

# The influence of type of PhD trajectory on completion rate and time-to-degree

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# Wageningen University & Research (WUR)

- Domain: Food and living environment
- 2,300 doctoral candidates
- Four-years in full-time equivalent PhD programme
- Very international
- Different types of PhD trajectories

# Trigger for research

- All early stage researchers
- As much as possible equal rights and duties
- Indications: differences in PhD trajectory result in difference in PhD candidates' performance
- Performance: measured as completion rate and time-to-degree
- In 2021 analysis of PhD population at WUR

# General question

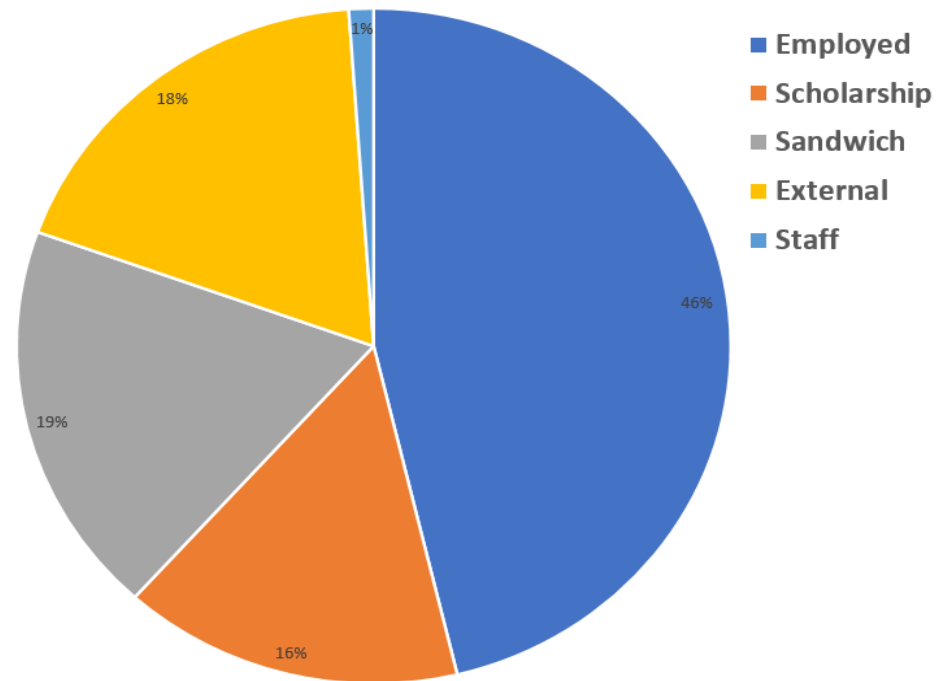
“What influence does the type of PhD trajectory have on the performance of the PhD candidate at WUR”

# Focus research: 5 types of PhD trajectories

- **Employed**  
at Wageningen University
- **Scholarship**  
based at Wageningen University
- **Sandwich**  
embedded at local institute, spend two-third in home country and one-third at Wageningen University
- **External**
  - employed by an institute/organization other than WU
  - self-funded
- **Staff**  
university research employees in PhD track

