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Regional distribution of discrimination forms in the labor market in Romania

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Regional distribution of discrimination forms in the labour market in Romania

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A highly segmented labour market usually favours a mismatch between supply and demand, significantly limiting the functional flexibility and the resilience of this market to macroeconomic shocks. From this perspective, such a market hampers the transition of an EU member to the euro zone, adversely affecting the quality of integration. The causes of labour market segmentation are related to: imperfect competition between firms, information asymmetry, how workers signal on the labour market, limited mobility of workers across different sectors, etc. Labour market segmentation can be done according to several criteria: type of employment, length of employment, salary level, gender, ethnicity, age, etc. When the labour market segmentation is based on discriminatory attitudes, the propagated effects may adversely affect the economic, social and territorial cohesion status of a country.

Being in the process of modernizing the labour market, of adapting the economic and social institutions to the requirements of the *acquis communautaire*, Romania has significant gaps to recover in relation to more developed countries in EU. Although virulent discrimination does not occur on the Romanian labour market, this phenomenon may delay the process of modernization and effective integration in the single European market.

In this article, the authors analyze the main forms of discrimination at the regional level based on the following indicators: the Duncan Index, The Moir and Selby-Smith segregation indicator (MSS), The Karmel and Maclachan index (IP) at local level; wage gap and occupational segregation by gender. They will also assess the effects of various forms of discrimination on the Romanian labour market flexibility.

Keywords: discrimination; wage; labour market.

JEL classification: J01, J15, 16.

1. Introduction

Equality between women and men is a fundamental right, a common value of the European Union and a necessary condition for achieving the objectives of growth, employment and social cohesion at EU level. Although there are still some inequalities in the last decades, the EU has made significant progress for the women and men to enjoy equal opportunities. This is mainly due to equal treatment legislation, measures to integrate the principle of equality in all Community policies and specific measures to promote women.

The pay gap between women and men has traditionally been an issue debated by economists, this is because the salary is an important determinant of the economic welfare and is of fundamental importance for the employed individuals as well as potential earning for employment for those who are not employees.

The sources of the pay gap between women and men are focused on gender-specific factors, particularly on the differences in qualifications and on the treatment assigned to the skilled workers. Most often, women earn less than men for the work of equal value. One of the main causes is the way in which women's competences are valued compared to men. Jobs requiring similar skills, qualifications or experience tend to be paid less and to be undervalued if they are predominantly performed by women.

Women may earn less than men because they have different production capacities than men. It is well known that professional experience is positively related to earnings. Because of family responsibilities, many women interrupt their career, and it is important to quantify the effect generated by the interruptions on earnings. Using the data on years of work, experience and Duncan vocational training (1955) they were able to explain the disparity in earnings between men and women.

Most studies (Oxaca, 1973) on the differences in pay between men and women were intended to quantify the effects of labour market discrimination on women's earnings. These studies started from the question how much women would have gained, on average, if they had the same education, training and other productive characteristics as men. The remaining earning gap is often interpreted as a measure of discrimination.

The idea of labour market segmentation belongs to the economists P. Doeringer and Piore M. who submitted it in the 70s referring to the existence of a dual economy, comprising two sectors: a *primary sector*, with specialized and well rewarded workplaces, with a high

wage and unionized protection. This sector is represented by the large multinational corporations and large national companies where the promotion of individuals, their careers and remuneration level is determined largely by the developments in this market.

The secondary sector is characterized by the workplaces that require low-skilled employees, low wages, and high risks of unemployment, poor working conditions where unions are absent and individuals relate directly with the employers. This sector is for small and medium companies.

The concept of labour market segmentation refers to the existence of different patterns of resource allocation (between domestic and foreign market) and of employment and income risk (primary and secondary market). Labour market segmentation can be done according to several criteria: type of employment (non-standard or standard), length of employment or work station (work relationships based on contracts with the indefinite duration or fixed-term contract), salary level, employment depending on gender, age, ethnicity etc..

An explanation for the labour market segmentation may be linked to: imperfect competition between firms, information asymmetry, and the manner in which workers indicate the labour market, etc., and the mobility between these two sectors is limited. An individual working in the primary sector will never want to work in the secondary sector, if he/she enters at some point in this market, and if this person has remained without a job it will be hard to get back to the primary market and last but not least his/her level of productivity will decrease. We may speak in this case of the existence of a voluntary *unemployment*, because the individual refuses to have employment in the *secondary market*. On the other hand, the situation contradicts the definition of voluntary unemployment because the individual will want to have a job in the primary market even for a lower wage.

