

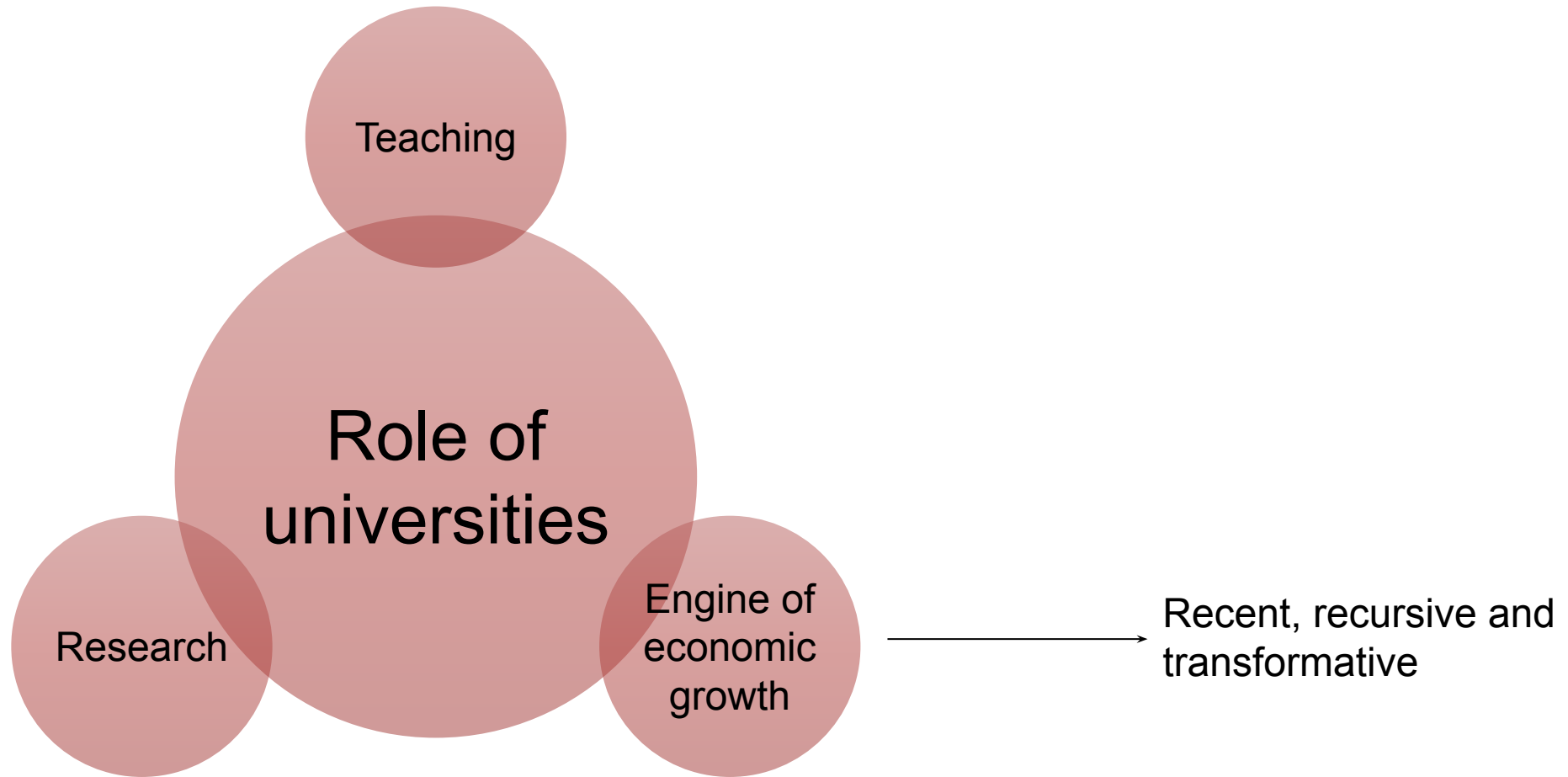
Universities in Regional Innovation Systems

