

Precarious careers in research

Analysis across EU countries and policy options

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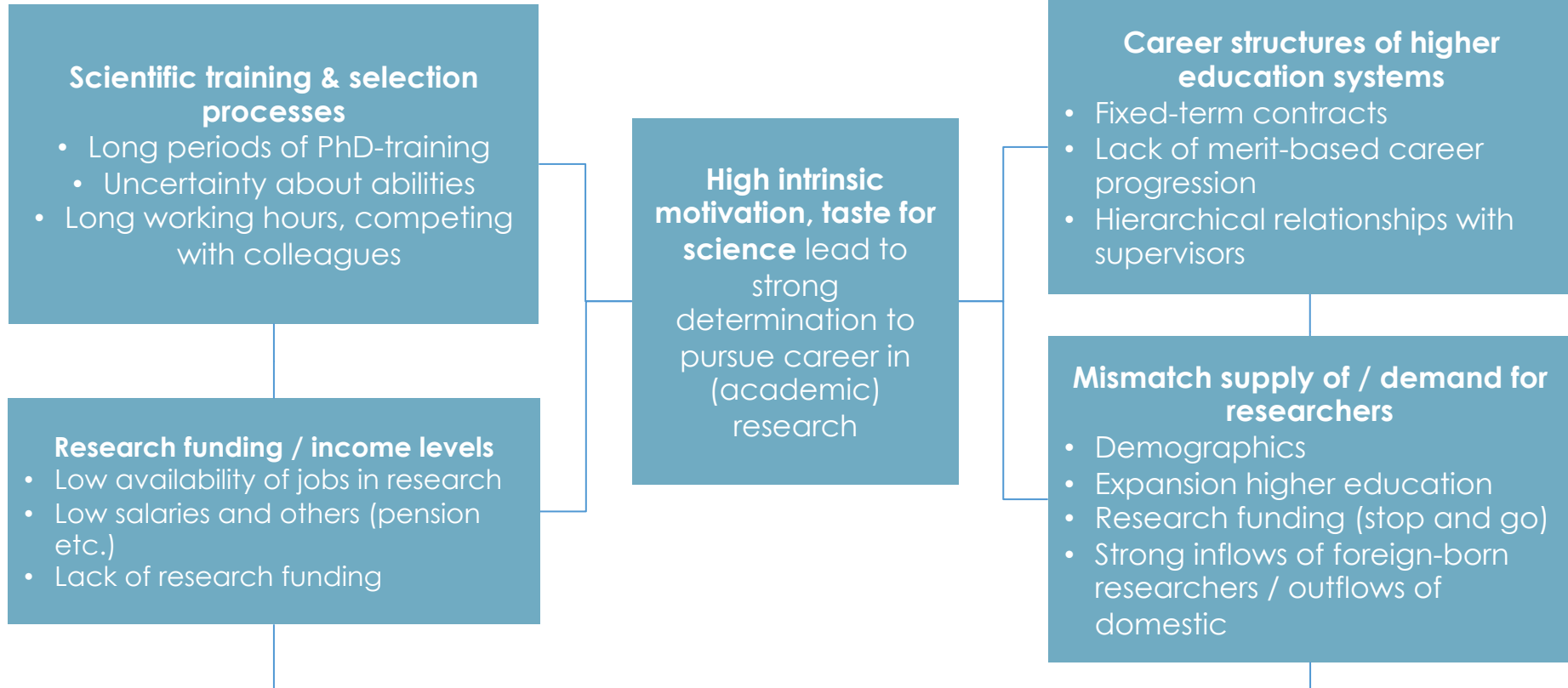


Overview

- A Factors that may drive precarious careers
- B Empirical findings for five dimensions of an academic job contract across EU Member States
- C Policy options for improving precarious careers

- *Short summary of very long, EU-funded report (with executive summary and country profiles though ;-)*

A Factors potentially contributing to precarious careers in research (-> levers to improve careers)



B EU-Level selected main findings

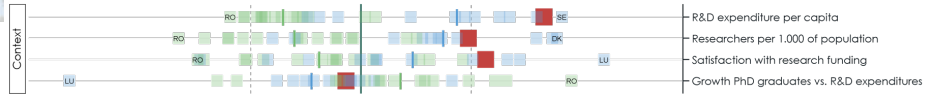
- **Main issues...**
 - in research-intensive countries (RiC) are related to careers & job availability – many fixed-term positions, struggling to obtaining tenure,...
 - In less research-intensive, “widening” countries, related to salaries and research funding; PhD candidates without contract
- ...point to **different dynamics in labour markets for researchers:**
 - In RiC, high research budgets fund many junior positions, but lack of permanent positions in academic research
 - In other countries, employers struggle more to find suitable researchers

