

The Youth Guarantee in Europe:

Estimating costs and number of beneficiaries

1. OVERVIEW

In July 2012, the International Labour Office (ILO) estimated the costs of introducing a youth guarantee in the Eurozone at 0.45 per cent of government expenditure (€21 billion).[1] Such estimate was based on the Swedish model of special job-search support, which had an annual disbursement of €6,000 per young participant plus 10 per cent administrative costs for the Public Employment Service (PES) to manage the programme.[2] The overall amount of €21 billion was derived by multiplying the cost of the guarantee per individual with the total stock of young unemployed in the Eurozone (aged 15-24) as detected by the annual Labour Force Survey.

Between the end of 2012 and the beginning of 2013, the ILO conducted another exercise to estimate the cost of the guarantee on the basis of a sample of countries (the mix of countries identified on the basis of available data were Belgium, Greece, France, Ireland, Netherlands, Portugal and Spain).[3] This work was undertaken in the context of the ILO review of existing youth guarantees or similar programmes (i.e. Australia, Austria, Denmark, Finland, Germany, Netherlands, Norway, Poland and Sweden) that distilled a number of lessons stemming from implementation. These lessons are summarized in a policy brief of the ILO that was finalized in March 2013.[4]

The latter estimates were conducted on the basis of the and actual costs for the implementation of measures that were likely to be the most prominent in the youth guarantee recommendation that was under development in EU institutions.

The estimates indicated a range of costs that varied from about 0.5 and 1.5 per cent of GDP. They were based on data and information available from the databases of the European Commission – particularly EUROSTAT. They included data on youth unemployment stock for the cohorts 15-24 and 15-29 (from labour force survey of the second quarter 2012), minimum wages (year 2012), unemployment benefit (year 2010), cost of training programmes and number of beneficiaries (labour market policy database

[1] See International Institute for Labour Studies, *Eurozone job crisis: Trends and policy responses*, Table 4, page 48, ILO, Geneva, July 2012.

[2] These data were taken from the report of the internal evaluation of the Swedish youth guarantee undertaken by the Swedish PES. Although not independently conducted by external evaluators, this is the only evaluation of youth guarantee that is available.

[3] Of the seven countries initially identified for running the estimate, Greece was finally not retained as the available costs of labour market training measures were nearly the double than those of the country with the highest training costs (this may be due to an error in the calculation of the number of participants or on the determination of the annual cost of training programmes). The estimate of the costs for introducing subsidized employment is also available for this country.

[4] See ILO, *Youth guarantees: A response to the youth employment crisis*?, Employment Policy Brief, ILO, Geneva, 2013.

– year 2010). The 2012 estimates of Gross Domestic Product (GDP) were derived from the databases of the Organisation for Economic Cooperation and Development (OECD).

After the adoption of the Recommendation of the Council of the European Union (23 April 2013), the ILO developed an advisory note to support member States that were engaged in the development of their youth guarantee schemes and plans. This methodology is based on the analysis of labour market flows instead of the stocks of young unemployed. It was developed by taking into account the provisions indicated in the above-mentioned Recommendation that apply to young people "within a period of four months of becoming unemployed or leaving formal education". [5]

2. METHODOLOGIES FOR ESTIMATING COSTS OF LABOUR MARKET PROGRAMMES

The methodologies for estimating the costs of labour market programmes are usually applied to country-level realities and are based on costs of similar programmes that were implemented in the past in the same country. They are commonly used to determine the budgetary allocation that would be required to achieve pre-established employment targets and to conduct analysis of cost-effectiveness of interventions that are instrumental to determine the mix of measures and inform policy choices.

The estimates conducted by the ILO in July 2012 can be considered a proxy at the EU aggregate level. They were based on the only youth guarantee that underwent an internal evaluation. Although they constitute a good reference, they are context-specific and based on the reality of a relative small country with low stock of unemployed youth and with an established system for the administration of labour market programmes, particularly to young people. This is somehow different from the realities of other EU countries, particularly the Eurozone ones of the South of Europe.