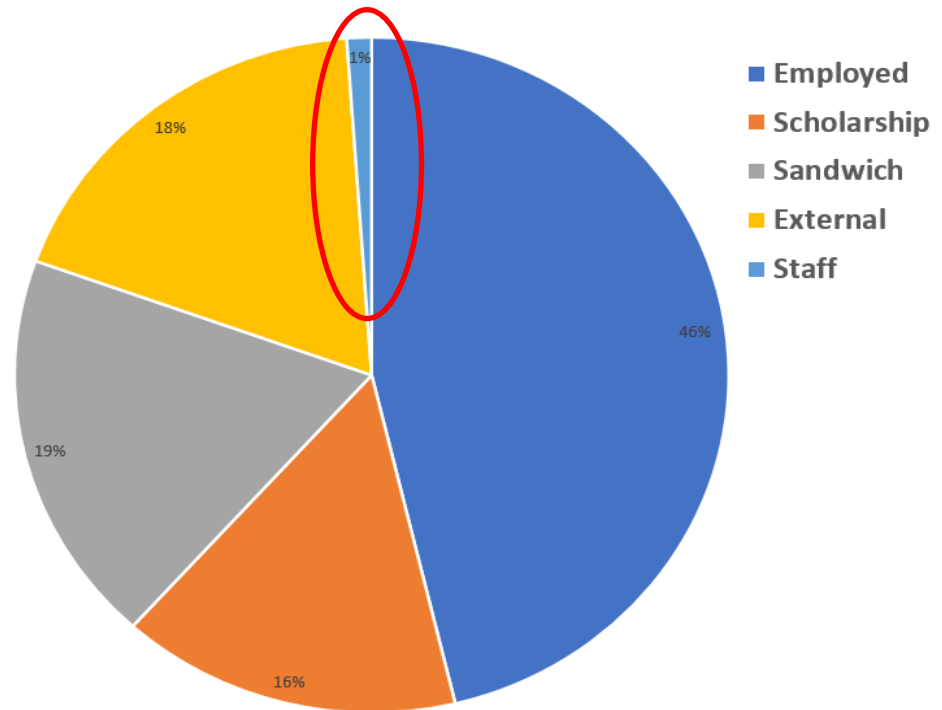
# Methodology

- Focus population: all PhD candidates who started at WUR in the period 2010 – 2020 (n=4213)
- Influx all PhD candidates by type of PhD trajectory:

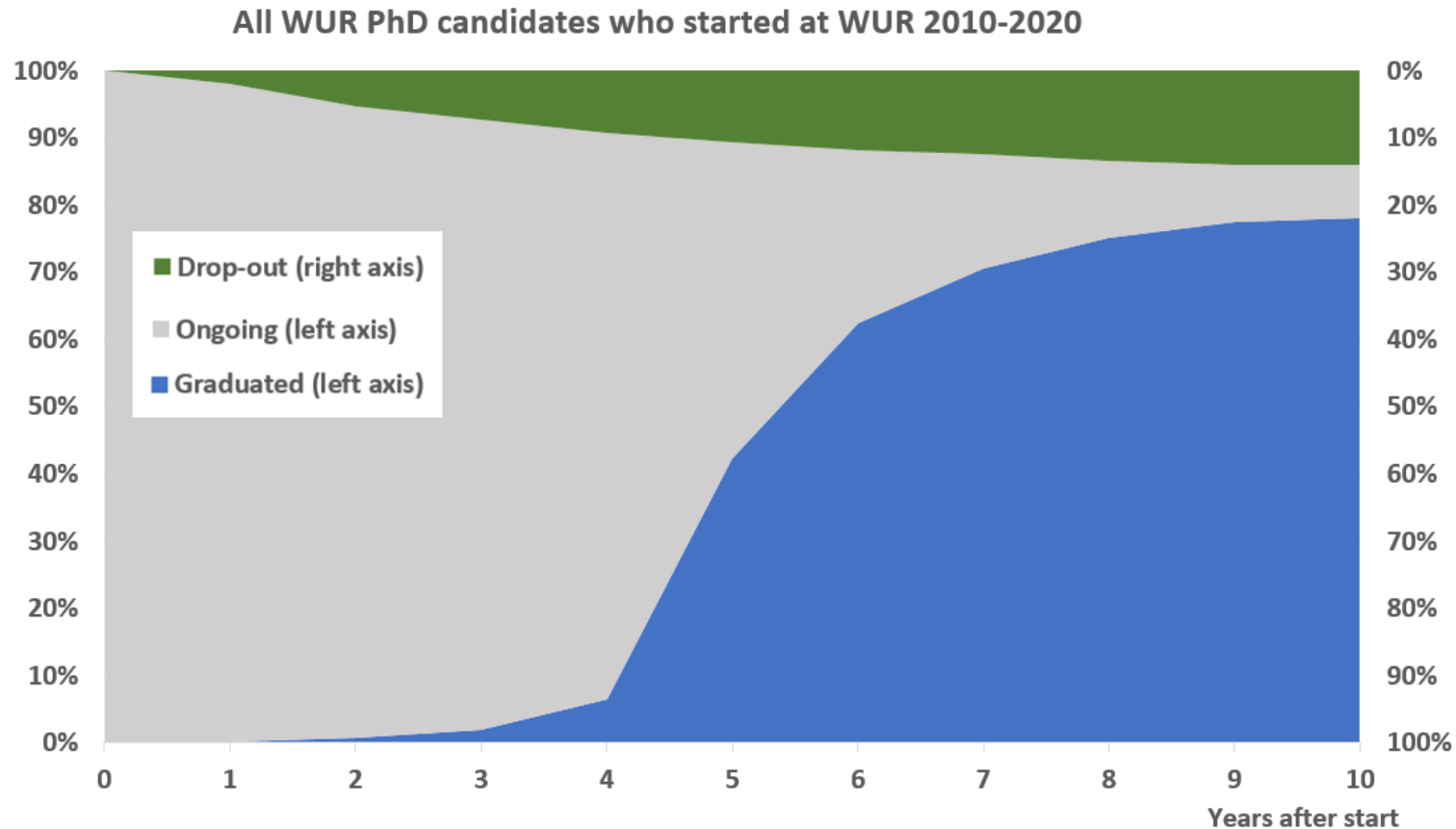


# Methodology

- Focus population: all PhD candidates who started at WUR in the period 2010 – 2020 (n=4213)
- Influx all PhD candidates by type of PhD trajectory:



# What happens in a PhD population?

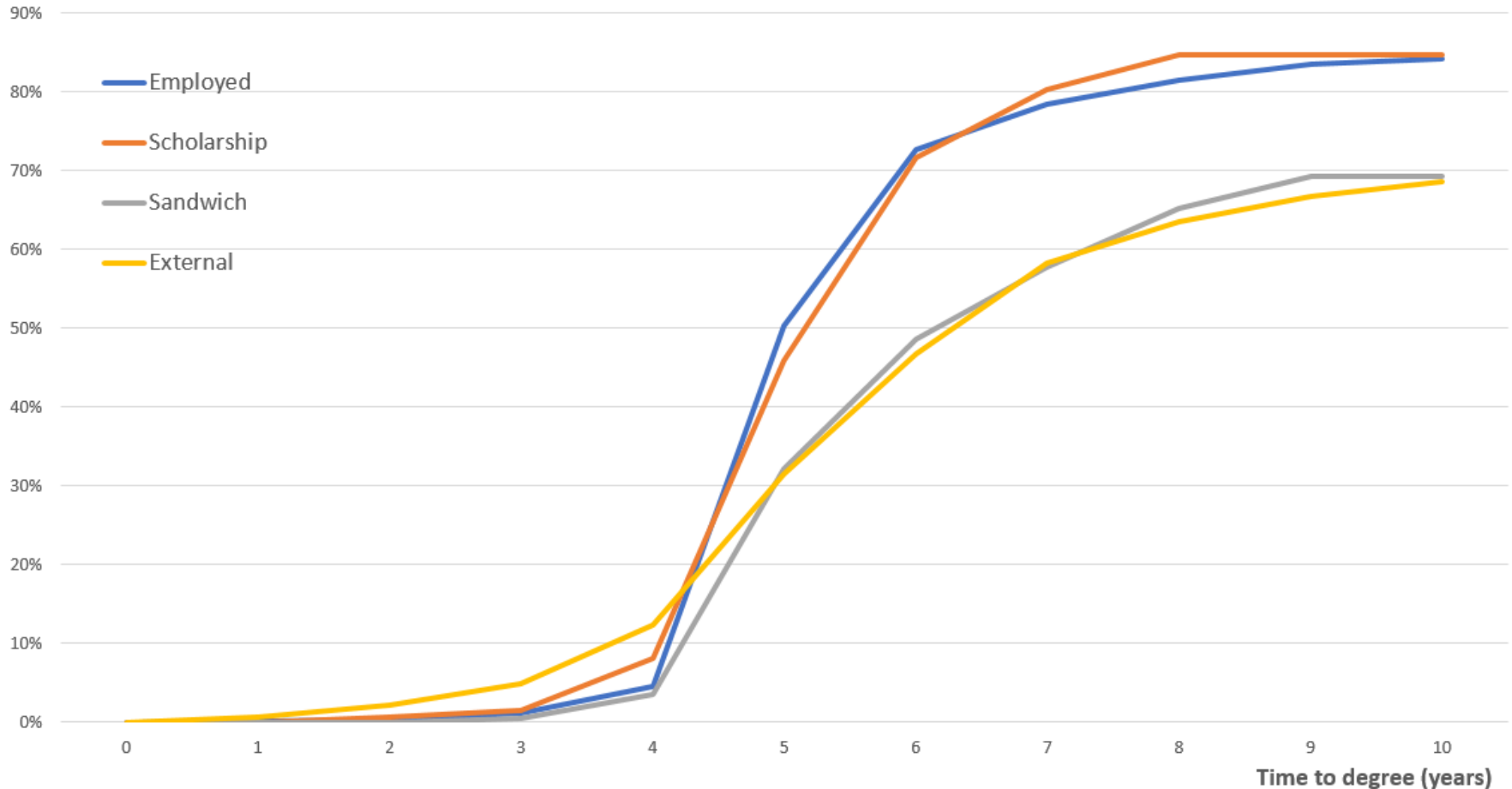


- Completion rate for focus population
- Final completion rate reached after ten (or more) years



