The links between student learning and career success of European and Japanese graduates : a structural equation model (SEM) approach

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Plan

- Research question
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- Data
- Methodology
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Research question

- Identify the links between the learning environment in HE institutions and career success.

Theoretical framework

1. Human capital
   - The relationship between studies and work can be considered in terms of a human capital approach (Vermeulen and Schmidt, 2008; Judge et al, 1995; Ng et al, 2005).
   - Individual factors, and particularly schooling and work-related experiences during studies can contribute to improve one's work performance (Becker, 1964).
- Latent constructs
  - →*Motivation*
  - →*Learning environment*
  - →*Work-related experiences*

Theoretical framework

2. Competencies

- The ability to manage situations that are complex, different and unstable (Le Boterf, 2005)
- Acquired and required competencies
- Mismatch between acquired and required competencies:
  - Aquired > required = competency underutilisation
  - Requised > acquired = competency deficits
- According to Allen and his colleagues (2001, 2007) underutilisation has a negative impact on job satisfaction, whereas deficits have a positive influence on job satisfaction
  - Latent constructs
    - →Competency mismatch (deficits)
    - →Competency mismatch (underutilisation)

Theoretical framework

3. Career success

- Accumulation of positive work performances and results, thorough work experiences (Judge et al, 1995; Ng et al, 2005).
- Two dimensions :
  - subjective or intrinsic (job satisfaction, career satisfaction…)
  - objective or extrinsic (wages, promotions, hierarchical status in the workplace…)
- Latent constructs
  - →Intrinsic success
 - →Extrinsic success

Data

- International data from the projet Reflex (*The Flexible Professional in the Knowledge Society : New demands on Higher Education in Europe*).

- Survey carried out in 2005 amongst graduates from the year 2000 in 13 European countries and Japan.

- Database of 34 347 individuals. The graduates not in employment at the time of the survey were dropped from our study (n=349). Final sample 31 696.

Methodology

- Two-stage :
  - Stage 1 – Development of theoretical model using the existing literature and adapting it to the Reflex data.
    - Pertinent observed variables
    - The latent constructs they assume
    - The links between the two
  - Stage 2 - Use of structural equation modeling (SEM) to test and improve theoretical model, and validate confirmatory model.