3. AN ILLUSTRATIVE EXAMPLE OF THE APPLICATION OF THE ILO METHODOLOGY FOR COSTING OF LABOUR MARKET INTERVENTIONS ON THE BASIS OF COUNTRY-LEVEL DATA.

As already mentioned in the overview, the estimate of costs of the youth guarantee ranging from about 0.5 to 1.5 per cent of GDP were conducted on the basis of data available from EUROSTAT from the said EU countries.

These estimates were based on a number of assumptions, formulated on the basis of the usual composition of packages of labour market measures that are similar to those included in the guarantee, their share in total programme composition, and the administrative costs that also included the provision of employment services (e.g. job-search skills, career guidance, profiling and employment planning).

This section briefly describes how to conduct estimates on the basis of available data. The methodology can be applied any time, also to update the estimates as new data are made available.

[5] See Council Recommendation of 22 April 2013 on establishing a Youth Guarantee (2013/C 120/01), accessible at http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013H0426(01)&from=EN

a. Estimate of costs for the introduction of subsidized employment

This estimate was conducted on the basis of different scenarios and with the following assumptions

a. Amount of subsidy equalled that of the minimum wage in the country (i.e. 100 per cent of minimum wage) *for a period of 12 months*. This assumption was made by taking into account the type of measure which envisages an employment relationship with duties and entitlements like any other non-subsidized worker in the same occupation and in full respect of the international principle of equal remuneration for work of equal value.

b. Beneficiaries. The number of potential beneficiaries was determined on the basis of alternative scenarios. With respect to age cohorts, a scenario considered the alternative of targeting (i) all unemployed youth aged 15 – 29; or (ii) all unemployed youth aged 15 – 24. The other scenario considered the alternative of targeting only 50 per cent of young unemployed aged (i) 15 – 29; or (ii) 15-24.

c. Administration costs. The overall cost for the administration of subsidized employment programmes was set at 15 per cent of the overall cost of the programme. Administration costs include the costs that Public Employment Services (PES) sustain for screening eligible individuals and partner enterprises; matching individuals with partner enterprises; monitoring of programme performance; and reporting.

The estimates were calculated for the sample of EU countries (Belgium, Ireland, Spain, France, Netherlands and Portugal) on the basis of national data on: (i) number of young (15-24 and 15-29) unemployed (EUROSTAT, Labour Force Survey, second quarter 2012); (ii) GDP level, in billion Euro (OECD, 2012); and (iii) monthly minimum wage (EUROSTAT, 2012).

The formula for the calculation of the percentage of GDP required for implementing the guarantee by including all (15-29 or 15-24) unemployed youth is the following:

The formula for the calculation of the percentage of GDP required for implementing the guarantee by including all (15-29 or 15-24) unemployed youth is the following:

Average annual cost employment subsidy=
[(total unemployed youth*minimum wage*12) + 15%] * 100/Annual GDP

The duration of the programme was set at 12 months, which is the average duration of employment subsidies, excluding any additional obligation placed on employers (see Annex 1 for the table template). The cost under each of the four scenarios was estimated on an annual basis both in billion of Euros and as a percentage of the GDP for each of the EU countries in the sample.

Assuming that the youth guarantee would include only employment subsidies, these costs would range from a minimum of 0.17 per cent to a maximum of 1.73 per cent of GDP.

b. Estimate of costs for the introduction of labour market training

Similarly, the estimate training costs was conducted on the basis of different scenarios and under different assumptions:

a. *Training costs included the average cost of training programmes at national level plus individual compensation* (i.e. 30 per cent of the unemployment benefit) *for a period of 6 months*. This assumption was made by taking into account: (i) the practice of providing individual trainees with a lump sum amount during the training period (individual compensation costs) − usually expressed as a percentage of the average monthly unemployment benefit; (ii) the average cost of training programmes (contracted to private training providers); and (iii) the average duration of training programmes around Europe (six months).

