
Study Abroad and Employability: Case of Poland

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Agenda for today

1. HE system in Poland and implementation of the Bologna process
2. International mobility of Polish students: stylised facts
3. International mobility of Polish students in comparative perspective
4. International mobility and employability: evidence from graduates' survey
5. Conclusions and open questions



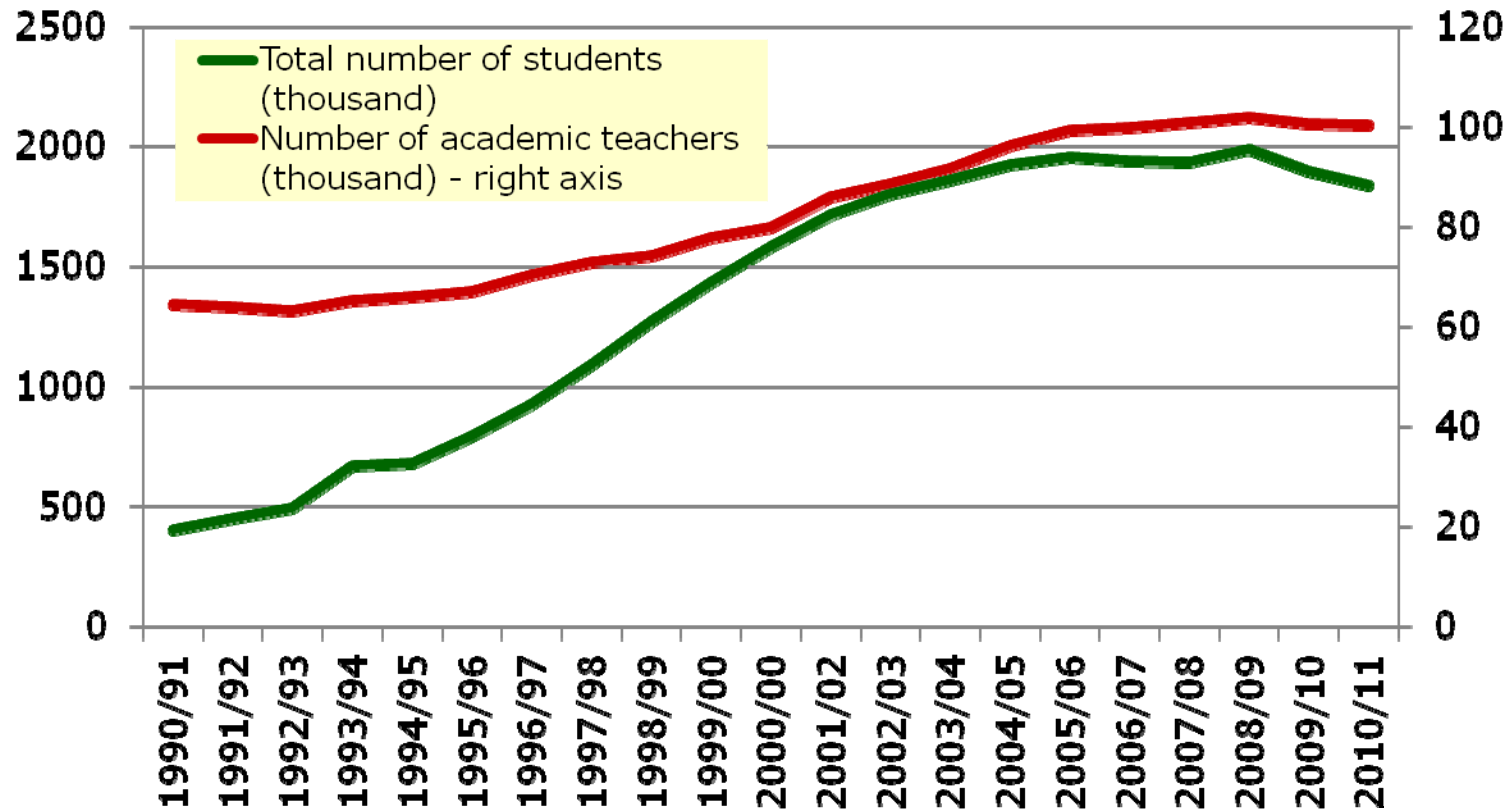
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HE system in Poland and implementation
of the Bologna process



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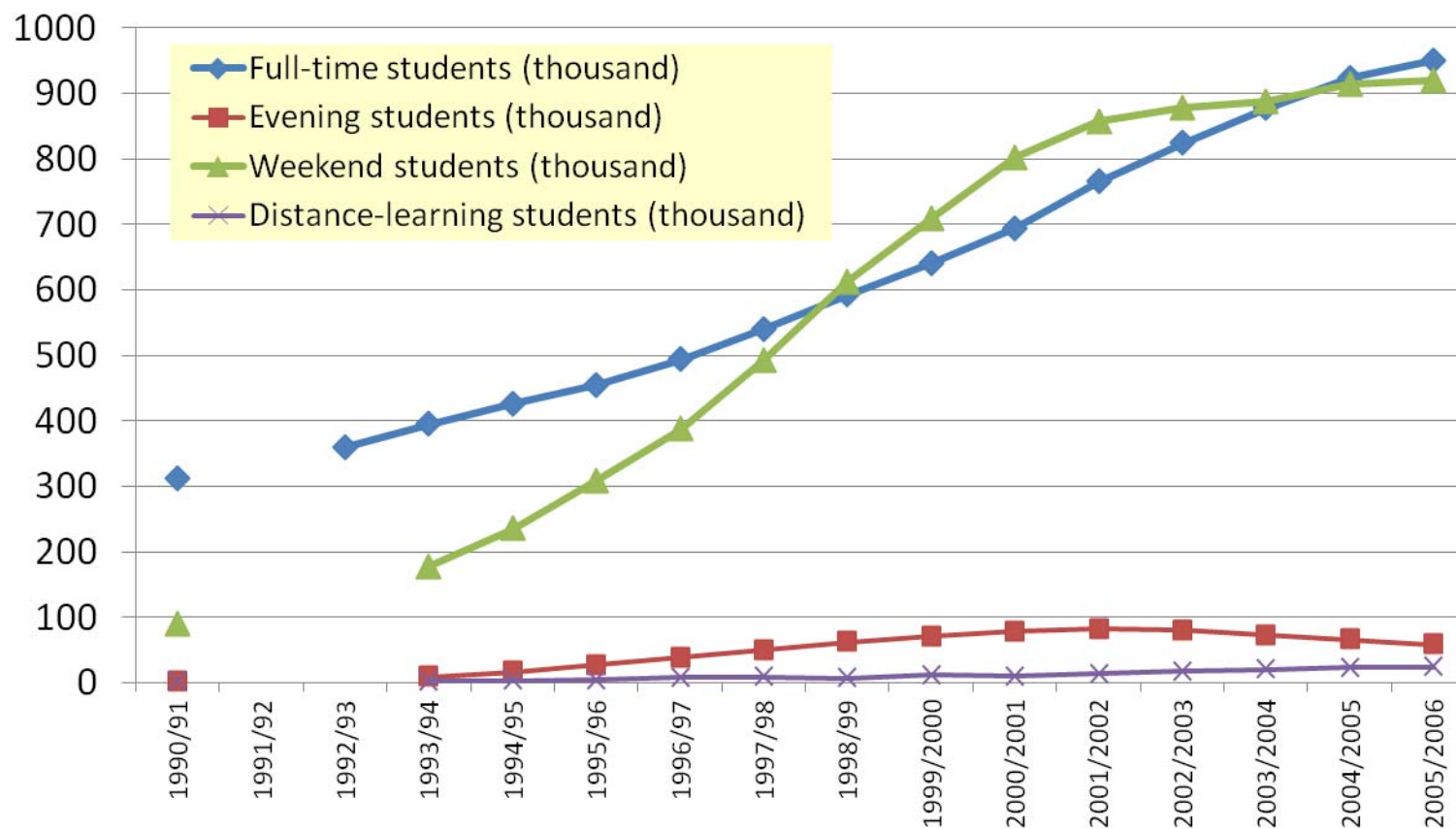
Dynamic growth of the number of degree students in Poland



Source: CSO Statistical Yearbook various editions



Role of part-time education



Source: CSO Statistical Yearbook various editions



Key developments of the HE system in Poland throughout transition period

- Partial commercialisation of educational services provided by the public HEIs (tuition fees for some forms of study) being a response to growing demand for tertiary education and significant difficulties in the financing of public HEIs:
 - even public HEIs relatively often offer cheap programmes
 - *e-learning* popularity as cost reduction not modernisation device
- Unprecedented growth of number of students was possible thanks to development of private HEIs: their number grew by 6 times and a number of students of private HEIs - by 13 times.



