

Study Conditions and Professional Success.

Methodology and First Results of a German Graduate Survey Conducted in Cooperation with 48 Higher Education Institutions (GRADNET)



Using Social Statistics to Illuminate the Issues, Processes, and Outcomes in Higher Education: International Viewpoints, Université du Québec à Montreal, December 7-9, 2009, Montreal, Canada

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Overview

- Institutional Background
- The GRADNET approach: The German Graduate Survey Network
- Selected Results: How important is the HE Institution Attended for Early Career Success
- Which Study Conditions are Relevant?
- Conclusions

A. Institutional Background – who and where is INCHER?

INCHER-Kassel

- ❑ International Centre for Higher Education Research Kassel (INCHER-Kassel)
- ❑ The centre is 31 years old
- ❑ Research Centre of the University of Kassel
- ❑ About 20-30 researchers
- ❑ About 15 doctoral students
- ❑ Study programme: Master of Higher Education
- ❑ Research focus: Higher education and work; HE systems and structures; (international) graduate surveys (CHEERS; REFLEX; PROFLEX; HEGESCO)
- ❑ International network of graduate surveys

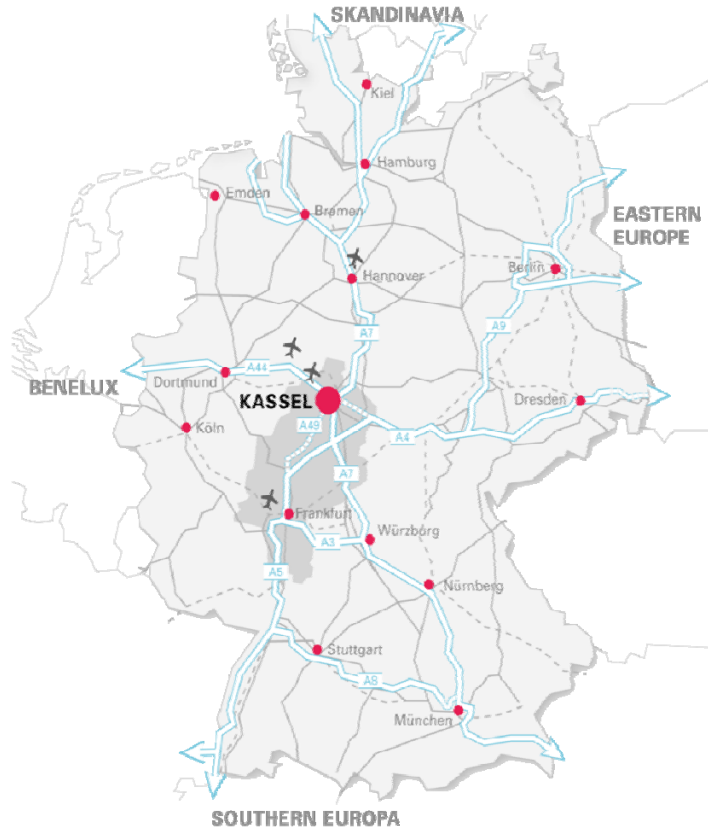
UNIKASSEL
VERSITÄT



INCHER-KASSEL
Internationales Zentrum
für Hochschulforschung Kassel

University City Kassel:

in the Heart of Germany, in the State of Hesse



Located in the center of Germany and Europe



Unique unity of urban culture and landscape



City of the documenta



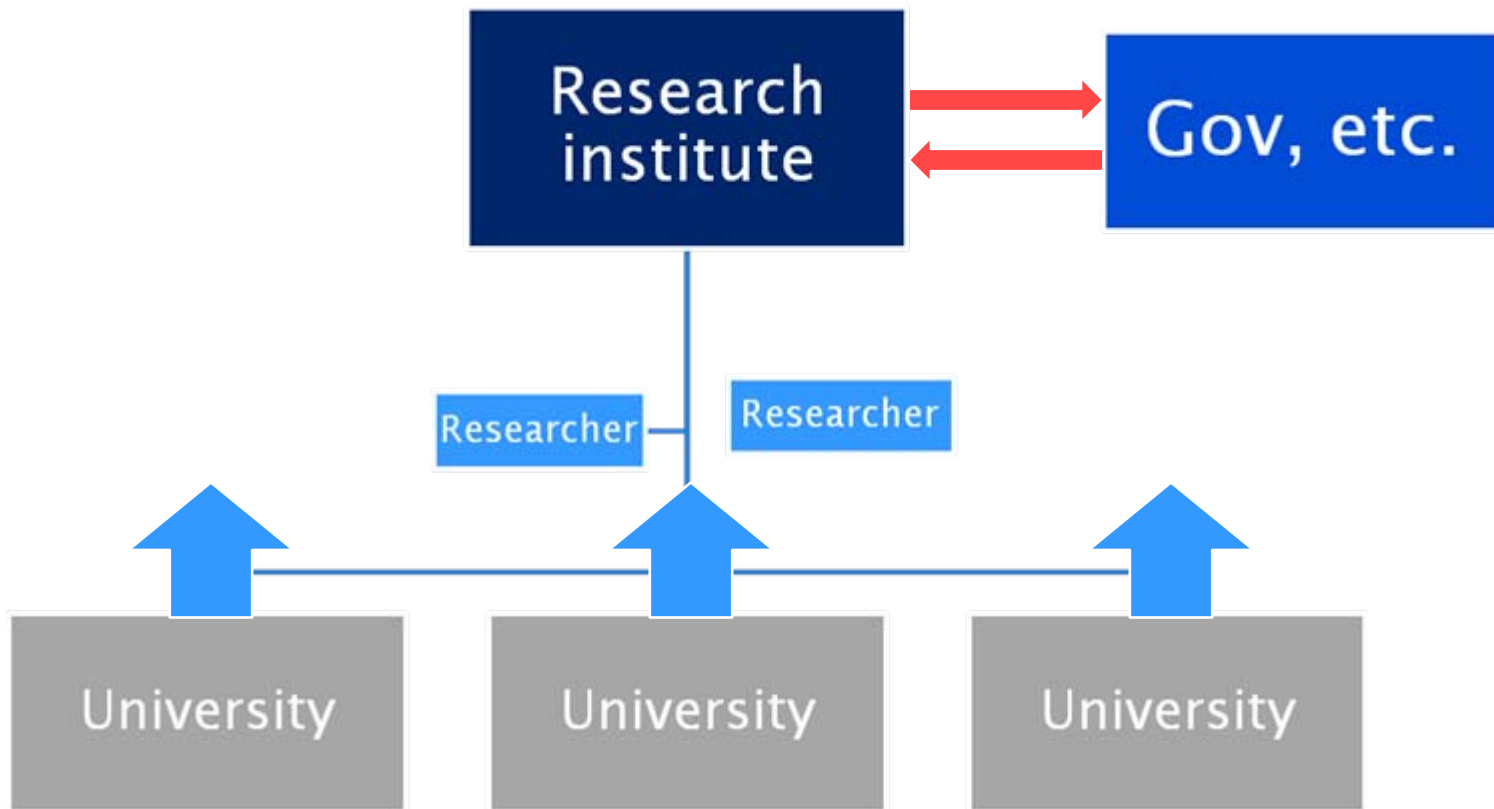
Parks and recreational areas



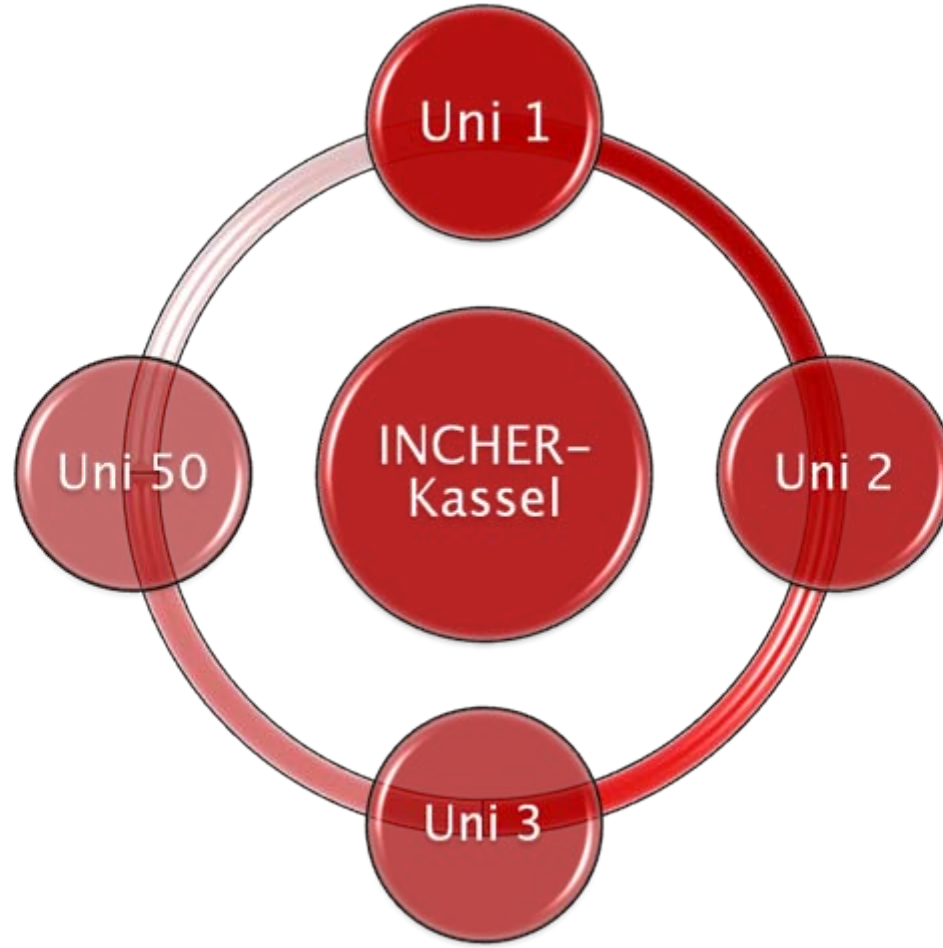
Center for industry, services and civil administration of northern Hesse