b. *Beneficiaries.* The number of beneficiaries was determined on the basis of alternative scenarios, as above. A scenario considered the alternative of targeting with training programmes: (i) all unemployed youth aged 15 – 29; or (ii) all unemployed youth aged 15 – 24. The other scenario considered the alternative of targeting with training programmes only 50 per cent of young unemployed aged (i) 15 – 29; or (ii) 15-24.

c. *Administration costs.* The overall cost for administering the programme was set at 15 per cent of the overall cost of the programme. Administration costs include the costs that Public Employment Services (PES) sustain for screening eligible individuals and training providers; matching individuals with training providers and training courses; monitoring of programme performance; and reporting.

The estimates were calculated on the basis of national data on: (i) number of young (15-24 and 15-29) unemployed (EUROSTAT, Labour Force Survey, second quarter 2012); (ii) GDP level, in billion Euro (OECD, 2012); (iii) 30 per cent of the average monthly unemployment benefit level (EUROSTAT, 2010); and (iv) annual training cost per person (EUROSTAT, Labour market policy database, 2010) – see Annex II for the table template. The cost under each of the four scenarios was estimated on an annual basis both in billion of Euros and as a percentage of the GDP for each of the EU countries in the sample according to the following formula.

Average annual cost training programmes =
[(total unemployed youth*30% unemployment benefit*6months)+ training cost per person) +15%]*100 /Annual GDP

The costs of introducing a youth guarantee envisaging only training ranged from a minimum of 0.17 per cent to a maximum of 16.7 per cent of GDP.

c. Estimates of costs for the introduction of a package of labour market programmes

The above-mentioned estimates were built on the assumption that national youth guarantees would include only one type of programme, either employment subsidies or training plus provision of employment services (job-search skills, career guidance, profiling, employment planning).

In order to reflect the fact that most EU countries would introduce youth guarantees that comprised a mix of labour market programmes, the estimates further computed the costs for each of four basic scenarios under the assumption that national guarantees would be comprised by an equal share of training and employment subsidies (see Annex III for table template).[6]

The final cost estimates (annual cost in percentage of GDP) thus reflect the introduction of a national youth guarantee that targets all young unemployed aged 15-29 and where 50 per cent of all costs are invested in training programmes, and the remaining 50 per cent is invested in employment subsidies. These final estimates ranged from a minimum of 0.5 per cent of GDP in the Netherlands and Belgium, to a maximum of 1.5 per cent of GDP in Spain for the cohorts 15-29 and from 0.28 in Belgium to a maximum of 1.20 per cent in Portugal for the cohorts 15-24.

Average annual cost youth guarantee =
[(total unemployed youth*50% average annual training cost) + (total unemployed youth* 50% average annual employment subsidy)] *100 /Annual GDP

4. FLOW ANALYSIS TO ESTIMATE THE NUMBER OF POTENTIAL YOUNG BENEFICIARIES FOR THE YOUTH GUARANTEE.

As mentioned is section B of this paper, the cost-estimate produced by the ILO in 2012 for the introduction of a youth guarantee in the EU member States were based on the stock of young unemployed aged 15-24 and 15-29. In order to reflect the provisions of the Recommendation that was adopted on 22 April 2013 (i.e. action within four months of becoming unemployed or leaving formal education), the ILO introduced a new element in the methodology to encompass the analysis of labour market flows (flows in and out or across labour market statuses) – as opposed to the analysis of the stock – in order to estimate the potential pool of young beneficiaries of the guarantee at national level.

