



Ministry of Education, Science, Research and Sport
Education Policy Institute (IVP)

Expenditure Review for Education

23 November 2016, Bratislava

Agenda

- Introduction
 - Terms of reference
 - Education system in nutshell
 - National development program for education
- Effective school network and funding
- Raising attractiveness of teacher profession
- Inclusion and equality in education
- Quality assurance in higher education
- Research funding and research assessment
- Graduate tracking system in Slovakia



Introduction

Mandate (1)

- The revision of expenditures for pre-primary, basic and secondary schools and HEIs (2.7 % of the GDP).
- Linked to National Development of Education
- Fiscal objectives
 - Total amount of the increase in public funds to be used in education and upbringing for this election period will be EUR 2 bn.
 - In 2020, the annual amount of public funds spent on education will be comparable to the average of the EU countries.

Mandate (2)

- Optimization of the schools network
- Increasing the attractiveness of teaching profession
- Improving inclusion and equality in education
- Reassessing the accreditation process
- Financing and evaluation of results of university science
- Graduate tracking system
- Reassess the compliance between the structural funds programming activities and the policy priorities

Education system overview

- Education is provided at pre-primary schools, basic schools (ISCED 1 and ISCED 2) 8 year *gymnasium* (ISCED 2 and ISCED 3), 4 year gymnasiums and VET schools (ISCED 3) and in special schools , tracking begins at the age of 10
- Good access to upper secondary education except for Roma, but still low participation on ECEC
- Average or above average outcomes in TIMMS, PIRLS; below average outcomes in PISA
- Strong effect of socioeconomic background on performance
- One of the highest shares of VET students in OECD, but low share of work-based training, not labour market relevant
- Low expenditure on education, teachers are underpaid

External factors

- **Opportunities**

- Public pressure to initiate education reforms
- Working on a political consensus to identify the best solutions in co-operation with relevant stakeholders
- Technologies

- **Threats**

- Demographic changes (decrease in effectiveness and pressure on public finances, teaching staff getting older)
- Political support of reforms (education reforms are costly in short-term, but beneficial in long-term)
- Globalization, migration and social inclusion

New education strategy

- Commitment to prepare the National Development Program of the Education System:
 - Long-term development of Slovak education system (10 year horizon)
 - From pre-primary to tertiary education
 - Based on Report on State of Education, which Slovak Government discussed in 2013
 - Discussions with the general public and annual analyses of progress

Process

- Goals of the Development Programme discussed with the general public:
 - Primary and secondary education – 14th October 2016
 - Tertiary education – 14th November 2016
- Full content of the Programme for public discussion – January 2017
- Government – March 2017

Participation

- Team of ministry advisors (V. Burjan, M. Ftáčnik, I. Juráš, J. Vantuch, E. Višňovský, L. Vozár, Z. Zimenová)
- Discussions with professionals (stakeholders in schools, local authorities, unions, employers, experts)
- Public discussion
- Consultations with Government Council for Education, Science, Youth and Sport