Key developments of the HE system in Poland throughout transition period

- Growing difficulties in reconciliation of the growing number of students and the need to maintain quality standards particularly in the case of private sector HEIs:
 - Reduction of number of hours of 65%-70% in case of non-stationary studies
 - Multiple-job holding by academic staff
 - Accreditation process: State Accreditation Commission (2002) domain specific accreditation bodies
- Changes in the domain-structure of studies: growth of the role of social sciences and humanities
- Changes of studies' curricula:
 - growing flexibility: freedom of setting curricula as long as obligatory minimal content is included
 - „supply-oriented” not „labour-market-oriented” policy of public HEIs with private HEIs basing on external staff and economic calculations lack of formalised market research



Implementation of the Bologna process in Poland

Source: CSO Statistical Yearbook various editions

Official HEIs' data for academic year 2008/2009	Total	Share of women (%)	Share of full-time students (%)	Share of student enrolled in public HEIs (%)
Total	1927762	57.0	48.1	65.3
First-cycle programmes	1151067 (59.7%)	54.4	46.1	57.8
Leading to a bachelor degree	831032 (43.1%)	64.4	42.6	50.3
Leading to a engineer degree	320300 (16.6%)	28.5	55.1	77.1
Second-cycle programmes	294237 (15.3%)	66.8	21.1	65.0
Long-cycle programmes	412673 (21.4%)	58.0	74.8	86.2



Implementation of the Bologna process in Poland

Source: CSO Statistical Yearbook various editions

- Percentage change in the share of different types of study programmes in the population of students and graduates (between academic year 2003/04 and 2008/09)

	Students	Graduates
First-cycle programmes leading to a bachelor degree	33.0	22.2
First-cycle programmes leading to a engineer degree	39.3	10.1
Second-cycle programmes	14.7	-5.9
Long-cycle programmes	-46.6	9.4



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Source: CSO Statistical Yearbook various editions

Poland in the *Bologna Process* *Stocktaking Report 2009*

POLAND

DEGREE SYSTEM

1. Stage of implementation of the first and second cycle
2. Access to the next cycle
3. Implementation of national qualifications framework

QUALITY ASSURANCE, ESG

4. Stage of development of external quality assurance system
5. Level of student participation in quality assurance
6. Level of international participation in quality assurance

RECOGNITION

7. Stage of implementation of diploma supplement
8. National implementation of the principles of the Lisbon Recognition Convention
9. Stage of implementation of ECTS
10. Recognition of prior learning

Poland was a signatory of the Bologna Declaration. Key developments since 2007 include: working out the proposal for National qualifications framework, including outcomes-based cycle descriptors and credit ranges; it has been prepared and discussed with the stakeholders and presented to the ministry, but it has not yet been approved. Future challenges include: development of a coherent assessment system for research and teaching activities of HEIs; establishment of National Academic Knowledge Centres; using NQF as a tool to introduce outcomes-based HE; making study requirements compatible with the Qualifications Framework for EHEA; strengthening links with labour market; specifying provisions on joint programmes; introducing RPL procedures and ensuring the flexibility of learning paths; focusing on practical realisation of quality assessment taking into account formal and legal aspects, as well as the importance of learning outcomes and quality of research.



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International mobility of Polish
students: stylised facts



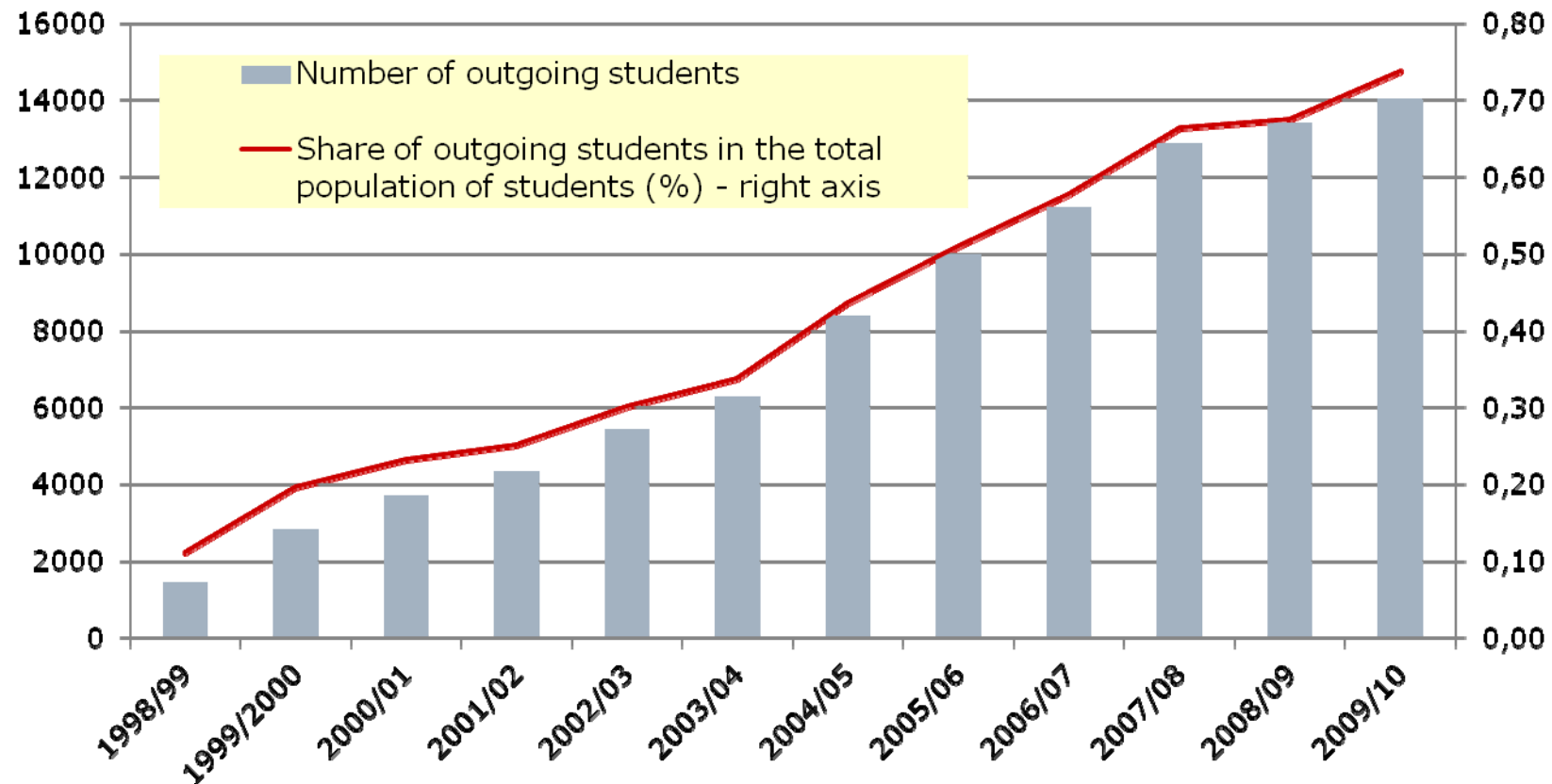
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Data sources on students' international mobility

- Forms of students' mobility:
 - EU programmes (Erasmus)
 - Other institutionalised programmes (bilateral agreements multilateral agreements etc.)
 - Individual activity
- Data scarcity on aggregate mobility:
no aggregate data!
- Partial data: Erasmus Programme



