,78
Marketing	2	8	13	21	56	1,80
Financial-accounting	1	8	19	17	55	1,83
Human resources	1	3	16	17	63	1,62

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Administrative	1	2	22	16	59	1,71
Overall score	1,75					

From the analysis of the information, we can conclude that the requirements of personnel with secondary education in the following period are low. Therefore, for the *Research-development, Supply, acquisition and logistics* compartments, none of the respondents has mentioned that they need personnel in a very large measure and only 1% and 8% stated this need as very high. Moreover, the *Research-Development* compartment is considered the one in which the lowest level of future employments for jobs which require secondary education is estimated. We believe that this situation is not surprising considering there are few organisations developing new products and technologies and which have such a compartment.

The analysis shows that the need for employees with secondary education is situated approximately at the same level for all compartments. Therefore, the highest score was calculated for the *Production* compartment (score 2,05), and the lowest value of the score was for the *Research-development* compartment. This situation shows that organisations intend in a small measure to hire in the following period personnel with secondary education.

The overall score for this question is 1,75 (from 1 – In a very small measure, to 5 – In a very large measure) which reflects the fact that *the need for personnel with secondary education is low*. Given the overall scores calculated for the two questions, we may conclude that the hypothesis launched before the research (I_1 - *The need for personnel with secondary and higher education within organisations is low*) is confirmed.

To identify the tendencies on the labour market in terms of required qualifications within organisations, the following questions were introduced in the questionnaire "*Which are the qualifications that are not listed in the Classification of Jobs in Romania (COR) and which you consider necessary for your organisation?*", "*Specify which are the necessary qualifications for your organisation that can be easily found on the labour*

market?" and "*Specify which are the qualifications required by your organisation that are hard to be found on the labour market?*", open questions which enabled respondents to express their own opinions.

For starters, we have tried to identify the qualifications that are not listed in the Classification of Jobs in Romania (COR) and which employers consider necessary for their organisations. The processing of the collected data showed that, according to the respondents, the following qualifications are not listed in the (COR) Classification of Jobs in Romania:

- restoration architect;
- design engineer;
- construction equipment engineer;
- social educator;
- potter.

After analysing the Classification of Jobs in Romania, we have found the following qualifications (jobs) similar to the ones mentioned by the respondents or identical to them:

- restoration architect, cod 214104;
- design engineer (for various fields of activity): within minor groups 214 „Architects, engineers and related professionals (exclusively engineers in the textile, leather, wood and construction materials industry)", 215 „Engineers in the textile, leather and food industry" , 216 „Engineers in the wood and construction materials industry", 221 „Specialists in biology and agronomy";
- construction equipment engineer, cod 214203; there was not identified a code for the name of „construction equipment engineer"
- social educator, cod 346002; there was not identified a code for social educator;
- ceramic modeller: cod 732106, processing worker of ceramics by extrusion, code 813917, processing worker of ceramic objects by injection, code 813919; the qualification of potter has not been identified as such in the Classification of Jobs in Romania.

Given the above mentioned, we can conclude that employers have identified jobs that they consider necessary within organisations and which cannot be found, under the name mentioned, in COR. Thus, the hypothesis

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mentioned before the research (***I₂*** – *There are qualifications that are not
listed in the Classification of Jobs in Romania - COR*) is confirmed.

The data collected for the identification of qualifications required
by organisations and which can be easily found on the labour market are
presented in table 4.

Table 4: Qualifications found easily on the labour market

Current no.	Qualifications	Percentage of mentions (%)
1.	Economist	20,00
2.	Accountant	15,30
3.	Commercial agent	12,30
4.	Engineer	7,90
5.	Jurist	14,10

The main qualifications (jobs) which, in the respondents' opinion,
can be easily found on the labour market are the following:

- economist, qualification mentioned by 20,00% of the respondents;
- jurist, in the opinion of 14,10% of the employers;
- accountant, for 15,30% of the respondents;
- commercial agent, qualification mentioned by 12,30% of the employers;
- engineer, in the opinion of 7,90% of the respondents.

Also, with a lower frequency, the following qualifications were
mentioned:

- driver;
- commercial worker;
- mechanic;
- secretary;
- locksmith.

