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Implementation experiences of the supplementary indicators on unemployment in Germany – Are they really relevant?

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1 The supplementary indicators: underemployment and potential additional labour force (PAF)

In 2011, the indicators “underemployment” and “potential additional labour force (PAF)” were launched in the European Statistical System (ESS) to supplement the ILO unemployment rate. After the implementation of a task force in early 2009 and a long debate with the EU member states there was an agreement how to supplement the unemployment rate and how to define these new indicators.

Underemployed persons are in employment, but they have the wish to work more hours and are available for additional work within two weeks. The indicator “underemployment” is subdivided into underemployed part-time workers and underemployed full-time workers. The last one is considered as an optional indicator.

Persons who are neither in employment nor unemployed according to the labour force concept are the so-called “economically inactive population”. Part of these persons can be classified under the potential additional labour force PAF because they are seen as having a close attachment to the labour market.

The potential additional labour force PAF comprises persons seeking work but not immediately available (PAF category A) and persons available to work but not seeking (PAF category B). The first group consists of persons who, though looking for a job, are currently not available in the short term (within two weeks) for taking up a job. The second group includes persons who are not looking for work for various reasons, although they generally would like to work and are available for work.

All supplementary indicators cover only persons aged 15 to 74 years. The reason for this is that in the European Union the ILO definition of unemployment is operationalized for this age group. For further aspects on the concrete operationalization of underemployment and potential additional labour force within the LFS data set see annex 1.

The Federal Statistical Office (Destatis) described already in 2006 the need for statistics that supplement the main indicators “employment” and “unemployment” within the (ILO) labour force framework. The first supplementary indicator which Destatis focused on was underemployment. Since June 2010 Destatis publishes not only analyses and empirical results for underemployment but also for the potential additional labour force.²

In the meantime, we further analysed the question which different additional indicators are generally needed to provide a (more) complete picture of the labour market. To answer this question, theoretically thoughts on the purpose of labour market statistics as well as the analysis of empirical results need to be considered. Both can help to find out whether and to what extent the existing supplementary indicators “underemployment”

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² See RENGERS (2006, 2009, 2010, 2012) and DESTATIS (2010, 2011, 2012).

and “potential additional labour force (PAF)” should be further developed or be complemented with other additional indicators.

All statistics in this publication are derived from the European Union Labour Force Survey (EU-LFS). Please note that this paper does not focus on the influence of question wording and question order on the empirical results. The operationalization referred to in this paper is the one agreed at the meeting of the Directors of Social Statistics group (DSS) in March 2011.

2 Purpose of labour market statistics

The purpose of labour market statistics consists in general of providing empirical knowledge about the labour market. However, different points of view of single science disciplines and different intended purposes lead to the fact that the one and same labour market statistic cannot fulfil all demands simultaneously.

The International Labour Organisation’s (ILO) labour force framework is originally based on an economic perspective and therefore especially in the mind of economists. Social scientists focus more on socio and socio-political aspects of the labour market. For example the statistical framework for measuring quality of employment is part of this last-mentioned point of view (see paper from Thomas Körner presented at this LFS-Workshop).

However, even if the labour market should be analysed under the economic perspective, the choice of “suitable” indicators decisively depends on the current labour market situation. There are two totally different current labour market situations to be distinguished:

(1) ***Lack of jobs:***

How many jobs must be created (to make efficient use of the entire labour force)?

(2) ***Lack of manpower:***

Which number in manpower or which manpower volume (manpower in persons or working hours) can be activated (to fulfill the economy’s need for productive capacity)?

In situations when the labour supply is bigger than the labour demand, the main purpose is to determine the size of *lack of jobs*. Additional indicators should enclose merely the people who are “automatically” activated for the labour market due to economic changes (e.g. changes in business cycles) with unchanged other general conditions.

In the opposite situation when the labour demand is bigger than the labour supply, the main purpose is to determine the size of *lack of manpower*. Additional indicators should enclose “every” possible manpower potential (manpower in person or working hours). At the forefront is the question, how high the potential is which can be activated due to changing general conditions (in short-term or at least in the medium term).

3 Underemployment

In Germany, in 2011, the size of the considered population aged 15 to 74 years was about 63.031 million persons. These included 39.638 million persons in employment (10.501 million part-time workers and 29.137 million full-time workers). The number of unemployed stood at 2.501 million. The employment rate of those aged 15 to 74 years was 62.9% and the unemployment rate for this age group was about 5.9%

3.695 million and respectively 9.3 % of all employed persons, regardless of whether they have a part-time or a full-time job, indicated to be underemployed in 2011. Among all persons in employment who indicated to be underemployed in 2011, only slightly more than half (1.962 of 3.695 million or 53.1%) had a part-time job (see table 1).