An individual who worked on the secondary market will enter very hard the primary market because it "signals" a lower level of education and productivity due to the previous activities (even if his/her productivity level increased, such person cannot enter the primary sector because of information asymmetry).

Labour market segmentation can lead to segregation which is one of the dominant features of the European labour markets. At a European political level desegregation has become one of the main objectives of the action programs for equality and it has been considered a main task of the European Employment Strategy in the equal opportunities pillar.

The debate on the main causes of segregation in employment dates back from the '70s and the key factors identified in the specialized literature are: *biological advantages*,

*investment in the human capital (schooling or vocational training), income differential, preferences and prejudice, socialization and stereotypes, barriers to entry the labour market and organizational practices*¹.

Gender segregation in the labour market is a situation where a gender is significantly concentrated compared to another one in certain areas from the labour market. There are two types of segregation: horizontal and vertical. Horizontal segregation refers to the concentration of women or men in certain sectors of the national economy. Vertical segregation is the disproportionate participation of a gender in a narrow range of occupations (occupational segregation) and / or in certain levels of professional hierarchy (hierarchical segregation). These different types of segregation lead to disadvantages for a particular genre, such as: *limited career prospects, the pay gap and poor social recognition*.

The pay gap between women and men is reinforced by the segregation in the labour market. There is still a tendency for women and men to work in different jobs. On the one hand, women and men often predominate in different sectors, and on the other hand, in the same sector or enterprise, women predominate in occupations less valued and paid.

Gender discrimination can be explained by the level of segregation in the labour market, by the employers' perceptions about male and female workforce, by the level of development of a country, by employers and employees. In any society, people are categorized starting from their attributes (stereotypical or not) which are supposed to be share with their own group. Usually these attributes are anticipated based on the stereotypes conveyed on behalf of various groups. Stereotypes are those beliefs and opinions about the characteristics of men and women which can be the basis for the discriminatory treatment in most cases.

2. The empirical analysis

In order to measure the segregation in the labour market in Romania, we started from the study conducted by Emerek, Figueiredo, Gonzalez (2003) and we used the following indicators:

- Index of dissimilarity (ID);
- The Moir and Selby-Smith segregation indicator (MSS);
- The Karmel and Maclachan index (IP)

¹ European Commission's Expert Group on Gender and Employment, "Gender segregation in the labour market Root causes, implications and policy responses in the EU", March 2009

The size of the ID index is the sum of absolute difference of the distribution of women and men in occupations. From the following mathematical formula it is clear that ID is equal with 0 in case of complete equality (the female labour force distribution on activities / professions is perfectly similar to the male one) and to 1 in case of complete dissimilarity (when women and men are distributed totally different on activities / professional groups). ID index can be interpreted as the proportion of workers which should change the job to eliminate the segregation - taking into account employment rates on activities / profession of women and men (equation 2).

$$ID = 1/2 \sum_i \left| \frac{M_i}{M} - \frac{F_i}{F} \right| \quad (1)$$

ID index formula can be written as:

$$ID = \frac{1}{N} \sum_i 1/2 * \left| M_i * \frac{N}{M} - F_i * \frac{N}{F} \right| \quad (2)$$

If the employment rate of female labour is equal to the male one, we have:

$$\frac{N}{M} = \frac{N}{F} = 2 \quad \text{și} \quad ID = \frac{1}{F} \sum_i 1/2 * |M_i - F_i| \quad \text{similarly}$$

$$ID = \frac{1}{M} \sum_i 1/2 * |M_i - F_i| \quad (3)$$

where:

M = the total number of men in employment

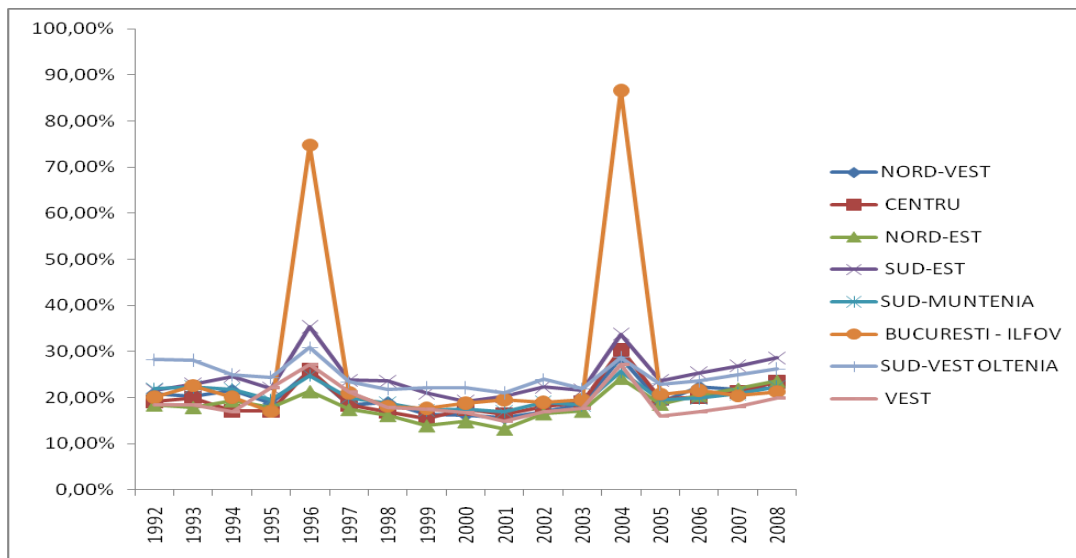
M_i = the number of men in occupation i

F = the total number of women in employment

F_i = the number of women in occupation i

Based on the equation (1) we calculated the index of dissimilarity on the eight development regions of Romania, between 1992-2008 (Annex 1) for the following activities: Agriculture, hunting and silviculture, Industry, Electric and thermal energy gas and water, Construction, Trade, Hotels and restaurants, Transport, storage and communications, Transport and storage, Financial intermediations, Real estate and other services, Education, Health and social assistance, Other activities of national economy, post and telecommunication,

Graph.no.1 Index of dissimilarity at local level (1992-2008)



Source: INS and own computing

From the chart above we can notice major fluctuations of the ID index both in regional profile as well as in the temporal dimension. However ID changes are more pronounced in dynamic, with only one exception - Bucharest-Ilfov Region. The capital region is usually atypical in comparison with the other regions of the country and therefore it is often analyzed separately. From the chart above we can notice for the Bucharest-Ilfov Region two moments of "structural shocks" in the ID dynamic: 1996, when the shock transitional period started in Romania, namely 2004, when the accession negotiations were completed (per chapter) in the EU, starting with the implementation of the results. All the other regions have undergone similar structural changes reflected in the growing peaks of the ID. Much higher increases in ID in the Bucharest-Ilfov region can be explained by the larger size differences of the economic activities, namely the positive internal migration balance of this region compared to other developing regions of Romania.

- **The segregation indicator Moir and Selby-Smith (MSS)** is based on the understanding that segregation means that the proportion of women within the occupational categories is different from the proportion of women in employment.

The size of the MSS indicator is the sum of the absolute differences between the share of female employment and the share of workers on occupation (formula 4). The MSS index takes the value 0 if it is a complete equality and can be twice the share of male labour in the total labour employed ($2 M / N$) in case of complete dissimilarity (formula 5). A change in the MSS indicator might occur due to a change in the number of female workers on occupations or to the total female labour force.

$$MSS = \sum_i \left| \frac{Fi}{F} - \frac{Ni}{N} \right| \quad (4)$$

$$\sum_i \left| \frac{Ni}{N} - \frac{Fi}{F} \right| = \sum_i \left| \frac{Mi}{N} + \frac{Fi}{N} - \frac{Fi}{F} \right| = \frac{M}{N} \sum_i \left| \frac{Mi}{M} + \frac{Fi}{M} - \frac{N}{M} * \frac{Fi}{F} \right| = \frac{M}{N} \sum_i \left| \frac{Mi}{M} + \left(\frac{F}{M} - \frac{N}{M} \right) * \frac{Fi}{F} \right| = \frac{M}{N} \sum_i \left| \frac{Mi}{M} - \frac{Fi}{F} \right|$$

The MSS indicator can be reformulated as:

$$MSS = \frac{M}{N} \sum_i \left| \frac{Mi}{M} - \frac{Fi}{F} \right| = 2 \frac{M}{N} * ID \quad (5)$$

