UNEMPLOYMENT RATE IN THE PERSPECTIVE OF LABOUR FORCE SURVEY AND NATIONAL EMPLOYMENT OFFICES – MEASUREMENT PROBLEM BASED ON THE EXAMPLE OF POLISH REGIONS

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Abstract

The algorithm for measuring many economic phenomena can be formulated in many ways. Unemployment rate constitutes an excellent example in this matter. Its basic variant is defined as the quotient of unemployed people number and the working population (unemployed and employed), however, sometimes it is indicated that this relationship is based on the number of unemployed people and the production age population. Solving this alternative does not seem difficult. Adopting conventional definitions of unemployment rate components is much more complicated, i.e. the definition of an unemployed and an employed person. Different interpretations of meanings ingrained in these concepts result in an indicator value variation which, by assumption, is supposed to describe accurately the intensity of unemployment phenomenon in a given population. This problem is well visible based on the example of Polish regions (unemployment rate measurement within the framework of Labour Force Survey and national employment offices). Therefore, it seems founded to pose a question – what should be done to make national and/or international unemployment statistics more credible? An attempt to solve this problem determines the logical sequence of the discussion presented in the hereby paper (problem identification – recommended solutions).

Key words: unemployment rate, unemployment, Labour Force Survey

JEL Code: J 21, J 40, R 23

Introduction

An adequate measure selection is of significant importance in the sequence of activities focused on determining the intensity of forced occupational inactivity (unemployment) with reference to a

particular population. This problem comes down to identifying the relationship describing unemployment rate, defining concepts present in its formula and indicating data collection methods, as well as their origin sources. Conventional and also different solutions to these issues are translated into various approaches to economic reality which, in fact, can present only one particular state. Capturing it is extremely difficult and associated with permanent investigation of new measurement methods (Marelli et al., 2012; Tyrowicz&Wójcik, 2010; Shorrocks, 2009). The hereby article expands on this idea, the purpose of which is to assess the adopted solutions in terms of determining the registered unemployment rate and indicating recommended directions of changes within the framework of Labour Force Survey.

1. Unemployment rate –methodological aspects

Unemployment rate identifies the intensity of forced occupational inactivity phenomenon in a given population. In its basic variant it is defined as the quotient of unemployed people number and the working population (unemployed and employed persons), however, sometimes it is indicated that this relationship is based on the number of unemployed people and the production age population. Solving this issue does not require any broader discussion, since the group of production age population covers – apart from the unemployed and employed persons – also the occupationally passive population, i.e. the unemployed and not seeking employment as resulting from their own choice. Including it in the algorithm used for determining the unemployment rate would mean presenting the distorted image of actual reality (lowering the real indicator value). Therefore an axiom should be adopted that unemployment intensity in a given population can be presented in the form of the below formula:

$$\text{unemployment rate} = \frac{\text{number of unemployed}}{\text{number of working population}} \cdot 100 \quad (1)$$

$$\text{number of working population} = \text{number of working population} + \text{number of unemployed population} \quad (2)$$

Such certainty, however, does not solve all problems, since the formula numerator and denominator (1) include numbers the values of which are correlated with the method for defining both employed and unemployed population, or their phrasing (working population), and these terms have not been clearly defined.

Labour Force Survey (LFS) assumes that the working population covers the part aged 15 and over of the society and during the week under analysis (*Labour force survey* …, 2014):

- earned the salary or income from work performed as: hired work in an owned or rented agricultural holding, or resulting from running one's own business outside the farming sector,
- helped in running a family agricultural holding, or a family business without receiving any remuneration from such work,
- was working in the above-mentioned scope for at least 1 hour,
- had a job, however, was not performing it due to an illness, maternity leave, paternal leave or vacation, or for some other reasons, however, the break in performing work was not longer than 3 months excluding hired workers, if they have received not less than 50% of their current remuneration,
- was learning a profession or training for a specific job based on agreements with companies or natural persons and, at the same time, was receiving remuneration.