Erasmus Programme: number of outgoing students

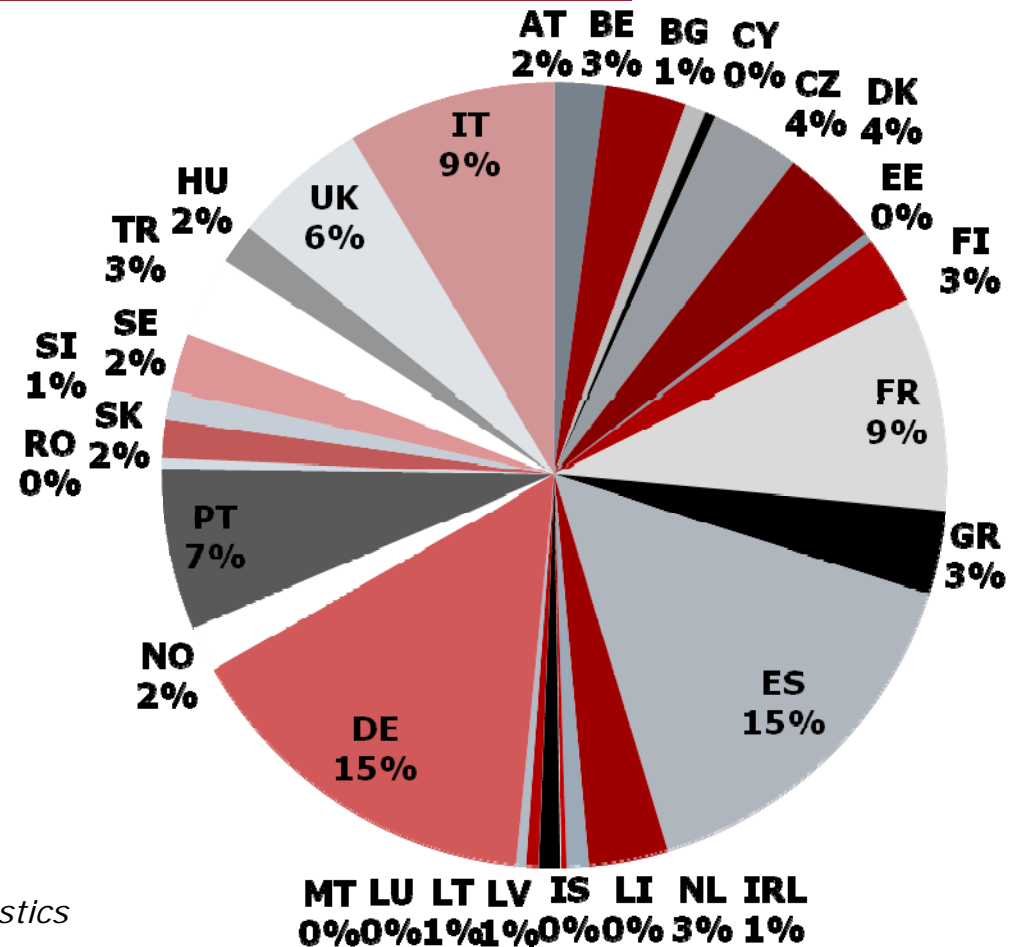


Source: FRSE statistics



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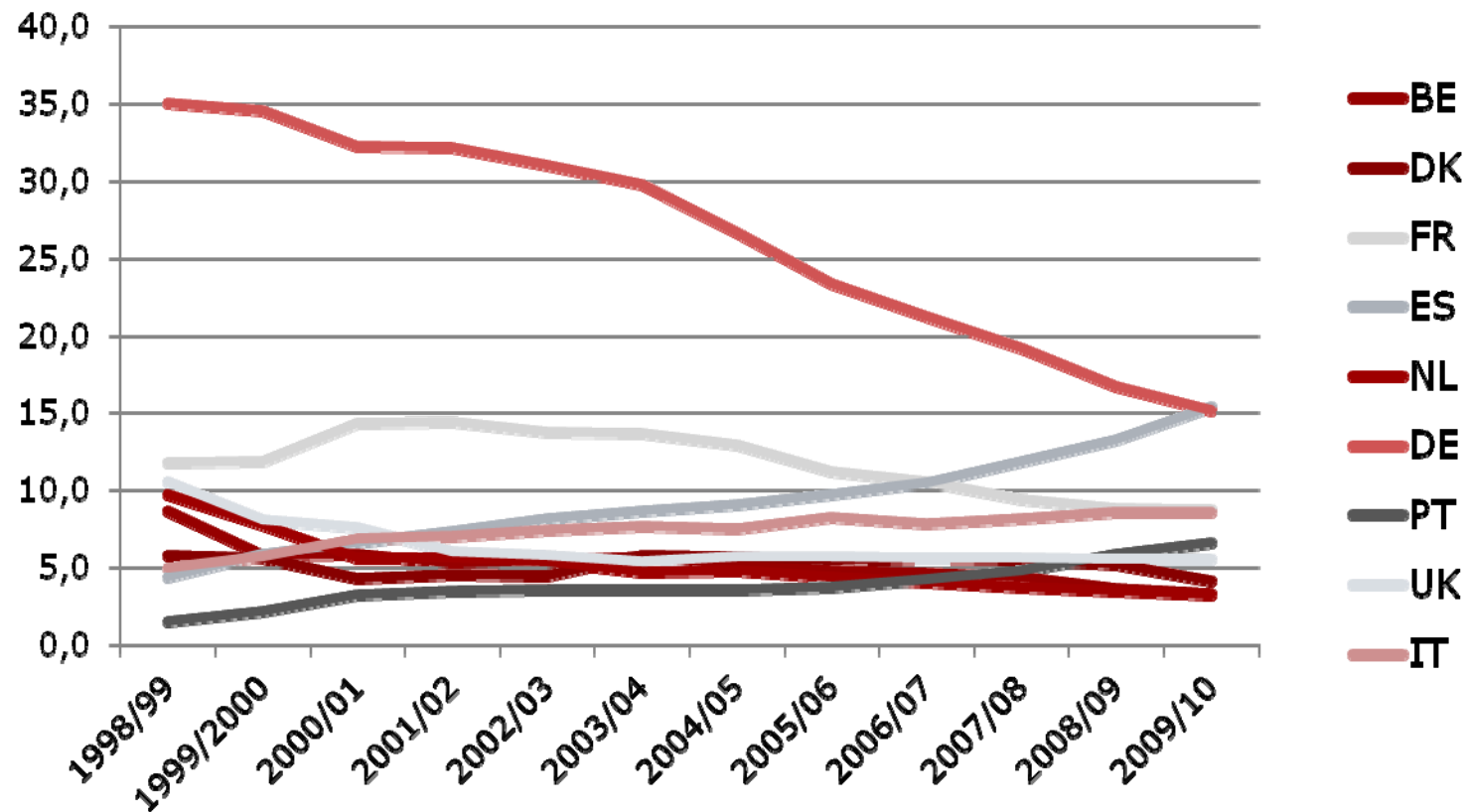
Outgoing students by destination country, 2009/2010



Source: FRSE statistics



Outgoing students: changes in geographical structure



Source: FRSE statistics



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International mobility of Polish
students in comparative perspective



