# THE ROMANIAN FLEXICURITY – A RESPONSE TO THE EUROPEAN LABOUR MARKET NEEDS[1]

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## Abstract

*The purpose of the paper is to assess the place of Romania in the context of the main flexicurity models identified at European level and to make a taxonomy of the EU countries through a cluster-type analysis, based on correlations between essential factors, namely: between F1 (advanced forms of internal flexibility and security) and F2 (external flexibility), as well as between F1 (advanced forms of internal flexibility and security) and F3 (basic forms of functional flexibility).*

*The novelty of the analysis we performed consists in including Romania in the European Flexicurity Models[2]. One of the most comprehensive analyses of the flexicurity models was performed by the European Commission in 'Employment in Europe 2007' on a group of 22 member states, which does not include Romania. The present analysis covers the EU27 countries, minus Luxembourg, Cyprus and Malta (a total of 24 EU countries), for assessing the place of Romania in the main flexicurity models identified at European level. In addition, the analysis includes two non-EU members, namely Switzerland and Norway.*

*The results indicate that within the European flexicurity models Romania falls into the large group of Central and Eastern European Model, with a low level of security and internal and functional flexibility.*

## Introduction - Flexicurity, as a reply to globalisation and demographic changes

For decades, the Europeans' ways of living and working has undergone numerous changes. The competitive pressures, the development of new products and services, the evolution of structural changes have intensified. New economies appear which find new markets for their products and represent new markets for the European Union as well. This creates major challenges to the enterprises and employees in Europe. Acquiring new qualifications becomes very important and the number of employees who perform various tasks during their active life and work for various employers is increasing.

Four important factors can be emphasised: the fast pace of European and international economic integration; the fast development of the new technologies, especially in the field of information and communication; the European society's demographic ageing, together with a relatively low average employment rate and a high level of long-term unemployment, which jeopardises the support to social protection systems; and the development of labour market segmentation in several countries, in which insiders coexist with outsiders.

In order to achieve the Lisbon objectives regarding more and better jobs, employees and employers, unions and owners, organisations and governments, national economies and regional trading blocs face new challenges: on the one hand, the development of a strong demand for rendering the labour markets, employment and labour organisation more flexible at a superior level, and on the other hand, a firm demand for ensuring the employees' security, especially of those in uncertain, precarious situation (marginalised on the labour market or unemployed). The labour market reply to these new challenges induced by the globalisation and the demographic ageing process is comprised in a relatively new concept: ***flexicurity***. The political concept, through which the European Union proposes to adapt the European labour market to the new challenges, was imported from English, where it results from the combination of two terms that reflect fundamental needs on the labour market, namely *flexibility* and *security*. The integrated concept of *flexicurity* would be a means to "reconcile" on the labour market the two elements, intrinsically related to the fast changes which the companies and employees must face in the middle of the globalisation process. Vladimir Spidla[3] in the speech launching the Report on flexicurity states that: *"If Europe is to face seriously and efficiently the challenges of globalisation*

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[3] *The European Commissioner for social affairs published simultaneously with the Report on social inclusion a Report on "flexicurity", 2005.*

*and those of a workforce that is decreasing rapidly, flexicurity must be a main concern. Employees must be able to move easily and confidently from one job to another*".

## 1. Definitions of flexicurity

The concept of "flexicurity" is primarily based on the idea that the two dimensions of flexibility and security are not contradictory, but mutually supportive, particularly in the context of the new challenges. It aims at enhancing, simultaneously, the flexibility and security dimensions of the labour market, by exploring synergies between different policies and institutions. Even if reference is often made to the Danish labour market model, because it has been a successful one, the term flexicurity is not originally a Danish one. Flexicurity was first coined in the Netherlands[4] in the context of the labour low reform of 1999, the "Flexibility and Security Act". Adriaansens defines the concept as a progress from *"job security"* to *"the individual's capacity to become employed and keep the job"*, practically from job security to employment security.

Because the concept is relatively new, the relevant literature is still developing and there is neither only one definition of the concept which is yet universally accepted nor methods for the quantitative characterisation thereof.

The term flexicurity is found in the literature with several definitions, partially overlapping:

a) flexicurity as "political strategy" (Wilthagen and Rogowski, 2002) and a more comprehensive version (Wilthagen and Tros, 2004);

b) flexicurity as "social protection" and "deregulation policy" (Keller and Seifert (2004), Klammer (2004, 2005);

c) flexicurity by analogy with the Prague spring motto of "socialism with a human face" *(metaphoric definition),* flexicurity as "analytical concept" (*instrumental definition* reflecting both *the neo-liberal and the unions' points of view*); (Tangian Andranik, 2006)[5];

d) flexicurity as "balancing flexibility and security", (Cazes and Nesporova, 2003);

e) flexicurity based on the "Danish golden triangle" of P. Kongsoj Madsen;

f) flexicurity as "operational concept", (European Commission, 2007).

Since the purpose of our analysis is taxonomy of the EU countries (Romania included) within the European flexicurity models, we will focus on the two definitions as instruments to analyse the dimensions of flexibility and security: a more compre-hensive version of Wilthagen and Tros (2004) and flexicurity as "operational concept" (European Commission, 2007).

In the first definition, four sub-dimensions are identified for the "flexibility" dimension and four sub-dimensions for the "security" dimension (Wilthagen and Tros, 2004).

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[4] *Prof. Hans Adriaansens with the occasion of speeches and interviews.*

[5] *Tangian Andranik (2006) European flexicurity: concepts (operational definitions), methodology (monitoring instruments), and policies (consistent implementations) 1 WSI-Diskussionspapier Nr. 148 October 2006.*

**Dimensions[6] of flexibility**

**External numerical flexibility** is the employers' capability to adjust the employment volume to the current needs. Mainly, this is given by the ease/difficulty in employment and dismissal and by the extent to which limited contracts can be used.

**Internal numerical flexibility** expresses the employers' capability to change the used amount of labour factor within the firm, without resorting to new employment (for instance, by changing the number and distribution of man-hours, by introducing time counter systems).

**Functional flexibility** is the ease/difficulty in changing labour organisation within a company by rotating positions, giving employees multiple tasks, etc.

**Wage flexibility** reflects the capacity to adjust the basic and supplementary payment according to individual performances and the company's economic status.

**Dimensions of security**

In the specialised literature, several aspects of security on the labour market are presented. Guy Standing enumerates seven types of security. Wilthagen, Tros and Lieshout reduce them to the following four types of security[7]:

**Job security** represents the employees' protection against dismissals and major changes in the working conditions (the main subject of the legislation regarding the employment protection) related to a specified job.

