

Productivity of European Researchers in Economics: Evidence from Survey Data

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Objective of the study

- To identify determinants of researchers' productivity linked to their environment
- To establish a connection between bibliographical data and research history



Online survey

Produced 486 replies on a set of questions covering

- Bibliographic information
- Research output
- Research funding

Replies to the online survey

Conversion process

Data



Have benefited from funding in the last 5 years
86%

Work in a University or a Research Institute
97%

Average age
42

Professor or Researcher
84%

European Residents 87%

Female respondents 29%

Output measures used in economic literature

Publication
count

- Corrections for co-authorship
- Corrections for the impact factor of the journal

Citation count

Hirsch Index

- Has a family of modifications and adaptations

Output measures in our study

Publication
count

- In three different types of journals

Citation count

- Citation count divided by the career age(CITNUM)

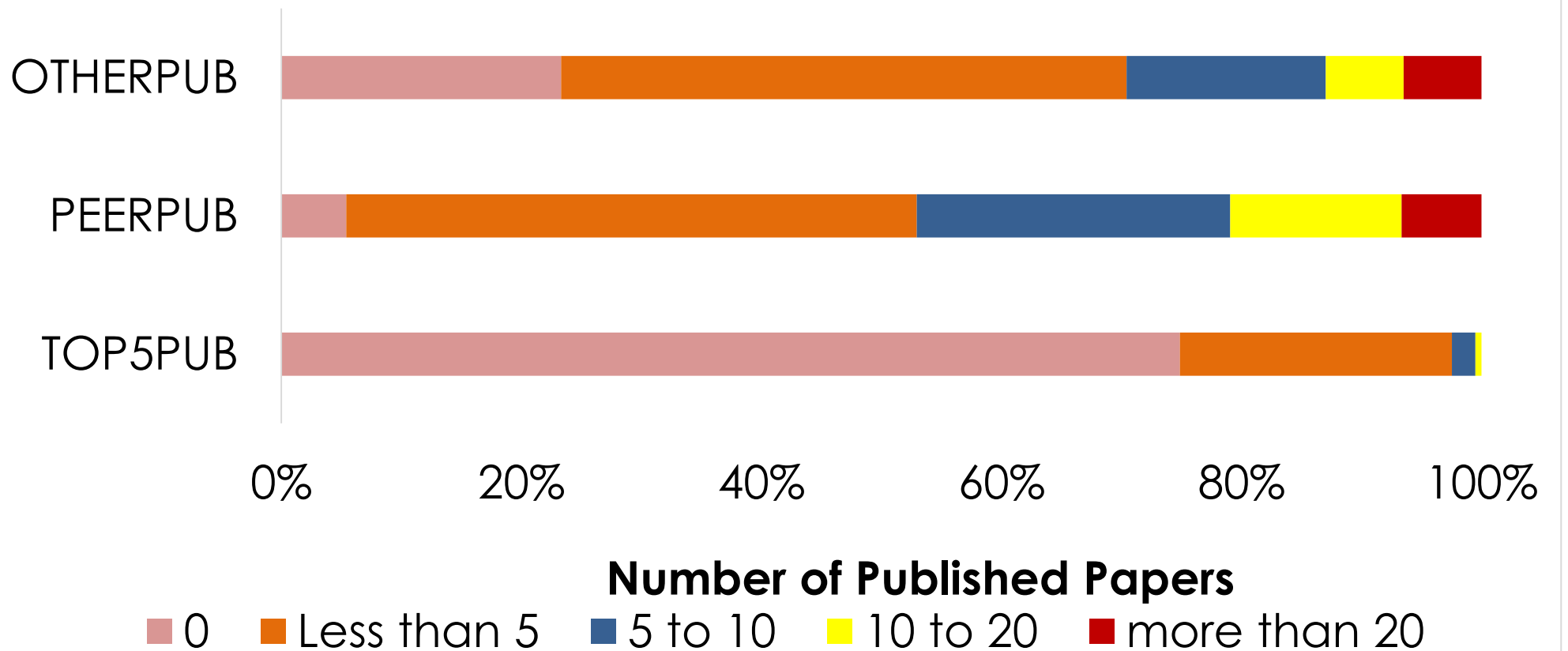
Hirsch Index

- The Hirsch Index divided by the career age(HINDEX)

Publication count is measured by intervals and transformed into count data, according to the following rule

Observed number of Publications	Attributed value to the variable
0	0
Less than 5	1
Between 5 and 10	2
Between 10 and 20	3
More than 20	4