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Given the frequency of the respondents' mentions, we can conclude that *the main qualification which, in the employers' opinion, is the easiest to be found on the labour market is that of economist*.

The data collected for the identification of qualifications required by organisations and which are difficult to be found on the labour market are presented in table 5.

Table 5: Qualifications found with difficulty on the labour market

Current no.	Qualifications	Percentage of mentions (%)
1.	Welder	20,40
2.	Doctor	17,40
3.	Medical assistant	14,30
4.	Stoker	12,30
5.	Saw worker	8,50
6.	Kinetotherapist	3,70

The main qualifications (jobs) which, according to the respondents, are difficult to be found on the labour market are the following:
- welder – mentioned by 20,40% of the respondents;
- doctor – mentioned by 17,40% of the respondents;
- medical assistant – for 14,30% of the respondents;
- stoker – according to 12,30% of the respondents;
- saw worker– for 8,50% of the respondents;
- kinetotherapist – mentioned by 1,2% of the respondents.

Also, with a lower frequency, the following qualifications were also mentioned:
- quality manager;
- internal auditor;
- project manager;
- enamel worker.

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Given the frequency of the respondents' mentions, we can conclude that *the main qualification which is difficult to be found on the labour market is that of a welder.* Consequently, the advanced hypothesis *(I_3 – The qualification that is easily found on the labour market in that of an economist and the qualification that is found with difficulty is that of a welder)* is confirmed.

Conclusions

In general, employers consider that they need employees with higher education in a small measure (overall score 2,29), with the specification that for the *Financial-accounting* compartment, the highest requirements are estimated (score 2,39). This tendency is manifested in the following period for the need of employees with secondary education, too (overall score 1,75), better employment opportunities being found in the *Production* compartment (score 2,05).

Employers have identified a series of qualifications which, in their opinion, are not listed in the Classification of Jobs in Romania and which they consider necessary. After studying the COR, the following qualifications / jobs were not found under the name mentioned by employers: "construction equipment engineer", "social educator", "potter". Employers from Centre Region believe that the main qualification that is the easiest to be found on the labour market is that of an economist. We believe, however, that the percentage of the organisations that have mentioned this qualification (20%) is not high, especially if we consider that, according to the new education system changed by the implementation of the Bologna Declaration, the qualification of an economist is general, a variety of specific jobs deriving from it. Among the qualifications easily found on the labour market, the following have also been mentioned: jurist, accountant, commercial agent, engineer etc.

The main difficulty that is found with difficulty on the labour market in Centre Region is considered to be that of a welder. We must also take into consideration the fact that for certain types of welding, an ISCIR authorization is required and the fact that there are various types of welding, which we believe raises problems for the employers in finding this

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qualification on the labour market. Among the qualifications that are easily found on the labour market, there were also mentioned: doctor, stoker, saw worker, kinetotherapist.

In order to adapt the labour force to the requirements of the labour market, in the context of the current financial constraints, employers and the County Employment Agencies in Centre Region and not only have at their disposal the EU financial instruments. We are first referring to the Social European Fund, through the Sectorial Operational Programme Human Resources Development (SOP HRD), but also the European Regional Development Fund (ERDF), the Fund for Rural Development (EAFRD), Lifelong learning and Progress Programme.

In order to update and improve the consistency of competencies, the SOPHRD can invest in:

- forecasting and development of qualifications and skills;
- supporting the reform of education and training systems, for the consolidation of their relevance to the labour market;
- the change of experience and the creation of networks between the higher education, research and business institutions to meet the new requirements of competencies;
- promoting entrepreneurship, the opening of enterprises and independent activities.

ERDF supports investments in educational infrastructure. ESF and other structural funds could act in synergy with other instruments, such as The European Integration Fund of third country nationals to increase migrants' participation on the labour market and to fight discrimination and the Lifelong learning programme. The joint action to support microfinance institutions in Europe (JASMINE) financed by ERDF and the recently created European Microfinance Progress Instrument can help people escape unemployment and social exclusion through the establishment of enterprises or by exercising an individual activity.

We consider that this part of the study, through the conclusions drawn, may help in the development of future projects within SOPHRD carried out by the members of the Territorial Pact and the County Partnerships in Centre Region and by other interested organisations.

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