**Employment security** represents the fact of ensuring employment, but not necessarily with the same employer and providing equivalent jobs, corresponding to the individual qualifications and the previous working conditions. The professional insertion capacity can be increased by providing professional education and training opportunities.

**Income security** reflects the income protection level in case the paid work is discontinued. Guy Standing considers it, more generally, as income protection through the minimum wage mechanism, salary indexation, comprehensive social security, including progressive taxation, providing the elderly with commissions.

**Combined security** provides conciliation between paid work and other social responsibilities and obligations (the equilibrium between working time and spare time, between work and family, etc.).

Referring to the second definition, on the basis of analytical experience and proof the Commission and the Member States have reached a consensus on an operational concept of flexicurity, which comprises four components[8].

- **Flexible and trustworthy contract agreements**

The idea is to help the unprotected workers, the "outsiders", who are already employed on short term or with irregular contracts or unemployed (many of them

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[6] *Andranik Tangian introduces here a fifth aspect namely* **flexibility through outsourcing**, *which is the ease/difficulty in employing personnel without work contracts, but with commercial contracts.*

[7] *Wilthagen, T. Tros, F., Lieshout, Harm van (2003).*

[8] *These four components were included in the January 2006 Annual Progress Report. The 2007 Joint Employment Report, Paper: "Towards Common Principles of Flexicurity: More and Better Jobs through Flexibility and Security", July 2007.*

being women, young persons and immigrants), find a job and obtain a stable contractual agreement. The modern labour organisations should promote labour satisfaction and, at the same time, make companies more competitive. Flexicurity also helps the "insiders", the protected workers, who are employed permanently with unlimited work contracts to prepare themselves, in time, for the change in job in the case of change in the economic conditions.

- **Comprehensive life-long learning strategies**

Life-long learning is the insurance that all the European citizens have an opportunity for acquiring a high quality initial education, that they complete secondary studies, develop key competences and acquire new ones and improve their competences during their active life. It is also about ensuring that companies invest more in human capital and about allowing companies to develop competences.

- **Active policies on an efficient labour market**

The active policies on the labour market help the unemployed return to work through employment services and labour market programmes, such as professional training and the creation of jobs. By implementing the active measures policies, such as an efficient support in finding a job and greater rewards for work, those looking for a job can be encouraged to find a new employer. The lectures on finding a job and the job clubs have proved to be the most efficient measures to help the unemployed find a job.

- **The modern social security systems**

It is important for the EU governments to provide adequate unemployment benefits that will act as a real help when people change their job and to provide health support if they become ill, as well as pensions when they retire from the active life. Childcare is another important issue, helping people combine work and private life and, thus, remain on the labour market.

**Flexicurity also involves an "aggregation" strategy,** which means that all the components should be considered together and simultaneously, not selectively.

We may conclude that flexicurity is a difficult concept to tackle analytically, largely due to its holistic nature. The dimensions of flexibility and security can be further sub-divided into several subcomponents, requiring a considerable numbers of indicators. To our knowledge, there are two analyses of flexicurity regimes/systems: the first, made in Employment in Europe 2006, focuses exclusively on the external component of flexibility and does not consider other forms of flexibility and the second one, made in Employment in Europe 2007, which considers the internal and functional components of flexibility. The seventh active variables used in EIE 2007 will be presented in section 2.2 of the paper.

## **2**. Integrating Romania into the European flexicurity models

### *2.1 Brief presentation of the context of the analysis*

In the past few years, the increased importance granted to flexicurity has been reflected in the ever higher interest in identifying flexicurity models compatible with the

EU countries, which capture the complexity of the elements on which action could be taken in order to improve the operation of labour markets.

As presented it in the first part, the flexicurity concept is defined on the basis of a considerable number of indicators which reflect the aspects of labour market flexibility and employment security. As a result, the studies performed in the EU countries capture various aspects which characterize the components of flexicurity, making a taxonomy of the countries within certain social models previously identified, starting from such an analysis within the EU15[9].

The European Commission Report "Employment in Europe 2006" clustered 18 EU Member States, including new member states, into five groups on the basis of flexicurity models:

- The Mediterranean model ( Spain, Portugal and Greece);
- The Continental model (France, Germany, Belgium, Austria);
- The Anglo-Saxon model (Ireland,  the UK );
- The Nordic model (Denmark, Finland and Sweden, plus the Netherlands);
- The Eastern European model (Poland, Hungary, the Czech Republic and Slovakia and Italy).

One of the most comprehensive analyses of the flexicurity models is included in *Employment in Europe* 2007, which enlarges the variables and the range of countries included in the survey to a number of 22[10] of the 27 member states, as compared to 18 in the previous year, the results being quite similar to the case of the countries considered in 2006. Most of the EU member states were the object of other studies as well, already famous, some of them focusing on the Central and Eastern European countries[11] or on the new EU member states[12] but *none of the analyses covered Romania.*

*2.2 The methodology used and the main variables*

The analysis performed below aims at defining the flexicurity model for Romania, together with other states in the Community area. For increasing representativeness and the possibility to report the results obtained by various key studies, especially those performed within *Employment in Europe*, 2007 and 2006, we will use the methodology they were based on, using a partially different statistical and econometric instrument, but whose results focus on the same aspects. Firstly, the group of analysed countries includes EU27, minus Luxembourg, Cyprus and Malta (a total of 24 EU countries), the purpose being that of assessing the place of Romania in the

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[9] *Ferrera (1998), Bertola (2001), Boeri (2002) outline 4 social models for the EU 15 countries at the end of the 20th century: the Nordic model, the Continental model, the Anglo-Saxon model and the Mediterranean model.*

[10] *Austria, Belgium, Bulgaria, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Lithuania, Great Britain, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Hungary.*

[11] *Cazes, Sandrine, Nesporova Alena (2003).*

[12] *European Commission,* Employment in Europe *2007.*

main flexicurity models identified at European level. In addition, the analysis includes two countries that are not EU members, namely Switzerland and Norway.

The analysis is based on a set of indicators which measure: external flexibility, internal and functional flexibility, security and active policies on the labour market. The results related to grouping the countries according to various systems of labour market/flexicurity are similar to those in the European Commission Report[13] and are based on the seven active variables proposed in the report (Table 1).