The above listed criteria do not cover the unemployed population. These are individuals aged 15 -74 who meet three conditions altogether, i.e. were not working in the period of the week under analysis, were actively seeking employment for 4 weeks (including the analysed week) and were ready to undertake employment within 14 days after the analysed week (*Labour force survey* …, 2014).

The presented labour force definitions (working population, i.e. the employed and unemployed) are not respected while determining the registered unemployment rate. Following this procedure it has been adopted that the unemployed represent persons, registered in accordance with a given country legislation, as the individuals seeking employment. In Poland these issues are provided for by the Act of 20th April 2004 on the promotion of employment and labour market institutions. In accordance with the nomenclature used in this Act an unemployed person is the one who was continuously employed through the period of at least 6 months within the territory of the Republic of Poland immediately prior to registration in an employment office, not employed and not performing any paid work, capable and ready to undertake fulltime employment applicable in a given occupation or service, or other paid work (or a disabled person – capable and ready to undertake employment in at least half of this working time), not learning at school, excluding those learning in a school for adults (…), registered in the district

employment office adequate for the permanent or temporary place of residence, if, among others he/she:

- "is 18 years of age,
- did not reach the retirement age (…),
- did not acquire the right for pension or annuity due to incapacity for work (…),
- is not an owner or holder of an agricultural property (…),
- did not submit the application for entry into the business register (…),
- does not remain under temporary arrest or does not serve a prison sentence (…),
- does not earn monthly income in the amount exceeding half of the minimum remuneration for work (…),
- does not receive any permanent benefit based on the social welfare provisions (…)"(Act of 20th April 2004)[1].

The definition of an employed person is also approached differently. While determining the employment rate Polish statistics does not specify the semantic interpretation of the discussed term. The estimations cover the number of civilian working population only, i.e. working people (in public and private sector entities, excluding those in active military service and the employees of budgetary units performing activities in the area of national defence and public safety, however, covering those working in individual agricultural holdings based on the census results) and also the unemployed[2]. These data are not published and used only for unemployment rate calculation (*Registered unemployment* …, 2014).

The differences in labour force (working population) defining and/or its components do not facilitate the transparency of conducted research.

2. Unemployment rate in Polish regions – alternative measurements and their imperfections

The intensity of forced occupational inactivity phenomenon in the population of Polish regions is determined using the analyses conducted within the framework of Labour Force Survey and the

[1]The provisions of the Act are quoted to the extent relevant to the conducted studies.
[2]The number of unemployed is determined based on the registers run in accordance with the Act of 20th April 2004 on the promotion of employment and labour market institutions. Therefore the estimations cover the number of working population only.

estimations made by the Central Statistical Office and also the data provided by employment offices (tab. 1.).

Tab. 1: Registered unemployment rate and according to LFS in Polish regions

Region	2009		2010		2011		2012		2013	
	RUR	LFS	RUR	LFS	RUR	LFS	RUR	LFS	RUR	LFS
Dolnośląskie	12,8	10,1	13,1	11,3	12,4	10,6	13,5	11,1	13,1	11,3
Kujawsko-Pomorskie	16,2	10,4	17,0	10,6	17,0	11,0	18,1	11,8	18,2	12,4
Lubelskie	12,9	9,7	13,1	9,9	13,2	10,3	14,2	10,5	14,4	10,3
Lubuskie	16,2	9,6	15,5	10,5	15,4	9,5	15,9	9,0	15,7	9,6
Łódzkie	11,9	7,6	12,2	9,2	12,9	9,3	14,0	11,0	14,1	11,1
Małopolskie	9,7	8,0	10,4	9,1	10,5	9,4	11,4	10,4	11,5	10,8
Mazowieckie	9,0	6,0	9,7	7,4	9,8	7,9	10,7	8,0	11,1	8,0
Opolskie	12,9	9,8	13,6	9,7	13,3	9,3	14,4	9,5	14,2	9,4
Podkarpackie	15,9	10,0	15,4	11,6	15,5	12,4	16,4	13,2	16,3	14,3
Podlaskie	12,8	7,1	13,8	10,2	14,1	9,2	14,7	9,3	15,1	9,9
Pomorskie	11,9	6,4	12,3	9,3	12,5	8,5	13,4	9,6	13,2	10,1
Śląskie	9,4	6,7	10,0	9,1	10,2	9,2	11,1	9,4	11,3	9,7
Świętokrzyskie	15,1	10,9	15,2	12,0	15,2	12,9	16,0	13,1	16,6	13,0
Warmińsko-Mazurskie	20,7	8,5	20,0	9,7	20,2	9,7	21,3	11,1	21,6	11,4
Wielkopolskie	9,2	7,5	9,2	8,7	9,1	8,7	9,8	8,5	9,6	8,8
Zachodniopomorskie	17,1	10,3	17,8	12,4	17,6	11,8	18,2	11,0	18,0	10,0