B. The New GRADNET Approach: Network of Graduate Surveys

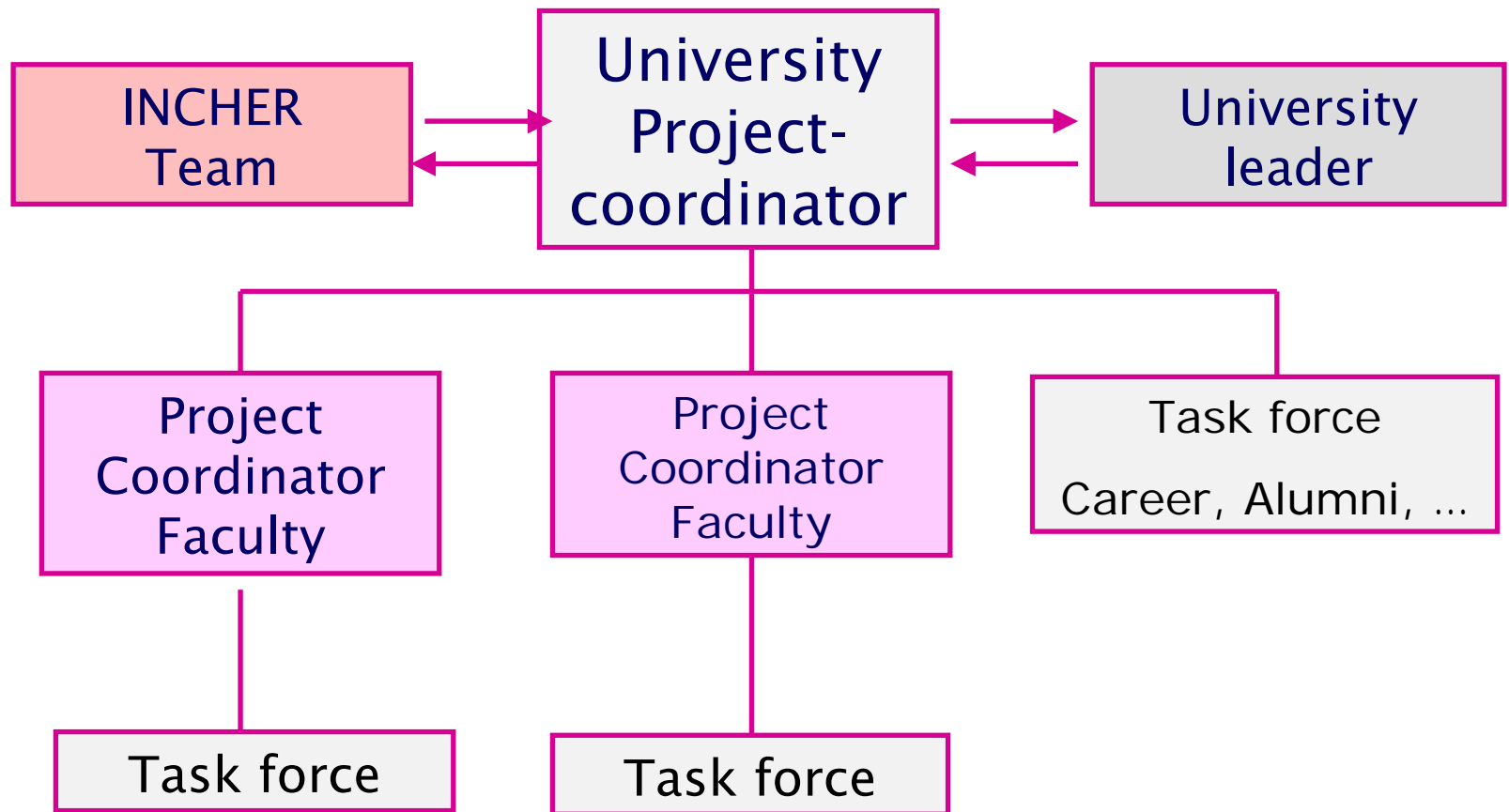
The Traditional Approach



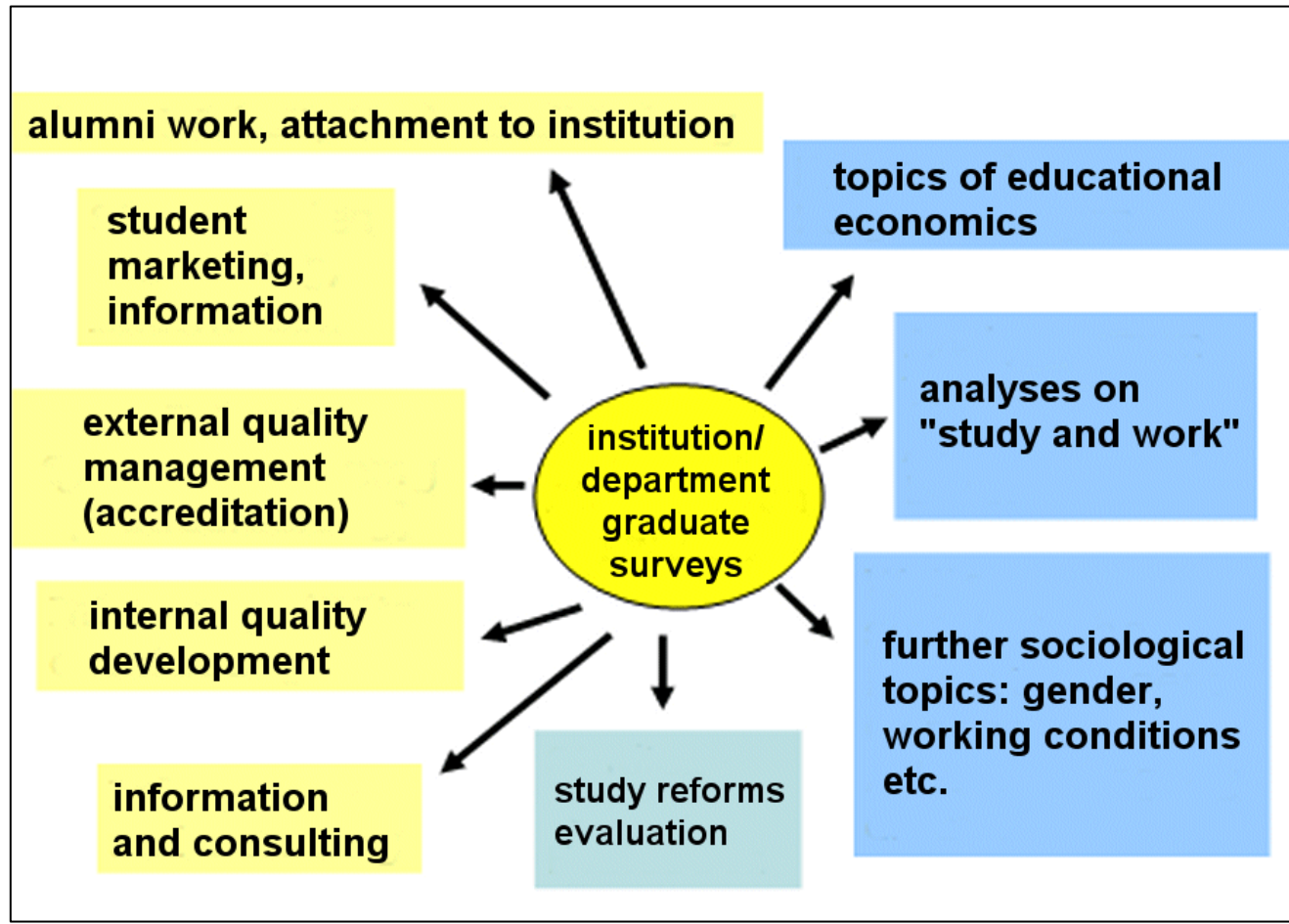
The German Network Approach



Organisation of GRADNET at University Level



The Bridge Concept – HE Research and Application



Objectives of Institutional Graduate Surveys in Germany

□ Multi-functional surveys with broad focus

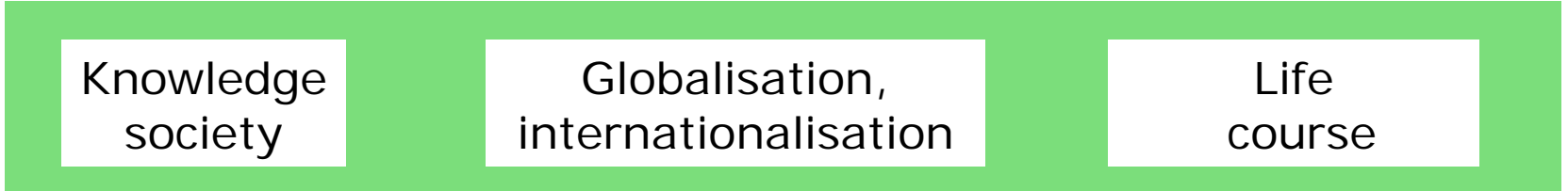
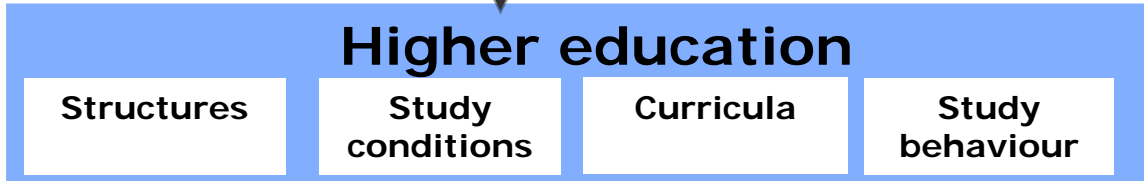
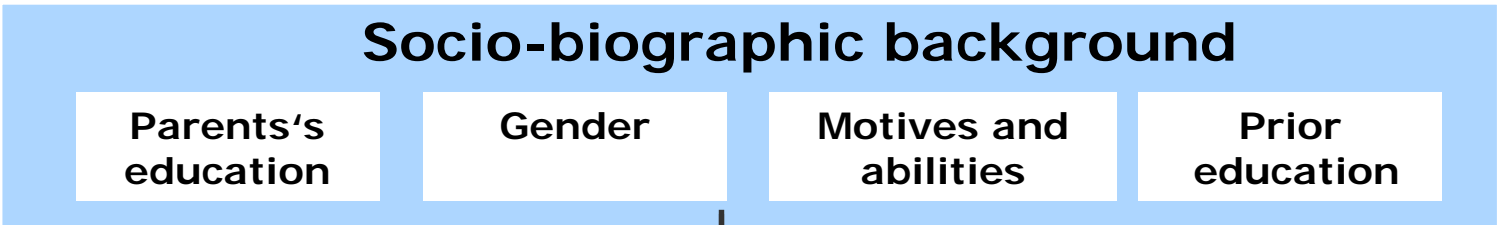
- Employment, labour market signals, professional success
- Competences and work
- Retrospective rating/evaluation of study
- Curricular development
- Continuing education (marketing)
- Networking, alumni databank
- Evaluation – quality assurance – accreditation

□ Multi-institutional surveys

- Benchmarking
- Comparison with relevant others – not with the average

Key Theoretical Problems

1. Which indicators do we need?
2. How to measure the labour market signals?
3. Which factors are relevant to explain the success of the graduates besides higher education?
4. To what extent is the professional success/career caused by HE?
5. Which elements of HE (study conditions and provisions, etc) have an impact?



GRADNET: Network of Graduate Surveys

- ❑ Established 2006 by INCHER-Kassel
- ❑ 2008: about 250 members
- ❑ German language
- ❑ Individual membership (email list)
- ❑ Two conferences per year
- ❑ Professionalisation of tracer study researchers
- ❑ Core group
- ❑ Initiative for the RESEARCH PROJECT
„Study Conditions and Professional Success“