Table 1: Desired working hours of underemployed or overemployed, LFS 2011

15 to 74-years ¹⁾	Germany					
	total		men		women	
	Number in 1,000	Desired change in weekly working hours, per capita	Number in 1,000	Desired change in weekly working hours, per capita	Number in 1,000	Desired change in weekly working hours, per capita
Underemployed	3,695	11.5	1,806	10.8	1,889	12.1
in part-time ²⁾	1,962	15.5	549	19.0	1,414	14.1
in full-time ²⁾	1,732	6.9	1,257	7.2	475	6.2
Overemployed	929	- 11.7	516	- 12.3	412	- 11.0
in part-time ²⁾	81	- 7.8	12	- 9.5	69	- 7.5
in full-time ²⁾	848	- 12.1	504	- 12.3	344	- 11.7

1) Persons in households aged 15 to 74 years, excluding persons performing compulsory military or civilian service.

2) The distinction between full-time or part-time employment is based on the respondents' assessment. Until now the boundary between usually worked hours of full-time and part-time workers in Germany is in fact 32 weekly hours. See DESTATIS (2012).

It is surprising, that on the other side 46.8% of all 3.695 million underemployed persons have already a full-time job. Among men the share is even 69.6%. There is here consequently the need for additional explanations and evaluations. It can be assumed that underemployed full-time workers would like to increase their working hours only to a limited extend and that there are significant differences compared to the characteristics of underemployed part-time workers. Perhaps these surprising results can be relativized from that perspective. Thus to check this assumption, the desired working hours of all underemployed persons were examined.

At the same time, the high number of underemployed raises the question about the counterpart "overemployment". How many persons in employment would like to decrease their normal weekly working hours, with a corresponding *loss* in earnings? And how many hours a week would overemployed persons like to work less? What is the situation like, if all wishes about weekly hours could be fulfilled? Would the whole economy work more or less hours net? An answer of this question is of high interest in a labour market situation with a looming lack of manpower.

Table 1 shows the results of this additional analysis. In 2011 the 3.695 million underemployed are counterbalanced by fewer than 1 million overemployed. Underemployed part-time workers wish to increase their weekly working hours by an average 15.5 hours, underemployed full-time workers by 6.9 hours. Persons in employment who wish to work less hours are predominantly full-time workers (848,000 of 929,000). They would like to reduce their weekly working hours by an average 12.1 hours. Persons in employment who already work part-time but would like to reduce their weekly hours nevertheless

wish an average of 7.8 hours less. This means that, altogether, the number of persons in employment wishing to work more is markedly larger than those wishing to work less. In 2011 the net effect of all desired working hours of under- or overemployed persons is 31.6 million working hours per week. In purely mathematical terms, the unused labour potential is about 790,000 full-time positions with a weekly working hour of 40 hours.

So the empirical results for Germany and a labour market situation with the looming lack of manpower, where “every” possible manpower is looking for, deliver the following key messages concerning a first assessment of the supplementary indicator “underemployment“:

- Both indicators, that is “underemployed part-time workers” as well as “underemployed full-time workers” should be analysed. It is also helpful to subdivide all groups by gender, because part-time work is (still) traditionally female-dominated.
- The indicator “underemployment” should be complemented with “overemployment”. Overemployed persons are part-time or full-time employed persons who wish to work usually less hours per week (with a corresponding decreasing salary).
- Both indicators „underemployment“ and „overemployment“ should be complemented with “the desired change in weekly working hours” (per capita). This is necessary because the desired changes (plus or minus) in weekly working hours of part-time and full-time workers are too different. For a more complete picture of the labour market there is the need of a kind of volume measure (for example in working hours).

4 Potential additional labour force (PAF)

In Germany one third (20.892 millions) of the population aged 15 to 74 years was economical inactive in 2011 and belongs therefore to the so-called economically inactive population. The supplementary indicator "potential additional labour force, PAF" tries to filter out those persons from this group who have a stronger attachment to the labour market than other economically inactive persons. As table 2 shows, 578,000 persons are seeking work but not immediately available to start a job. On the other hand, 590,000 persons are not seeking, but want to work and are available to work. In total, there are 1.168 million people who can be regarded as potential additional labour force (PAF). Conversely, this means, that in total 19.723 million people and accordingly 94.4 percent over the economically inactive population aged 15 to 74 are not included in this supplementary indicator PAF. However, perhaps within this group some people have also a stronger attachment to the labour market than others? After all there are 1.163 million inactive persons not available to work and not seeking but wanting to work. Those *other*, i.e. not PAF, economically inactive persons *with* willingness to work account for 5.6 percent of all economically inactive persons. Hence it is a similar size to the whole “potential additional labour force”. A subdivision by three rough age groups young (15-24), middle (25-59) and older (60-74) shows that especially the younger and middle-aged economically inactive persons with willingness to work are outside the indicator PAF. There are even 14.8% of economically inactive persons aged 25 to 59 years with willingness to work, a share higher than from PAF (13.3%).