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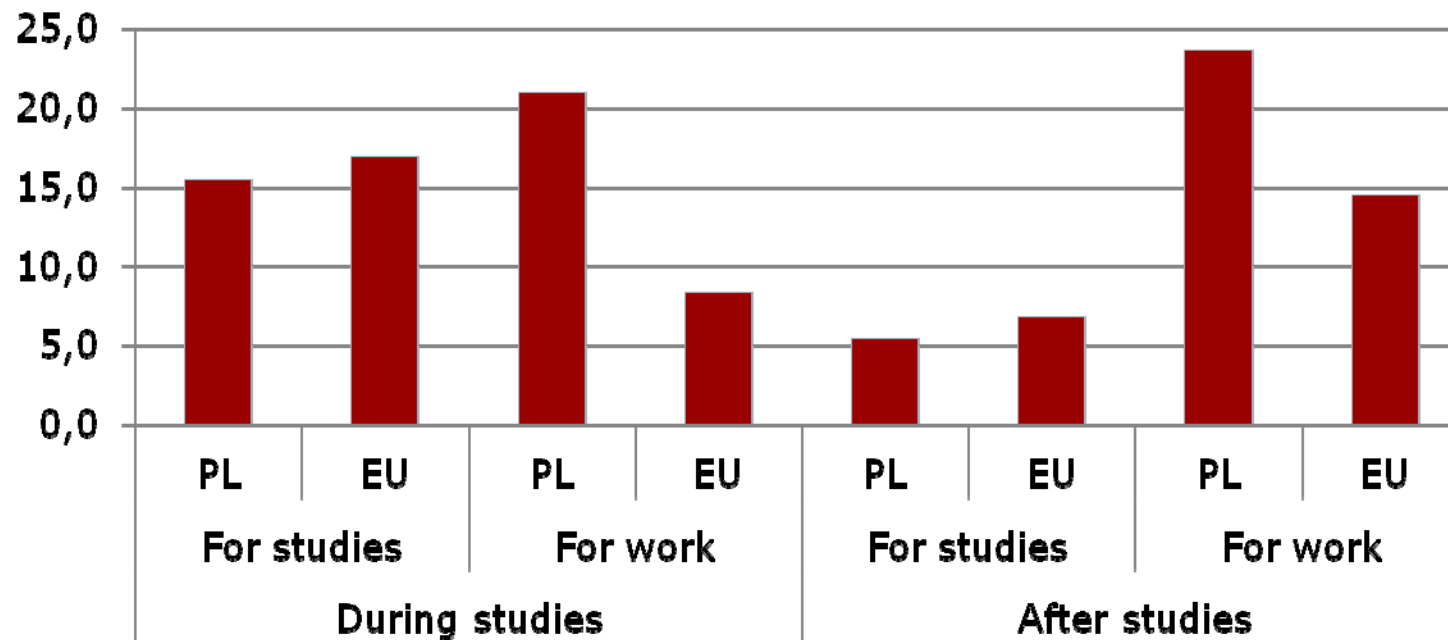
Datasources: Refelx/Hegesco database

- Scarcity of comparable data
- Reflex and Hegesco database
 - In 2003: REFLEX project that focused on the degree to which higher education equips graduates with the competencies to meet labour market demand
 - In 2005: Hegesco project as a follow-up of the Reflex → a cross-country comparison of 19 European countries
 - Total sample: 48500 obs. (Poland: 1200 obs.)



Mobility of Polish students in comparison to other survey participants

Share of graduates declaring participation in international mobility



Source: own calculations based on REFELX/Hegesco dataset



Share of graduates declaring foreign experience by domain: Poland versus other European countries

	Education		Sciences		Engineering		Medicine		Social sc		Business		Total	
	PL	EU	PL	EU	PL	EU	PL	EU	PL	EU	PL	EU	PL	EU
Abroad during studies for study reason	8.9	11.4	13.6	14.9	11.5	14.8	25.8	17.7	15.3	19.8	19.8	16.6	15.0	15.4
Abroad during studies for work reason	11.6	6.3	18.2	7.2	18.9	8.4	22.6	5.9	29.9	8.7	23.6	11.3	21.0	8.5
Abroad after studies for study reason	0.7	4.5	8.0	8.5	5.1	6.6	9.7	6.7	8.3	8.8	4.9	6.1	5.3	6.5
Abroad after studies for work reason	13.0	8.8	29.5	17.2	24.0	19.4	19.4	10.2	22.2	14.8	24.4	15.8	22.5	15.1

Source: own calculations based on REFELX/Hegesco dataset



Study Abroad and Employability: case of Poland

International mobility and
employability: evidence from
graduate survey



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Data sources on graduates activity

- No regular country-wide graduates' survey
- Fragmentary analyses run by schools
- Survey on Poles' Educational Paths realised on the representative group of Polish households in 2004 - outdated
- Special graduates' survey carried out in 2007: an inquiry on the labour market participation of school leavers in the context of the „First Job” programme



2007 Graduates' Survey

- Data gathered between late November 2006 and late February 2007
- 20-thousand representative sample:
 - persons that between January 1998 and December 2005 finished their education (no longer studied)
 - graduated from secondary level schools (high schools and vocational schools) upper secondary and tertiary (undergraduate and graduate level) schools
 - were less than 27 years old at the moment of graduation
 - between the last and last-by-one stage of their education career hadn't had a break of more than 12 months
- Only persons not continuing education were included



2007 Graduates' Survey

- The questionnaire consisted of several parts (177 questions) concerning:
 - level of education and education path
 - process of looking for a first job during the period of 12 months after graduation
 - economic activity after graduation
 - detailed characteristics of jobs undertaken
 - questions on the entrepreneurship
 - impact of employment offices on the graduates professional careers and
 - spatial mobility of graduates.
- Sample in the database comprises 20181 observations entirely for Poland out of which 5566 graduated from HEIs.

Mobility in the 2007 graduate survey

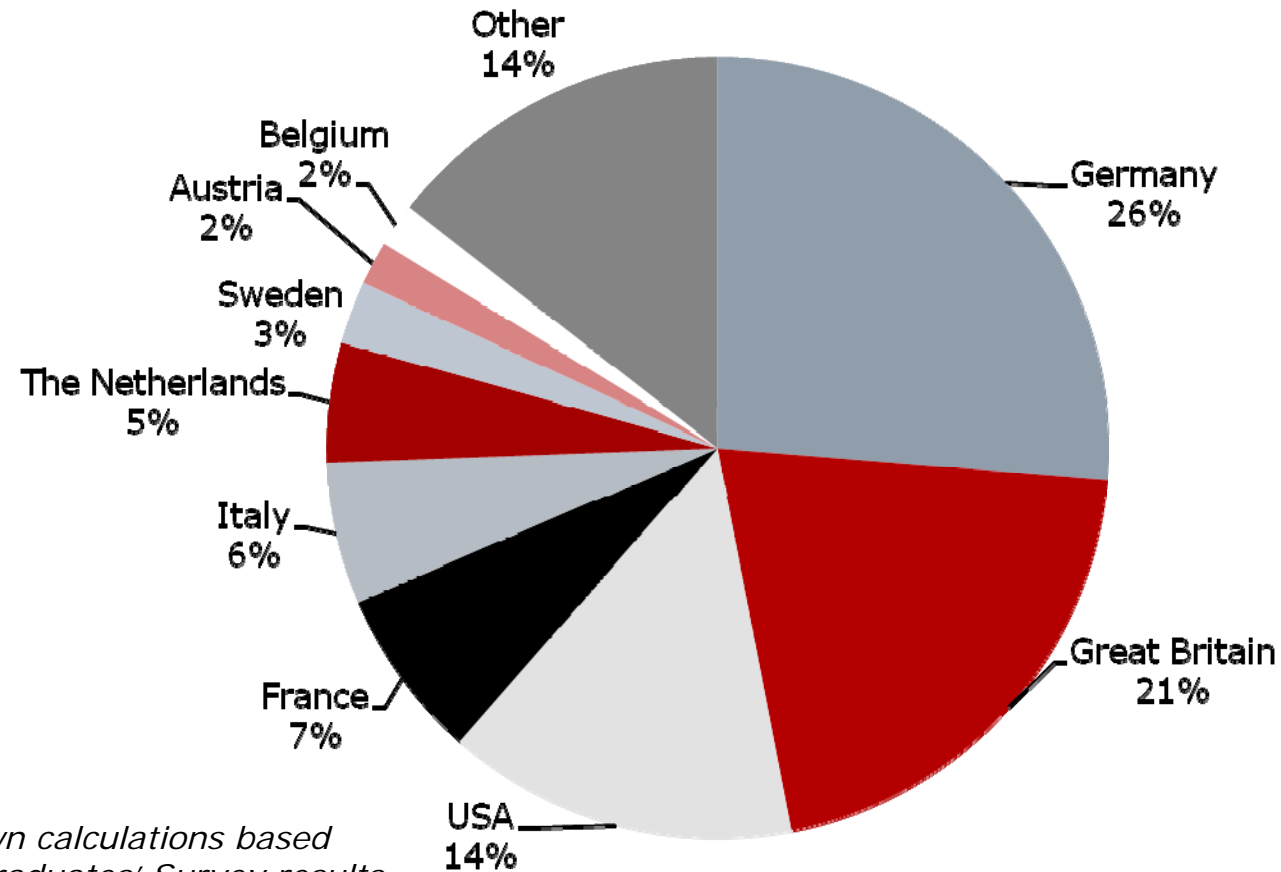
- At least one semester of study abroad: 3.1% of tertiary graduates
- At least two weeks abroad for work or study purpose: 11.8 % of tertiary graduates
- More than a half of outgoing students: only one trip
- Length of stay abroad