**Table 1**

### The variables included in the analysis of the flexicurity models and the databases

| Active variable/ symbol | Database used | Period |
|---|---|---|
| The European Protection Legislation indicator used as a proxy for external numerical flexibility (EPL) | 1. EWCS data, 2. M Elsner, Odile Chagny, *"Working conditions and working time in an enlarged Europe"* Office for Official Publications of the European Communities, 2005 | 2005-2006 |
| Percentage of participants in education or training programmes (ETP) | 1. European Commission, *Indicators for Monitoring the Employment Guidelines, 2008 Compendium* 2. Eurostat, Labour Market Policy, | 2006 |
| Expenditure on labour market policies as a percentage of GDP (i.e. the sum of passive/unemployment benefits and ALMPs) (LMP) | | 2006 |
| An indicator on work intensity and the irregularity of working schedules to measure aspects of internal flexibility (WII) | European Foundation for the Improvement of Living and Working Conditions, *The 4th European working conditions survey  2007* (based on EWCS 2005 data) | 2005 |
| An indicator on the existence or non-existence of flexible working-time arrangements and forms of non-typical work to measure aspects of internal flexibility (FWA) | | 2005 |
| An indicator on the degree of autonomy and complexity of tasks to measure aspects of functional flexibility (WAC) | | 2005 |
| An indicator on rotation and teamwork to measure aspects of functional flexibility (RTW). | | 2005 |

*Source: Adapted from EC, Employment in Europe 2007.*

### 2.2.1. The external flexibility

In order to analyse the external flexibility, we are using as indicators the types of labour contracts (individual, temporary, collective) and the EPL (Employment Protection Legislation) composite index. The EPL composite index reflects aspects related to the

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[13] Employment in Europe *2007.*

contractual relationships regulations, for the purpose of ordering the countries according to the labour market external flexibility. The EPL composite index used in the analysis comprises regulations regarding the protection against individual redundancy, temporary work contracts and the protection against collective redundancies.

**Table 2**

### EPL summary index, UE27 countries

| BE | BG | CZ | DK | DE | EE | EL | ES | FR | IE | IT | LV |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 2.50 | 2.00 | 1.90 | 1.80 | 2.50 | 2.60 | 2.90 | 3.10 | 2.90 | 1.30 | 2.40 | 2.50 |
| **LT** | **HU** | **NL** | **AT** | **PL** | **PT** | **RO** | **SL** | **SK** | **FL** | **SV** | **UK** |
| 2.80 | 1.70 | 2.30 | 2.20 | 2.10 | 3.50 | 2.80 | 3.30 | 1.70 | 2.10 | 2.60 | 1.10 |

*Source: OECD Employment Outlook 2004, with some revised data; European Foundation for the Improvement of Living and Working Conditions (2005). Working conditions and  working time in an enlarged Europe.*

The general intention for calculating the EPL indicator is to reflect the EPL influence upon the costs supported by the employers. According the European Foundation for the Improvement of Living and Working Conditions[14], the expenditure on social protection includes the following: social benefits, which consist of transfers, in cash or in kind, to households and individuals to relieve them of the burden of a defined set of risks or needs; administration costs, which represent the costs charged by the scheme for management and administration purposes; other expenditure, which consists of miscellaneous expenditure by social protection schemes, such as the payment of property income and other expenses (current prices used). Having in view the value of the EPL indicator, the authors consider that the labour market legislation is quite rigid (Figure 1).

**Figure 1**

### Employment protection legislation index, by country, 2003
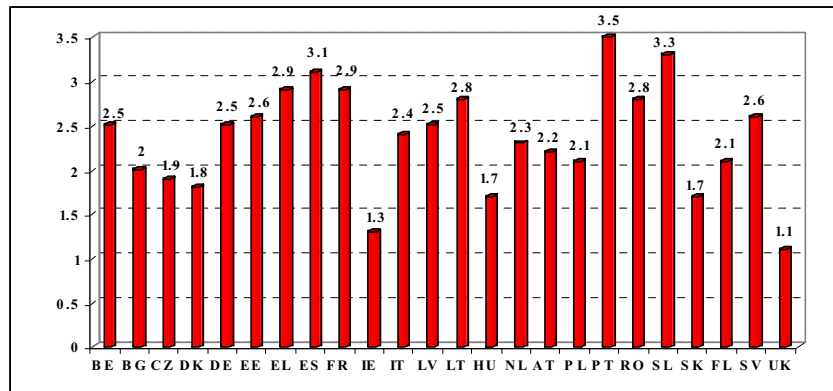


*Source: European Foundation for the Improvement of Living and Working Conditions (2005) - Working conditions and working time in an enlarged Europe.*

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[14] *European Foundation for the Improvement of Living and Working Conditions*, "Approaches to flexicurity: EU models", 2007.

Making a parallel regarding the value of the EPL Indicator for 24 countries, one may see that Romania is ranked the 20th, having the same value of the EPL index as Lithuania. The high value of the index reflects that Romania has quite a rigid labour legislation, which, in reality, reduces employment and labour productivity and the companies cannot quickly adapt to the globalisation process and technological changes.

### 2.2.2. The participation in education and training programmes (ETP)

In accordance with the Lisbon Strategy 2005, the Member States must invest more in the human capital, improving education and knowledge. In 2010, the ratio of adults who participate in education and training programmes (lifelong learning (LLL)) at least 4 weeks per year should be 12.5%.

**Figure 2**
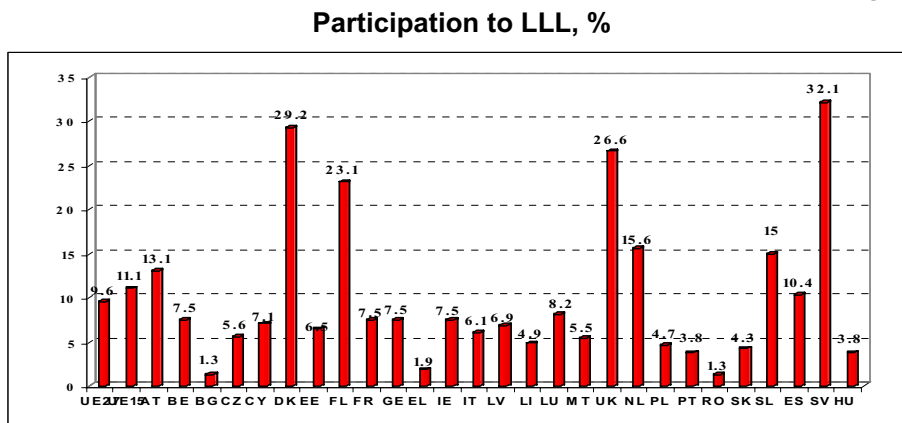
## Participation to LLL, %



*Source: European Commission, Indicators for monitoring the Employment Guidelines including indicators for additional employment analysis, 2008 Compendium.*

If in 2006 the participation ratio in the EU27 of the population aged 24-65 reached 9.6%, in Romania it was low (namely 1.3%) as compared to Denmark and the United Kingdom, where this percentage exceeded 25%[15].