The above-mentioned Recommendation encourages member States to include three broad groups of young people (aged 15-24), namely:

a. young people leaving the formal education system (i.e. dropouts and graduates at each level of the education system);

[6] The assumption that Member States would have introduced a balanced mix of subsidies and training is broadly in line with country practice. In most national youth guarantees training and employment subsidies are the prevailing labour market integration measures. However, there are outlier countries such as Portugal, where training programmes comprise over 73 per cent of the overall cost of the youth guarantee.

b. young unemployed, and

c. young people who are inactive, not in education or training, but are willing to work (this group consists mostly of discouraged young workers).

a. Estimates of number of school leavers

In order to estimate the potential number of young school leavers to be included in the guarantee it is necessary to calculate: i) the number of "early" school leavers (which includes dropouts from primary and secondary education and youth leaving school with at most lower secondary education); ii) the annual number of upper secondary education graduates, not enrolling in tertiary education; and iii) the annual number of university graduates (not progressing to post-graduate studies). Not all school leavers, however, will become unemployed or detached from the labour market.

There are two data sources that can be used for the approximation of the annual number of school leavers likely to become eligible under the guarantee: (i) administrative data of the education system; (ii) panel data of the national Labour Force Survey (if the national survey has a rotation sample). The first method (less precise) applies the current unemployment and worker discouragement ratios by level of educational attainment (as measured by the Labour Force Survey) to the total number of young people in each of the three categories of schools leavers (dropouts at each level; secondary education students not progressing to tertiary education; and tertiary education graduates). This method is based on the assumption that the labour market outcomes of the different categories of school leavers remain constant from one year to the next. The second method (more accurate) uses the flow statistics generated by a rotation design in the national Labour Force Survey.[7] The figures (in thousands of young people) by labour market status (employed; unemployed; inactive in-school; and inactive not-in-school) are organized in a matrix over overlapping periods as shown in Table 1 below.

TABLE 1: SCHOOL-TO-WORK FLOWS (LFS ROTATION DESIGN), THOUSANDS

School-to-work flows (15-24 years old)			Year t				
			E_t	U_t	S_t	O_t	Total
Year t-1	Employed	E_{t-1}	380	22	8	19	**429**
	Unemployed	U_{t-1}	19				
	Inactive, at school	S_{t-1}	**8**	**19**	611	**17**	**655**
	Inactive, not at school	O_{t-1}	12	5	56	141	**214**
	Total		**419**	**247**	**675**	**180**	**1,521**

Source: International Labour Office (ILO), 2013. *Data requirements for youth labour market analysis. A training package*, ILO, Geneva, 2014.

The example shows that the total number of school leavers in year $_t$ was 44,000 young persons (the sum of the shaded cells in the third row of the matrix). This number

[7] Whether the country has a Labour Force Survey with a rotation design will need to be checked with the National Statistical Office. In such "rotation" sample designs, a fraction of sample households and persons remain in the sample at different points in time and therefore provide the basis to derive flow data by matching records from successive survey rounds.

includes: (i) 8,000 youth who were in school in year $_{t-1}$ and employed in year $_{t}$; (ii) 19,000 youth who were in school in year $_{t-1}$ and were unemployed in year $_{t}$; and 17,000 who were in school in year $_{t-1}$ and were inactive, but no longer in school, the following year. The likely number of school leavers to be targeted by the youth guarantee on the basis of this example is 19,000 youth (school leavers who become unemployed) plus those who are discouraged workers among the 17,000 youth who remained inactive, but were no longer in school. The number of young discouraged workers can be estimated by disaggregating the information on reasons of inactivity available from the national Labour Force Survey.[8]

b. Estimates of the number of young unemployed

The number of young unemployed likely to become eligible for the guarantee may be estimated by analysing the inflows into unemployment in the period just before the introduction of the guarantee. Such estimates can build either on the quarterly figures of the Labour Force Survey or on the monthly figures of the Public Employment Service (PES) on registered unemployment.