Number of months	Frequency	Percent
1	221	20.8
2	286	26.9
3	286	26.9
4-6	195	18.3
7-12	71	6.9
13 and more	6	0.6
Total	1065	100.0

Source: own calculations based on 2007 Graduates' Survey results



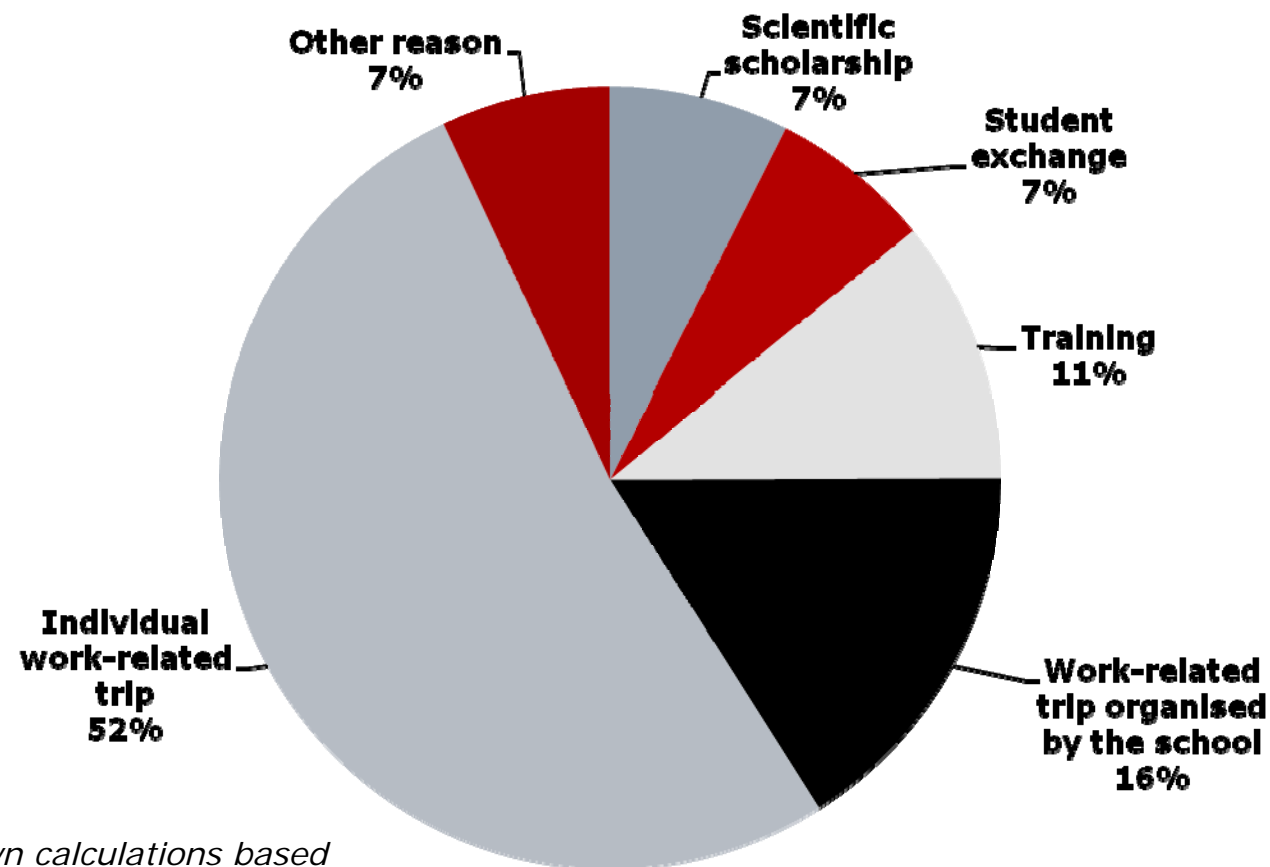
Destination countries of graduates travelling abroad at least for 2 weeks before graduation