On the one hand, in the Nordic countries the levels are double as compared to the EU target for 2010, and on the other hand the progress of the states with low levels diminished in the past few years. The analyses performed recently regarding the participation of the young and adults to education and training programmes indicate that Romania is placed among the last countries in Europe regarding the following indicators: the participation of the population aged 25-64 in education and training and the early school leaving ratio.[16] This situation is also due to low financial allocations to

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[15] *E.C.C.,* Delivering lifelong learning for knowledge, creativity and innovation*, SEC (2007) 1484.*
[16] National Report on the Implementation of the Education and Training 2010 Work Programme in Romania*, Bucharest 2007.*

education. The ratio of public expenditures on education to the GDP is highly differentiated according to countries: Denmark or Sweden has a maximum of expenditures on education (7-8% of the GDP), Romania being placed in this hierarchy on the last position among the EU27 member states, much below the level of Bulgaria.

**Figure 3**

### Public Expenditure for education as percentage in GDP %
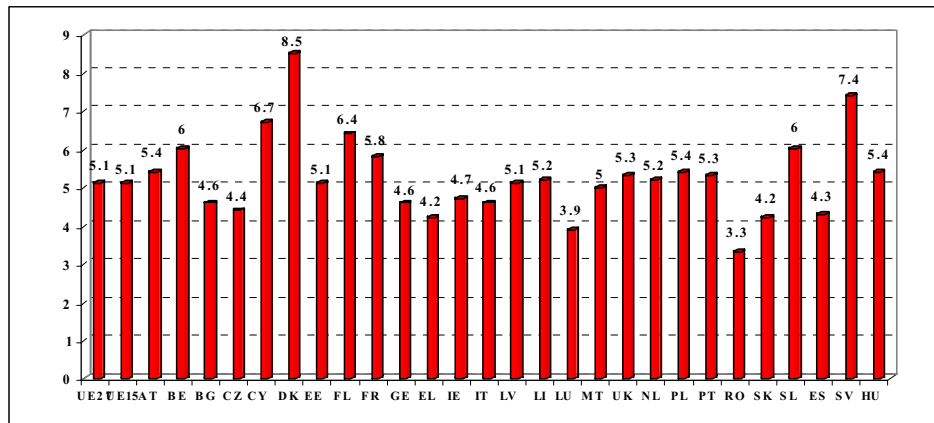


*Source: European Commission, Indicators for monitoring the Employment Guidelines including indicators for additional employment analysis, 2008 Compendium.*

### 2.2.3. Expenditures on active measures on the labour market (LMP)

The average expenditure on active and support measures was of about 2% of the GDP between1985 and 2004[17], but, by countries, the data indicate large differences, which in 2006 ranged between 3% and 0.3% of the GDP. Romania reached the lowest level of expenditure.

**Table 3**

### LMP expenditure as % of GDP, 2006

| No. | Country | Active measures | Supports | No. | Country | Active measures | Support |
|-----|---------|-----------------|----------|-----|---------|-----------------|---------|
| 1 | Austria | 0.54 | 1.39 | 14 | Lithuania | 0.18 | 0.13 |
| 2 | Belgium | 0.89 | 0.81 | 15 | Luxemburg | 0.39 | 0.59 |
| 3 | Bulgaria | 0.39 | 0.18 | 16 | Great Britain | 0.05 | 0.19 |
| 4 | Czech Rep. | 0.13 | 0.23 | 17 | Holland | 0.75 | 1.47 |
| 5 | Denmark | 1.43* | 2.51** | 18 | Poland | 0.36 | 0.71 |

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[17] *European Commission,* Employment in Europe *2006.*

| No. | Country | Active measures | Supports | No. | Country | Active measures | Support |
|-----|---------|-----------------|----------|-----|---------|-----------------|---------|
| 6 | Estonia | 0.05 | 0.07 | 19 | Portugal | 0.45 | 1.23 |
| 7 | Finland | 0.72 | 1.69 | 20 | Romania | 0.11 | 0.28 |
| 8 | France | 0.68 | 1.39 | 21 | Slovakia | 0.14 | 0.34 |
| 9 | Germany | 0.61 | 2.09 | 22 | Slovenia | 0.17 | 0.39 |
| 10 | Greece | 0.06** | 0.44** | 23 | Spain | 0.58** | 1.46* |
| 11 | Ireland | 0.46 | 0.86 | 24 | Sweden | 1.13 | 0.96 |
| 12 | Italy | 0.45 | 0.8 | 25 | Hungary | 0.19 | 0.36 |
| 13 | Latvia | 0.17 | 0.3 | | | | |

*\* 2004 and \*\*2005*
*Source: EC, Indicators for monitoring the Employment Guidelines including indicators for additional employment analysis, 2008.*

The dynamic analysis also indicates, in most countries, the fact that there is a very slow progress regarding the movement from passive measures to active measures on the labour market. Romania has practically maintained over the interval 2003-2006 the same percentage of expenditures on active measures (0.11% of the GDP), making no progress.

### 2.2.4. The internal flexibility

The data on the components of internal flexibility are taken from the *Fourth European Working Conditions Survey[18]*. Table 4 shows the proportion of people working over 40 hours a week in different countries (the reference for long working hours in the *Fourth European Working Conditions Survey* is 48 hours or more).

**Table 4**

**Actual weekly hours by countr**

| UE27 | UE 15 | NMS12 | BE | BG | CZ | DK | DE | EE | EL | ES | FR | IE | IT | CY |
|------|-------|-------|----|----|----|----|----|----|----|----|----|----|----|----|
| 40.0 | 39.5 | 40.6 | 38.8 | 41.7 | 41.2 | 38.6 | 41.1 | 40.7 | 39.9 | 39.0 | 37.7 | 38.9 | 38.4 | 39.1 |
| **LV** | **LT** | **LU** | **HU** | **MT** | **NL** | **AT** | **PL** | **PT** | **RO** | **SL** | **SK** | **FL** | **SK** | **UK** |
| 40.6 | 40.3 | 39.8 | 40.5 | 40.0 | 40.0 | 41.1 | 40.4 | 38.8 | 41.7 | 40.8 | 39.9 | 39.3 | 39.2 | 41.4 |

*Source: EUROFOUND, Working time developments, 2007.*

The employees in Romania and Bulgaria work longer hours than their counterparts in the EU, followed by the United Kingdom from the UE15 countries group. The average number of hours worked by full time employees per week is 40.6 in the 'new' countries and 39.5 in the 'old' ones.

