



@GeoSkills_Plus



Geo Skills +



Education and Culture DG

Lifelong Learning Programme



Eimuntas Paršeliūnas

Institute of Geodesy, VGTU

EUREF2014 Symposium

Vilnius, Lithuania, 2014-06-04/07



@GeoSkills_Plus



Geo Skills +

**P. Dijkstra¹, J. Pirlot², V. Penkov³, E. Parseliunas⁴, M. Wijngaarde⁵, K. Donert⁶,
D. Frigne⁷, H. Westerbeek⁸, K. Levoleger¹, D. Popovas⁴, R. Obuchovski⁴, D.
Slikas⁴, A. Buga⁴**

¹Dutch Cadastre, Land Registry and Mapping Agency (NETHERLANDS)

²Belgian Order of Surveyors (BELGIUM)

³Geodesy, Cartography and Cadastre Agency (BULGARIA)

⁴Vilnius Gediminas Technical University (LITHUANIA)

⁵Council of European Geodetic Surveyors (BELGIUM)

⁶European Association of Geographers (BELGIUM)

⁷Flemish Association for Geographic Information (BELGIUM)

⁸GEO Employment Market (NETHERLANDS)



Education and Culture DG

Lifelong Learning Programme

Geo Skills Plus

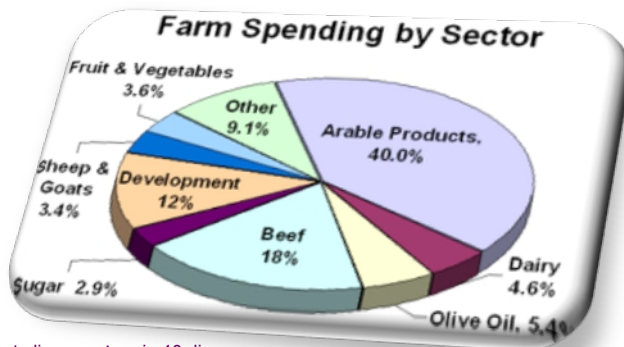
GEO
Education



Labour
Market

Why this project is relevant

Geo is everywhere



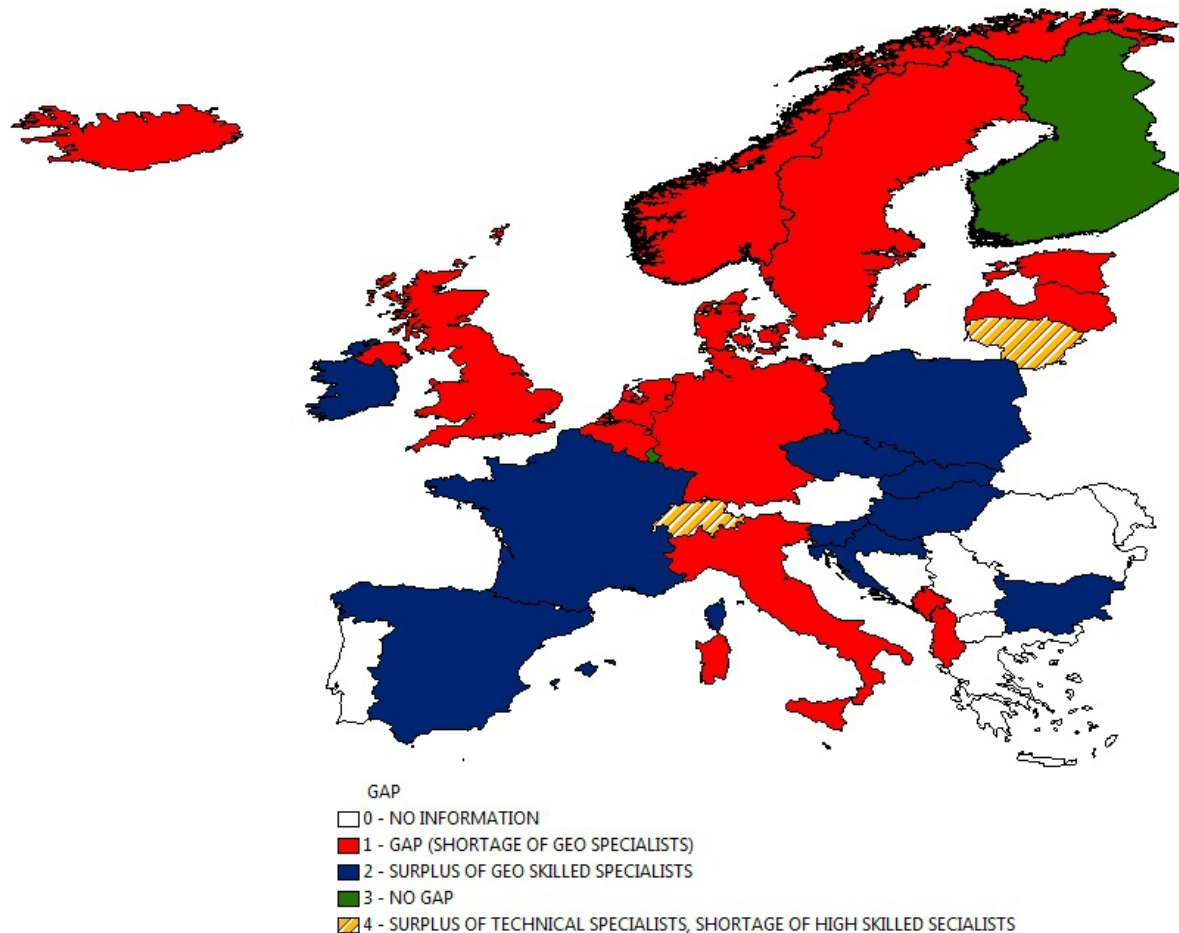
2014 metų liepos mėnesio 10 diena

The Netherlands

- In 2008 first signs of a mismatch between demands of GEO labour market and quantity and quality of students and graduates
- Establishment Geo Employment Market Foundation



Research Supply and Demand GEO Labour Market in EU (by CLGE)



Gap in the European countries

Project Partners



Project consists of 5 Work packages (WPs)

Work package 1: Cooperation Model

Work package 2: Awareness Raising

Work package 3: Bridging the Gap

Work package 4: Dissemination

Work package 5: Project Management and Progress Reporting

The Gap description

The Gap could be defined as a combination of some mismatches:

- Imbalance of the number of students and demand of the labour market,
- Discrepancy between expectations of job market (employers) and student's professional abilities (qualification, knowledge, practical skills etc.), (lack of motivation for life learning),
- Variance between the fast technological development and delayed improvement of study curriculums,
- Dissonance between narrow geo-specialized study programmes and multi-disciplinary needs of market
- Inadequacy between locally educated students and internationally widening market (internationalization of the geo-market).