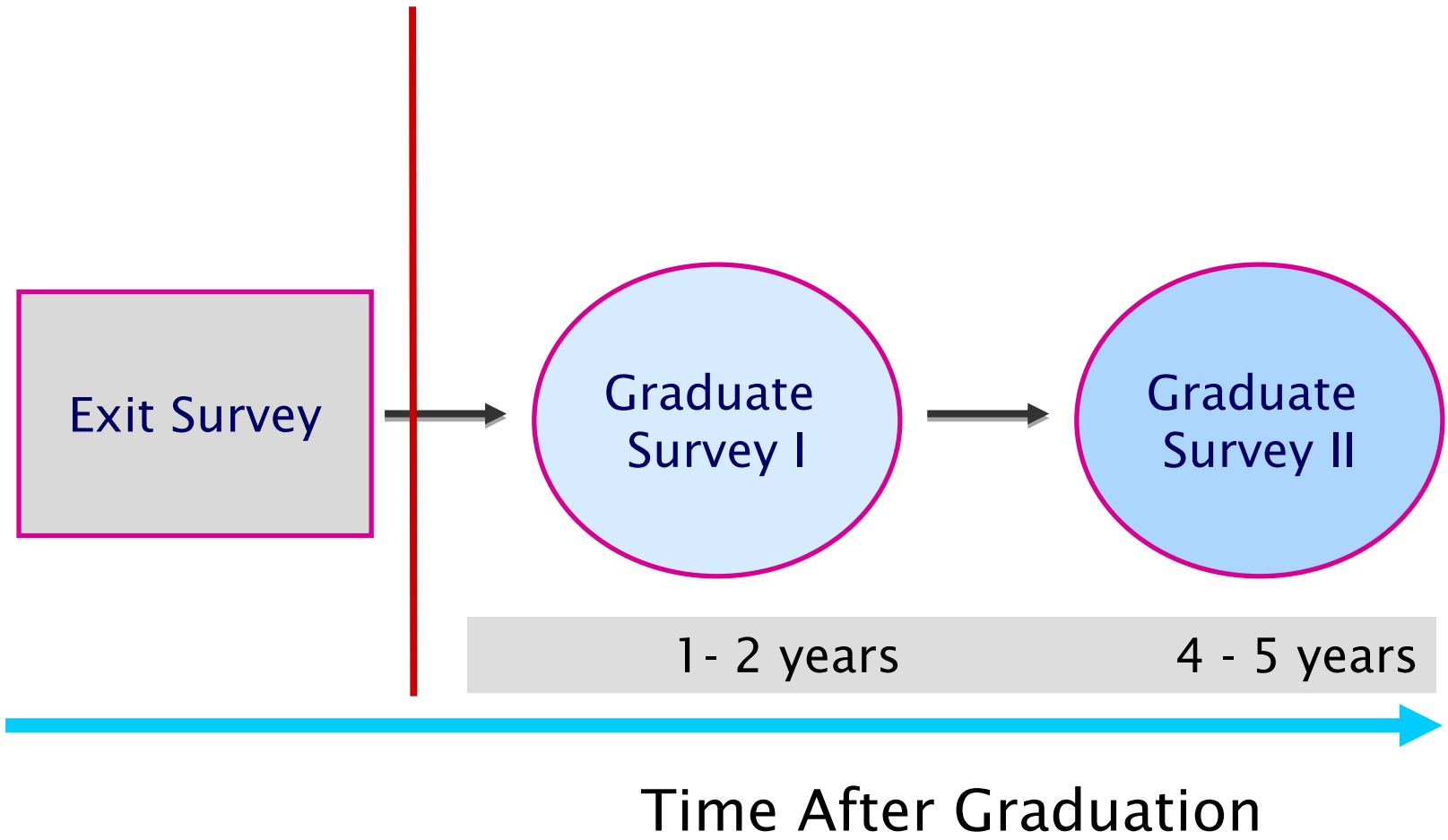
Background: New Challenges

- ❑ Growing competition of HE institutions
- ❑ Growing international competition
- ❑ New study structure (Bologna process)
- ❑ „Employability“
- ❑ Evaluation and Accreditation („Accountability“; “outcome assessment”)
- ❑ Growing service demand from students
- ❑ New HE management philosophy – quality management




The Tracer Study Revolution in Germany

- Until 2007: only a few institutions of HE conducted regular tracer studies
- 2008/2009 almost all relevant institutions of HE are partners in different regional or national systems of regular tracer studies
- Coverage: about 80% of all graduates in Germany

(Future) Design of Graduate Surveys



New Survey System in Germany: the GRADNET SURVEYS (INCHER)

| Year of graduation | Year of Graduate Survey | | | | |
|---|--------------------------------------|---|--|--|----------------------------|
| | 2007/2008 Dec.-March | 2008/2009 Oct.-Feb. | 2009/2010 Oct.-Feb. | 2010 Oct.-Dec | 2011 |
| 2006 (9 HE institutions, 15,000 graduates) | 1.5 years after graduation (done) | Panel  | | 4.5 years after graduation | |
| 2007 (48 HE institutions; 80,000 graduates) | | 1.5 years after graduation (done) | Panel  | | 4.5 years after graduation |
| 2008 (52 HE institutions; 80,000 graduates) | | | 1.5 years after graduation (running) | Panel  | |

19 The German Graduate Survey Network Project

Project-coordinators from 35 universities and fachhochschulen during a workshop in Kassel; Sept. 2008



Cooperation for development

- ❑ Every university has an individual questionnaire (2009: 160 surveys were administrated at the same time by INCHER-Kassel)
- ❑ Every university has a project coordinator
- ❑ At least 6 training workshops per survey
- ❑ Every university received the cleaned data and ready to print table reports of about 500 pages
- ❑ Many universities published the results in the internet
- ❑ A lot of internal and external dissemination activities
- ❑ 2009 survey: dataset with 36,000 graduates

Implementation of the German Network Approach

- ❑ Address database of the HE institution
- ❑ Update of addresses by HE institution
- ❑ Four contacts/send outs
- ❑ Contacts by letters and/or email
- ❑ Combination of paper and online questionnaire
- ❑ Response rate should be about 50%

Cooperation with Faculties and Study Programmes

- ❑ Discussion and development of the questionnaire (adaptation)
- ❑ Interpretation of findings
- ❑ Dissemination at faculty/study programme level