Construction of latent variables - example
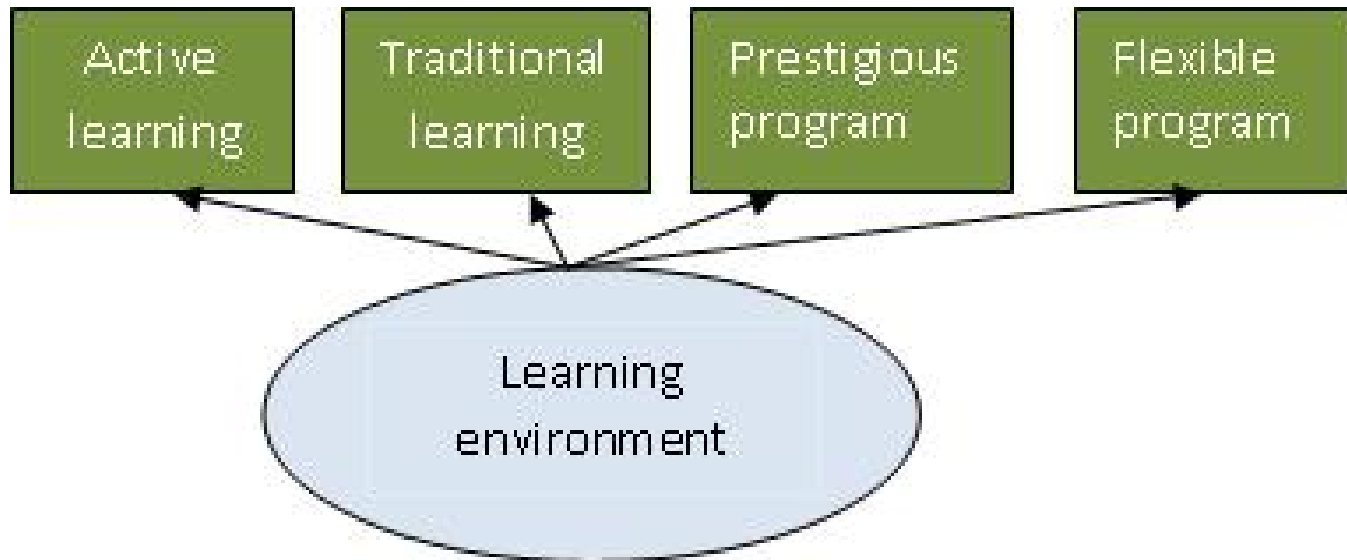
- Questionnaire items on a scale from 1= "not at all" to 5= "to a very high extent"
- Exploratory factor analysis to identify the items that are grouped together
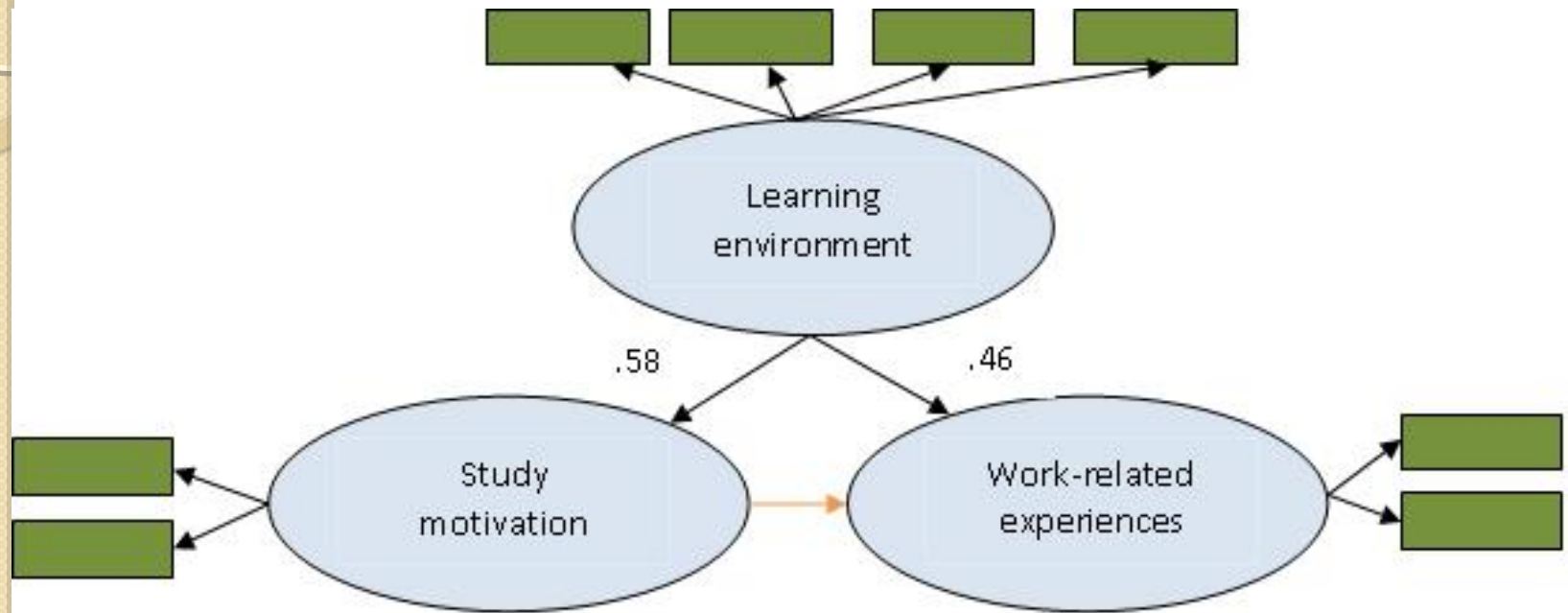- Total scores for each factor