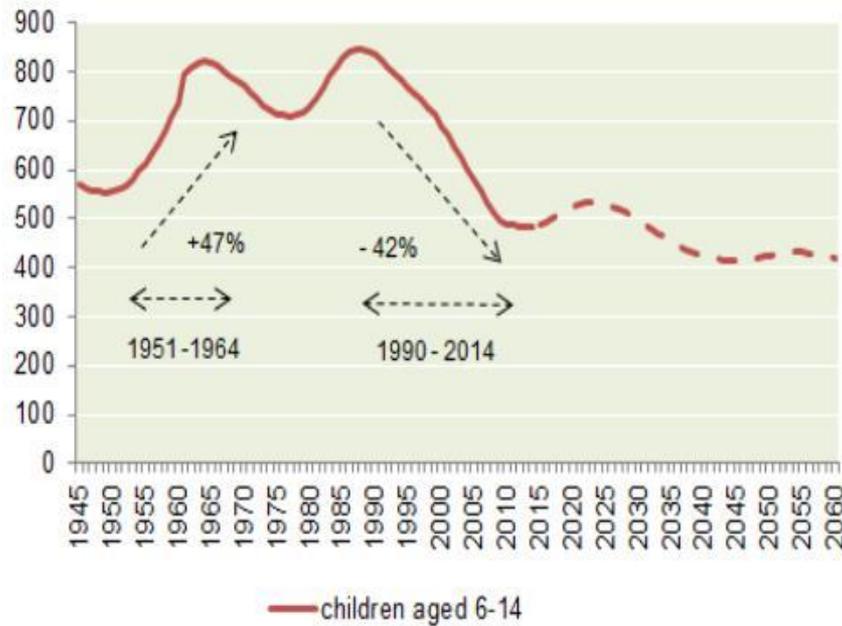


Effective school network and funding

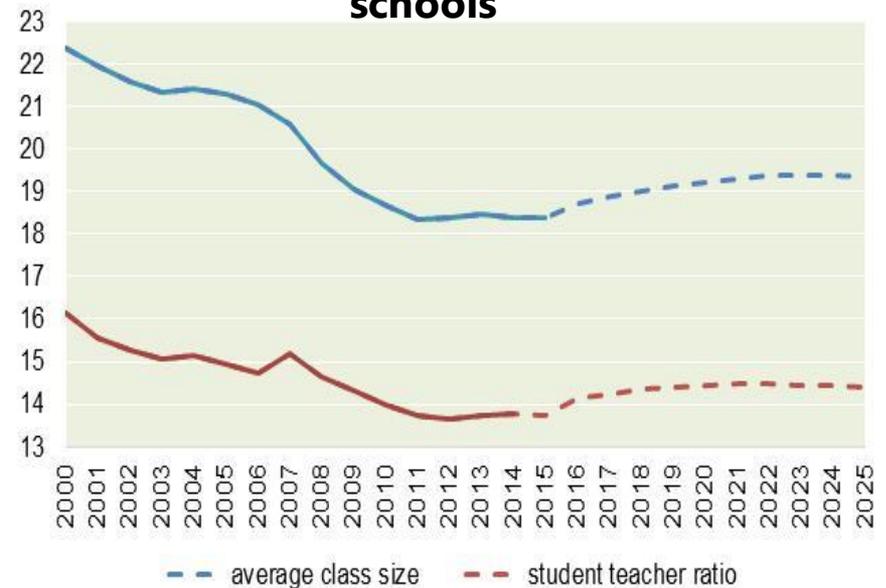
Context (1)

- The school network is less effective than in the past due to negative demographic development.

Demography – children aged 6-14



Effectiveness indicators – basic schools



Context (2)

- Per capita funding and regulations are key tools to secure the effectiveness of the school network.
- Regulations include minimum class size, minimum school size, school admission to network and closure, labor market relevance of study fields.
- Small primary and lower secondary schools are financially supported by higher per capita allocation.

Potential savings	Excluding transport costs	Including transport costs	School buses
Financial support only for pupils at the primary level	22,25 mil. eur	14,3 mil eur	-
Closure of schools with less than 50 pupils	-	13,4 mil eur	12 mil. eur
Extra financial support not taking into account individual school owners	6 mil. eur	-	-

Strengths and weaknesses

- Per capita funding creates incentives for providing education in the most effective way.
- International comparison does not indicate a large amount of potential savings.
- Funding itself does not lead to sufficient optimisation of school network due to political costs and a large number of small municipalities as school owners.
- Regulations are not effective.

MoE policy proposals

- Optimization of the school network concentrating on lower secondary education based on a complex analyses taking into account regional needs and specific position of national minorities.
- Definition of quality indicators with respect to material and personal conditions. In case the criteria are not satisfied, schools shall be closed.
- Exemption of national minority schools from minimal class size rules.

Spending review objectives

- Update financial impact of possible consolidation measures on case of basic schools (pilot study).
- Assessment of regulation of VET study fields reflecting labor market needs.
- Identify measures to increase efficiency of the funding system (e.g. redundancies).

Issues for discussion

- Can optimal school network be defined?
- How to incorporate non-monetary factors such as quality, inclusion, access to education to decisions about rationalization of the school network?
- Which tools should play key role in rationalisation - the funding system or central regulations?
- How to deal with the problem of many small municipalities as school owners which oppose school closures?