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[18] EWCS*, 2005.*

The internal flexibility index takes into account nine questions included in the *European Work Condition Survey* (EWCS), which cover aspects regarding labour organisation, labour intensity, non-typical work, as according to Table 5.

**Table 5**

**Internal Flexibility Index**

| No. | No. EWCS survey | Component Loadings | Component factor |
|---|---|---|---|
| 1 | Q14a. | Normally, how many times a month do you work at night, for at least 2 hours? | F2 |
| 2 | Q14b. | How many times a month do you work in the evening, for at least 2 hours? | F2 |
| 3 | Q14c. | How many times a month do you work on Sundays? | F2 |
| 4 | Q14d. | How many times a month do you work on Saturdays? | F2 |
| 5 | Q14e. | How many times a month do you work more than 10 hours a day? | F1 |
| 6 | Q16a_a. | Do you work the same number of hours every day? | F1 |
| 7 | Q16a_b. | Do you work the same number of days every week? | F1 |
| 8 | Q16a_c. | Do you work fixed starting and finishing times? | F1 |
| 9 | Q17a. | How are your working time arrangements set? | F2 |

*\* Statistical annex key.*
*For questions Q14a to Q14e, percentages refer to the proportion of respondents working over 5 days/month at night, in the evening, Sundays, Saturdays, respectively, more than 10 hours a day.*
*For questions Q16a to Q16c, percentages refer to the proportion of respondents answering positively with don't know/refusals omitted from calculations.*
*For question Q17a, percentages refer to the proportion of respondents with less flexible working time arrangements.*
*Source: EWCS, 2005.*

The statistical data processing method aimed at determining the internal flexibility index on the basis of the questionnaire made up of the nine questions in the EWCS survey groups the investigated countries according to two essential internal flexibility factors:

1. *Factor F1,* which groups labour intensity (directly correlated with the answers to question Q14e) and the irregular working programme (reversely correlated with the answers to questions, Q16a_a, Q16a_b, Q16a_c).

2. *Factor F2,* which groups the flexible working programme (reversely correlated with the answers to question Q17a) and the atypical working programme (reversely correlated with the answers to questions Q14a, Q14b, Q14c, Q14d).

The method employed implies calculating the standardised values $z_i$ for each internal flexibility factor associated with each country or group of countries analysed, using the equation:

$$z_i = \frac{\overline{x}_i - m}{\sigma} \tag{1}$$

where: $\overline{x}_i$ represents the average of the country $i$ for the analysed factor;

$m$ is the European Union average (UE 27) for the analysed factor;

$\sigma$ represents the standard deviation of the values associated with the European Union (EU27) as compared to the average for the analysed factor.

Based on the standardized values for each country, each factor obtained is in accordance with the data in the following table:

**Table 6**

**The values of the factors associated with internal flexibility**

|  | UE 15 | BE | BG | CZ | DK | DE | EE | EL | ES | FR | IE | IT | CY | LV | LT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F1 | 0.194 | 0.207 | 0.467 | 0.937 | 0.980 | 0.480 | 1.014 | 0.282 | 1.394 | 0.240 | 0.373 | 0.487 | -2.353 | 0.382 | 0.163 |
| F2 | 0.061 | 0.363 | 0.716 | 0.598 | 1.708 | 1.286 | 2.343 | 2.537 | 2.001 | 0.208 | 1.252 | 0.012 | -0.204 | 2.866 | -2.560 |

|  | LU | HU | MT | NL | AT | PL | PT |  | SL | SK | FL | SV | UK | NO | CH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F1 | 1.403 | 0.137 | 1.186 | 0.494 | 1.256 | 0.417 | 2.191 | 0.740 | 0.491 | 0.59 | 0.877 | 0.691 | 0.080 | 0.110 | -0.174 |
| F2 | 1.664 | 0.437 | 0.707 | 1.136 | 0.548 | 2.073 | 0.017 | 2.432 | 0.218 | 0.008 | 1.405 | 0.123 | 0.098 | 0.029 | 0.572 |

*Source: Authors' calculations (for all countries), based on EWCS data.*

The points associated with the pairs of the standardised values for the two internal flexibility factors for each country are presented in the graph corresponding to internal flexibility.

**Figure 4**

**Internal flexibility**
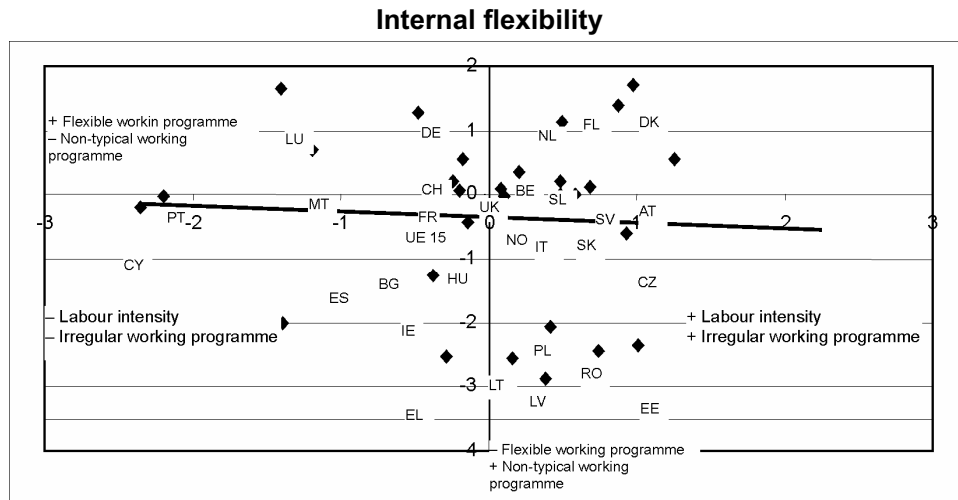


*Source: Authors' calculation based on EWCS data.*

Romania is placed, together with other Central and Eastern European countries (Poland, Latvia, Estonia) in the right-down area, which concentrates those countries with a relatively high labour intensity and a significantly non-typical working programme.