Case Study

Agenda

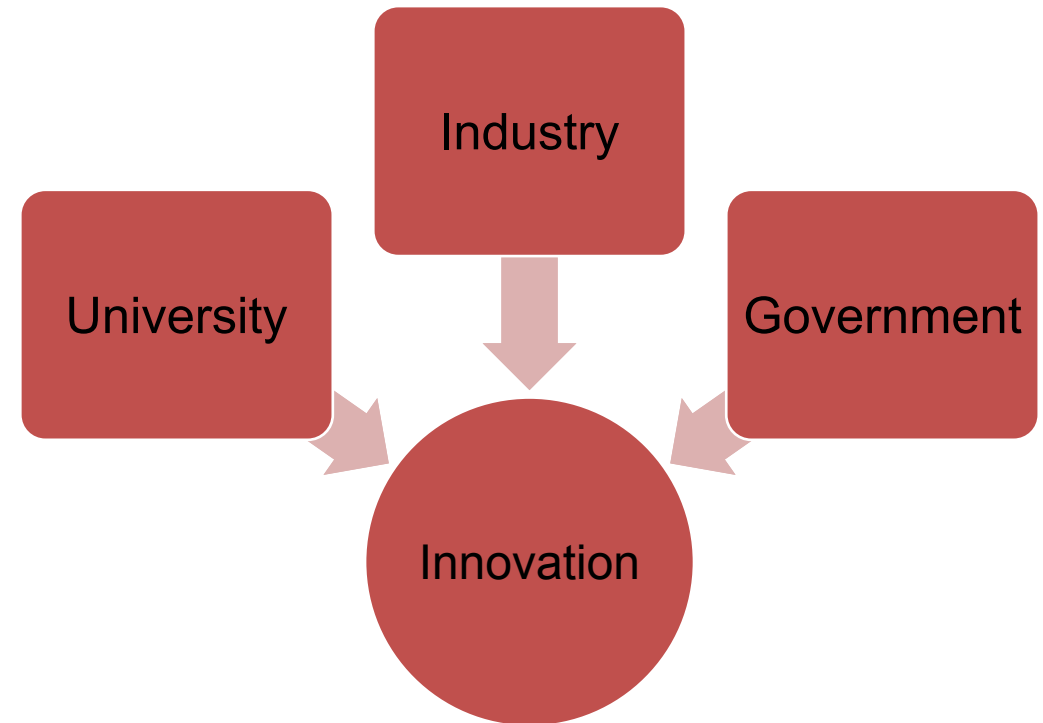
- Review of Gunasekara's conceptual framework and its application to Australian universities
- Application of the framework to the TU Dortmund and the Ruhr Area
- Research questions:
 - What has the role of the TUDO university in the Regional Innovation System in the Ruhr Area historically developed?
 - How does it define this role in its mission and strategy today?
 - How does this compare with the Australian case?

Introduction



Gunasekara's conceptual framework

- What do universities do? Why do they do what they do?
- Two models:
 - Triple-helix model by Leydesdorff & Etzkowitz -> generative
 - Engaged university -> developmental



Case Study – Australia

- Three universities were surveyed through interviews with key staff

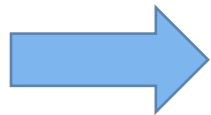
	Peri-urban university	Provincial university	Rural university
Regional economy	Services-oriented	Manufacturing; transitioning to services	Agricultural
Elements	Role		
Regional agglomeration	Developmental	Emerging generative	Developmental
Human capital stock	Developmental	Emerging generative	Developmental
Associative governance	Developmental	Generative and developmental	Developmental
Cultural norms	-	-	-