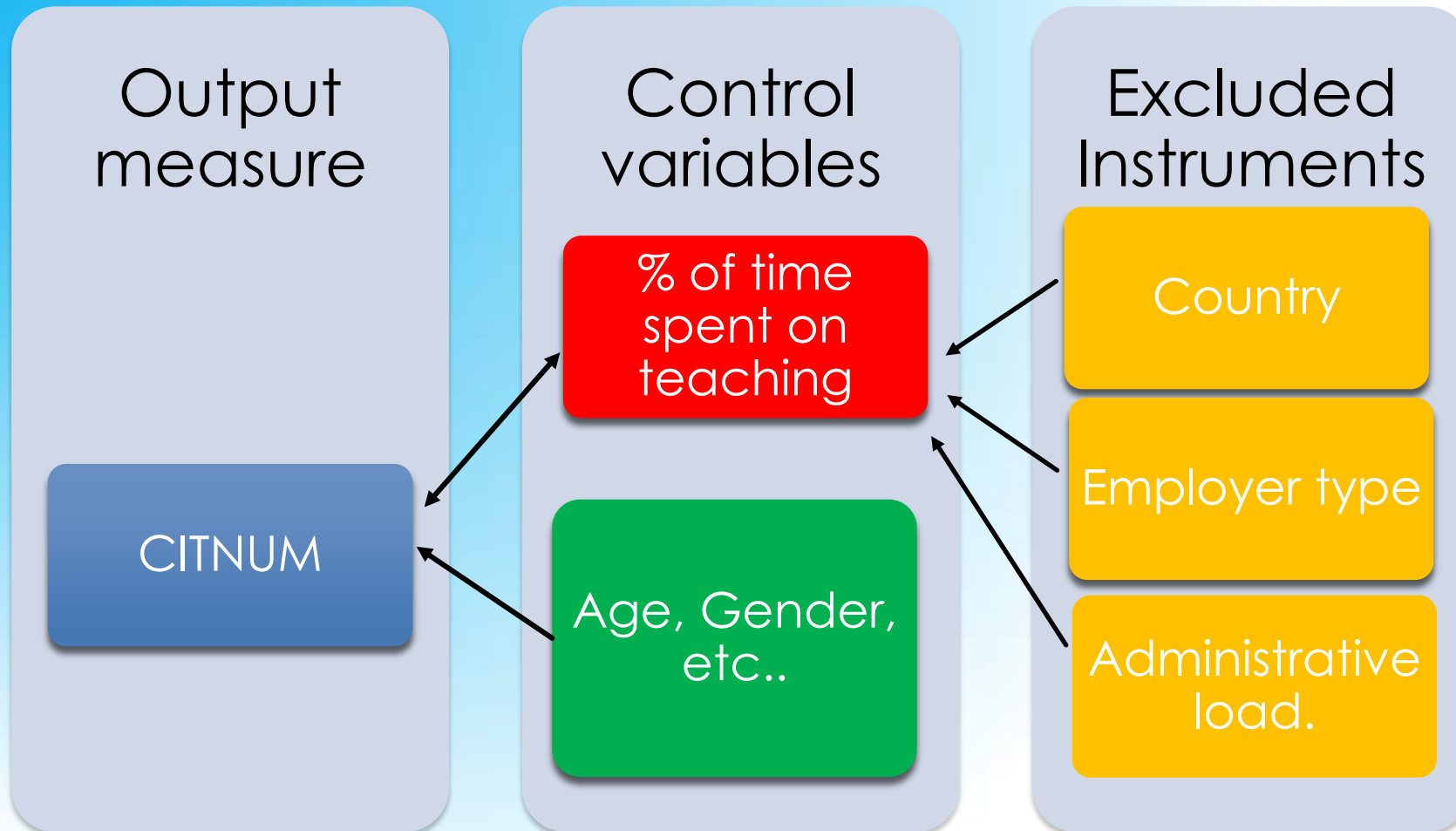
Population distribution by the number of published papers in the three types of journals