### *2.2.5. The functional flexibility*

In order to determine the functional flexibility index, data from 11 questions in the EWCS survey were used, namely:

Table 7

### Functional Flexibility Index

| No. | No survey | Component Loadings | Component factor |
|-----|-----------|--------------------|------------------|
| 1 | Q23c | Does your main paid job involve: solving unforeseen problems on your own? | F1 |
| 2 | Q23e | Does your main paid job involve: complex tasks? | F1 |
| 3 | Q23f | Does your main paid job involve: learning new things? | F1 |
| 4 | Q24a | Are you able to choose or change your order of tasks? | F1 |
| 5 | Q24b | Are you able to choose or change your methods of work? | F1 |
| 6 | Q24c | Are you able to choose or change your speed or rate of work? | F1 |
| 7 | Q25d | Have you influence over the choice of your working partners? | F1 |
| 8 | Q25e | Can you take your break when you wish? | F1 |
| 9 | Q25j | Are you able to apply your own ideas to your work? | F1 |
| 10 | Q26a | Does your job involve rotating tasks between yourself and colleagues? | F2 |
| 11 | Q26b | Does your job involve doing all or part of your work in a team? | F2 |

*Statistical annex key\**
*For questions Q23c to Q26b, percentages refer to the proportion of respondents answering positively with "don't know"/refusals omitted from calculations.*
*Source: EWCS, 2005.*

According to the data, about ¾ of the employees are in the situation in which they perform new jobs which raise new problems, 55% have to solve complex tasks (the European average is 59.45%), a large part have the freedom to choose or change working methods (60.6% as compared to 66.9% the EU27 average) or can implement their own ideas. Their influence is reduced, though, when the problem is to select partners or possibilities to interrupt their work when they want to.

The statistical data processing method groups the investigated countries according to two essential functional flexibility factors:

1. The factor F1, grouping the degree of work autonomy and complexity, is correlated directly with the answers to questions: Q23c, Q23e, Q23f, Q24a, Q24b, Q24c, Q25d, Q25e, Q25j.

2. The factor F2, grouping the rotation of positions and teamwork, is correlated directly with the questions Q26a and Q26b.

The method implies, similarly to the internal flexibility case, to calculate the standardised values $z_i$ for each functional flexibility factor associated with each country or group of countries under investigation, using equation 1. The standardised values were then used to obtain the two factors included in the following table.

**Table 8**

**The factorial values associated with functional flexibility**

|    | UE 15 | NMS | NM2 | BE | BG | CZ | DK | DE | EE | EL | ES | FR | IE | IT | CY | LV |
|----|-------|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| **F1** | 0.032 | -0.123 | -0.117 | 0.529 | -0.801 | -0.429 | 1.786 | -0.596 | 0.441 | -0.008 | -0.744 | 0.380 | 0.606 | 0.110 | -0.418 | 0.402 |
| **F2** | -0.049 | 0.061 | 0.428 | 0.410 | 0.723 | 0.133 | 1.327 | 0.551 | 0.986 | 0.217 | -1.399 | -0.882 | 0.653 | -1.278 | -0.168 | 1.159 |

|    | LT | LU | HU | MT | NL | AT | PL | PT | RO | SL | SK | FL | SV | UK | NO | CH |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| **F1** | -0.534 | 0.788 | 0.123 | 1.234 | 1.381 | 0.641 | -0.039 | -0.293 | **-0.027** | 0.099 | -0.732 | 1.138 | 1.537 | -0.051 | 1.328 | 1.392 |
| **F2** | 0.009 | 0.348 | -1.228 | 0.633 | 1.869 | 0.087 | 0.050 | -1.173 | **0.808** | 2.814 | 0.438 | 0.816 | 1.327 | 0.854 | 1.293 | 0.131 |

*Source: Authors' calculations (for all countries) based on EWCS data.*

The points associated with the pairs of values of the two functional flexibility factors for each country are presented in the graph corresponding to the functional flexibility. ***Romania is placed in the upper left area, which concentrates Central and Eastern European countries with a low level of work autonomy and task complexity, correlated with a high rotation among jobs, but also of organising work in teams.***

**Figure 5**

**Functional flexibility**
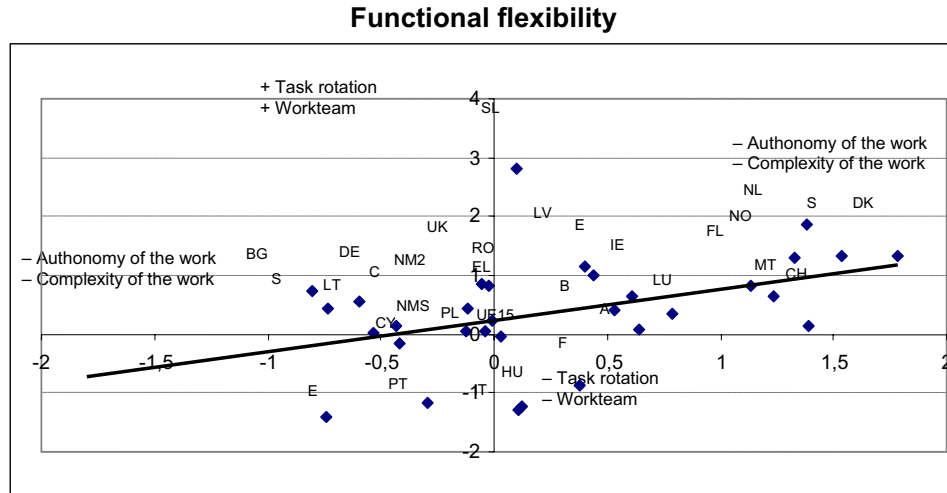


*Source: Authors' calculations based on EWCS data.*

Yet, Romania's position is in an area very close to the frontier with countries with high autonomy and complexity of tasks, as it results from the very high deviation from the EU15 average.

### 2.3. The correlation between factor 1 of internal flexibility and factor 1 of functional flexibility

Comparing the two previous graphs, one may notice a relatively higher spread of the countries in terms of internal flexibility, indicating a high level of heterogeneity among the investigated countries. Correlating the first internal flexibility factor with the first functional flexibility factor, the result indicates a very good correlation.

In order to analyse this correlation, we introduced the data associated with the first factors of each category of flexibility. Using a Principal Component Analysis (PCA) method, by which we eliminated gradually from the analysis the countries with a poor correlation between the factors, we obtained a determination coefficient (R-square or $R^2$) of 0.669. We must mention that the analysis is made exclusively on the basis of the correlation/determination coefficients, which means that there is not necessarily a causality connection associated to them[19].