Source: own calculations based on 2007 Graduates' Survey results



Aim of a trip abroad before graduation

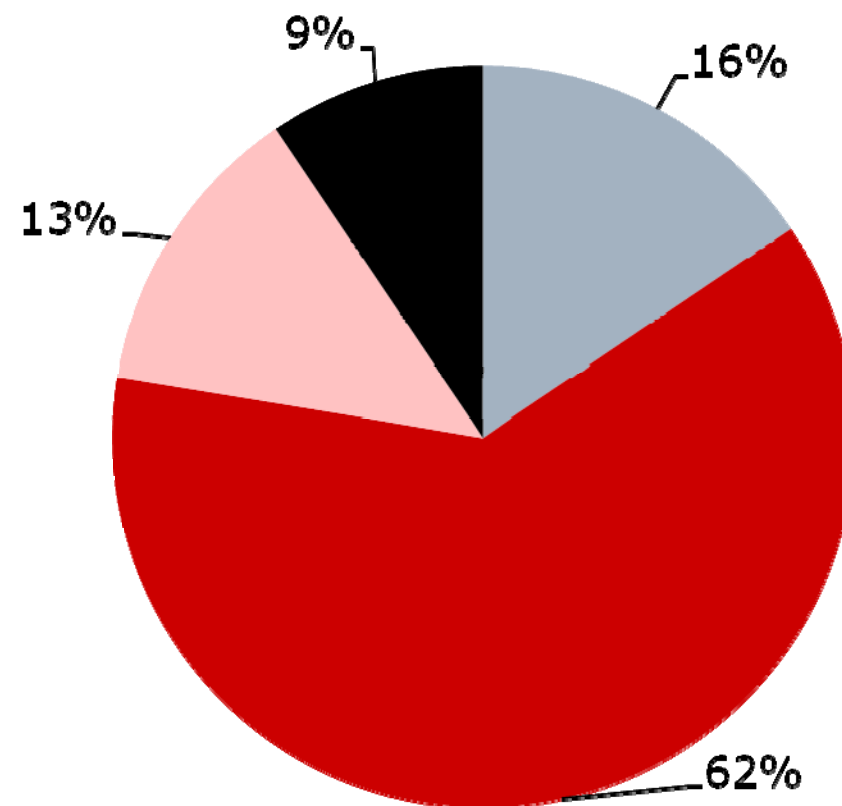


Source: own calculations based on 2007 Graduates' Survey results



Fact of work during a stay abroad

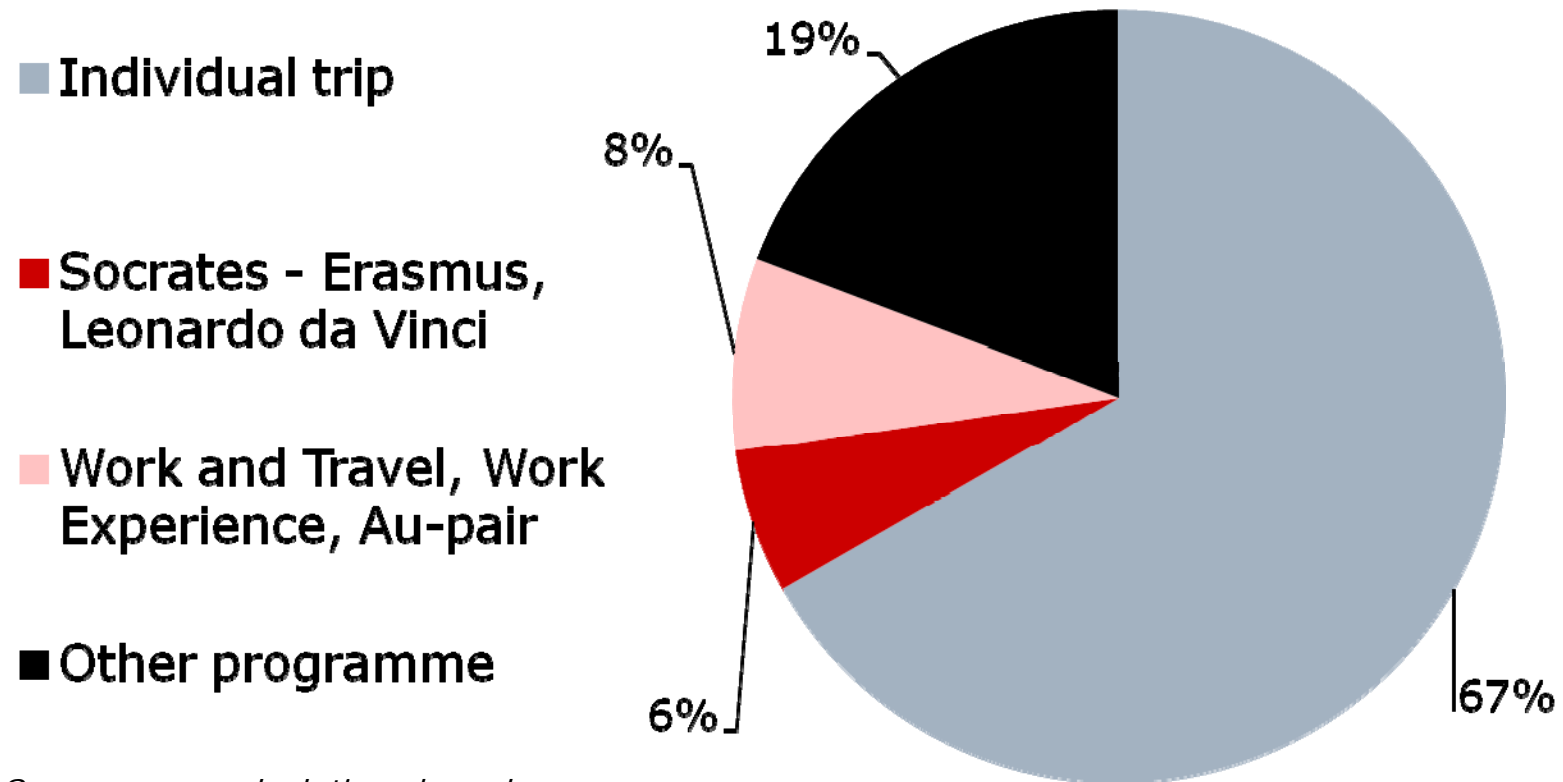
- I worked during my stay abroad and my job was related to my studies and qualifications
- I worked during my stay abroad, but my job was not related to my studies and qualifications
- I didn't work, but I didn't want to work
- I didn't work, because I was not able to find job



Source: own calculations based on 2007 Graduates' Survey results



Organisation of going abroad

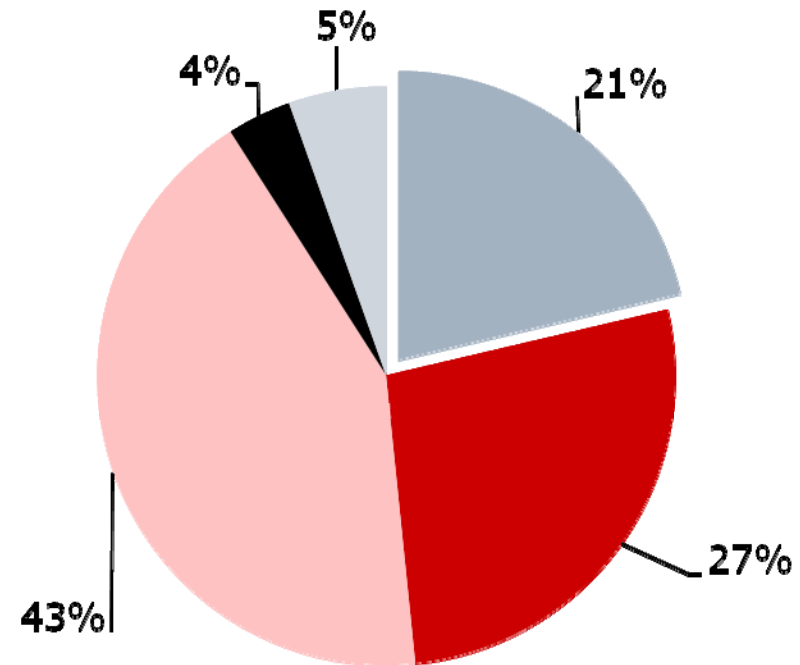


Source: own calculations based on 2007 Graduates' Survey results



Assessment of stay abroad

- Very beneficial, increased my skills and qualifications
- Rather positive for my career
- Rather indifferent for my career path
- Rather harmful for my career
- Very harmful for my career



Source: Own calculations based on 2007 Graduates' Survey results



How to measure employability?

- Traditional approach to labour market success: employment rate
 - Modern labour market:
 - Types of employment contracts
 - Employment stability
 - Wage level
 - Human capital accumulation
 - Utilization of skills and knowledge acquired during education
 - Personal development
 - Career perspectives
 - Degree in which actual job matches graduate's expectations
 - General satisfaction: work-life balance
-



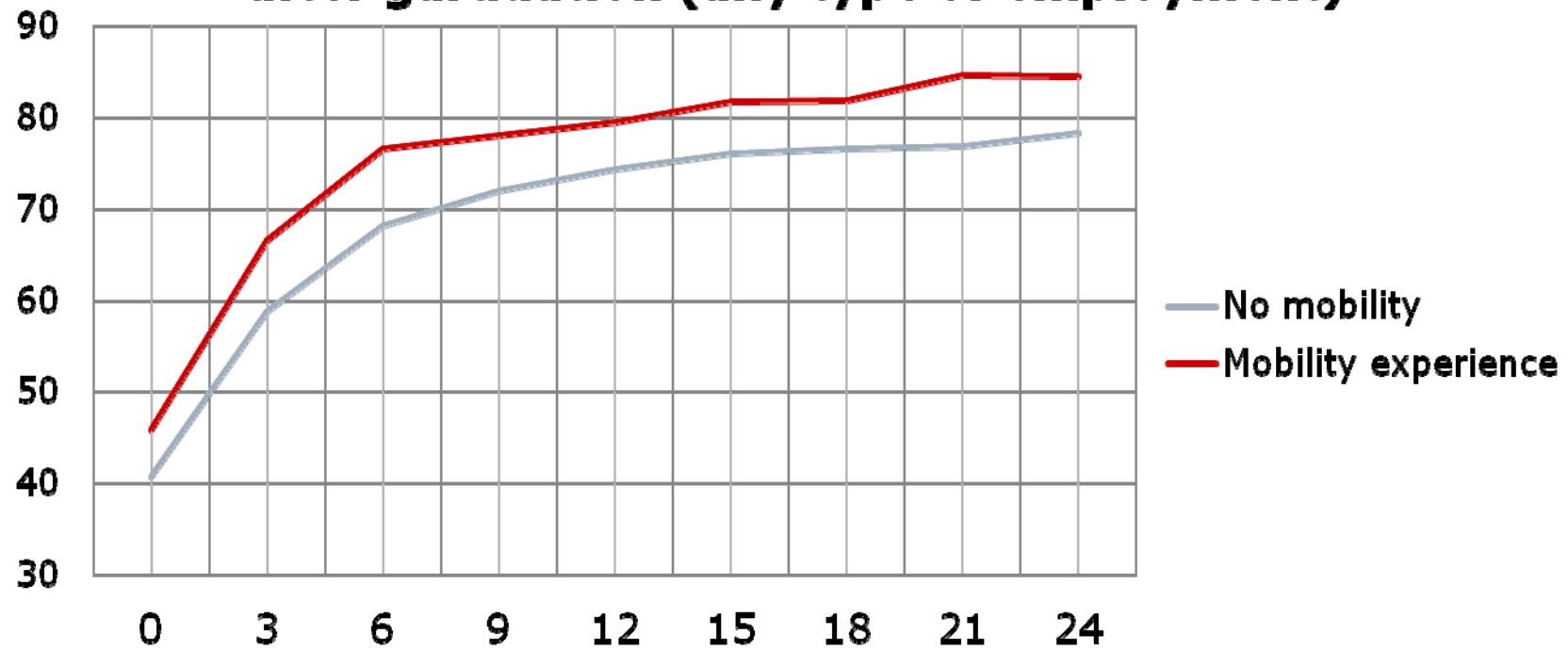
Our approach to employability measurement

- Based on theoretical considerations and data gathered during in the survey
- Fact of employment
- Four different types of success definition:
 - E = 1: undefined time of contract
 - E = 2: fixed term contract or civil contract
 - E = 3: work without contract, training etc.
 - E = 123: any type of job
- Time duration of job search



Are mobile students more employable?