B EU-Level selected main findings – time trends

- Available data point to some positive trends
 - Declining PhD numbers vs. growing research spending,
 - More merit-based recruitment and career progression,
 - Fixed-term contracts reduced...
- But long periods of time in career uncertainty persist, especially by comparison with private sector (much lower share of fixed-term)
- Impact of inflation?

Widening Non-Widening Country Value

Context



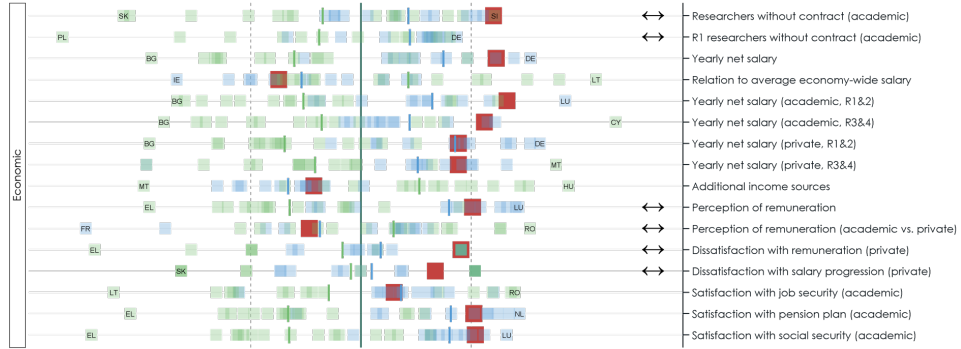
Temporal



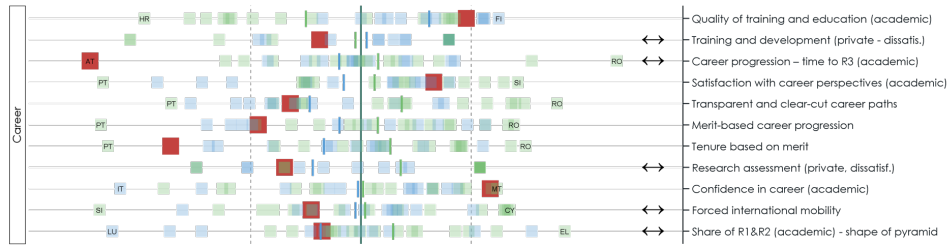
Organisational



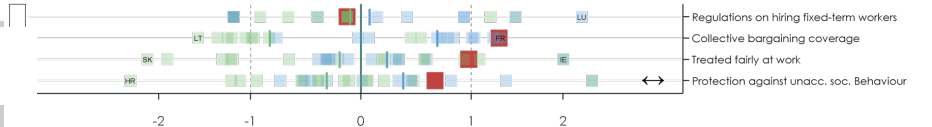
Economic



Career



Social



R&D expenditure, PhD production

Fixed term & part-time contracts

Autonomy, intensity

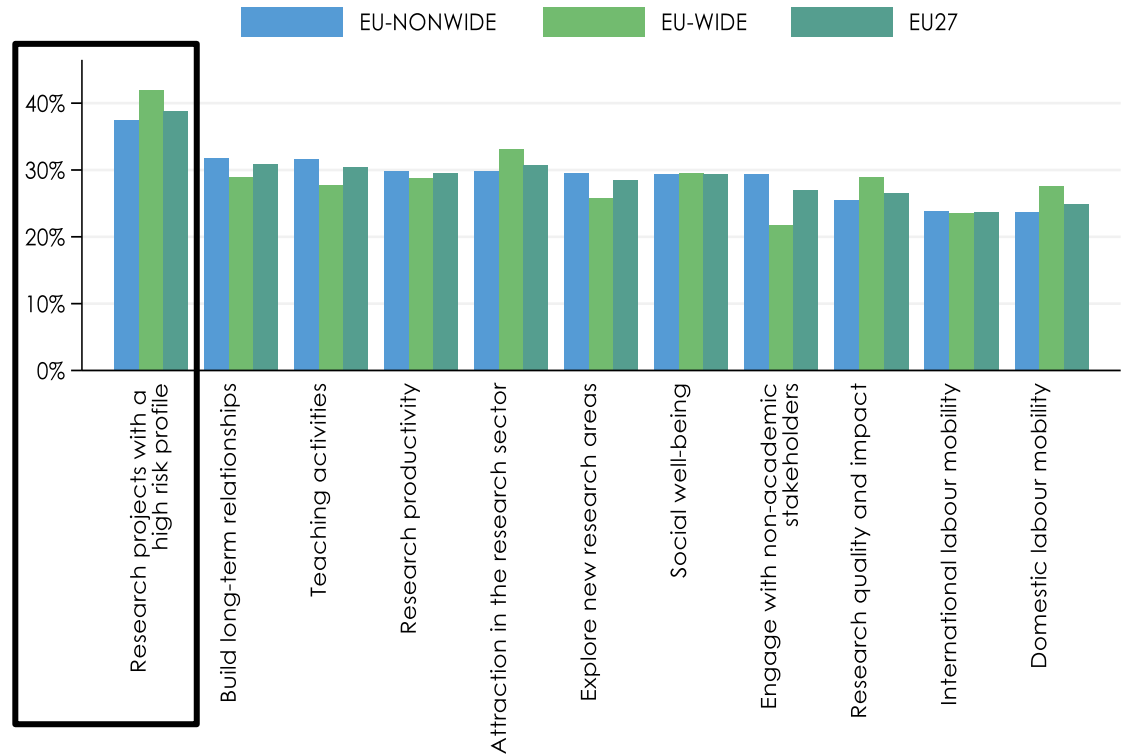
Salaries, social security benefits, employment contracts