The first step revolves around computing the average (mean) duration of youth unemployment. This calculation serves to understand whether it is likely that all newly unemployed youth will become eligible to participate to the youth guarantee (i.e. the mean duration of youth unemployment exceeds the four month unemployment threshold established by the guarantee) or not.[9] The average (mean) duration of unemployment is the arithmetic average for single months of unemployment for all young people (15-24) that are unemployed according to the labour force survey or on the basis of the PES unemployment register.[10]

The risk of remaining unemployed for longer periods of time compared to the average, however, is determined to a large extent by individual factors (e.g. educational attainment, national origin, prior work experience, sex and geographical location). The identification of those characteristics more likely to influence the probability of young individuals to remain unemployed for more than four months is typically done by using econometric techniques (*probit* model) applied to the micro-data of the Labour Force Survey or on the longitudinal data of the PES register. *Probit* models are normally deployed in econometric profiling methods used to channel (segment) young individuals to different employment services and programme streams according to the labour market barriers (risks) they experience.

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[8] The assumption it that the labour market outcomes for this group of young people will remain constant form one year to the next.

[9] This indicator measures the "current duration" of unemployment rather than the "completed lenght of unemployment spell", because the unemployment spell is captured up to the time of the reference period of the labour force survey, or the time of querying the unemployment database of the PES. There is a general agreement that this indicator tends to underestimate average "completed" duration of unemployment. See Corak M., Heisz A., 1995, *The duration of unemployment: A user guide,* Statistics Canada; Shorrocks A., 2009. *Spell incidence, spell duration and the measurement of unemployment*, Journal of Economic Inequality, 7/2009 and Gradín C., Cantó O., del Río C., 2012 *Unemployment and spell duration during the great recession in the EU*, Universidade Vigo, Working Paper: 12/05. Alternatively, it is possible to use Kaitz's formula to calculate the expected duration of unemployment, namely: $D = U/F$, where D is the expected duration of unemployment for the newly unemployed group; U is the level of unemployment; and F is the size of the newly unemployed group. In a steady state model, the constant level of unemployment is equal to the product of the constant rate of inflow and duration as measured by D. Since the level of unemployment is equal to the inflow recorded at each time of the survey and the remaining members of all previous inflow groups, the formula for duration becomes the ratio of the constant level of unemployment to the constant level of inflows. For a full explanation see Horrigan M.W. 1987. *Time spent unemployed: A new look at data from the Current Population Survey (CPS),* Monthly Labour Review.

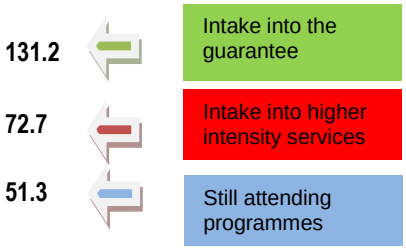
[10] For example, at the end of 2012 the average duration of youth unemployment in EU27 countries was 9.7 months. Average duration of youth unemployment, however, varies largely by country (for instance, in the same year Finland recorded a mean duration of youth unemployment of 3.4 months and the Slovak Republic of 26 months), EUROSTAT, *Detailed annual labour force survey results*, available at http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database.

Once the average duration of unemployment for young people is known, a second calculation is carried out on the same dataset to: (i) estimate more precisely the annual pool of unemployed youth eligible for the guarantee (e.g. all newly unemployed youth within four months from the start of the unemployment spell, with no additional targeting mechanism) and (ii) judge how the intake of young people into the guarantee can be managed and plan the deployment of human and financial resources accordingly.[11] Such estimates are based on the assumption that the youth guarantee follows a three-tier service delivery approach, whereby all eligible youth receive basic employment services in the first three months of the unemployment spell, to then progress to higher intensity services (individual counselling and individual employment planning), and to active labour market/return to education programmes, if unemployment persists beyond the four months threshold.

Table 2 shows the estimates based on the quarterly data of the labour force survey and Table 3 those done on the basis of the monthly inflow figures of the unemployment register.