Employment rate during two years after graduation (any type of employment)

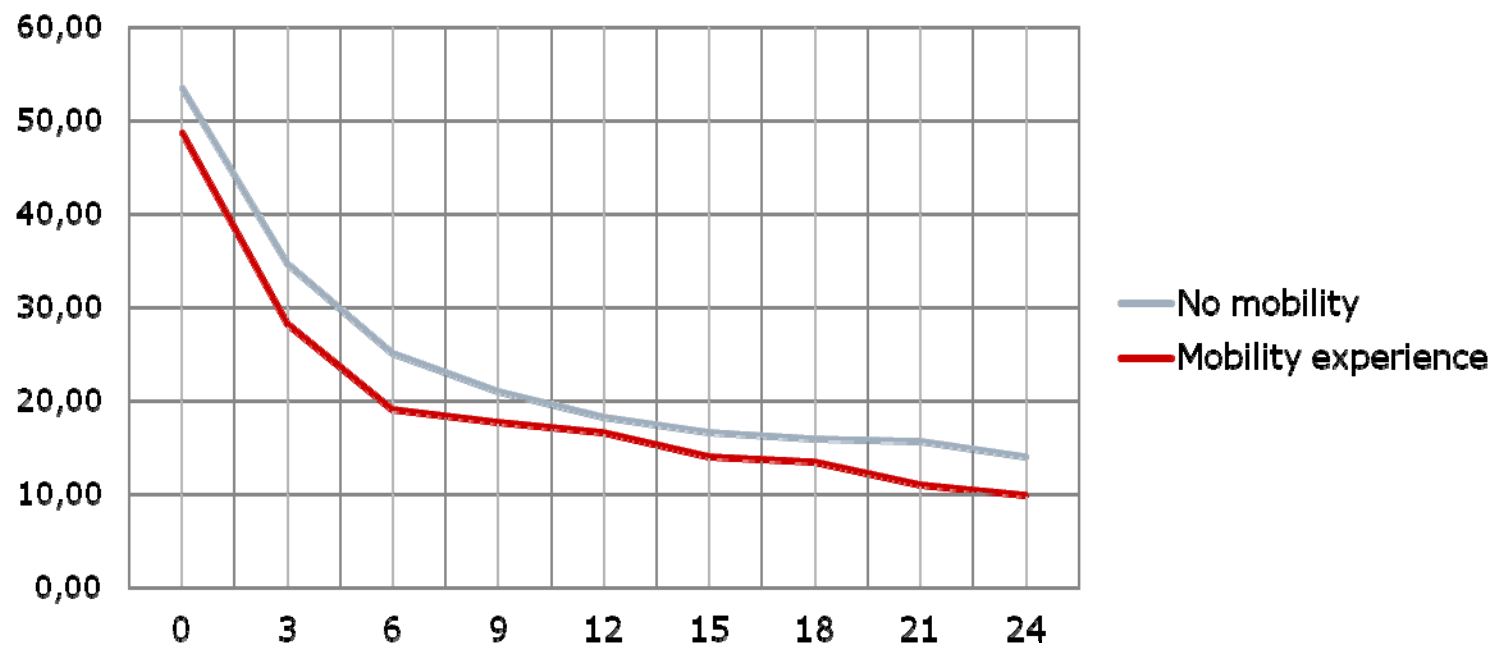


Source: own calculations based on 2007 Graduates' Survey results



Are mobile students more employable?

Unemployment rate during two years after graduation



Source: own calculations based on 2007 Graduates' Survey results



Probability of finding any type of job during six months after graduation

At least one semester abroad	Job found during first 6 months after graduation		
	No	Yes	Total
No	36.82	63.18	100
Yes	17.65	82.35	100
Total	36.33	63.67	100

Source: own calculations based on 2007 Graduates' Survey results



Average job search time of tertiary graduates (only persons without job at the moment of graduation)

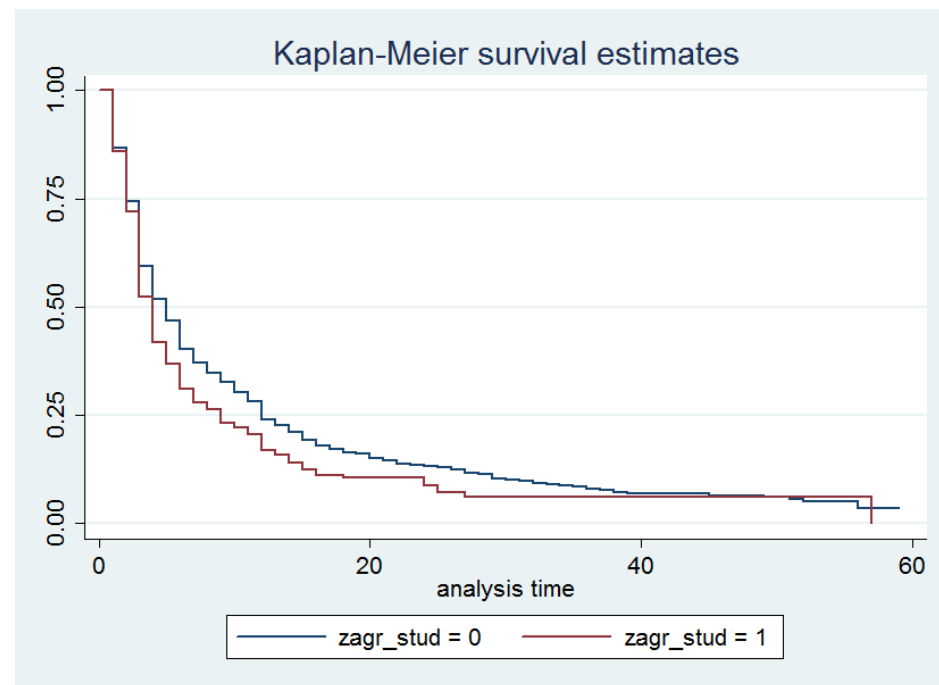
Source: own calculations based on 2007 Graduates' Survey results

Category		Average	Standard deviation	Coefficient of variation	First quartile	Median	Third quartile
Women		8.4	9.3	1.1	2	5	12
Men		7.5	9.5	1.3	2	4	9
Bachelor degree	Public school	10.5	11.3	1.1	3	6	17
	Non-public school	9.7	10.5	1.1	2	6	13
Master degree	Public school	7.1	8.2	1.2	2	4	9
	Non-public school	9.2	11.4	1.2	2	5	11
Town 100 th +		7.2	9.2	1.3	2	4	8
Town up to 100 th		8.3	9.2	1.1	2	5	12
Countryside		9.1	9.9	1.1	3	5	12
At least 2 weeks abroad for work or study	No	8.3	9.5	1.1	2	4	12
	Yes	6.7	8.2	1.2	2	4	8
At least one semester abroad	No	8.2	9.5	1.2	2	4	11
	Yes	5.3	5.4	1.0	2	3	6
Total		8.1	9.4	1.2	2	4	11