Career paths & progression

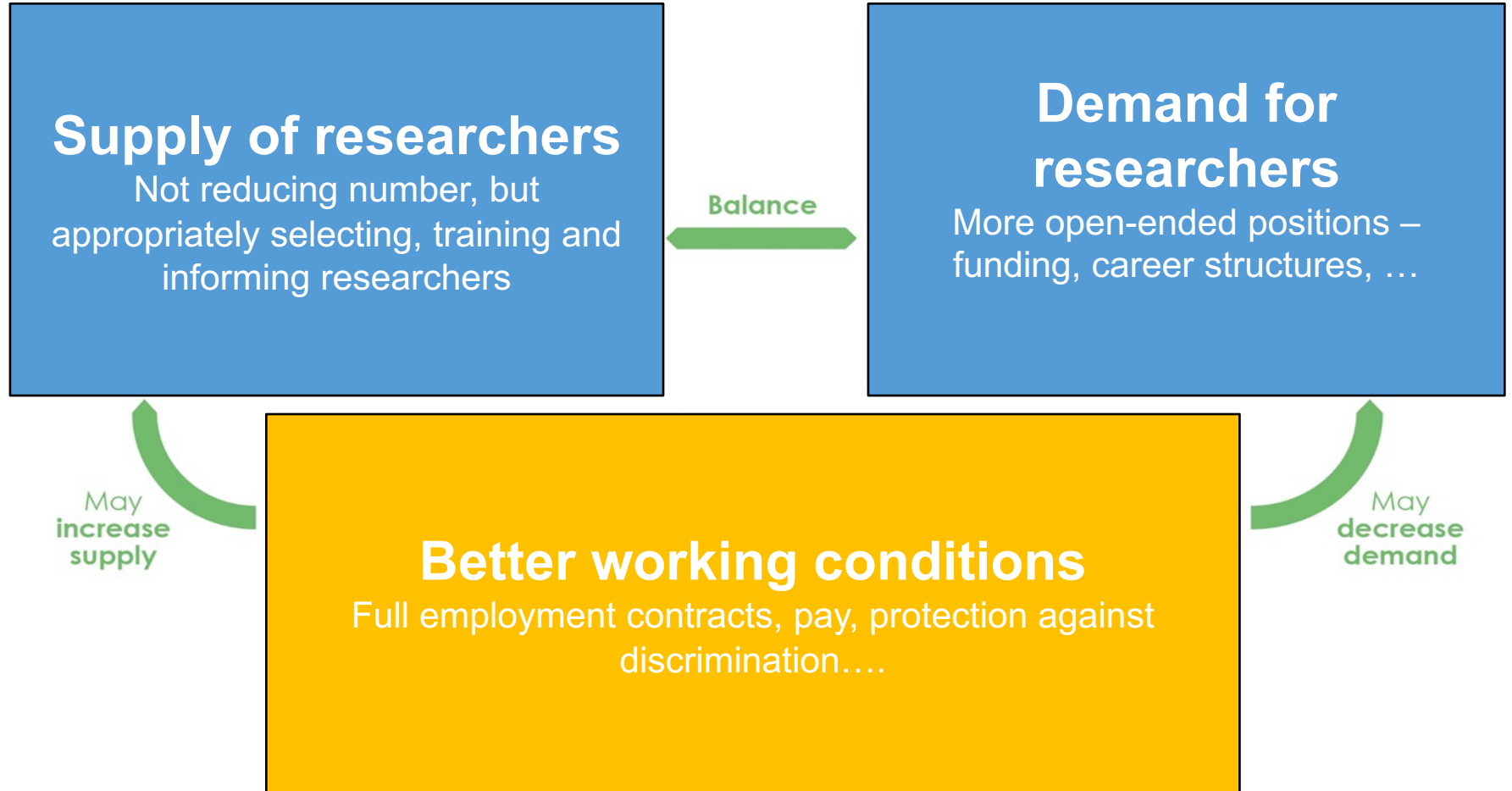
Fair treatment

B EU-Level selected main findings – impact of precarity on top of researchers' well-being

Close to 40% of researchers say that working conditions restrict them in choosing **high risk research projects** - > clear link **between precarity and research excellence**




C Policy options framework: 1. Balance supply with demand 2. Better Working Conditions



C Key Policy levers

Supply