C. Selected Results

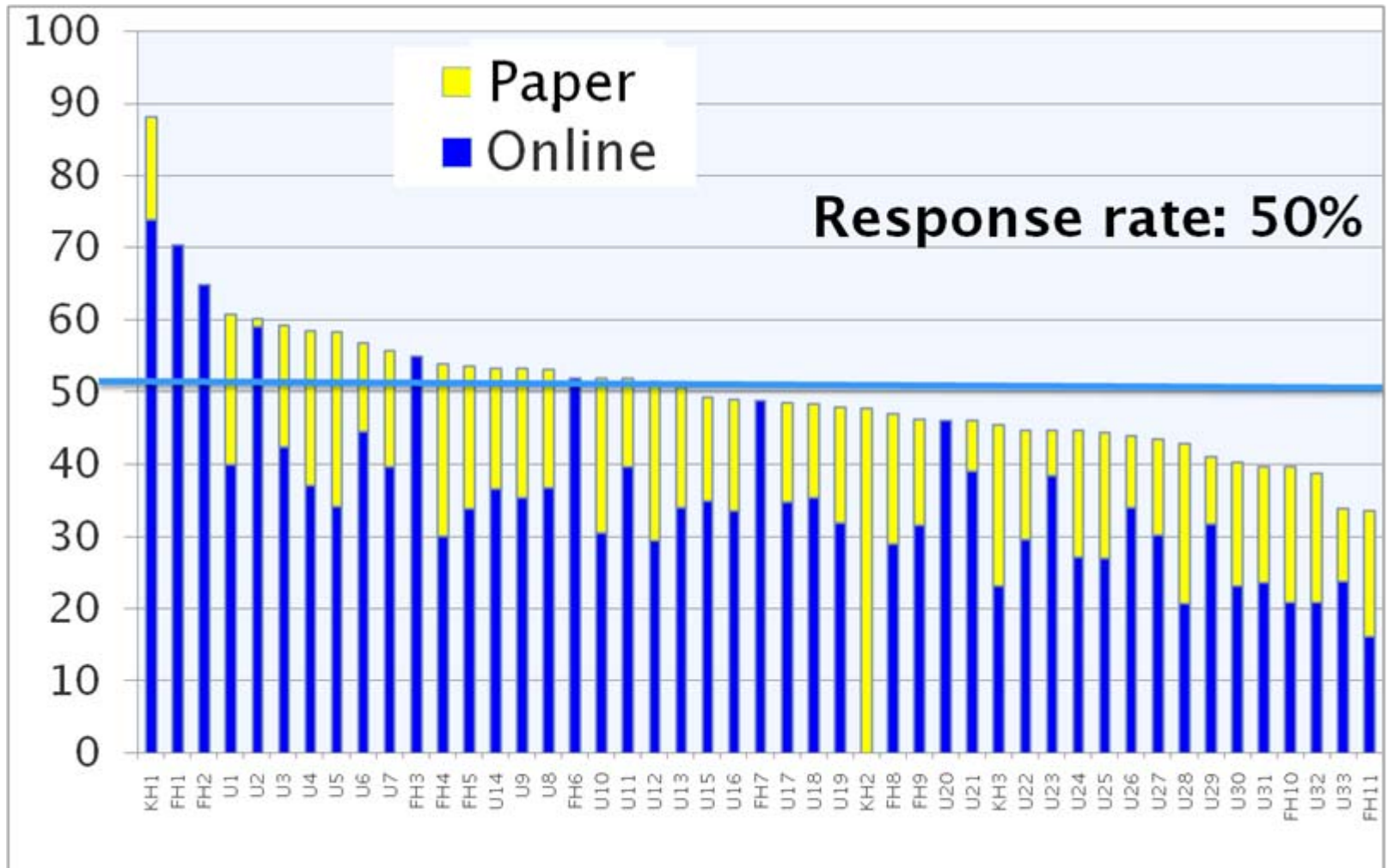
from the German
Graduate Surveys Network
Project (GRADNET)
Survey 2009

24 Design and Conduction of the GRADNET 2008-2009

| | Pilot | Main survey |
|---|---------------------------|--------------------------|
| Cohort of graduates (year of graduation) | 2006 (WS 05 + SS 06) | 2007 (WS 06 + SS 07) |
| Preparation of survey | Oct. - Dec. 2007 | Feb. - Sept. 2008 |
| Field phase | Dec. 2007 – March 2008 | Oct. 2008 - Jan. 2009 |
| Number of participating institutions of higher education | 9 | 48 |
| Used addresses | 15.200 | 86.800 |
| Valid addresses | 12.800 | 75.000 |
| Responses | 6.300 | 37.500 |
| Response rate | 49% | 50% |

INCHER-Kassel: German Graduate Surveys Network Project (GRADNET); survey 2009; cohort 2007, 1.5 years after graduation

Response Rate by HE institution (German Graduate Survey Network Project)



INCHER-Kassel: German Graduate Surveys Network Project (GRADNET); survey 2009; cohort 2007, 1.5 years after graduation

Selected Results of the Survey 2009

1. Cooperation for development among HE institutions in Germany
2. Graduates of the year 2007: optimal labour market conditions in Germany – a success story
3. Negative scenarios do not find empirical support – no trend towards a „Generation Trainees“
4. Differences by field of study are less important
5. Remarkable good employment conditions for Bachelor graduates
6. Growing relevance of soft skills
7. Reputation of the HE institution seems to be not important
8. BA graduates have not less international experiences
9. Transition to first job depends on own initiatives
10. Master – the winners of the Bologna process

Study Conditions: Differences by HE Institutions?

28 Measurement of Study Conditions (1)

How do you rate the following study provisions and conditions in your course of study ?

Scale of answers from
1 = very good to
5 = very bad

29 Study conditions (2) – Examples of items (out of 37)

- Professional relevance
 - Relationship between theory and practice
 - Preparation for work
 - Teaching staff with practical experience
 - Practice-oriented teaching contents
 - Study projects
 - Mandatory internships/practice semesters
 - Courses on technical, environmental, economical, social, cultural and/or psychological impacts of scientific applications (e.g. technological consequences)

Selected Study Programmes

1. HistGer – History and German (Uni-Magister; n=761)
2. SocSc – Political sciences and sociology (Uni; Dipl. u. Mag.; n=983)
3. EcBus – Economics and business (n=3.766)
4. ME - Mechanical engineering (n=1.140)
5. Comp – Computer sciences (n=1.678)

Assessment of Study Conditions: Differences by HE Institutions (η^2)

| | HistGer | SocSc | EcBus | ME | Comp |
|------------------------|---------|-------|-------------|-------------|------|
| Content of teaching | .071 | .086 | .076 | .115 | .118 |
| Study organisation | .090 | .121 | .212 | .115 | .154 |
| Social integration | .088 | .140 | .182 | .233 | .106 |
| Professional relevance | .073 | .100 | .288 | .070 | .149 |
| Career activities | .049 | .092 | .103 | .080 | .071 |
| Methods | .052 | .074 | .083 | .090 | .053 |
| Ressources | .171 | .117 | .117 | .033 | .156 |
| Foreign laguages | .056 | .032 | .114 | .071 | .079 |

Early Professional Success: Differences by HE Institutions?