Raising attractiveness of teacher profession

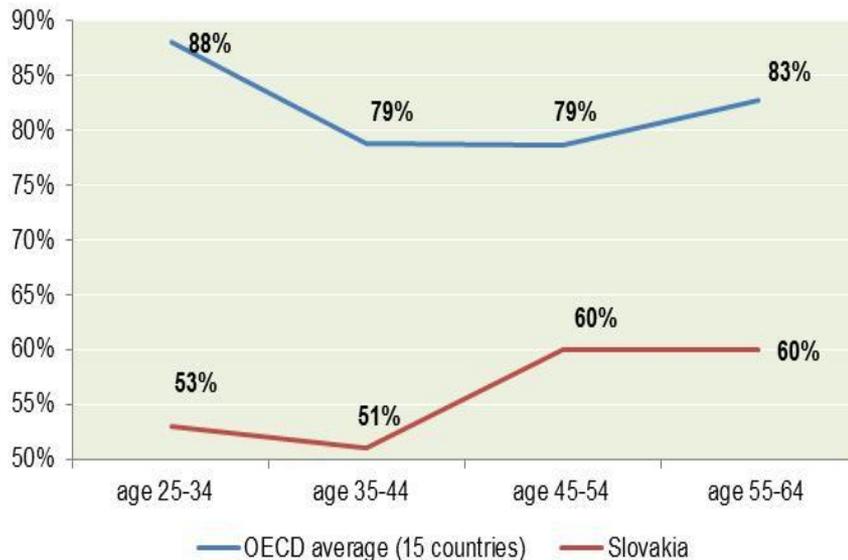
Context (1)

- Teachers earn significantly less than employees in occupations requiring similar qualification.
- Young teachers are worse off relative to their peers from other occupations than older teachers.
- Low remuneration makes the teaching profession in Slovakia much less attractive than in other developed countries.
- Government is gradually improving the attractiveness of teacher profession on the labor market.
- Teacher actual salary is made up of tariff salary (cca.75%) and allowances (cca. 25%).

Context (2)

Slovak teachers make 57% of earnings of tertiary educated workers. Younger teachers are relatively worse off compared to their peers than older teachers. Recently, average teachers' salary grew faster than the average national salary.

Ratio of teacher salary to salary of tertiary educated workers by age



Increase of teacher salaries and of salaries in national economy



Strengths and weaknesses

- Teacher profession provides more stability and job security than other occupations. Tariff wage is increased automatically for each years of recognized service (total 24% in 32 years).
- The centrally managed tariff-salaries do not reflect teachers' real regional market value given their qualifications and the remuneration system only partially reflects productivity and quality of employees' work.

MoE policy proposals (1)

- Tariff salaries will increase by 6% on 1/9/2016 and annually by 6% since 1/1/2018 provided that structural reforms of the education system will be adopted. Special emphasis will be given on young teachers.
- Teacher salaries will be raised to at least 80% of earnings of tertiary educated employees. The salary increase will be accomplished by higher tariff-wages and personal bonuses based on complex teachers' evaluations.

MoE policy proposals (2)

- The pay disadvantage of young teachers will be eliminated and starting salary of teachers will increase to the average level of young professionals in other high-skilled occupations.
- Teacher certification which leads to salary increase shall be reformed to assess teachers' skills in practical environment and be allowed only after certain years of teaching.

Spending review objectives

- Estimate financial costs of increasing teacher salaries.
- Summarize international practice on compensation systems and teacher merit pay.
- Analyze link among skills, salary and specific occupations (PIAAC).
- Calculate indicators on attractiveness of the teachers program on universities for secondary graduates.
- Analyze attractiveness of teacher profession for recent tertiary graduates.

Issues for discussion

- How to increase teacher salaries to raise the attractiveness of teacher profession and incentivize quality?
 - Merit pay (how to design it? should additional pay based on positive feedback be claimable by teachers?)
 - Faster increase for younger teachers?
 - Regional differentiation?
 - Subject differentiation?
- By how much should be the salaries increased? Is the pace set by government for salary increases sufficient to catch up with other employees with tertiary education?



Inclusion and equality in education

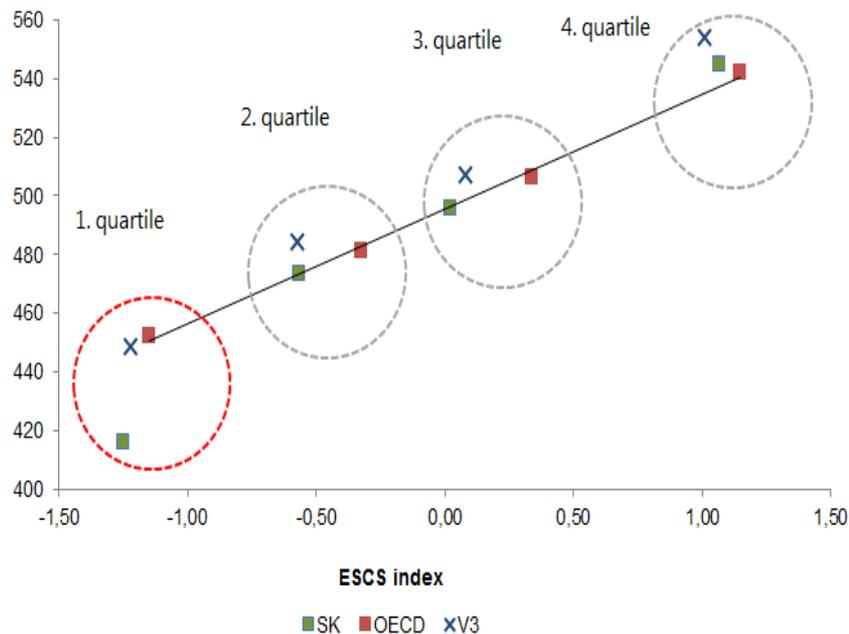
Context (1)