Back to the (empirical) analysis of the supplementary indicator PAF: Gender and age have the strongest influence on the reasons for economical inactivity (non-availability and non-seeking respectively) in Germany. In general younger persons in PAF aged 15 to 24 are economically inactive because they are in education or training, no gender differences are shown. In the middle-aged sex is determining the main reason for inactivity: for women aged 25 to 59 other personal or family responsibilities, to look after children,

people in need of care, disabled people are the main reason for inactivity. Whereas inactivity for family reasons is in practice irrelevant for middle-aged men. Instead of that “illness or inability to work” and “other reasons” are the most frequently answers mentioned in the survey. For older persons (60-74) sex matters again little. For example, both gender in PAF category B “persons available to work but not seeking” say, they do not search for work due to retirement. One fifth of the older persons in PAF category B stopped or did not start any search activity because they did not believe that the labour market offers job opportunities for them (“discouraged workers”).

So the empirical results for Germany and a labour market situation with a public debate claiming a looming lack of manpower, where “every” possible manpower is looking for, deliver the following key messages concerning a first assessment of the supplementary indicator “potential additional labour force“:

- For an exhaustive account of all possibilities to close a lack of manpower by mobilisation of economically inactive population, it is not enough to focus on the supplementary indicator “potential additional labour force, PAF” only. The indicator PAF should be complemented with „other economically inactive persons with willingness to work“.
- All indicators, that is “PAF” and “other economically inactive persons with willingness to work” should be subdivided by gender and at least three age-groups to get more information about the age-specific and gender-specific reasons of economical inactivity.
- It is necessary to know more about the reasons for inactivity. Though besides publishing the indicators „persons seeking work but not immediately available“ and „persons available to work but not seeking“ publishing the corresponding “reasons for not seeking employment” (LFS-variable SEEKREAS) and the “main reason for not being available to start working within two weeks” (LFS-variable AVAIREAS) is desirable.
- Perhaps it is possible to harmonize the characteristic values of the variables SEEKREAS and AVAIREAS, so that the whole PAF can be evaluated in relation to the reasons for the economic inactivity.

Table 2: Economically inactive persons, LFS 2011

Germany (Numbers in 1,000)	persons aged			
	15-74 (total)	15-24 (young)	25-59 (middle)	60-74 (older)
Economically inactive population	20,892	4,292	5,403	11,197
Potential additional labour force (PAF)	1,168	265	719	184
persons seeking work but not immediately available	578	146	388	44
persons available to work but not seeking	590	119	331	140
Other economically inactive p. <u>with</u> willingness to work	1,163	264	800	99
Other economically inactive p. <u>without</u> willingness to work	18,560	3,763	3,884	10,913
% over economically inactive population				
Potential additional labour force (PAF)	5.6	6.2	13.3	1.6
persons seeking work but not immediately available	2.8	3.4	7.2	0.4
persons available to work but not seeking	2.8	2.8	6.1	1.3
Other economically inactive p. <u>with</u> willingness to work	5.6	6.1	14.8	0.9

5 References

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Annex 1: Operationalization of Underemployment and Potential Additional Labour Force

Underemployed part-time workers:

Number of persons employed (ILOSTAT='1'), working part-time (FTPT='2'), wishing to work more (WISHMORE='1') and available to work more (AVAILBLE='1').

Underemployed full-time workers (optional indicator):

Number of persons employed (ILOSTAT='1'), working full-time (FTPT='1'), wishing to work more (WISHMORE='1') and available to work more (AVAILBLE='1').

Persons seeking work but not immediately available: This is the sum of:

- Number of inactive persons actively seeking who are not available to work in the next two weeks, i.e. (ILOSTAT='3'), (SEEKWORK='4'), (AVAILBLE='2')
- Passive jobseekers or jobseekers not indicating method (ILOSTAT='3'), (SEEKWORK='4'), (AVAILBLE='1')
- Number of inactive persons who found a job starting < 3 months and are not available i.e. (ILOSTAT='3'), (SEEKWORK='1'), (AVAILBLE='2')
- Number of inactive persons who found a job starting > 3 months, i.e. (ILOSTAT='3'), (SEEKWORK='2').

Persons available to work but not seeking: number of inactive persons available to work and not seeking but wanting to work, i.e. (ILOSTAT='3'), (AVAILBLE='1'), (SEEKWORK='3'), (WANTWORK='1')

Source: Eurostat (2011), Doc. Eurostat/F/11/DSS/01/2.2EN, Annex 1: "Item 2.2: Proposal for a set of indicators to supplement the ILO unemployment rate", MEETING OF THE EUROPEAN DIRECTORS OF SOCIAL STATISTICS, LUXEMBOURG, 21-22 MARCH 2011