The relation (5) shows us the relationship between the two indicators. If the employment rate of female labour is equal to the male one

$$\frac{F}{N} = \frac{M}{N} = 1/2 \text{ and } MSS = DI \quad (6)$$

where:

M = the total number of men in employment

Mi = the number of men in occupation i

F = the total number of women in employment

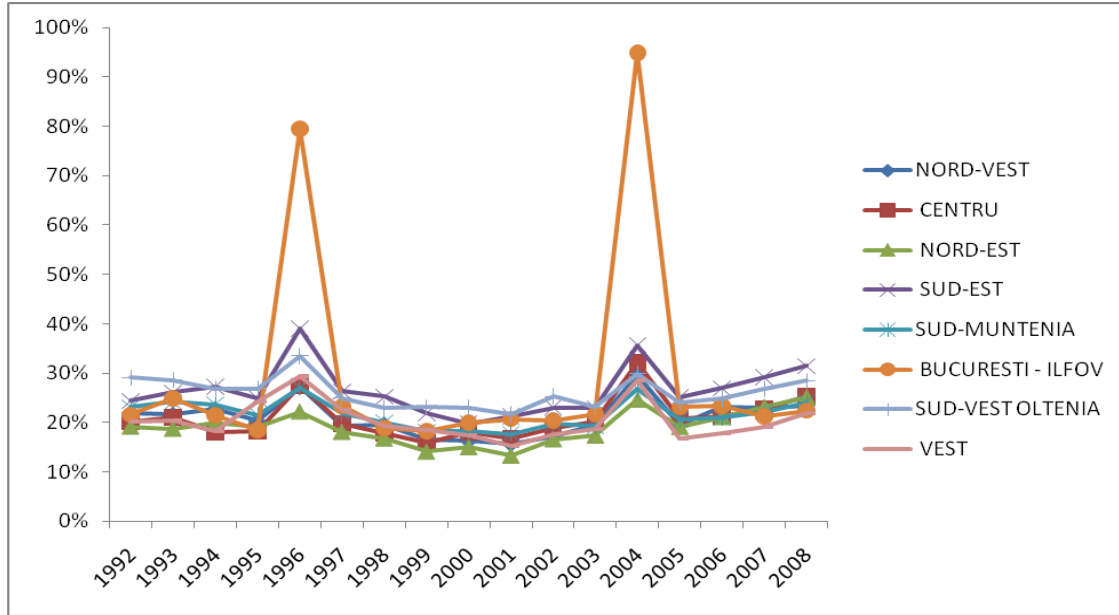
Fi = the number of women in occupation i

N = the total number of employees

Ni = the total number of employees in occupation i

The MSS index can be interpreted as the number of people who should change jobs in order to eliminate segregation. This index represents in fact a two times multiplication of the ID index as long as the employment rate of male labour force is higher than the women's rate.

Graph.no.2: The Moir and Selby-Smith segregation indicator (MSS) at local level (1992-2008)



The dynamics of the MSS index is similar to that of the ID index both in the regional dimension and in the temporal one (Annex 2) only that the values are much higher due to the increasing of the share of the employed male population in the total employed population.

- **The Karmel and Maclachan index (IP)** is also based on the understanding that segregation represents a different distribution of women and men in the professional categories. The IP index shows us the differences between women and men in employment

$$IP = \frac{1}{N} \sum_i \left| \left(1 - \frac{M}{N} \right) * Mi - \frac{M}{N} * Fi \right| \quad (7)$$

The IP index can be written as:

$$\left(1 - \frac{M}{N} \right) * Mi - \frac{M}{N} * Fi = Mi - \frac{Ni}{N} * M$$

$$\frac{F}{N} * Mi - \frac{M}{N} * Fi = \frac{Ni}{N} * F - Fi$$

$$IP = \frac{1}{N} \sum_i \left| Mi - \frac{Ni}{N} * M \right| = \frac{1}{N} \sum_i \left| \frac{Ni}{N} * F - Fi \right| = \frac{1}{N} \sum_i \frac{1}{2} \left(\left| Mi - \frac{Ni}{N} * M \right| + \left| Fi - \frac{Ni}{N} * F \right| \right) \quad (8)$$

$$IP = \frac{F}{N} \sum_i \left| \frac{Ni}{N} - \frac{Fi}{F} \right| = \frac{F}{N} * MSS = 2 * \frac{M}{N} * \frac{F}{N} * ID \quad (9)$$

The formula (9) shows the relationship between the three terms.