Six Indicators of Professional Success

1. Income
2. Status/Career opportunities (index)
3. Appropriate position (vertical match)
4. Use of knowledge and skill (horizontal match)
5. Work autonomy (index)
6. Job satisfaction

Vertical Match

A. In your opinion, which academic degree fits best for your current job?

- a) A higher academic degree
- b) My academic degree
- c) A lower academic degree
- d) No academic degree necessary

Question H17

B. Considering all aspects of your job situation (status, position, salary, work tasks etc.), how appropriate is your current job situation to your course of study?

Scale of answers from 1=,to a very high extent' bis 5=,not at all'.

Question H18

Horizontal Match

To what extent are the knowledge and skills you acquired during study utilized in our current job?

Scale of answers from

1 = to a very high extent to

5 = not at all

Early Professional Success: Very Small Differences by HE Institution Attended (η^2)

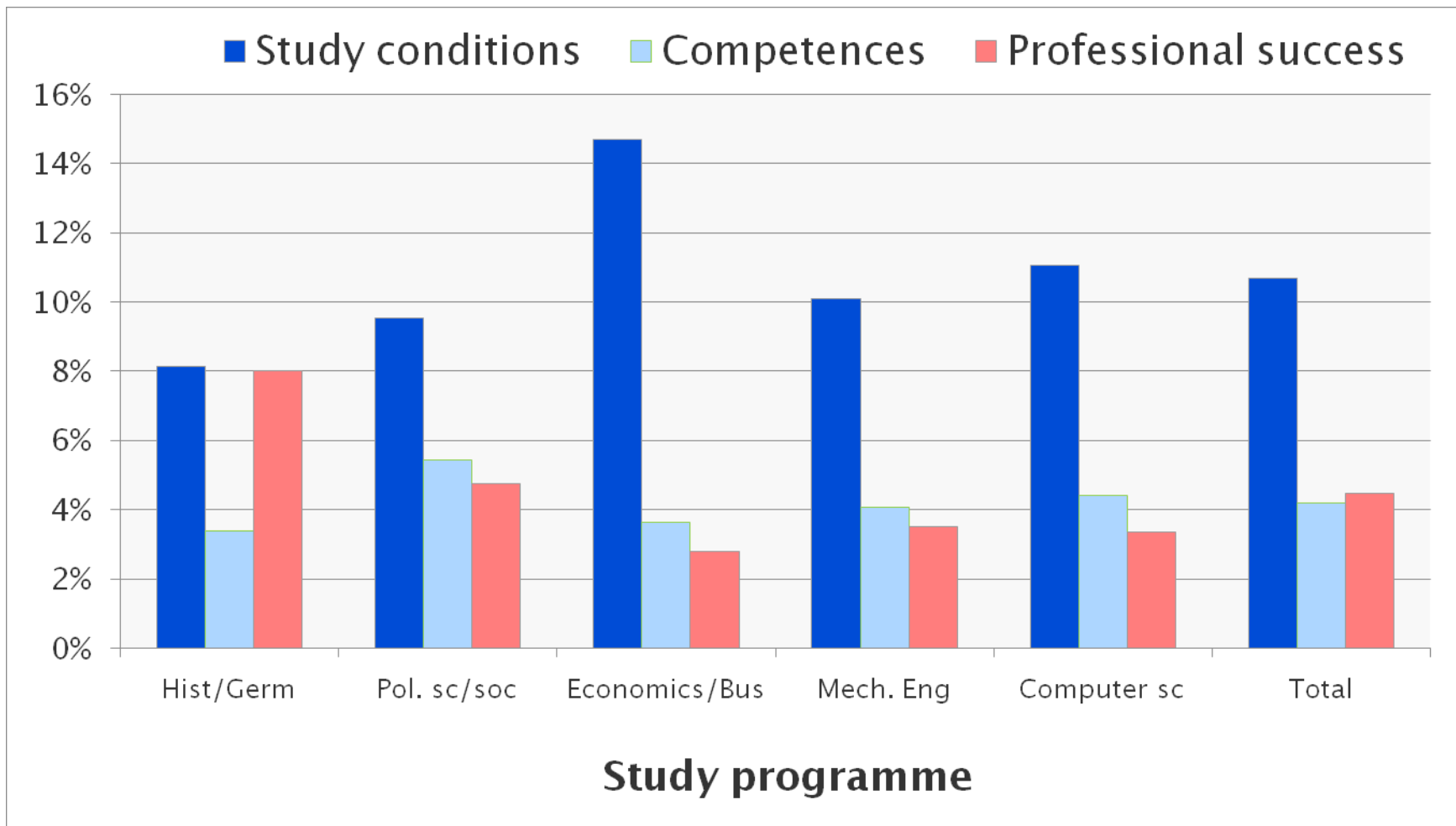
| | HistGer | SocSc | EcBus | ME | Comp |
|-----------------------------|---------|-------|-------|------|------|
| Income | .117 | .044 | .067 | .095 | .057 |
| Status/career opportunities | .077 | .060 | .022 | .025 | .036 |
| Vertical match | .064 | .049 | .023 | .022 | .020 |
| Work autonomy | .084 | .039 | .019 | .021 | .026 |
| Use of knowledge and skills | .075 | .044 | .022 | .018 | .030 |
| Job satisfaction | .064 | .049 | .015 | .029 | .032 |

INCHER-Kassel: German Graduate Surveys Network Project (GRADNET); survey 2009; cohort 2007, 1.5 years after graduation