TABLE 2: YOUTH UNEMPLOYMENT BY DURATION (QUARTERLY LFS, THOUSANDS)

		Year t			
		Q1	Q2	Q3	Q4
1	1-3 months	**34.5**	32.9	32.5	31.3
2	4-6 months	23.4	**26.6**	21.5	24.6
3	7-9 months	21.9	22.9	**22.7**	28.6
4	10-12 months	17.4	34.5	35.6	**21.9**



The quarterly data of the labour force survey on youth unemployment by duration are organized in a matrix as shown in Table 2.[12] Assuming that the youth guarantee starts in the first quarter of year *t*, the number of eligible youth is 34,500 individuals (column 1 row Q1). If the mean duration of unemployment exceeds the four months threshold, all young people with unemployment spells from one to three months need to be included in the guarantee, while young people who are in the stock of unemployed (i.e. those in rows 2, 3 and 4 of Q1) are excluded. In the second quarter, the inflow is of 32,900 young people and so on until the last quarter of the year. By the fourth quarter: (i) 131,200 young unemployed will have been enrolled into the guarantee and will have received basic employment services (i.e. the sum of young people in row 1 from all quarters); (ii) of these, 72,700 will have shifted to higher intensity services (i.e. those in row 2 in the second, third and fourth quarters); and (iii) 51,300 youth will still be attending back-to-school/labour market programmes (this depends on the average duration of the back to school/labour market programmes).

[11] The youth guarantee deals with the inflow of young people into the labour market. Therefore, all those young people that are in the stock of unemployed at the start of the guarantee are excluded from the guarantee and will have to be treated with the standard provision of services and programmes.

[12] Countries that conduct monthly labour force survey can organize data by each month of the year and single month of unemployment spell.

Table 3 below shows the same calculation method applied to the monthly intake into the PES unemployment register.

TABLE 3: REGISTERED YOUTH (15-24) UNEMPLOYMENT BY DURATION, (MONTHLY DATA)

		Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
1	Total	5337	6029	6,077	5778	5,868	5412	5,123	5015	5,581	5,385	4,918	4,886
2	< 1 month	807	658	798	828	956	709	698	782	1343	812	890	986
3	1-2 months	1860	798	658	790	820	900	700	650	770	1168	800	802
4	3-4 months	931	1858	790	655	698	801	896	690	628	700	1008	768
5	5-6 month	981	980	1358	755	650	642	798	850	620	600	650	850
6	7-8 month	397	981	950	1008	750	650	641	790	800	596	550	600
7	9-12 months	209	400	980	900	988	742	650	641	780	769	500	480
8	Low intensity services, monthly workload	807	1,456	2,246	2,273	2,474	2,410	2,294	2,122	2,741	2,680	2,698	2,556
9	High intensity services, monthly workload	.....	....	.....	755	1,400	2,034	2,089	2,281	2,200	1,965	1,700	1,930

The total number of young unemployed who become eligible for the guarantee is 7,579 young individuals annually (i.e. the sum of monthly inflows shown in row 2 of the table).[13] The number of young unemployed progressing to higher-intensity services is 6,415 (the sum of the shaded areas of row 5).

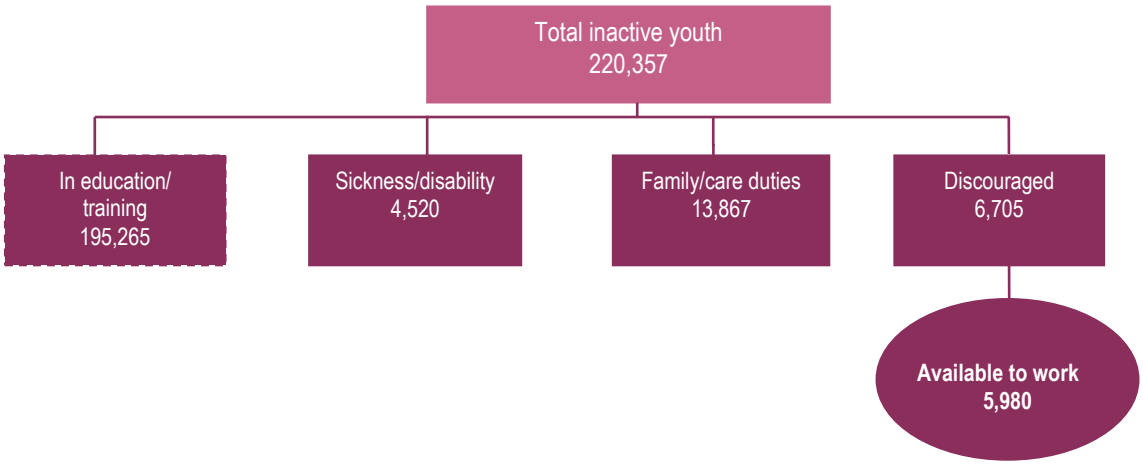
The progression of newly unemployed youth towards high-intensity services is illustrated in the cells marked with a red line. For example, at the beginning of the guarantee in January 807 young unemployed started receiving low-intensity services. Of these, 755 were referred to individual employment planning and back-to-school or active labour market programmes in April.[14]