The theoretical model
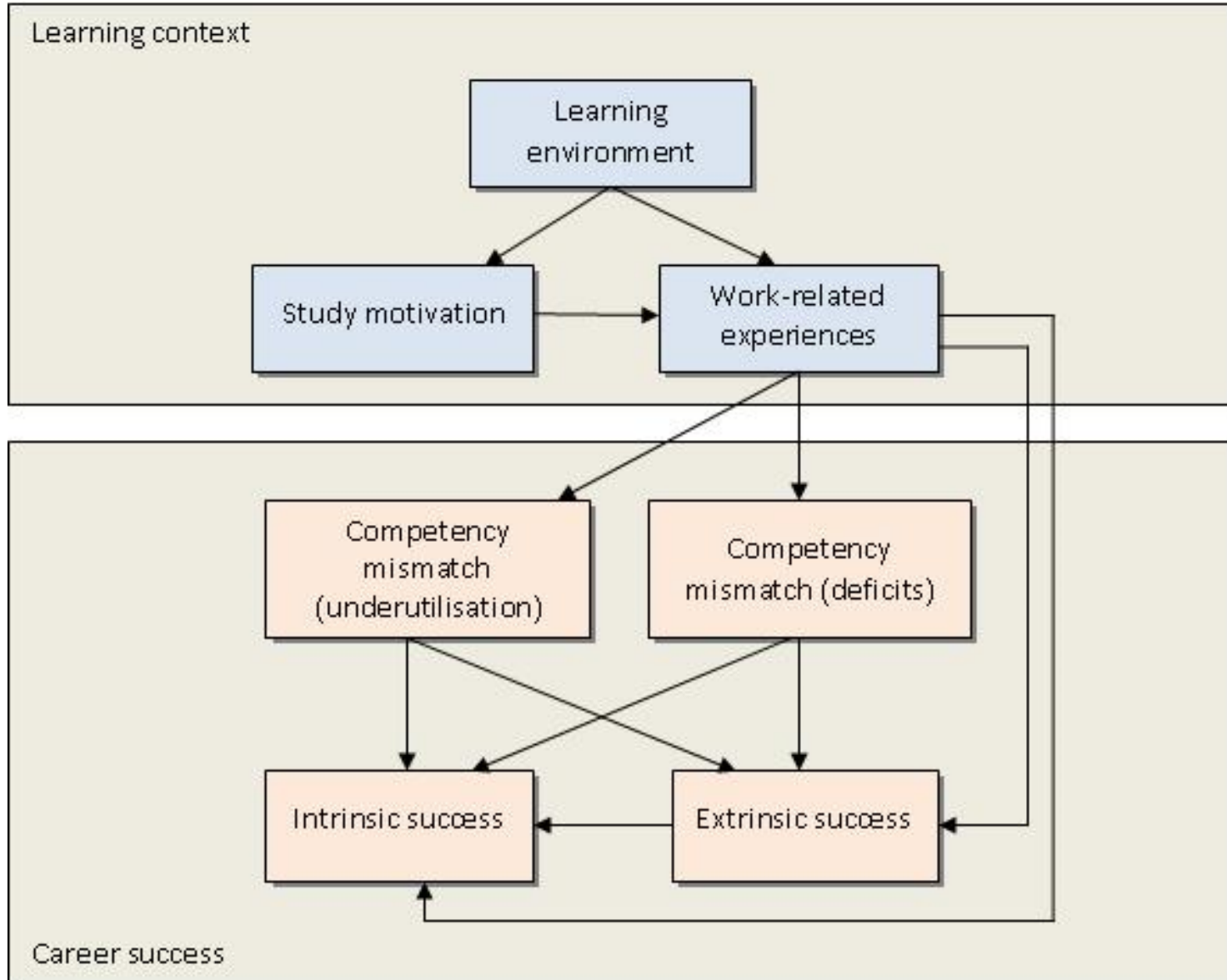
Results

- In three parts:
  - Model 1 – The learning context
  - Models 2a and 2b – The mismatches between competencies (underutilisation and deficits) and career success