 Career path with early and reliable selection points (transparent, merit-based recruitment) ...

... coming with 4 types of support

- Job market information
- Training in transferable skills
- Feedback
- Getting to know researchers/ former alumni (research/non-research)

... provided / organised by

- Graduate Schools
- Post-doc Offices
- Human Resources in universities/ research institutions

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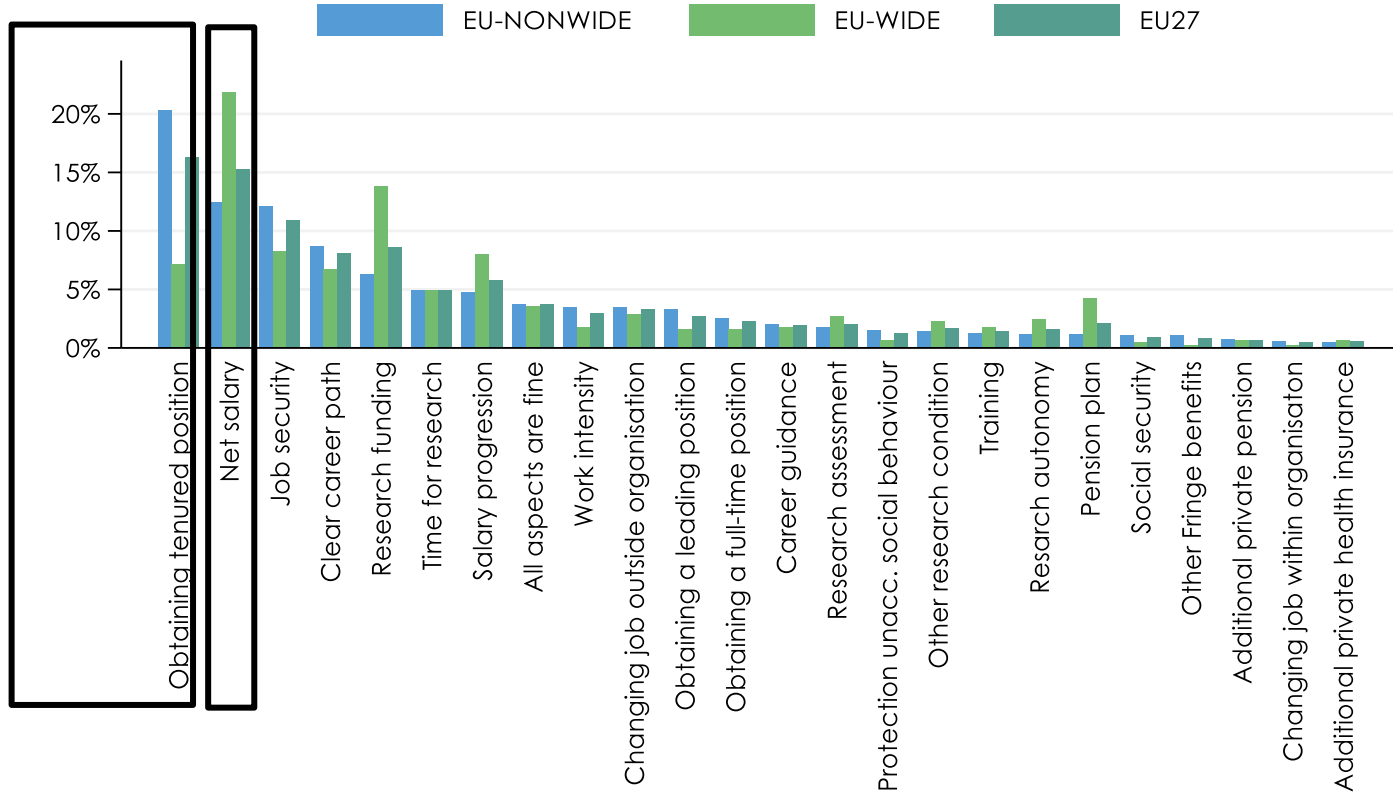
Conclusions – improving precarious careers