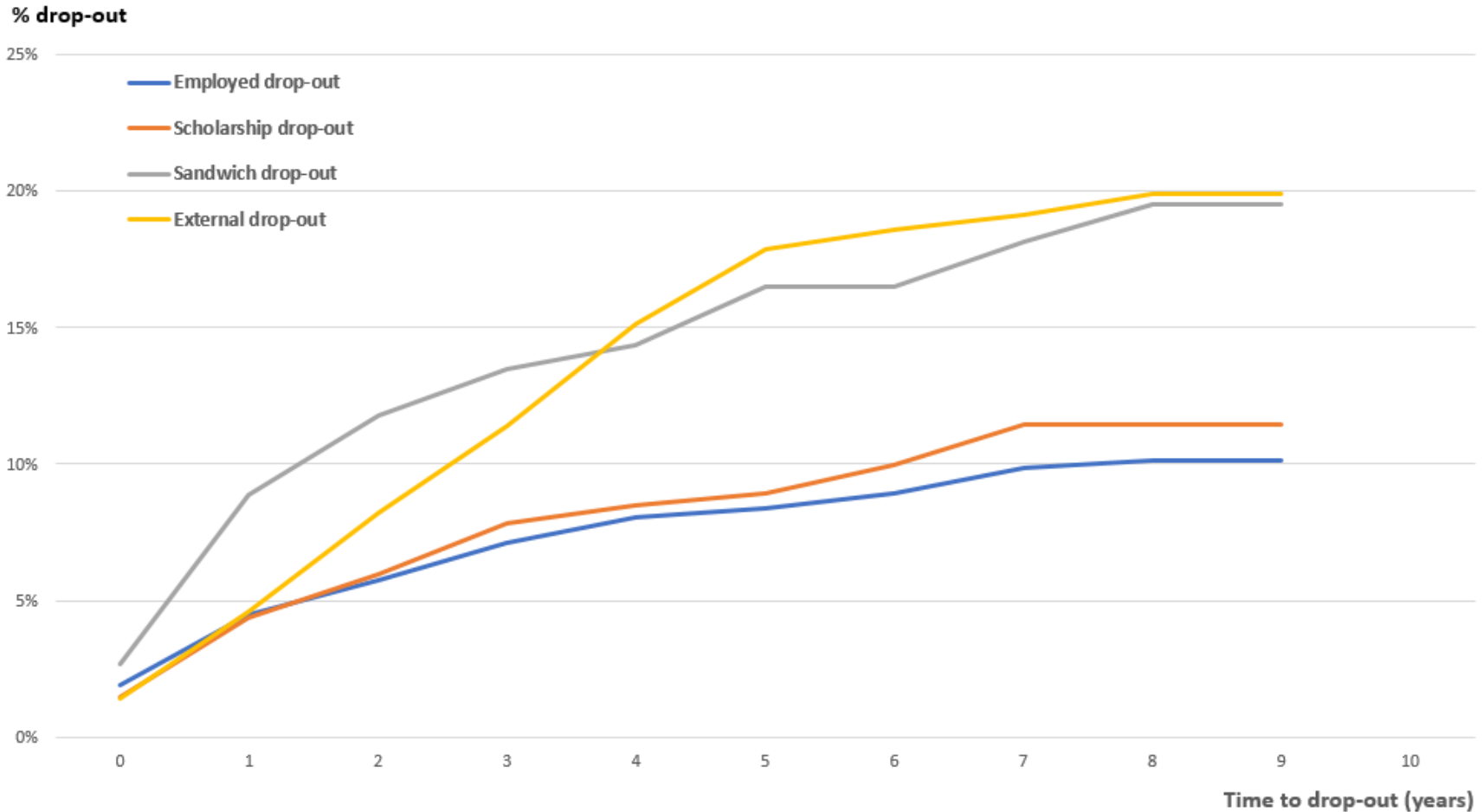
# Result: completion rate

Focus population, completion rates 4 main types:



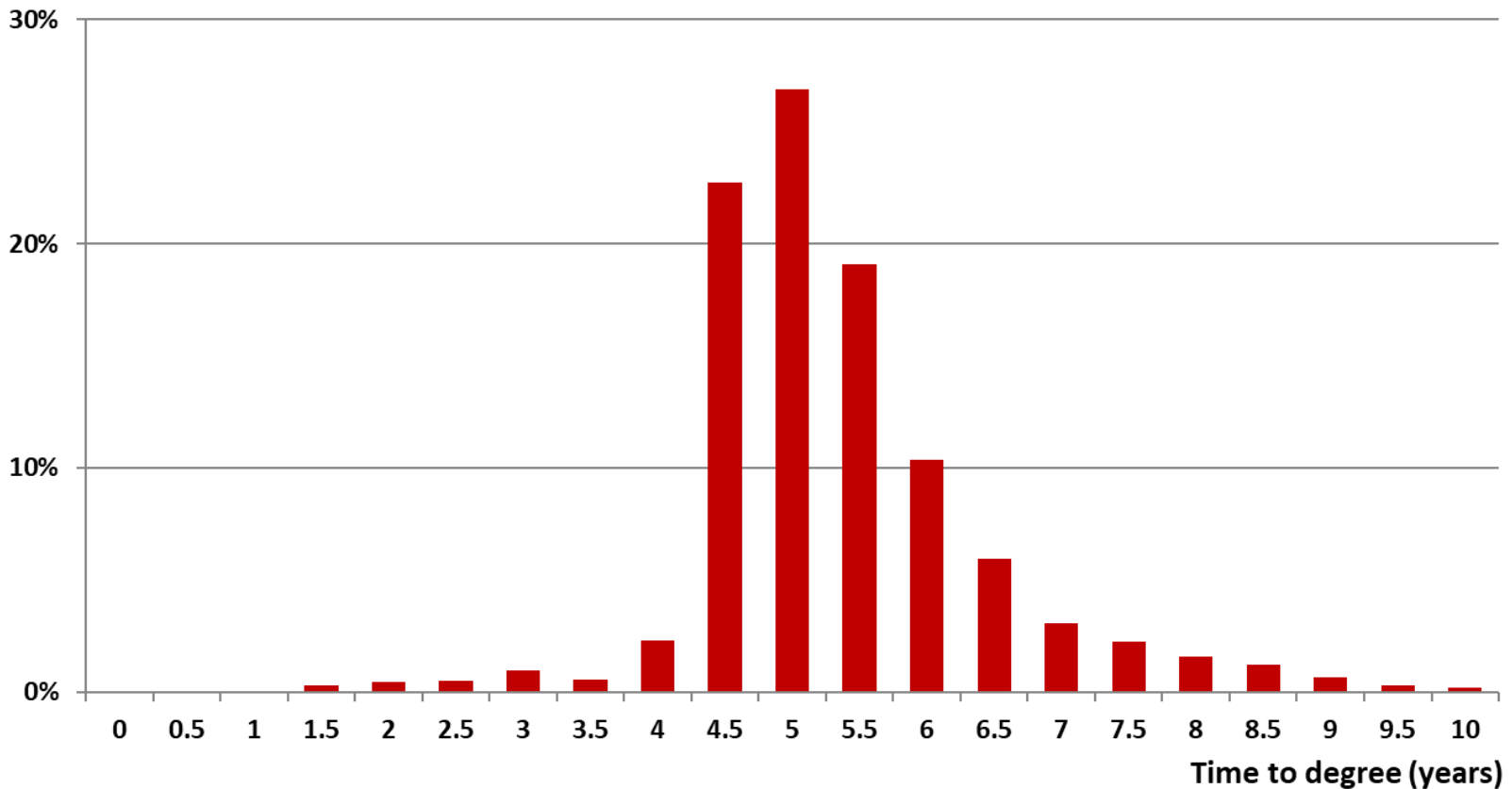
# Result: drop-out rate

The same similarities show for drop-out rates:



# Result: time-to-degree

- Time-to-degree has a skewed distribution
- Metric used: median time-to-degree



# Result: median time-to-degree

WUR overall: 4.7 yrs.

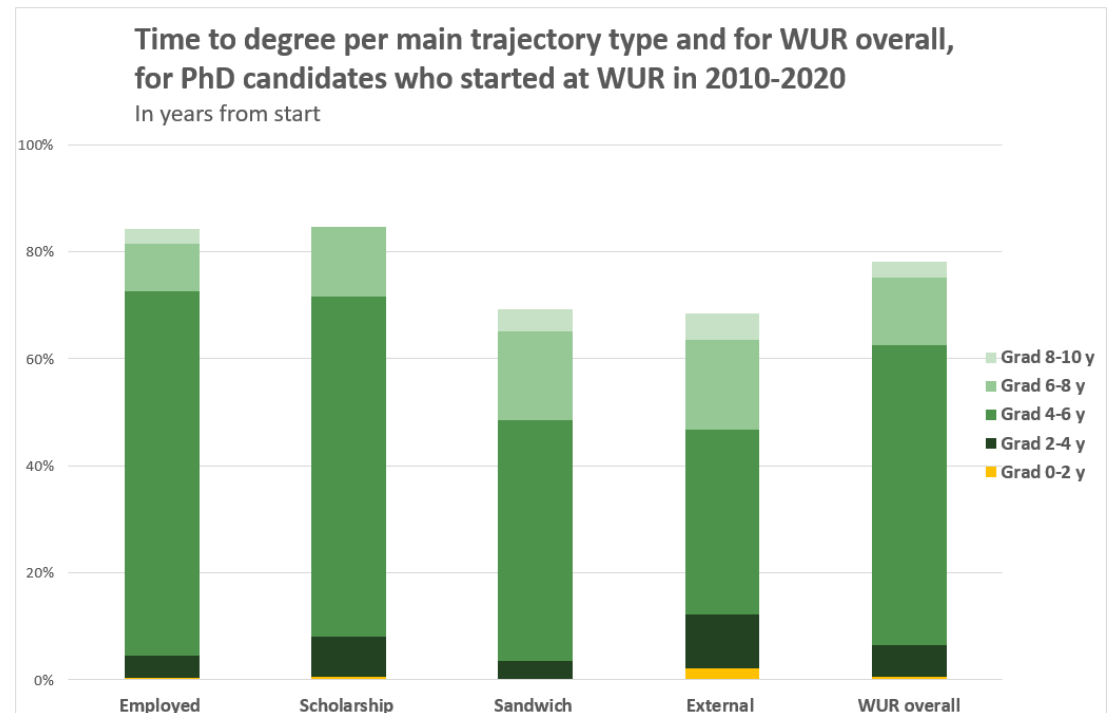
Employed: 4.7 yrs.