  - Models 3a and 3b – The learning context, mismatches between competencies and career success
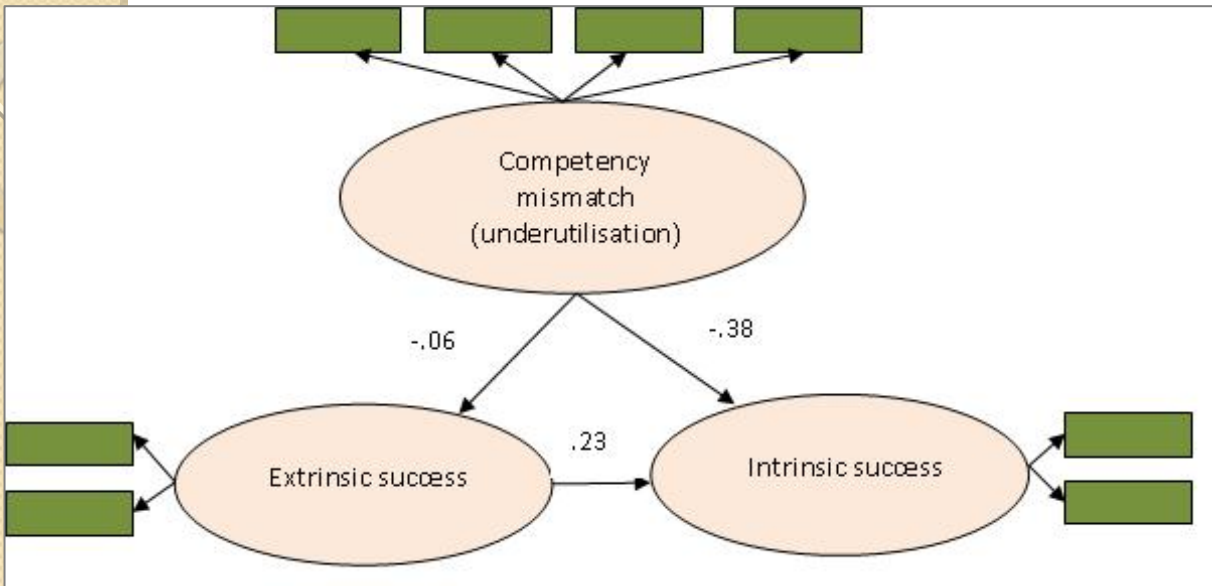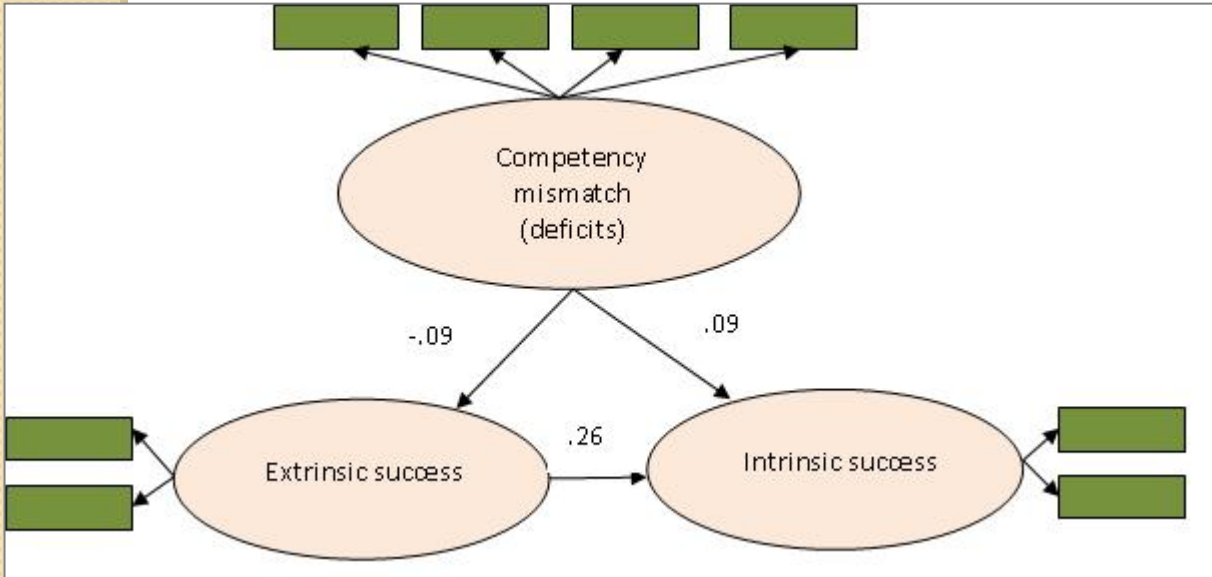
Model 1- The learning context