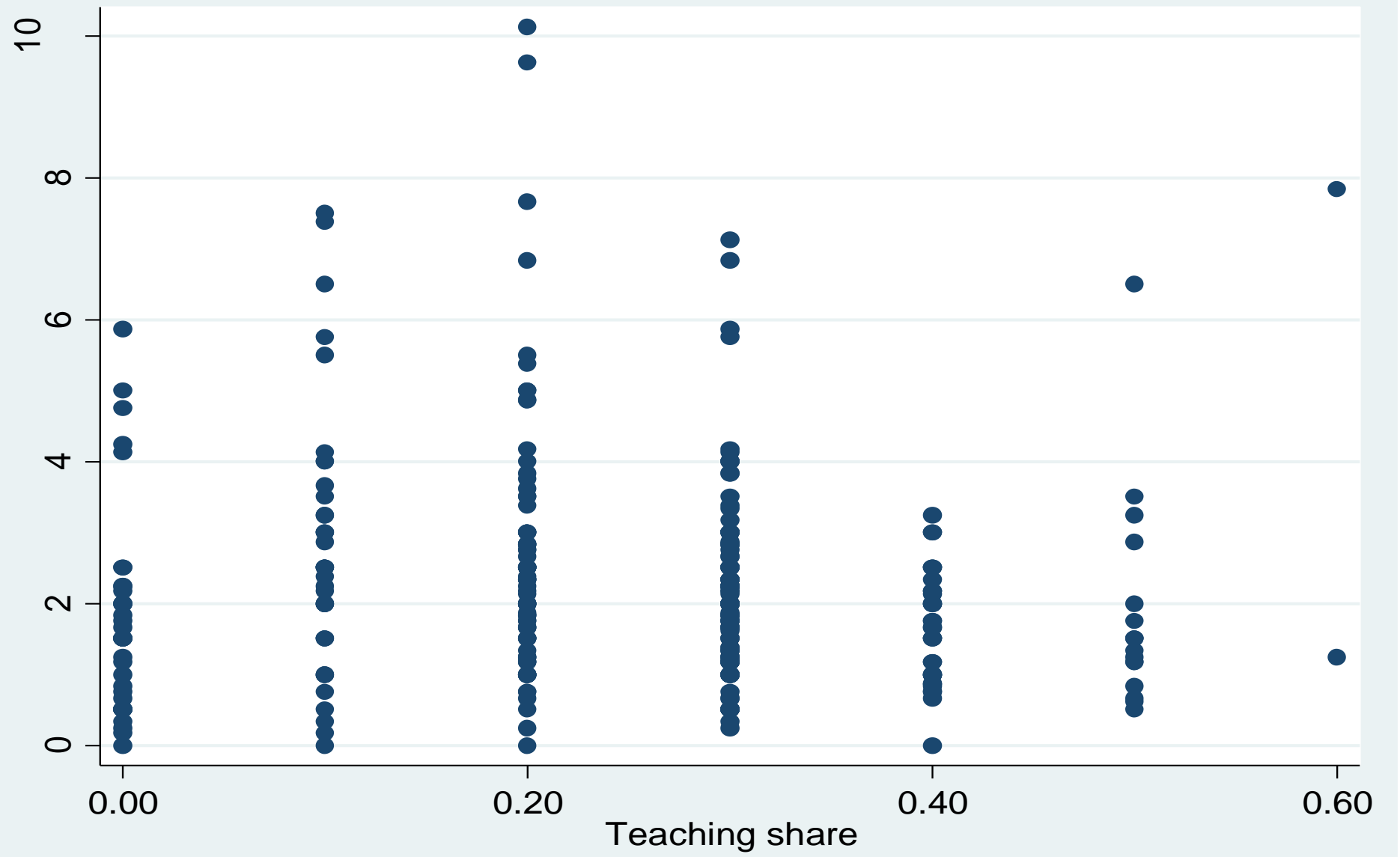


Set of control variables

- ➔ Age, gender, currently held position at work.
- ➔ Percentage of time spent on teaching activities (TEACH)
- ➔ Other control variables (Average duration of grants,...)

Econometric Models





Econometric Design

Problem: Reversal causality between the % of time spent on teaching and the output measures

Solution: Apply a generalized method of moments with the following excluded instruments (Z)

- ▶ Country dummies
- ▶ The type of employer (University, Research Centre, Central Bank, etc.)
- ▶ % of time spent on administrative tasks

Econometric Results

- ▶ Decrease of teaching load by 10%
 - ▶ Increase of number of citations by 136
 - ▶ Increase of Hirsch Index by 2.8 over 10 years
keeping everything fixed
- ▶ No statistically significant gender distortion
- ▶ The quality of the graduate diploma
 - ▶ More publications in top5
 - ▶ Less publications in other peer-reviewed economic journals

Country	% of time dedicated to teaching activities	
	Mean	Std. Deviation
Belgium	0.253	0.110
France	0.202	0.120
Germany	0.220	0.136
Hungary	0.240	0.129
Italy	0.250	0.128
Netherlands	0.278	0.167
Spain	0.265	0.114
Switzerland	0.210	0.099
UK	0.188	0.139



Conclusion

- ▶ Predictive power of the research environment
- ▶ Review of country-related academic traditions
 - ▶ Convergence to a unique European model

Possible extensions

- Dynamic models on the life cycle of scientists