- Evidence shows a lot of potential policy options, in Austria and elsewhere – on top of legally restricting the time on fixed-term contracts (Germany, Austria). **Someone needs to coordinate relevant policies & actors in a country.**
- But even in the most perfect system, it is unlikely that everyone who is interested in or aspires to a career in academic research will be able to do so
- This is why early honest feedback is important, training in transferable skills and information on a range of careers available using research skills, not just in academic research – **so that researchers can take informed decisions on their career.**

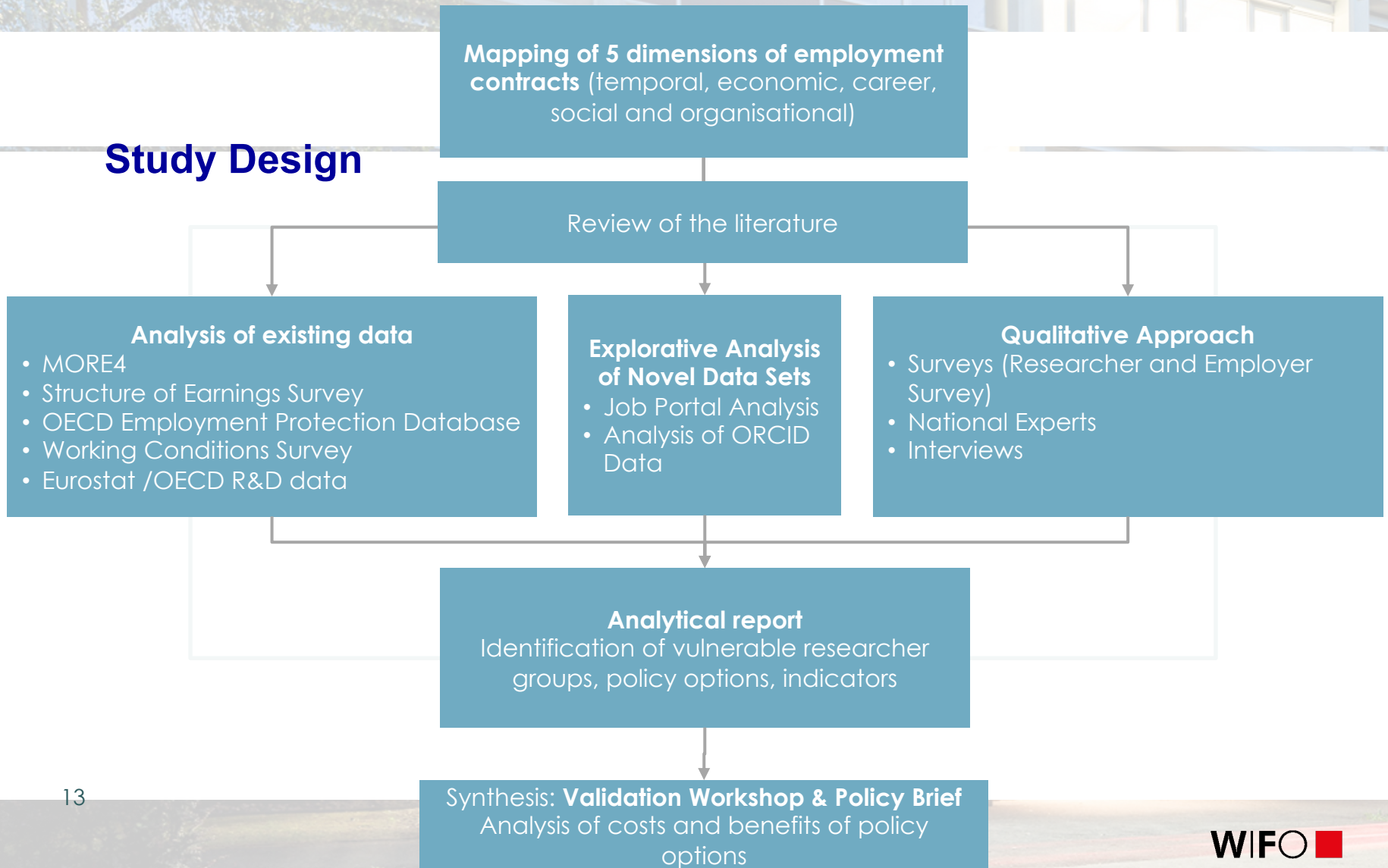
References

- Janger, Jürgen, Alexandros Charos, Peter Reschenhofer, Anna Strauss-Kollin, Fabian Unterlass, und Stefan Weingärtner. **Precarious Careers in Research. Analysis and Policy Options**. Vienna: WIFO - Austrian Institute of Economic Research - IDEA Consult (Miriam van Hoed, Lidia Nunez) –Technopolis Group (Gerwin Evers, Matthias Ploeg) 2022. <http://www.wifo.ac.at/wwa/pubid/70473>.
- Janger, Jürgen, Alexandros Charos, Peter Reschenhofer, Anna Strauss-Kollin, Fabian Unterlass, und Stefan Weingärtner. *Precarious Careers in Research. Country Fiches*. Vienna: WIFO - Austrian Institute of Economic Research, 2022. <http://www.wifo.ac.at/wwa/pubid/70474>.
- Twitter thread (even shorter than executive summary)
<https://twitter.com/JurgenJanger/status/1605096026997952512?s=20>
- MORE4 HEI survey - Janger, J., Kügler, A., Hofmann, K., Schmidt-Padickakudy, N., Strauss-Kollin, A., Budraitis, M., Nuñez Lopez, L., & Van Hoed, M. (2020). MORE4 – Support Data Collection and Analysis Concerning Mobility Patterns and Career Paths of Researchers. Survey on Re-searchers in European Higher Education Institutions. WIFO. <http://www.wifo.ac.at/wwa/pubid/67166> - <https://www.more-4.eu/>