- Scope: socially disadvantaged pupils (Roma), students with different categories of disorder
- Educational outcomes:
 - Strongest impact of social background in OECD (plus low educational attainment of Roma and special school pupils)
 - Low pre-school participation
 - Misplacement in special schools (overrepresentation of Roma)
- Outcomes of Roma are not systematically monitored, ethnicity data of pupils is not collected except for international surveys.
 - Last population census reports 100 thousand Roma
 - Atlas of Roma communities (2013) reports 400 thousand Roma and 74 – thousand Roma (18%) living in segregated areas

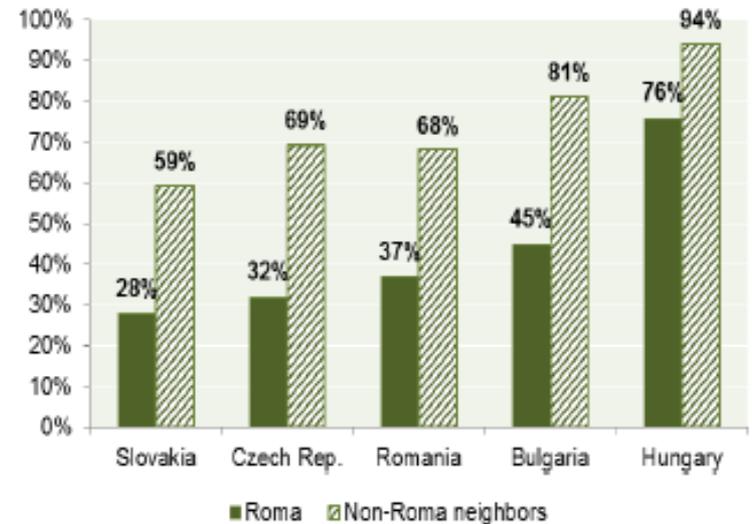
Context (2)

In mathematics, 25% in student outcomes can be explained by ESCS. Outcomes are also negatively effected by unemployment of parents, after accounting for ESCS.

Score in mathematics by ESCS index



Participation of Roma and non-Roma in ECEC the same locality (aged 3-6)



Source: UNDP/WorldBank/ECregional Roman survey (2011)

Context (3)

- State policies for socially disadvantaged children:
 - Earmarked targeted allowances – teacher assistants, learning materials, school meals
 - Increased per capita funding of special needs students
 - Zero grade – to increase readiness for compulsory schooling
 - Container schools – to create better access to education (Roma)
- National projects targeting Roma
 - All day curriculum, inclusive curriculum, learning programs for teachers, prevention of misplacement in special schools
 - Teacher (Roma) assistants and specialists in schools and terrain
 - Building ECEC capacities in areas with high concentration of Roma population, conditioned by inclusiveness of new capacities

MoE policy proposals

- More teacher assistants and specialists in basic schools and secondary schools to promote inclusion of marginalized communities.
- Diffusion of best practices from implementing inclusive education through continuing education.
- Improve diagnosis and reassessment of special educational needs.
- New national projects building on activities from last programming period (e.g. all day schooling etc.)