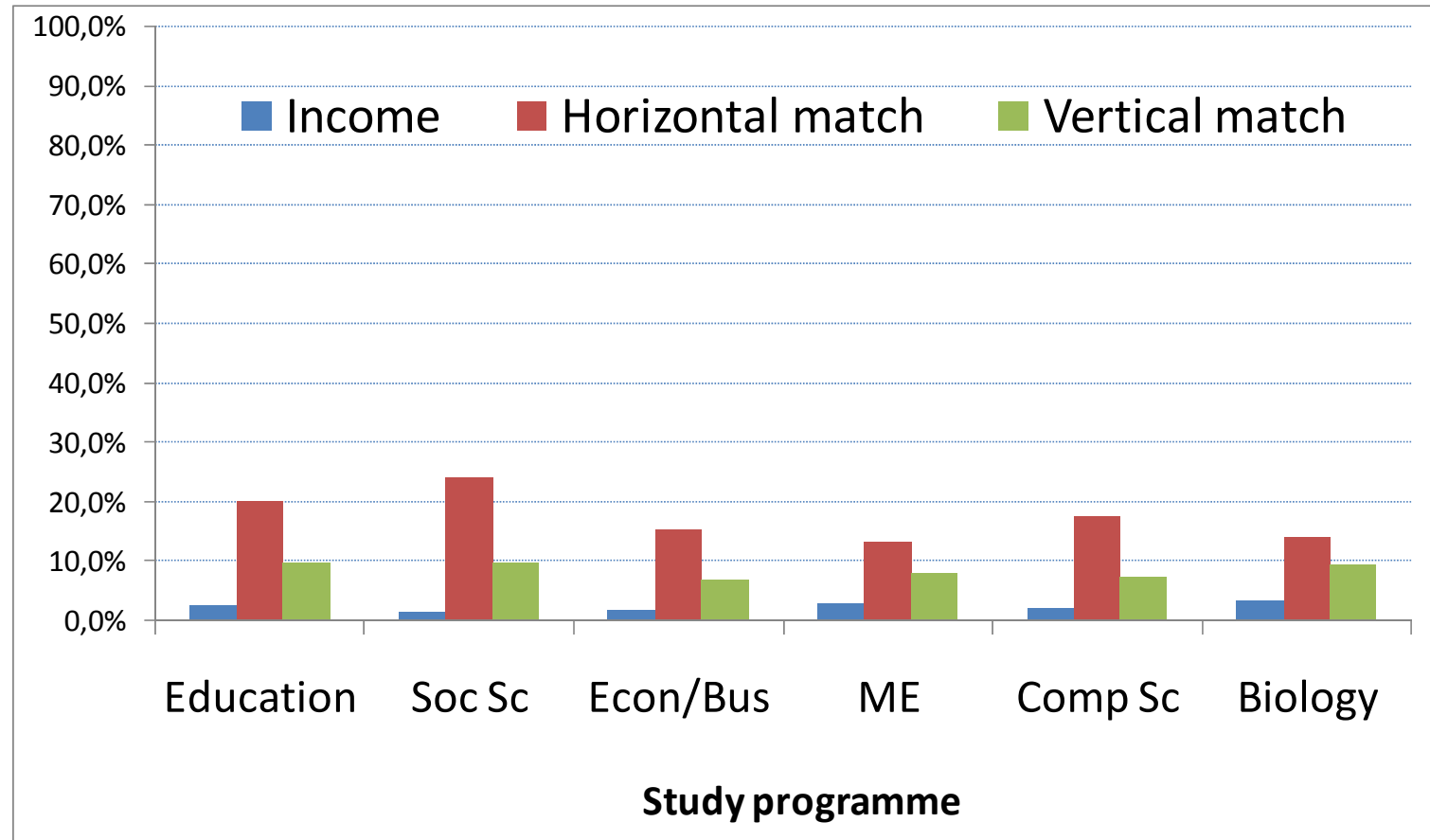
37 Summary of differences between HE institutions

- ❑ Small differences regarding study conditions
- ❑ Very small differences regarding competences
- ❑ Very small differences regarding early professional success

Summary: Differences Between HE Institutions (η^2)



39 Study Conditions and Professional Success – Level of Individuals, by Selected Study Programmes (R²; OLS regressions)



40 Study Conditions and Early Professional Success

– *Horizontal Match*

(stand. OLS regressionscoeff., beta)

| | HistGer | SocSc | EcBus | ME | Comp |
|-----------------------------------|----------------|--------------|--------------|-------------|-------------|
| Content of teaching | .083 | .034 | .071 | .134 | .139 |
| Study organisation | .076 | -.029 | -.003 | -.028 | -.007 |
| Social integration | .019 | .119 | .003 | -.081 | .007 |
| Professional relevance | .128 | .204 | .196 | .123 | .194 |
| Foreign language | -.077 | .013 | -.016 | .045 | -.010 |
| Career | .046 | -.063 | -.019 | .123 | .016 |
| Methods | .008 | -.003 | .027 | -.010 | -.041 |
| Ressources | -.004 | .034 | .076 | -.020 | -.013 |

D. Conclusion

Results from CHEERS and REFLEX

- ❑ No single variable has stable strong effects on employment outcomes
- ❑ The betas from multiple regressions are seldom higher than ± 0.1 .
- ❑ Many effects are country specific (like the role of the institution in the case of the Grandes Ecoles)
- ❑ No simple answers available

Status of Research on Causal Relevance of Higher Education

Still in search of usable knowledge

- How college affects students?
(Pascarella/Terrenzini, most comprehensive synthesis report, 2005)
 - Little evidence
 - Little net effects of programme quality
- Still in search of usable knowledge
(Peter Ewell, National Center for Higher Education Management Systems (NCHEMS))

Results and New Developments

- Professional relevance matters
- Very good employment conditions for graduates in Germany 2007-2008
- Effects of economic crisis are still unknown
- Structural changes: What will be the effects of the new study structure (BA/MA)

New Study Structures and the Relationship Between HE and Work in Germany

- Lower qualification level in Germany (from MA to BA)?
- Higher participation of graduates from lower status families?
- Less importance of differences between Fachhochschulen and Universities?
- Job chances of the BA from universities at the time of the economic crisis?
- More open doors? Less clear career pathways?
- More professional relevance?

Thank you