Case Study – TU Dortmund

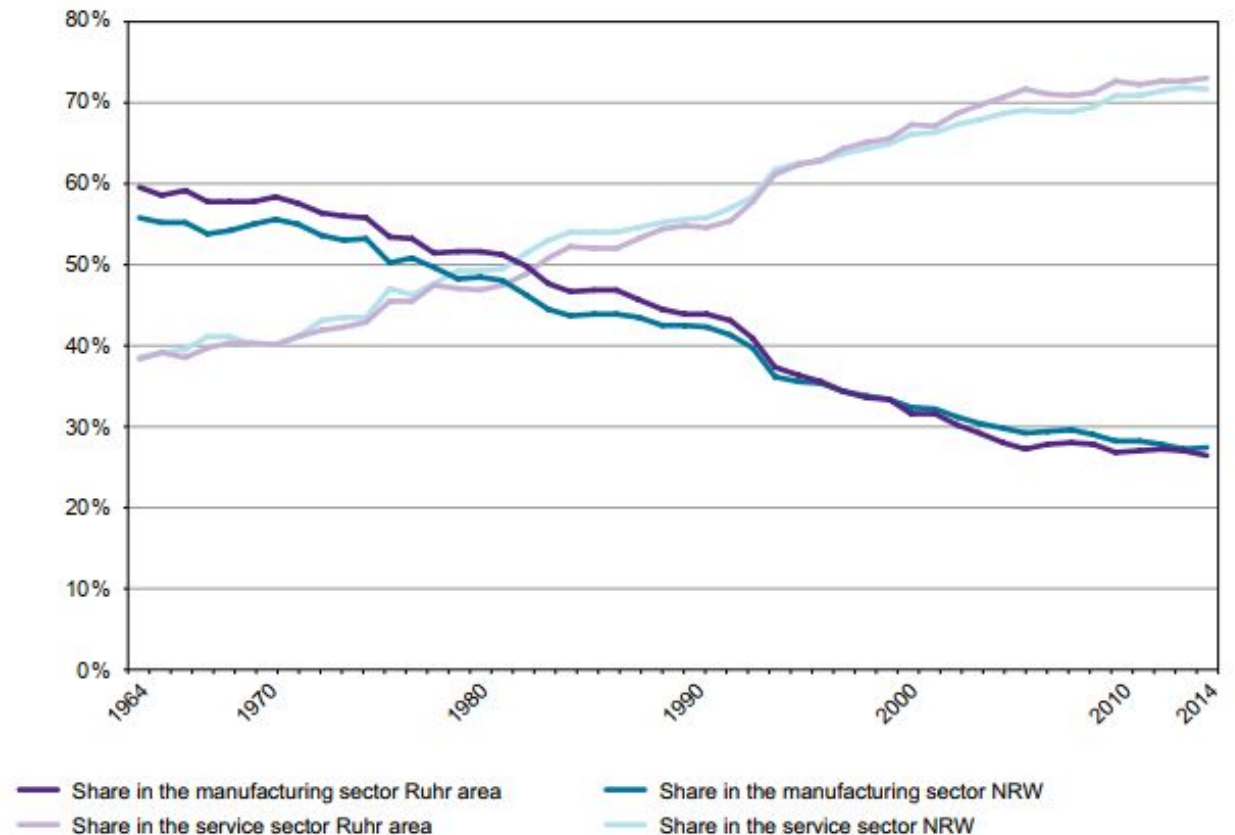
- History (TU Dortmund, 2019):
 - Founded in 1968 as University of Dortmund
 - Courses in natural sciences and engineering initially; later also in economics and social sciences
 - Integration of PH Dortmund in 1980
 - Renamed to Technical University of Dortmund to emphasise technological role in 2007
- Four key research areas today (TU Dortmund 2018):
 1. Materials, production technology and logistics
 2. Chemical biology, agents and process engineering
 3. Data science, modelling and simulation
 4. Education, schools and inclusion

Case Study – TU Dortmund

- Regional economy: Dortmund and the Ruhr Area
- Formerly strong mining and manufacturing sectors
- Transition to services



Similar to provincial university in Australia



Case Study – TU Dortmund

- TUDo sees itself as a regional innovation driver (TU Dortmund, 2018, p. 9):

„The TU Dortmund contributes to turning the city and the Ruhr Area into a centre of high-tech and services.“



**Generative role
(triple-helix)**

- Forms of regional involvement:
 - Knowledge and technology transfer (e. g. business incubating; cooperation with TZDo)
 - Regional cooperation (e. g. networking; Masterplan Wissenschaft -> triple-helix)
 - Social engagement (e. g. further education; science communication)

Conclusion

- TU Dortmund's role largely generative
- Comparable to provincial university in a similar environment

	Peri-urban university	Provincial university	Rural university	TU Dortmund
Regional economy	Services-oriented	Manufacturing; transitioning to services	Agricultural	Manufacturing; transition to services
Elements	Role			
Regional agglomeration	Developmental	Emerging generative	Developmental	Generative
Human capital stock	Developmental	Emerging generative	Developmental	Unclear
Associative governance	Developmental	Generative and developmental	Developmental	Generative and developmental
Cultural norms	-	-	-	Unclear

References

- Dahlbeck, E., & Gärtner, S. (2019). JUST TRANSITION FOR REGIONS AND GENERATIONS: Experiences from structural change in the Ruhr area (T. Köberich, Ed.). Berlin: WWF.
- Gunasekara, C. (2006). Reframing the Role of Universities in the Development of Regional Innovation Systems. *The Journal of Technology Transfer*, 31(1), 101–113. <https://doi.org/10.1007/s10961-005-5016-4>
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- TU Dortmund. (2019). Die TU Dortmund – eine Zeitreise. Retrieved 30 November 2019, from <https://www.tu-dortmund.de/universitaet/profil/chronik/>