Scholarship: 4.7 yrs.

Sandwich: 4.9 yrs.

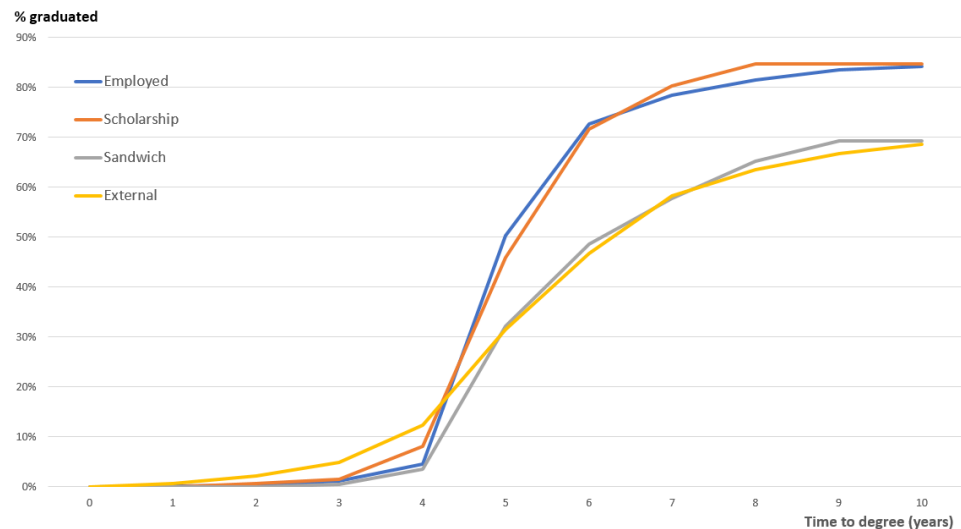
External: 4.7 yrs.

Type 'Sandwich' stands out:  
higher time-to-degree



# Results

1. Employed and scholarship candidates show a similar performance for both completion rate and time-to-degree.
2. Sandwich and external candidates show a similar performance for completion rate.
3. Employed and scholarship candidates show a much higher completion rate (84%) than sandwich and external candidates (~ 69%).
4. Sandwich has a higher time-to-degree than the others



# Conclusion

The type of PhD trajectory influences the performance.

# How to proceed

- Further investigation of underlying specifics
- Discuss whether and which mitigating measures should be taken to decrease the differences in performance between the types of PhD trajectories
- Aim:
  - Increase the completion rate of sandwich and external
  - Decrease the time-to-degree of sandwich

# Underlying specifics: 1<sup>st</sup> indications

- Funding source

differences in living allowance

paid vs. unpaid pregnancy leave, parental leave, child care

possibility for funded extensions

- Supervision / communication

employed and scholarship: fully based at WU

- Time constraints / other duties

external and sandwich: employed elsewhere



# Thank you!

Questions?

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# What causes delay?

- Project related issues
- Too much time on teaching duties and/or courses
- Personal reasons
- Writing thesis
- Time constraints
  - funding source ends
  - return to home country
  - already new job
- Different expectations
- Supervision

# What causes drop-out?

- Not enough progress
- New job
- End of funding
- Other duties
- Personal reasons
- Supervision