Chi-square= 516.68
Df= 18
CFI= 0.902
RMSEA= 0.042

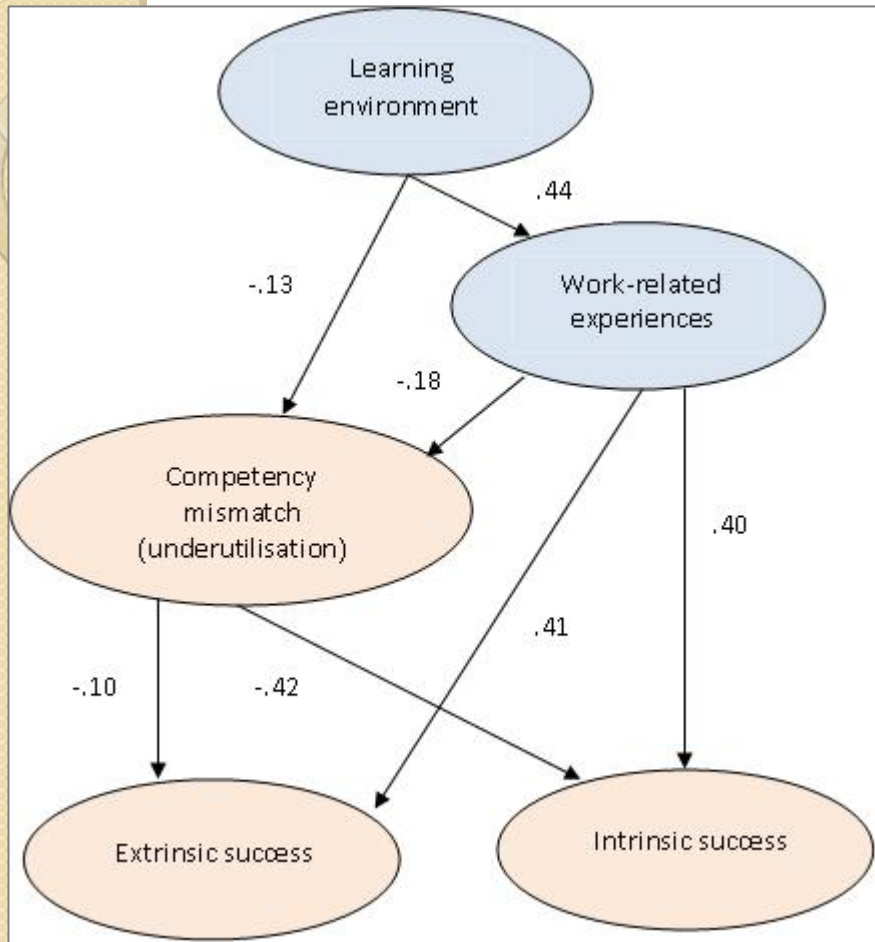# Models 2a and 2b – The mismatches between competencies and career success