c. Estimates of the numbers of young people detached from the labour market

Youth detached from the labour market are those that are inactive, not in school or training, but willing to work if given an opportunity. The data source used for this estimate is the Labour Force Survey, which allows disaggregating young people who are inactive by reason of inactivity (disability, family/care responsibilities, discouraged workers and others) and available to work. The figure below shows how the identification of eligible youth can be done. It has to be recalled that by using the labour force data, young school leavers who become discouraged workers are already included in the discouraged count.[15]

[13] The calculation is based on the assumption of an average youth unemployment duration exceeding four months.
[14] The table does not reflect the practice of many employment services to exclude participants to active labour market measures from the "live" register. The table also presumes duration of higher-intensity services not exceeding eight months.
[15] It has to be noted that the number provided in the figure represents the *stock* of discouraged workers aged 15-24 or 29. The flow into discouragement on an annual basis is possible by further disaggregating panel data into the various reasons of inactivity.

FIGURE 1: YOUNG PEOPLE DETACHED FROM THE LABOUR MARKET



d. Estimates of number of young people eligible to the guarantee: Options and limitations

The methods presented above to estimate the pool of potentially eligible young people suffer two broad shortcomings. First, the estimates presented above are based on the figures of just one year and they do not take into account employment projections.

More reliable estimates on potentially eligible youth can be compiled by: (i) applying a *probit* model on pooled data spanning more back years to estimate the likelihood of young people 15-24 to remain unemployed for four months or longer; and (ii) including employment projections based on past trends and output growth estimates.

The second shortcoming is the mix of administrative and survey-based data sources used to approximate the number of eligible youth within each group. This may be problematic for the category of young unemployed, if there are large differences between the number of young unemployed detected by the Labour Force Survey and those who register with the PES. When these differences are large, the estimates of eligible unemployed youth can be expressed as a minimum (PES register) and a maximum number of young unemployed (Labour Force Survey).

Finally, the estimates of the eligible population will also depend on the guarantee's implementation modality and the partnership arrangements that are established. In many countries, in fact, the youth guarantee is managed by the employment services, where registration as unemployed is a requirement. But young school leavers, discouraged workers and also many young unemployed do not register with the PES. This may results in large differences between those who are eligible under the terms of the youth guarantee and those who actually participate.

Table 4 below summarizes the methods and data source that can be used to approximate the number of eligible youth for a youth guarantee.