The graphic representation of the correlation between the factors is:

**Figure 6**

**The correlation between the first internal and functional flexibility**
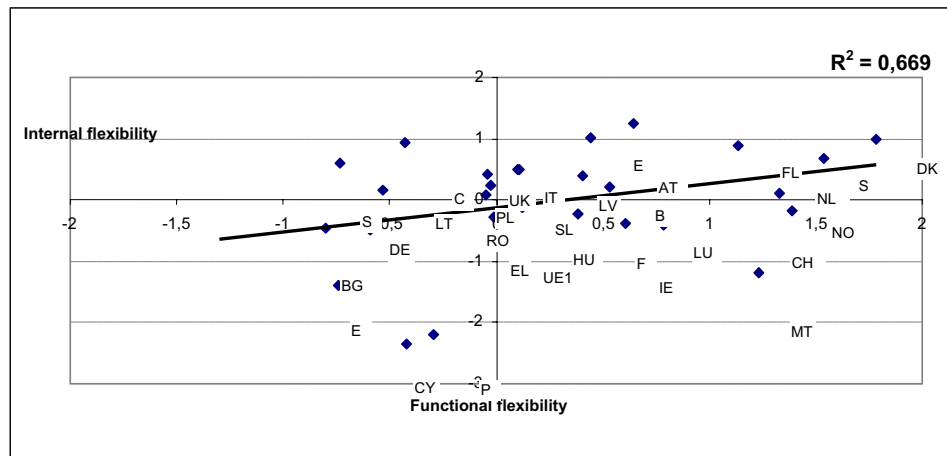


*Source: Authors' calculations based on EWCS data.*

The graph resulting from the cluster-type analysis confirms the separate analyses of the internal flexibility and functional flexibility: there is a strong correlation between them, if we use factor 1. The countries with the poorest correlation of the two factors are Spain, Luxembourg, Malta, Bulgaria, and the countries with the strongest correlation are EU15,

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[19] Employment in Europe 2006.

Cyprus, Portugal, Italy, Estonia and Slovenia. Romania is placed in the group of the countries with a significant correlation between the two factors.

Making taxonomy of the flexicurity systems according to groups of countries implies covering several stages. Firstly, it means creating a correlation matrix of the seven variables, for all the countries in the survey, using the standardised values, according to the methodology applied in the case of the internal and functional flexibility. The calculation of the correlation matrix for the standardised values associated with the investigated countries lead to the following values:

**Table 9**

**Correlation matrix**

|        | EPL | ETP       | LMP     | WII     | FWA     | WAC     | RTW     |
|--------|-----|-----------|---------|---------|---------|---------|---------|
| EPL    | 1   | -0.235175 | 0.00082 | **-0.352** | -0.2252 | -0.1364 | -0.0468 |
| ETP    | -   | 1         | **0.60603** | 0.32748 | **0.55209** | **0.68777** | 0.48584 |
| LMP    | -   | -         | 1       | 0.05223 | **0.63051** | **0.64942** | 0.20235 |
| WII    | -   | -         | -       | 1       | 0.11282 | 0.50303 | **0.49539** |
| FWA    | -   | -         | -       | -       | 1       | 0.39415 | 0.26007 |
| WAC    | -   | -         | -       | -       | -       | 1       | 0.4328  |
| RTW    | -   | -         | -       | -       | -       | -       | 1       |

*Source: Authors' calculations.*

The results in the matrix indicate the existence of certain correlations, namely:

*Factor 1* - a strong direct correlation between variables: the existence or non-existence of flexible working time arrangements and forms of non-typical work (FWA), the degree of autonomy and complexity of tasks (WAC), the percentage of participants in education or training programmes (ETP), the expenditure on labour market policies as a percentage of GDP (LMP);

*Factor 2* - reverse correlation between the work intensity and the irregularity of working schedules (WII) and the European Protection Legislation indicator (EPL);

*Factor 3* - direct correlation between the work intensity and the irregularity of working schedules (WII) and an indicator of rotation and teamwork to measure aspects of functional flexibility (RTW).

On the basis of establishing the type of correlation and the hierarchy of correlation coefficient values, we identified three essential factors (main components), as follows:

**Table 10**

**Correlation type and correlated variables**

| Factor | Correlation type | Correlation name | Correlated values |
|--------|------------------|------------------|-------------------|
| 1 | Strong direct correlation (over 2/3 of the total correlation) | Advanced forms of internal flexibility and security | FWA, WAC, ETP, LMP |
| 2 | Reverse correlation | External and internal flexibility | WII, EPL |
| 3 | Direct correlation | Basic forms of functional flexibility | WII, RTW |

*Source: Based on data in the correlation matrix.*

The values associated with the two factors according to countries are processed below using an analysis method of grouping according to *k* averages, which implies allocating countries to grouping centres determined on the basis of the three main factors. We identified *k=5* grouping centres through the consecutive ranking of the three factors, as follows: we first grouped the countries according to the values of factor 1 (the most important), then according to factor 2, and finally in accordance with factor 3 (Table 11). We obtained the following values of the factor according to the groups of countries:

**Table 11**

**Correlation factorial values**

| No. | Countries | Factor 1 | Factor 2 | Factor 3 | Factor values | |
|---|---|---|---|---|---|---|
| | DK | 1.902089 | 0.970776 | 1.153242 | Factor 1 | between 1 and 2 |
| | SV | 1.403584 | 0.136649 | 1.008979 | Factor 2 | positive |
| | FL | 1.347334 | 0.661002 | 0.846563 | Factor 3 | positive |
| | NL | 1.04694 | 0.296916 | 1.181802 | | |
| | UK | 0.651832 | 1.124598 | 0.467195 | Factor 1 | between -1 and 1 |
| | IE | -0.32286 | 0.72566 | -0.07799 | Factor 2 | positive |
| | | | | | Factor 3 | between -1 and 1 |
| | AT | 0.506793 | 0.763745 | 0.671446 | | |
| | SL | 0.290179 | -0.56729 | 1.652585 | Factor 1 | between 0 and 1 |
| | BE | 0.18955 | -0.01942 | 0.308198 | Factor 2 | between -1 and 1 |
| | DE | 0.122475 | -0.36278 | 0.035201 | Factor 3 | positive |
| | FR | 0.088219 | -0.58771 | 0.206627 | | |
| | **UE15** | **0.06376** | **-0.30602** | **-0.1212** | | |
| | **UE27** | **-0.05783** | **0.173921** | **-0.23502** | | |
| | IT | -0.12168 | 0.207196 | -0.39548 | Factor 1 | between -1 and 0 |
| | PT | -0.35504 | -2.08051 | -1.68202 | Factor 2 | between -1 and 1 |
| | ES | -0.90968 | -1.33715 | -1.13819 | Factor 3 | negative |
| | HU | -0.35643 | 0.498574 | -0.68263 | | |
| | SK | -0.47763 | 0.862908 | 0.514974 | | |
| | CZ | -0.52408 | 0.863377 | 0.534988 | | |
| | EE | -0.78081 | 0.29791 | 0.999684 | Factor 1 | between -2 and 0 |
| | BG | -0.85483 | 0.075134 | 0.128297 | Factor 2 | between -1 and 1 |
| | PL | -0.92083 | 0.430553 | 0.233388 | Factor 3 | between -1 and 1 |
| | LV | -0.9523 | 0.068368 | 0.770902 | | |
| | RO | -1.16888 | -0.01142 | 0.773961 | | |
| | EL | -1.17439 | -0.60852 | -0.84041 | | |
| | LT | -1.2402 | -0.29984 | 0.085943 | | |