If the number of female employees is equal to the male one $\frac{M}{N} = \frac{F}{N} = 1/2$ we have

$$IP = \frac{1}{N} \sum_i 1/2 (|Mi - 1/2 Ni| + |Fi - 1/2 Ni|) = 1/2 MSS = 1/2 ID \text{ where:}$$

M = the total number of men in employment

Mi = the number of men in occupation i

F = the total number of women in employment

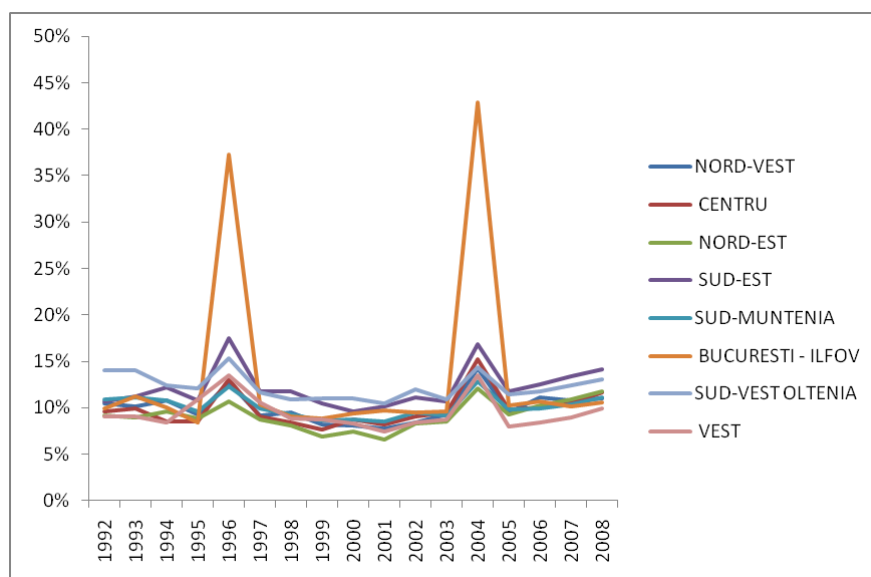
Fi = the number of women in occupation i

N = the total number of employees

Ni = the total number of employees in occupation i

The IP index can be interpreted as the proportion of labour that should change its workplace in order to eliminate segregation (considering the number of women and men on occupation). This index can be equal to 0 if it is a complete equality, and twice the rate of male labour multiplied by the rate of female labour ($2 * M / N * F / N$), in case of complete dissimilarity (equation 8). This index may increase with the increase in the share of employed female labour force in the total number of employed population (F / N). The results of IP calculations on the development regions of Romania during 1992 - 2008 are shown in the chart below (graph no.3)

Graph no.3: The Karmel and Maclachan index (IP) at local level



From the chart below we can see that the IP variations are smaller both in the regional profile and in the temporal profile than ID and MMS, and the share of employed women in the total number of employed population decreased over the analyzed period.

There is a link between the three indexes and they depend on the occupational structure of the economy. The results of the indices may, however, show the participation of women in the labour market in different ways. For example, if the share of women in employment increases while the supply of women (and men) remains stable, the ID index will show no change, in turn the MSS index will decrease indicating lower segregation, and the IP index will increase, indicating higher segregation.

None of these traditional indexes provides a fully satisfactory method of measuring the segregation over time; their application and comparison of levels depend on the purpose of the research. For example, correlating the MMS index with IP we notice that the rate of employment of female labour in the total employed population decreased.

3. Conclusions:

There are significant effects of gender segregation in the labour market in Romania. Assessed by several indexes (ID, MMS, IP) gender segregation shows major differences in regional profile, differences that reveal important gender differences in the territorial division of labour.

Although the effect of segregation has a slight downward trend, there are two moments in time that reported large and sudden increases of this effect. The moments are related to the major restructurings suffered by the Romanian economy at the beginning of the

shock therapy transition to the market economy (1996) and the completion of EU accession negotiation chapters (2004).

If the analysis is completed with the employment rate gap by gender, at regional level there are found major differences in age groups and regions. However, in most cases the employment rate of male labour exceeds the employment rate of female labour.

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¹ Ruth Emerek, Hugo Figueiredo, Pilar González, Lena Gonäs and Jill Rubery, “Indicators on gender segregation”, January 2003

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