Spending review objectives (1)

- Analyze key indicators on special education needs students in basic schools and special schools (SZP, Roma, Disabled, Early school leavers) and reconsider data-collection practices
- Calculate sub-populations attainment gap, if possible based on panel-data
- Evaluate effectiveness of past policies - efficiency of targeted allowances (Employment review)

Spending review objectives (2)

- Identify policy measures encouraging desegregation
 - ECEC (place guaranty or compulsory) + quantification of benefits and need for ECEC capacities
 - Effective use and funding of teacher assistants and specialists (psychologists, special pedagogists, social pedagogists)
 - Objective diagnosis and re-diagnosis in diagnostic centers

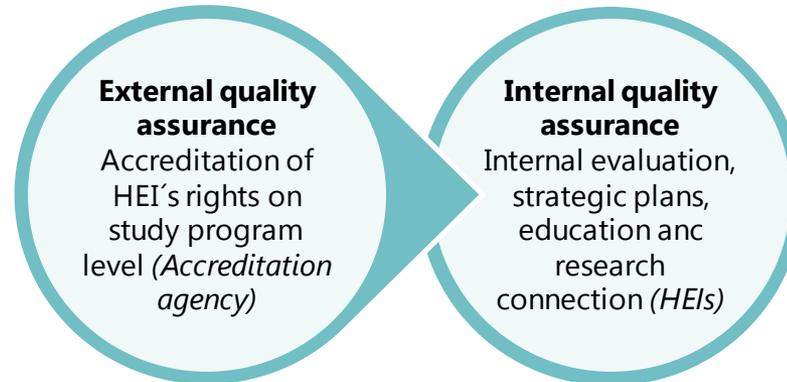
Issues for discussion

- Should specialists (psychologists, special pedagogists, social pedagogists etc.) be stationed at schools or provide services as employees of pedagogical advisory centers in terrain?
- Is it possible to better connect the isolated system of special schools with mainstream education (e.g. transfer of knowledge, even transfer of some students)?
- Is it good to have a funding system “labeling” special needs students? Is there any more appropriate funding scheme that would minimize negative incentives?
- How to overcome language barriers in case of Roma children? (Roma assistants, extra Slovak classes etc.)?



Quality assurance in higher education

Context



- Accreditation is the main part of external quality assurance system in higher education. Institutions have to meet minimal quality standards to be accredited.
- There are two types of accreditation:
 - Accreditation of individual rights initiated by HEIs - e.g. specific study programs, habilitation process of professors, etc.
 - Complex accreditation initiated by ministry every 6 years - evaluation in every aspect – all study programs and also science, research, personal and technical conditions, etc.

Strengths and weaknesses

- Assessment of research quality as a part of complex accreditation is firmly established and stricter criteria were adopted recently.
- The accreditation process is bureaucratic and formal which raises quality concerns.
- Independence of the Accreditation agency and its members is not guaranteed.

MoE policy proposals

- Institutional reform of Accreditation agency based on Standards and guidelines for quality assurance in the European Higher Education Area (ESG) by ENQA.
- Accountability turns in quality assurance from external to internal systems.



Spending review objectives

- Summarize international practice on external quality assurance models in countries with institutional/field of study level of external accreditation.
- Calculate costs of the new agency.

Issues for discussion

- How to implement the ESG in the new agency and accreditation model?
- Should accreditation and research assessment be conducted by one body?
- Who and how would appoint the members of the new agency?
- Will be the decisions in accreditation made by new agency or ministry?



Research assessment and funding

Context

- In general, the quality of higher education research in Slovakia is considered to lag behind international standard.
- Competitive funding and assessment of research quality are key tools to increase the performance of HE research.
- Total institutional allocation for HEIs consists of block grant (92 %) and competitive project funding (8 %).
- Block funding is allocated based on complex research assessment (42%), publication performance (22%), raised revenues from third parties (22%), PhD graduates (10%).

Strengths and weaknesses

- Allocation of block funding is transparent.
- Complex assessment of research is in place and stricter criteria were adopted recently but produce distorted results.
- Assessment of publication performance motivates to produce quantity and it is inconsistent with complex assessment of research.
- Allocation for project funding is low and selection of projects is ambiguous.
- Systematic assessment and funding of research excellence is missing.

MoE policy proposals

- Development of complex research quality assessment based on the British REF adapted to Slovak particularities, which will provide objective results about the quality of research output in international comparison. Assessment of impact of applied research, particularly.
- Stronger block funding of international quality research identified by the research assessment.
- Stable funding of research excellence.
- Transparent functioning of project agencies and gradual increase of project funding.

Spending review objectives

- Evaluate results of the current research assessment and funding system
- Summarize international best practices on complex research assessment methods (e.g. RAE).
- Quantify impact of the different criteria for publication performance in the block funding (e.g. impact factor) – data issue.