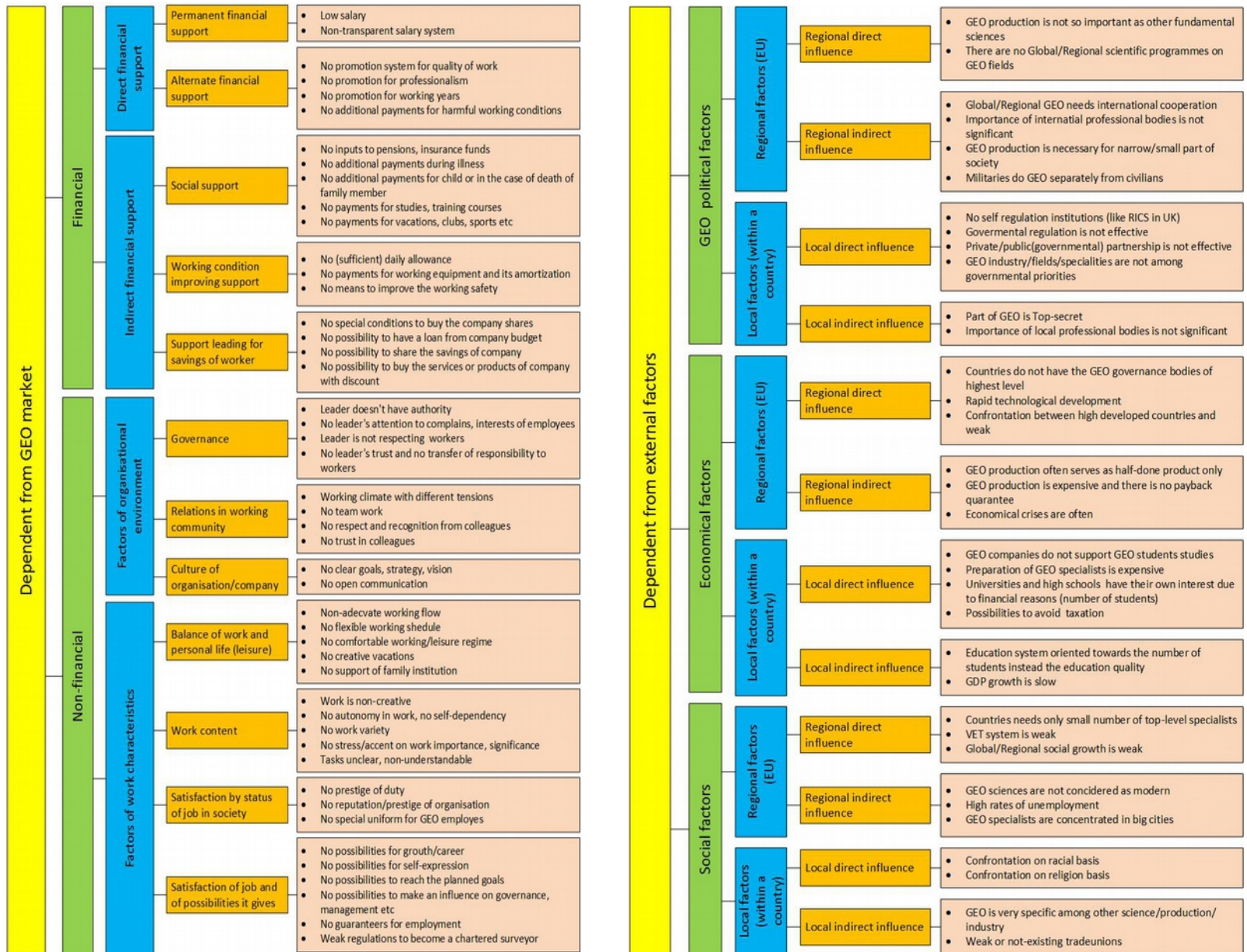
The factors of the gap arisal

Three main components:

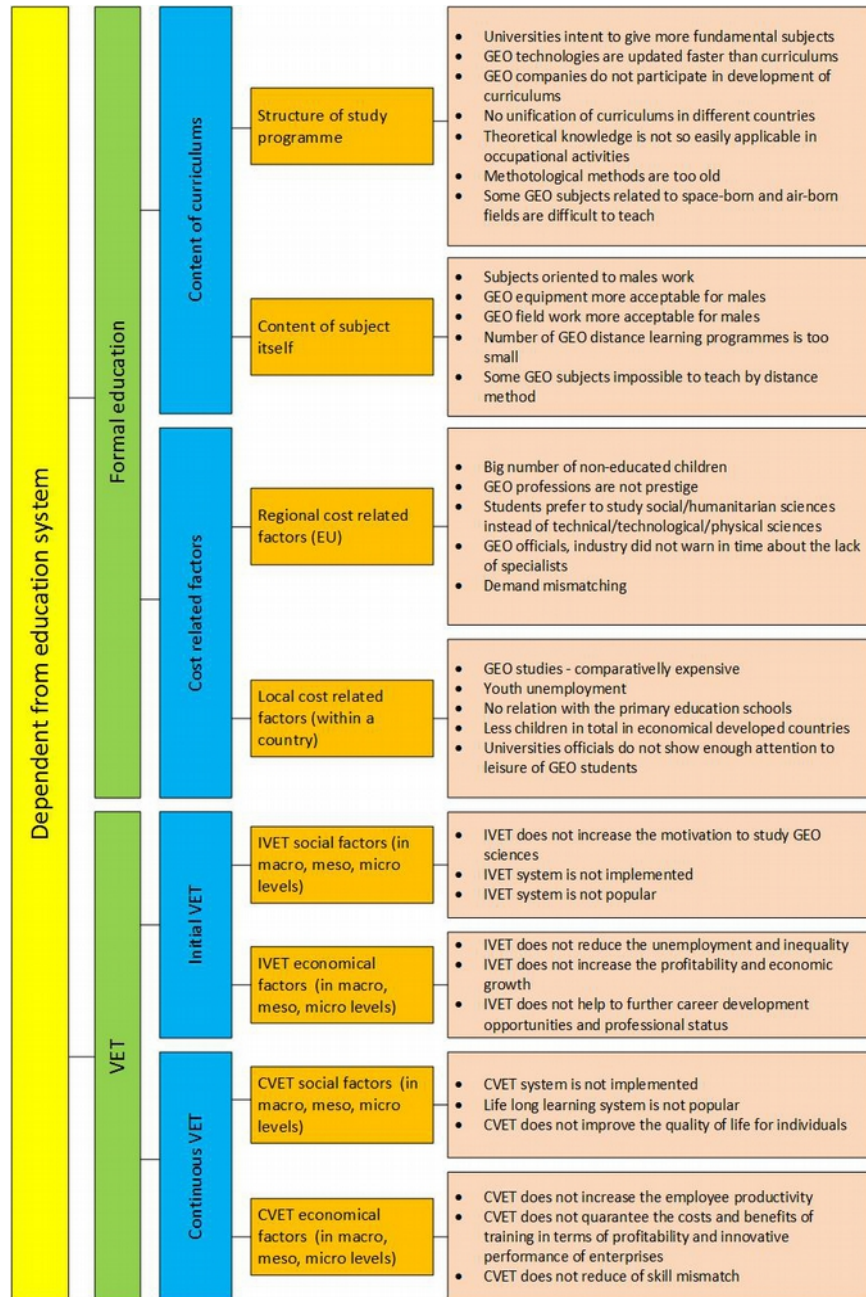
- factors dependent from GEO market,
- external factors,
- factors dependent from education system.