Legend:
RUR – registered unemployment rate
LFS – unemployment rate according to Labour Force Survey
Source: authors' estimations based on the Local Data Bank, http://stat.gov.pl/bdl, 27.03.2015

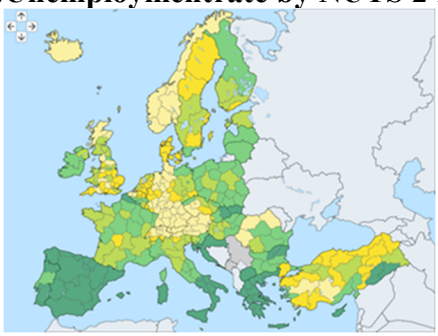
The differently estimated unemployment rates result in such diversified values (see e.g. Warmińsko-Mazurskie region) that a question should be asked which of them provides a reliable picture of the discussed phenomenon intensity within the populations under analysis?

The registered unemployment rate is not free from imperfections. The working population (unemployed) is registered and estimated (employed). It does not cover those involved in defence or public safety, although in fact they represent the employed population. The data covering the unemployed and employed are collected using different methods (in case of the unemployed their location place is the place of residence or stay, whereas in case of the employed – their place of employment). Moreover, the fact of unemployed population registration does not decide about an accurate measurement of their collection reflecting actual reality. It frequently happens that employment offices register individuals who are actually employed, i.e. run their own, illegal business, or are employed without a documented employment relationship(Dimova&Nordman, 2014; Barnichon&Nekarda, 2012). On the other hand, they do not provide data for persons seeking employment who, for various reasons, do not want to take advantage of the support

offered by public employment services (e.g. believing in one's own possibilities for occupational activation, or quite the contrary – the feeling of helplessness and hopelessness resulting in occupational inactivity combined with social exclusion), or they are excluded from it since they fail to meet particular criteria of the conditionally offered support (e.g. continuous employment for the period of at least 6 months, failing to meet an employment office requirements by not responding to its requests for appearance).

Some of these defects are taken care of by the research methodology within the framework of Labour Force Survey. Its algorithm for unemployment rate determining does not focus on whether an employed individual has signed a legal work contract or whether an unemployed person, seeking employment, has been registered as unemployed in a relevant employment office (the actual rather than formal occupational situation is analysed). The correctly conducted surveys are flawed with a slight error and, what is important, comparable in an international regional space. (Fig. 1.).

Fig. 1:Unemploymentrate by NUTS 2 regions (31.12.2013)



Legend	Cases
2.5 to 5.4	65
5.4 to 7.2	61
7.2 to 9.5	63
9.5 to 14.4	63
14.4 to 36.2	61
Data not available	1

Source: Eurostat, http://ec.europa.eu/eurostat/en/data/database, 01-04-2015

It should, however, be remembered that LFS methodology is based on the definitions of working population, i.e. the employed and the unemployed, adopted at the 13th International Conference of Labor Statisticians (1982 with later amendments) and recommended for application by the International Labor Organization (Valticos, 1996). These definitions, even though generally applied, seem to identify both the unemployed and the employed incorrectly. For example, the first listed group does not cover those occupationally inactive, who do not seek employment, since they are convinced that they will not find it (discouraged, feeling hopeless and helpless). Among the employed ones, on the other hand, household members are listed who support running a family agricultural holding or a family business and do not receive any remuneration for such work (it could, in fact, be regarded as a hidden form of unemployment,