Issues for discussion

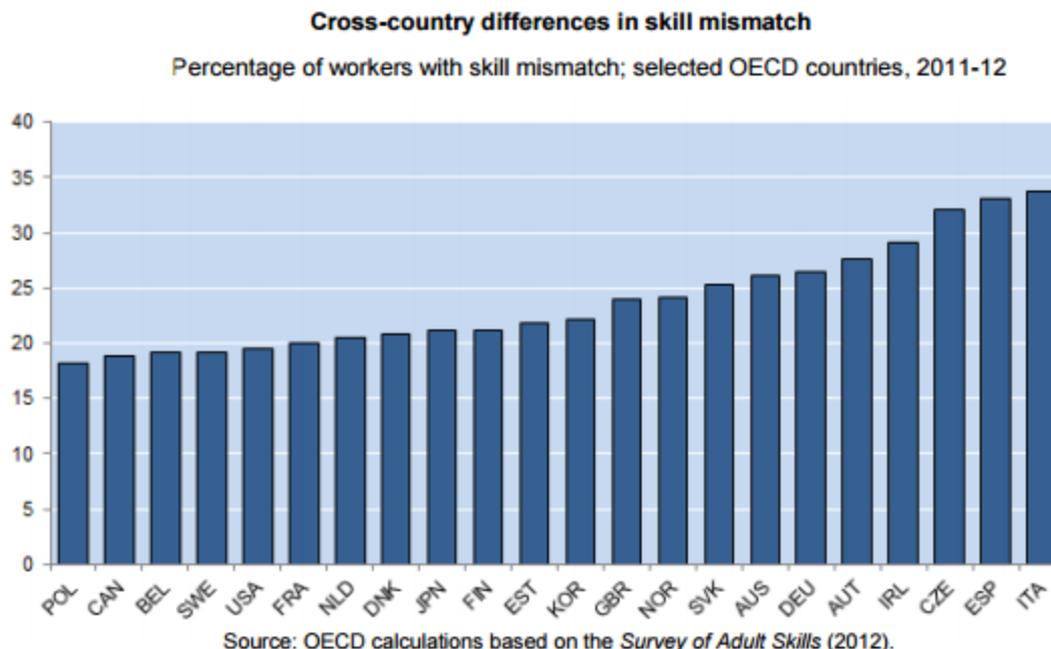
- How to design body conducting assessment of research quality?
- How to create project agencies to secure objective allocation of funds?
- How to balance peer review and bibliometrics in complex assessment of research quality?
- How to design a metrics, which would reflect publication culture of different research fields?
- Is metrics necessary alongside complex assessment of research quality?



Graduate tracking system

Context (1)

- Considerable share of graduates is working in positions that are not adequate to their level of qualification or in occupations not related to their initial field of study.
- The incidence of skill mismatch is above OECD average.



Context (2)

- Available administrative data on HE graduates from various sources (social insurance agency, employment and school records). Unfortunately, such a data are not available for SE graduates.
- Surveys on labour market success of SE graduates are still missing. On the other hand few surveys on HE graduates has been realized.
- Only unemployment data and unemployment rate of SE graduates are available.

Strengths and weaknesses

- The government has introduced several national projects which collected data about tertiary educated graduates, their labour market success and skills. However, these projects are not ongoing.
- Insufficient statistical database of graduates' labour market outcomes and skills.
- Appropriate institutional framework is missing.
- Data collection from various sources is problematic, especially from legislative and institutional reasons.

MoE policy proposals

- The ultimate goal is a systematic acquisition of quality data on the performance of secondary vocational school graduates in the labour market.
- Strong effort to join administrative data on SE graduates from several sources.
- There is also an intention of common project with CEDEFOP which will be aimed on the issues of skills anticipation and VET graduate tracking.
- Complex system of tracking tertiary graduates' career paths will be established.

Spending review objectives

- Monitor available administrative data and propose indicators which should be regularly published
- Summarize international practice on graduate and employment surveys
- Identify policy measures to effectively use of the graduate tracking data (career guidance, network regulation)
- Possible use of the CEDEFOPs project preliminary results (not confirmed yet)

Issues for discussion

- How to effectively employ existing administrative data and potentially developed secondary and tertiary graduate surveys for the purpose of graduate tracking?
- What is the most effective way to implement graduates' surveys? What time after graduation would be optimal to carry out the surveys? What approach would be appropriate to data collection?
- How to address blind folds in graduates' tracking (e.g. the problem of international mobility)?
- What form (career guidance and counselling, web portal etc.) and what kind of information (skills, labour market outcomes) shall be provided to public?