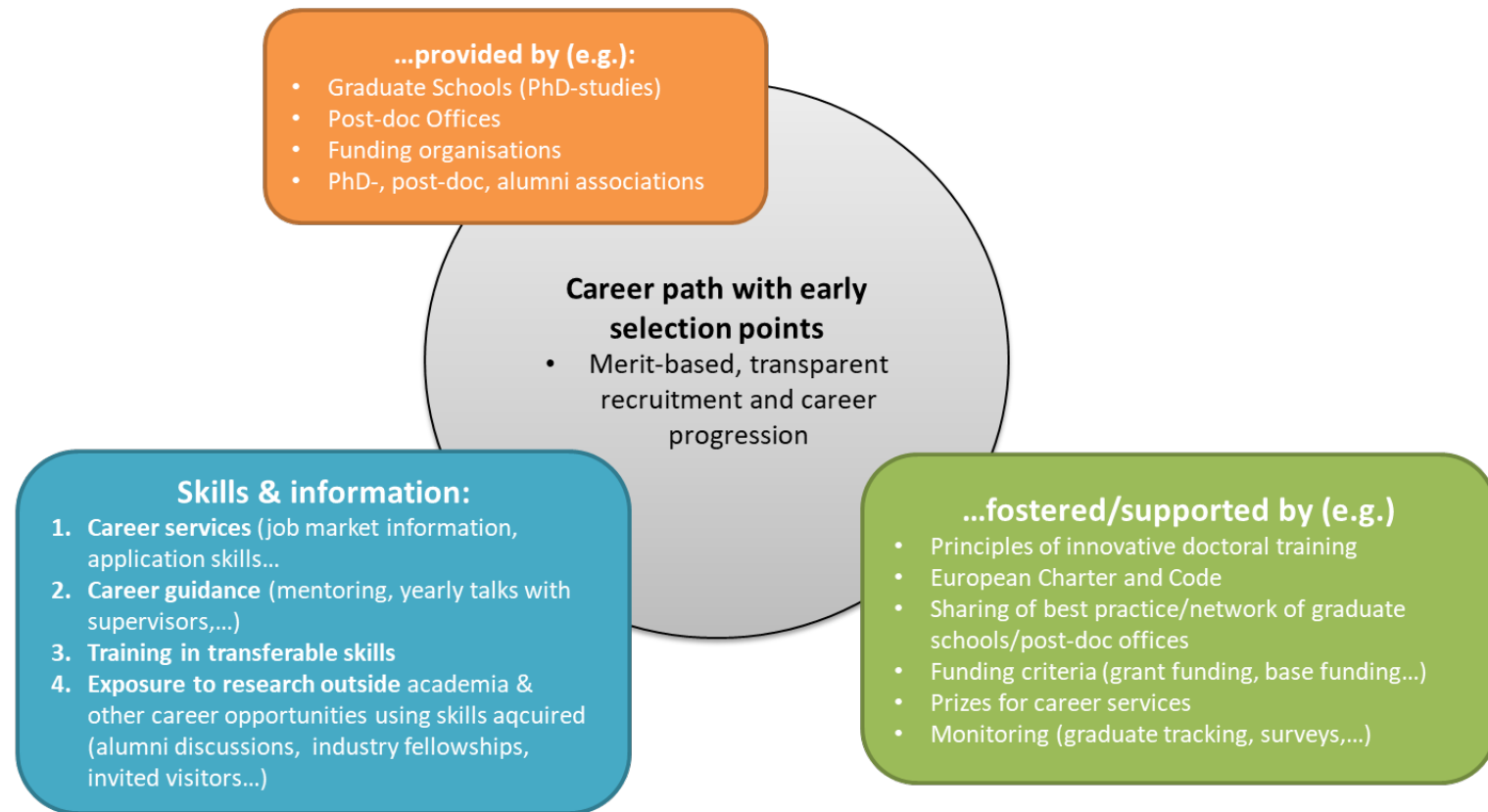
If researchers could improve one aspect of their job



Study Design



POLICY OPTIONS TO BALANCE SUPPLY WITH DEMAND (ADJUST SUPPLY)