Model 2-a
Chi-square= 900.35
Df= 17
CFI= 0.964
RMSEA= 0.058

Model 2-b
Chi-square= 553.72
Df= 17
CFI= 0.984
RMSEA= 0.036

Models 3a et 3b: Full model

Model 3-a
Chi-square= 1753.14
Df= 70
CFI= 0.936
RMSEA= 0.039
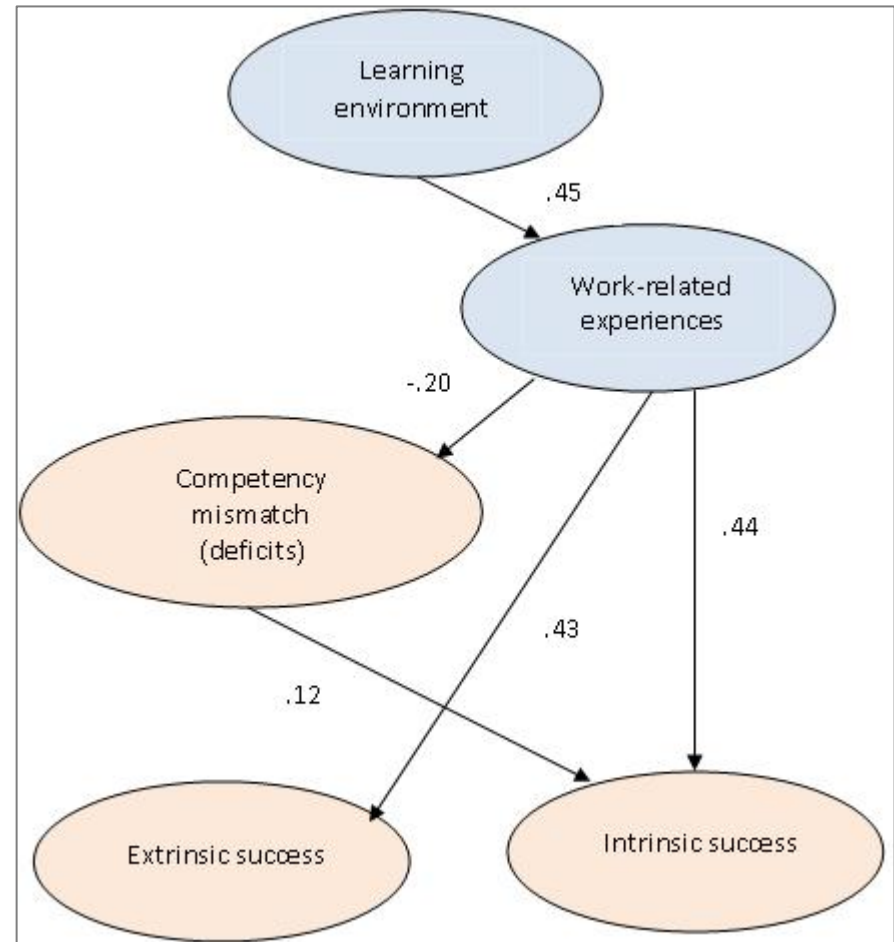
Model 3-b
Chi-square= 1216.83
Df= 70
CFI= 0.952
RMSEA= 0.032

Conclusions

- Influence of the *learning environment* on career success

- Influence of the *learning environment* on *work-related experiences during studies* which in part explain *competency underutilisation* and *deficits*, and the *extrinsic* and *intrinsic* dimensions of *career success*.

- The relationship between *motivation* and *work-related experiences* was not significant, which is in line with Vermeulen and Schmidt's findings (2008).

- However, *motivation* has a strong link with the *learning environment*

Conclusions

- The graduates with underutilised competencies indicate less career success.
- The graduates with competency deficits are generally more satisfied with their jobs.
- Our study shows that mismatches between acquired and required competencies are more linked to the intrinsic dimension of career success rather than the extrinsic one.

Limits

- Graduates is the only source of information.
  - Self-rated competencies
  - Various aspects could influence the rating (stereotypes, personality).
- It is important to note that our study has not considered country specificities in the model. These specificities could lead to different results within each country in terms of our model.

Future research

- The links between the learning environment in HE institutions and professional success, using the point of view of employers (survey data).
- How workers in different careers consider career success
- Qualitative studies

Thank you