These three components are split into **4 levels**, forming a **hierarchy** of the factors of the gap arisal.

The Gap factors Hierarchy



The Gap factors Hierarchy



A questionnaire for the pair-wise comparisons

DEPENDENT FROM EDUCATION SYSTEM

Formal education			VET
------------------	--	--	-----

Formal education

Content of curriculums			Cost related factors
------------------------	--	--	----------------------

VET

Initial VET			Continuous VET
-------------	--	--	----------------

Initial VET

IVET social factors (in macro, meso, micro levels)			IVET economical factors (in macro, meso, micro levels)
--	--	--	--

Continuous VET

CVET social factors (in macro, meso, micro levels)			CVET economical factors (in macro, meso, micro levels)
--	--	--	--

IVET social factors (in macro, meso, micro levels)

IVET does not increase the motivation to study GEO sciences			IVET system is not implemented
IVET does not increase the motivation to study GEO sciences			IVET system is not popular
IVET system is not implemented			IVET system is not popular

IVET economical factors (in macro, meso, micro levels)

IVET does not reduce the unemployment and inequality			IVET does not increase the profitability and economic growth
IVET does not reduce the unemployment and inequality			IVET does not help to further career development opportunities and professional status
IVET does not increase the profitability and economic growth			IVET does not help to further career development opportunities and professional status

CVET social factors (in macro, meso, micro levels)

CVET system is not implemented			Life long learning system is not popular
CVET system is not implemented			CVET does not improve the quality of life for individuals
Life long learning system is not popular			CVET does not improve the quality of life for individuals

CVET economical factors (in macro, meso, micro levels)

CVET does not increase the employee productivity			CVET does not guarantee the costs and benefits of training in terms of profitability and innovative
CVET does not increase the employee productivity			CVET does not reduce of skill mismatch
CVET does not guarantee the costs and benefits of training in terms of profitability and innovative			CVET does not reduce of skill mismatch




A questionnaire for the pair-wise comparisons

Priorities with respect to:

Goal: VET

>1 Initial VET

>1-2 IVET economical factors (in macro, meso, micro levels)

1-2-1 IVET does not reduce the unemployment and inequality	,481	
1-2-2 IVET does not increase the profitability and economic growth	,114	
1-2-3 IVET does not help to further career development opportuni...	,405	
Inconsistency = 0,03 with 0 missing judgments.		

Expected digital values of Initial VET factors importance

CONCLUSIONS

1. Hierarchy structure of gap factors between GEO (VET) students and employers was created, where factors are grouped in 6 levels. Suggested structure is adopted for questionnaire of respondents by method of pairwise comparison and processing of obtained judgements by multi-criteria method of analytic hierarchy process (AHP).
2. Multi-criteria method of analytic hierarchy process was used for performed analysis. Selected criteria allow universal reflection of gap factors. Created gap factors hierarchy provided transparency to judgment process and made visible effect of its elements on results.
3. Test AHP computations were made and expected digital values of gap factors importance was determined.



@GeoSkills_Plus



Geo Skills +



www.geoskillsplus.eu

Thank you for your attention