*Source: Authors' calculation for all countries.*

One may notice very different factorial values according to countries, emphasising various situations in terms of social policies and of the labour market between the investigated countries. Grouping the countries on the basis of the concentration methodology of *k* type, we come to identify five groups of countries, the results

obtained being similar to the results of other analyses performed in the EU member states panel[20]. Maintaining the above-mentioned taxonomy[21], the allocation of these countries according to this analysis is:

**Table 12**

**Grouping the countries according to the concentration method k**

| Bin | Frequency | Flexicurity model | Countries in the group |
|---|---|---|---|
| 0.324948 | 9 | Eastern and Central European | CZ, SK, EE, LV, PL, BG, RO, LT, EL |
| 0.615799 | 3 | Mediterranean | IT, ES, PT |
| 0.906651 | 2 | Anglo-Saxon | IE, UK |
| 1.197502 | 7 | Continental | DE, BE, FR, AT, SL |
| More | 4 | Nordic | DK, SV, NL, FL |

*Source: According to authors' calculations based on average and variance.*

Te graphic representation of grouping the countries is based on the correlations between essential factors, namely:

**Factor 1** – Advanced forms of internal flexibility and security and **Factor 2** – External flexibility;

**Factor 1** – Advanced forms of internal flexibility and security and **Factor 3** – Basic forms of functional flexibility.

**Figure 7**

**Grouping the countries according to Factor 1 – Advanced forms of internal flexibility and security and Factor 2 – Basic forms of external flexibility**
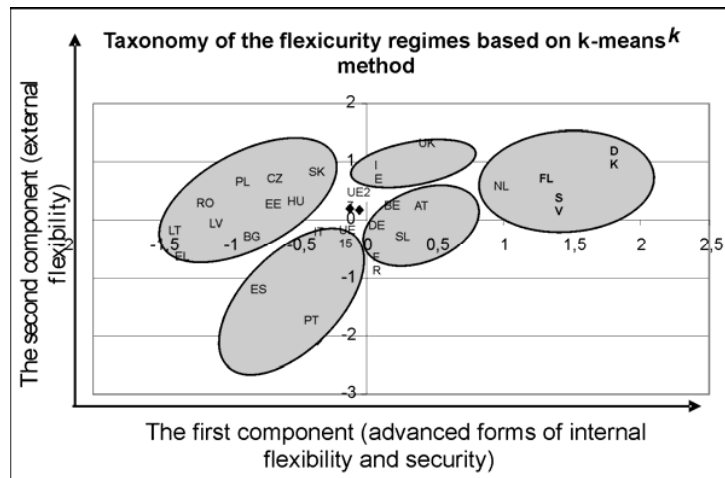


*Source: Authors' calculation based EWCS.*

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[20] *European Commission,* Employment in Europe 2006 and 2007.

[21] *Boeri (2003).*

The circles in the representation delimitate the groups of countries according to the *k* concentration method as presented in Table 11.

The comparative analysis confirms the results obtained by the *k* concentration method in identifying the groups of countries. In both correlations, the Eastern and Central European group of countries includes the largest number of countries. On this position, the aspects that characterize Romania are: ***low internal flexibility, low security, external flexibility on the middle European line.***

**Figure 8**

**Grouping the countries according to Factor 1 – Advanced forms of internal flexibility and security and Factor 3 – Basic forms of functional flexibility**
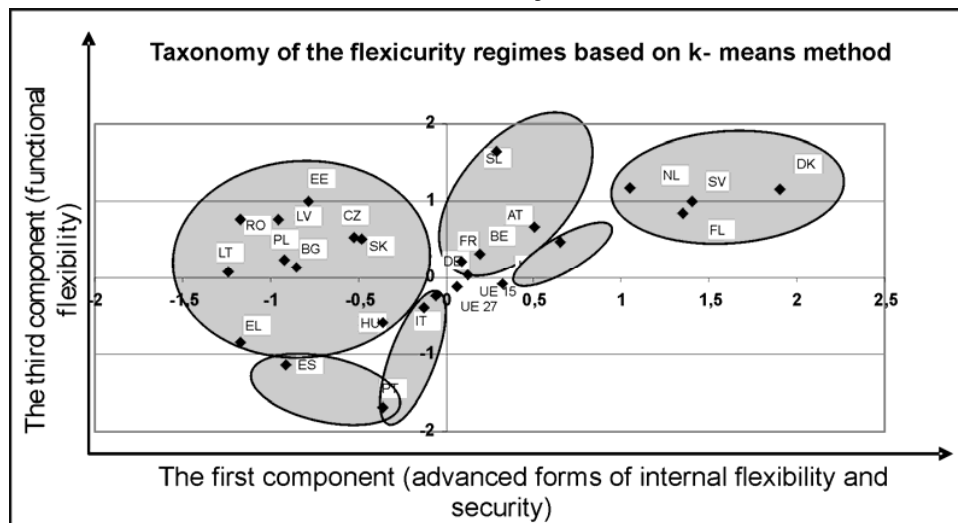


*Source: Authors' calculation based on EWCS. data.*

The graph indicates a positive positioning of Romania in terms of functional flexibility, together with other Central and Eastern European countries.

# 3. Conclusions

As it was expected, there are huge differences between the EU27 member states regarding the performance of their labour markets.

Te poorest performances are recorded by the Eastern and Central European countries, which include seven member states since 2004, as well as the newest member states, Romania and Bulgaria. In general, their labour market is a rigid one, characterised by low mobility, high long-term unemployment rate and low employment rate for the population aged 55 and over. Also, these countries are facing low social

protection, and very low participation in education and training programmes for the population, including lifelong learning.

All these converge to a relatively low adaptability of labour markets, the idea being that there is a need for these countries to focus on labour market flexibility and increase in employment security, in general.

In particular, the following major tasks are identified for Romania:

- To improve the position of employees with fixed period work contracts and to standardise wage remuneration conditions;
- To progress in ensuring employment protection, starting from the basis until ensuring a complete protection, according to the length of employment;
- To facilitate access to vocational training, including the creation of special funds for training, correlated with financial support or fiscal loans;
- Efficient active policies in the field of the labour force, starting from increasing the role of public employment services, the direct support granted to the unemployed or other categories of persons;
- An increased social security, by means of unemployment benefits and stimulating social assistance systems.

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