TABLE 4: ESTIMATES OF YOUNG PEOPLE ELIGIBLE FOR THE GUARANTEE

	Data source	
	Administrative data	**Household-based data**
a) Young school leavers	Annual data on pupils and students (aged 15 to 24 or 29) to calculate: 1) dropouts from primary and secondary education and youth leaving school with at most lower secondary education; 2) upper secondary graduates (not progressing to university); 3) university graduates (not progressing to post-graduate studies). Apply the current unemployment and discouragement ratios by level of education to approximate the total pool of eligible school-leavers	This data source can be used if the labour force survey has a rotation sample. Map the shift across labour market statuses (employed, unemployed, inactive-school, inactive-no school) in the last two consecutive years (or first and last quarter of the last available year). Sum the number of those shifting from school to unemployment and those shifting from inactive-school to inactive (but not in school) and are willing to work.
b) Young unemployed	**Option A** Monthly data of the Public Employment Service (PES) register in the year preceding the guarantee. Plot the number of flows in and from the register to estimate the number of those who: 1) Will receive low-intensity services, but will exit before or at the fourth month of unemployment; 2) Will remain unemployed for longer than four months and will progress to high-intensity services **Option B** Run a *probit* model on data pooled from a number of years preceding the guarantee to estimate the number of those likely to remain unemployed longer than 4 months. This also allows determining those factors (individual characteristics) leading to the likelihood to remain unemployed for longer periods	**Option A** Quarterly (or monthly if available) data of the Labour Force Survey in the period preceding the guarantee. Plot the number of those who will flow in and out of unemployment to estimate the number of those who: 1) Will receive low-intensity services, but will exit before or at the fourth month of unemployment; 2) Will remain unemployed for longer than four months and will progress to high-intensity services **Option B** Run a *probit* model on data pooled from a number of years preceding the guarantee to estimate the number of those likely to remain unemployed longer than 4 months. This also allows determining those factors leading to the likelihood to remain unemployed for longer periods
c) Youth detached from the labour market	If the country has a data warehousing system, it is possible to estimate at least a fraction of young detached workers by identifying those who receive an income replacement/supplement benefit, but are not registered with the PES	**Option A** Total number of discouraged young workers (i.e. those young people who do not look for work because they think no job is available) and are willing to work. **Option B** Include all young inactive individuals not in education and training and available to work.

ANNEX I

ESTIMATES OF AVERAGE ANNUAL COST FOR THE INTRODUCTION OF EMPLOYMENT SUBSIDY PROGRAMMES

	Eurostat Unemployment (thd) 2012 Q2				*OECD* GDP 2012	*Eurostat* Minimum wage 2012	Compensation 100%	Annual compensation cost (100% minimum wage	Administration cost (EUR)	Total	Annual cost guarantee (bn)	Annual cost guarantee (% of GDP)
Countries	15-19	20-24	25-29	Total unemployed youth (15-29)								

FORMULA

Average annual cost employment subsidy=
[(total unemployed youth*minimum wage*12) + 15%] * 100/Annual GDP

ANNEX II

ESTIMATES OF AVERAGE ANNUAL COST FOR THE INTRODUCTION OF TRAINING PROGRAMMES

Countries	*Eurostat* Unemployment (thd) 2012 Q2				*OECD* GDP (EUR bn) 2012	Eurostat (2010) Unempl. benefits (EUR)	Monthly compens. (EUR) (30% UE benefits)	Compens. cost 6 months (EUR)	Annual training cost/person (EUR)	Total training cost	Compens. + training cost	Admin. cost (EUR)	Total costs	Annual cost guarantee (EUR bn)	Annual cost of guarantee (% of GDP)
	15-19	20-24	25-29	Total unempl. youth (15-29)											

FORMULA

Average annual cost training programmes =
[(total unemployed youth*30% unemployment benefit*6months)+ training cost per person) +15%]*100 /Annual GDP

ANNEX III

ESTIMATES OF AVERAGE ANNUAL COST FOR THE INTRODUCTION OF A YOUTH GUARANTEE COMPRISING AN INTEGRATED PACKAGE OF SERVICES AND PROGRAMMES

Countries	*Eurostat* Unemployment (thd) 2012 Q2				*OECD* GDP 2012	Annual cost %GDP - Share wage subsidy in guarantee 50% (see Table Annex I)	Annual cost %GDP - Share training in guarantee 50% (see Table Annex II)	Total cost guarantee package % GDP
	15-19	20-24	25-29	Total unemployed youth (15-29)				

FORMULA

Average annual cost youth guarantee =
[(total unemployed youth*50% average annual training cost) + (total unemployed youth* 50% average annual employment subsidy)] *100 /Annual GDP