Comparison of survival functions

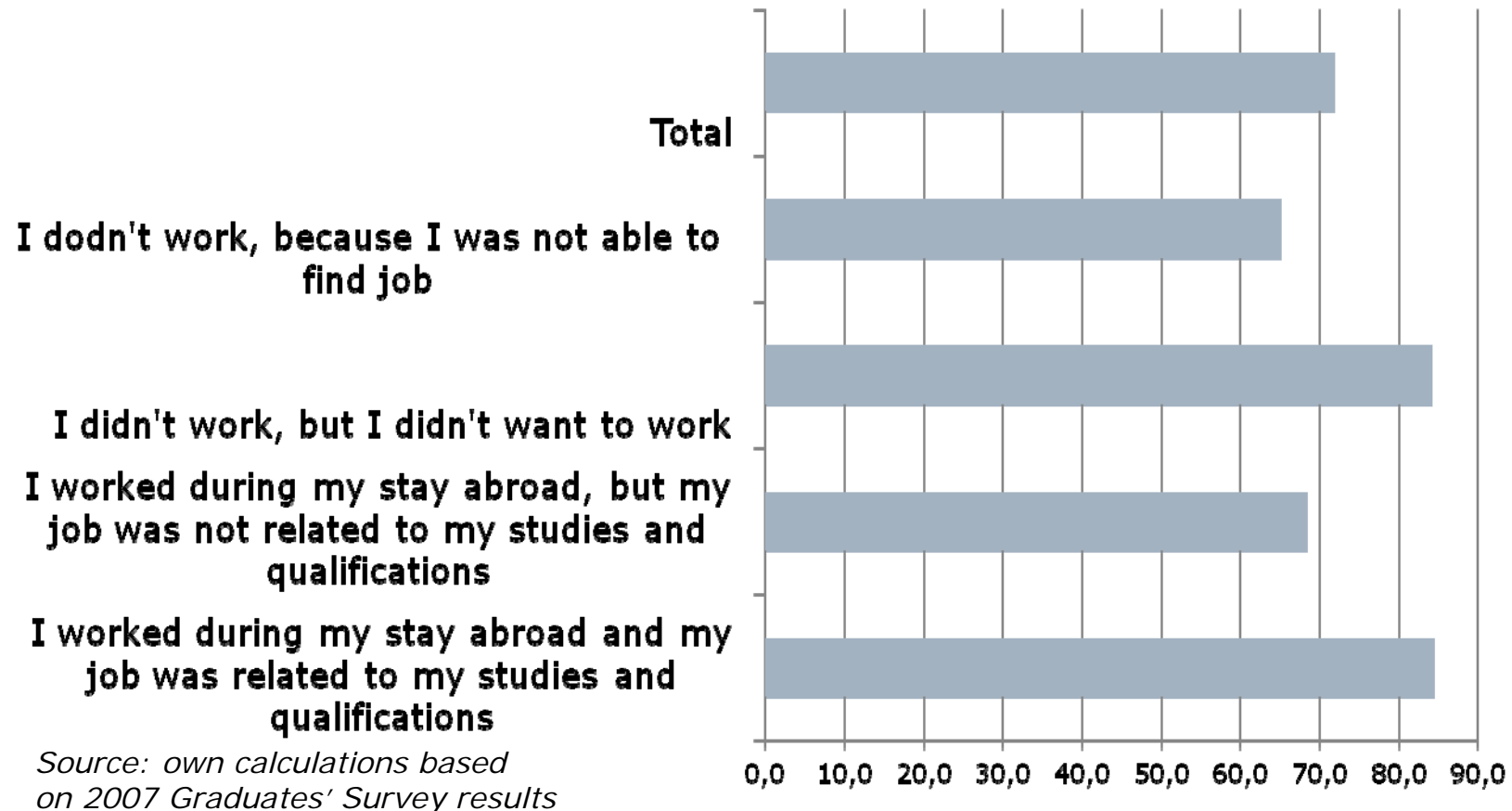
Success: getting a job (any form)		
Log-rank test for equality of survivor functions		
	Events observed	Events expected
0	1495	1524.12
1	188	158.88
Total	1683	1683
chi2(1) =	6.82	
Pr>chi2 =	0.009	



Source: own calculations based on 2007 Graduates' Survey results



Population of graduates with an experience of stay abroad: employment rate 6 months after graduation



Is there a causative relationship between mobility and employability?

- Regression analysis: survival analysis
- Dependent variable: search time
- Four different types of success definition:
 - $E = 1$: undefined time of contract
 - $E = 2$: fixed term contract or civil contract
 - $E = 3$: work without contract, training etc.
 - $E = 123$: any type of job
- Two different measures of experience abroad
 - At least one semester spent abroad for education reason
 - At least two weeks spent abroad for work or education purpose



Is there a causative relationship between mobility and employability?

- Independent variables:
 - Gender (M/F)
 - Domain of study
 - Knowledge of foreign language (Yes/no)
 - Practical experience (Yes/no)
 - Driving licence (Yes/no)
 - Computer skills (Yes/no)
 - Contacts (Yes/no)
 - Disability (Yes/no)
 - Type of degree (BA/MA)
 - Class of settlement unit (Big town small town countryside)
 - Year of graduation



Regression results

Source: own calculations based on 2007 Graduates' Survey results

	(1)	(2)	(3)	(4)
VARIABLES	E=123	E=1	E=2	E=3
Men	1.1025	1.4105**	1.0688	0.8264
At least two weeks abroad	1.0698	0.8103	1.1887	1.2015
Tertiary MA	1.3812**	1.6658**	1.2000*	1.3692**
Town 100+	1.2789**	1.4284**	1.5429**	0.7793
Town <100	1.1208	1.0996	1.3466**	0.8753
Economics	1.0947	1.1252	1.2042	0.9361
Law	0.9560	1.0882	0.9888	0.7883
Teachers	1.2425	1.4434	1.3463	0.8943
Social Sciences	1.0456	0.7977	1.3394	0.9568
Engineering	1.4217**	1.3366	1.6914**	1.1003
Health	1.8717**	1.3675	2.2118**	1.8060
Science	1.1083	1.0614	1.2094	1.0405
Foreign language	1.0888	1.4513**	0.9712	0.8890
Practical experience	1.0593	0.9733	1.1357	1.0201
Driving licence	1.2182**	1.0765	1.2795**	1.2541*
Computer skills	1.0288	1.0152	1.0738	0.9860
Contacts	1.3069**	1.2614*	1.3390**	1.2540
Disability	0.6596	0.5094	0.9159	0.4873
Observations	1773	1773	1773	1773
** p<0.01 * p<0.05				



Regression results

Source: own calculations based on 2007 Graduates' Survey results

	(5)	(6)	(7)	(8)
VARIABLES	E=123	E=1	E=2	E=3
Men	1.1055	1.4221**	1.0821	0.8059
At least semester abroad	1.2891	0.8807	2.0037**	0.5769
Tertiary MA	1.3858**	1.6560**	1.2085*	1.3689**
Town 100+	1.2682**	1.4181**	1.5289**	0.7744
Town <100	1.1164	1.0887	1.3536**	0.8704
Economics	1.0679	1.1028	1.1350	0.9567
Law	0.9388	1.0559	0.9510	0.8081
Teachers	1.2326	1.4278	1.2980	0.9232
Social Sciences	1.0337	0.7772	1.2926	1.0054
Engineering	1.4065**	1.3325	1.6093*	1.1441
Health	1.8382**	1.3528	2.0893**	1.8442*
Science	1.0920	1.0537	1.1570	1.0592
Foreign language	1.0811	1.4390**	0.9613	0.8941
Practical experience	1.0614	0.9780	1.1343	1.0277
Driving licence	1.2158**	1.0573	1.2730**	1.2803*
Computer skills	1.0194	0.9797	1.0616	1.0097
Contacts	1.3149**	1.2678*	1.3431**	1.2771
Disability	0.6609	0.5061	0.9239	0.5010
Observations	1768	1768	1768	1768
** p<0.01 * p<0.05				



Conclusions

- Dynamic increase in mobility of Polish students, with changes in geographical structure
- Yet, it is a destination patterns
- Most of students going abroad during studies do it for work purpose and organise a trip on their own (without any institutionalised support)
- Students with mobility experience are characterised with **higher probability of finding a job and shorter search time**



Conclusions: does mobility increase employability?

- However, regression analysis (with control of other observable characteristics) suggest **that mobility *per se* does not increase employability**
- However, mobility may be correlated with other characteristics increasing probability of finding a job
- **Therefore mobility may improve matching efficiency (screening device)!**
- Determinants of international mobility?



Thank you!

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