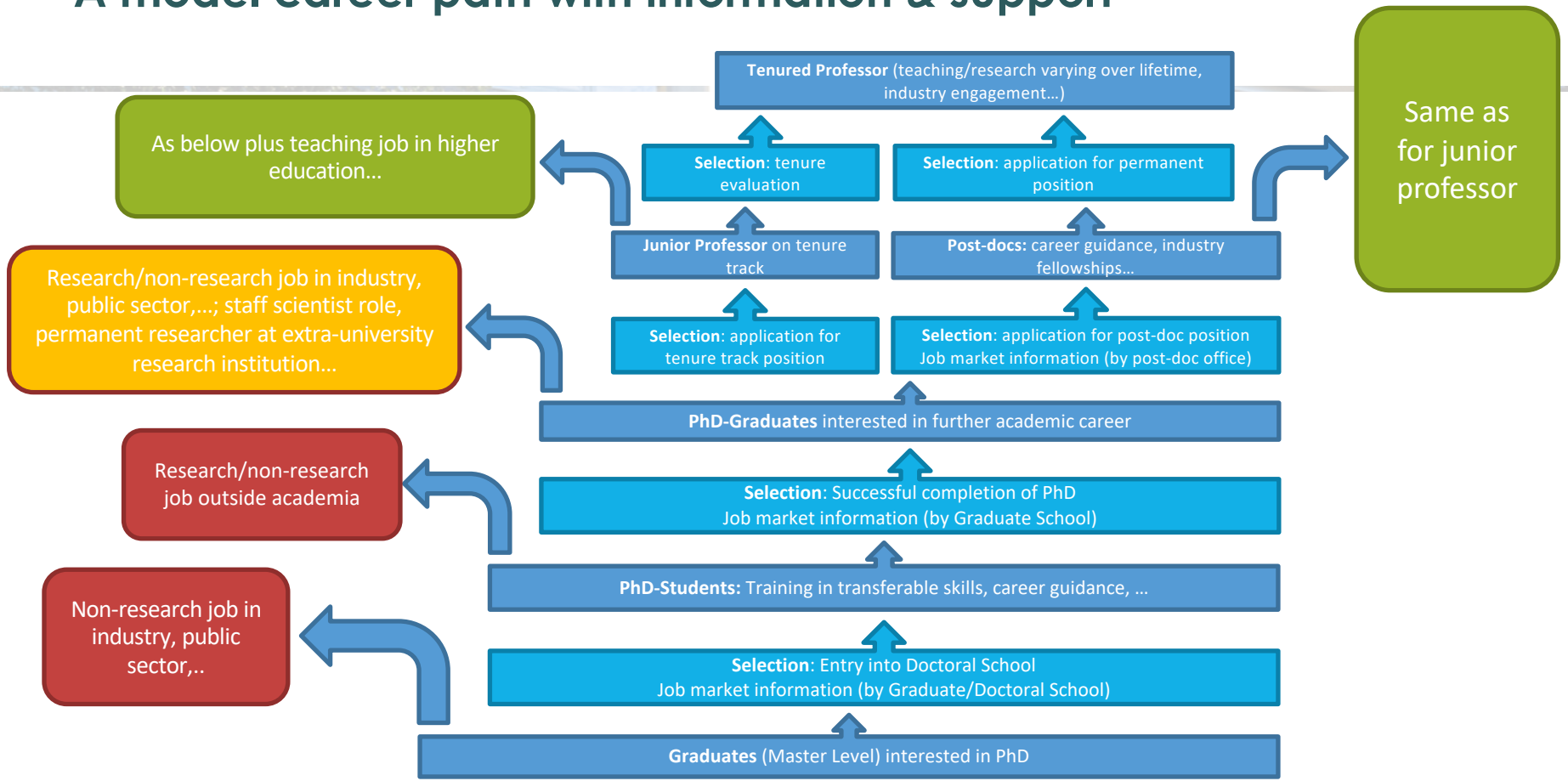


KEY POLICY LEVERS:



1. **STRUCTURED PHD-TRAINING (DOCTORAL/GRADUATE SCHOOLS) FOR AS MANY PHD-STUDENTS AS POSSIBLE (EU: DOCTORAL SCHOOL 12% 2019, vs. 65% USA)**
2. **POST-DOC OFFICES WITH LARGE RANGE OF SUPPORT SERVICES IN AS MANY RESEARCH INSTITUTIONS AS POSSIBLE (NO DATA AVAILABLE; IN US GUIDELINES FOR POST-DOC OFFICES)**

A model career path with information & support



Where will a biology PhD take you?

A faculty job is an "alternative" career.



At this rate, <10% of entering PhD students will become tenure-track faculty. Yet, 53% rank research professorships as their most desired career.³

Arrows represent annual fluxes. Circles are total current workforce numbers.



86,000

current US biology PhD students

1,900 to 3,900 foreign-trained PhDs start postdocs

30% do more than one postdoc¹

720 leave the US

37-68,000 current postdocs

15% of PhDs get tenure-track faculty jobs within 6 years post grad.²



29,000

current tenured and tenure-track faculty



17,000

current bio PhDs doing non-science jobs



22,500 current industry researchers

Every year, ~16,000 students start biology PhD programs

9,000 receive PhDs

70% (5,800) postdoc

? years

US PhDs spend an average of 4 years, but others must spend longer to account for number of postdocs.

18% of PhDs get non-tenure track academic jobs within 6 years post grad.²

25,000

current non-tenure track academic positions



24,000

current non-research, science related jobs



7,000 current gov't researchers

7 years

average time to degree

37% drop out

30% (2,500) don't postdoc

10% of former postdocs (up from 2% in 2010) consider themselves unemployed.¹

Version 2

Sources:

1 - Science Careers Annual Postdoc Survey (2012) <http://goo.gl/nmVYCN>

2 - doi:10.1038/472276a <http://www.nature.com/news/2011/110420/full/472276a.html>

3 - Sauermann & Roach 2012 PLOS ONE; DOI: 10.1371/journal.pone.0036307

Unless otherwise noted, NIH Biomedical Workforce Working Group (2012)

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