especially among teenagers), and also those "employed" for 1 hour in the analyzed week (with the statutory 40-hour working week!). Interpretational doubts can also be raised by the condition for earning a wage or an income from the work performed in the analyzed week (hired work in their own or rented agricultural holding, or resulting from running their own business outside the farming sector). In such perspective, a person performing work without earning any income (e.g. incurring a loss in running a business) should not be referred to as an employed person. Moreover, such individual can neither be qualified as an unemployed person, nor as an occupationally passive one. It should also be observed, that income (alternatively earnings) does not always decide about the qualification in the employed group. One can remain employed working without any remuneration in a family business, however, one cannot be employed learning a job, or going through training for a particular work without receiving any remuneration for that. Moreover, the methodological assumptionsadopted in the study excludesome categories of persons identified as employed in employment reporting from the group of employed population, including e.g. the employed accommodated in hotels for company staff, or those working abroad for Polish employers. Such curtailment has its negative counterpart, since the employed cover those employed full or part time, whereas part time can take the form of hidden unemployment (Friedman, 2014; Pastore, 2012; Pedersen & Schmidt, 2011).

The imperfections related to registered unemployment rate and according to LFS seem the sufficient reason to suggest new solutions in this matter.

3. Unemployment rate – essential directions for measurement modification

Unemployment rate is supposed to define the actual intensity of forced occupational inactivity phenomenon in a given population. This postulate, as it has been presented, does not cover the relation between the number of the employed and the working population specified using employment offices' data (registered unemployment), or information collected based on a survey (LFS).

Higher accuracy of unemployment rate measurement is related to the improvement of its calculation algorithms. In this process the new and adjusted to reality definitions of the unemployed and the working population are of key significance (King & Morley, 2007). In legal terms the definition of an unemployed person from an unemployed one entitled to benefits should be clearly distinuguished. This shall result in meaningless criteria disappearance, such as e.g.

continuous employment in a particular period prior to registration in an employment office. A transparent definition of a working person, which is carefully avoided in both legal provisions and statistical research on registered unemployment rate, could turn out valuable and useful. In a sense these terms (an unemployed person and an employed one) should correspond to questions asked within the framework of LFS.

In LFS research it seems founded to determine whether the individuals aged 15-74[3] during the week under analysis:

1. were self-employed (were running their own business) regardless of their working time,
2. were helping in running a family business, considering it an adequate alternative of a different employment form (hired work or self-employment) regardless of their working time,
3. were employed as a full-time or part-time hired worker (specifying their employment part, e.g. ¼, ½, ¾, if its fraction did not result from their own choice),
4. had a job (specifying their employment part - ¼, ½, ¾, 1, if its fraction did not result from personal decisions), however, did not perform this job due to their own choice (e.g. maternity leave, vacation) or for other, random reasons (e.g. illness, compulsory, paid leave following the principle that the remuneration in relation to the previously received salary is defined by the employment part),
5. were not the working individuals (in accordance with points 1-4),
6. were willing and ready to take up a job.

Answers to the above questions seem to provide a reliable definition of the group of the working and the unemployed population. However, one should keep in mind that in this way determined e.g. decreasing unemployment rate does not solve all the socio-economic problems, since even the elimination of forced occupational inactivity phenomenon is not identical with the elimination of poverty.

Conclusions

The objective picture of actual reality (registered interest rate) does not have to coincide with subjective perceptions of respondents (LFS), which results from the limited substitutability of

[3]The adopted age range is recommended by Eurostat in identifying the unemployed. The same age range should be considered while identifying the employed persons. Otherwise there is a probability of an actual unemployment rate underestimation.

registration-estimation and survey based research results. It is, however, not the only reason of suchdeviations, recorded in Polish regions. They primarily result from the radically different definitions of the unemployed and the working population, or their phrasing (occupationally active population). Their, even slight, terminological consistency should define the indicated directions for changes in the algorithm of unemployment rate measurement. The discussion presented in the hereby article should turn useful in the analyzed subject matter which, following the authors' intention, can become an incentive for a more extensive debate.

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