Regional economy upgrading – triple helix at work? Some selected cases from the Czech republic (and Central Eastern Europe)

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Presentation outline

- **How to use the concept of „triple helix" in the context of regions in the Czech republic and their effort to increase their competitiveness and regional economic upgrading**

- Theoretical context

- Specifics of application in the context of CEE, V4 region and particularly Czechia

- Own research – the case study from successful and less successful region (South Moravia vs. Central Moravia)

- Conclusions

„Triple helix" in the framework of regional development theories

- Institutional theory– authors *Henry Etzkowitz*

- *and Loet Leydesdorff, 1997*

- Rather concept and analytical tool than a new theory

- „Poetic expression"

- Innovation creation is dependent on mutual collaboration and other types of linkages in the region (territory)

- Connection to for ex. Regional innovation systems (RIS)

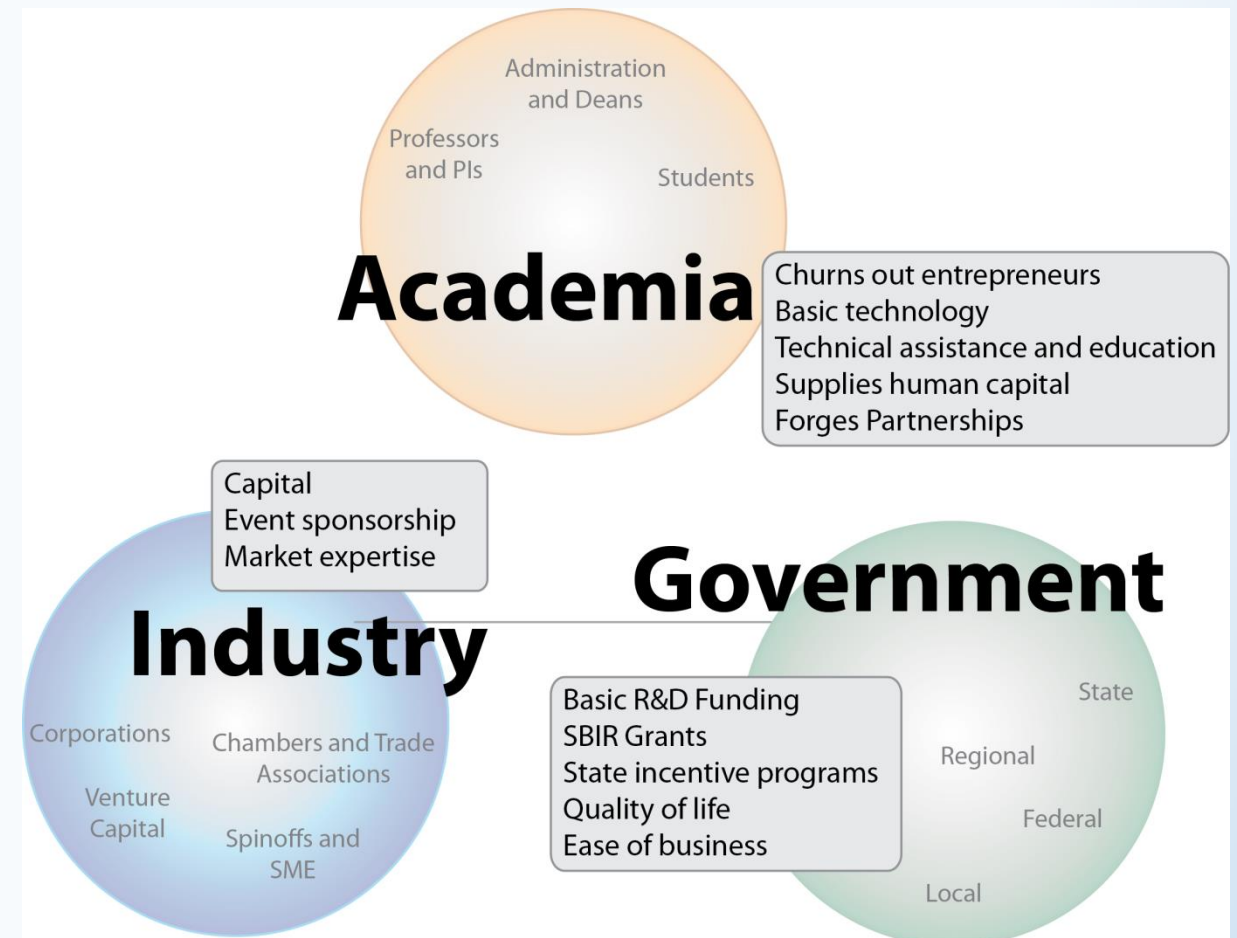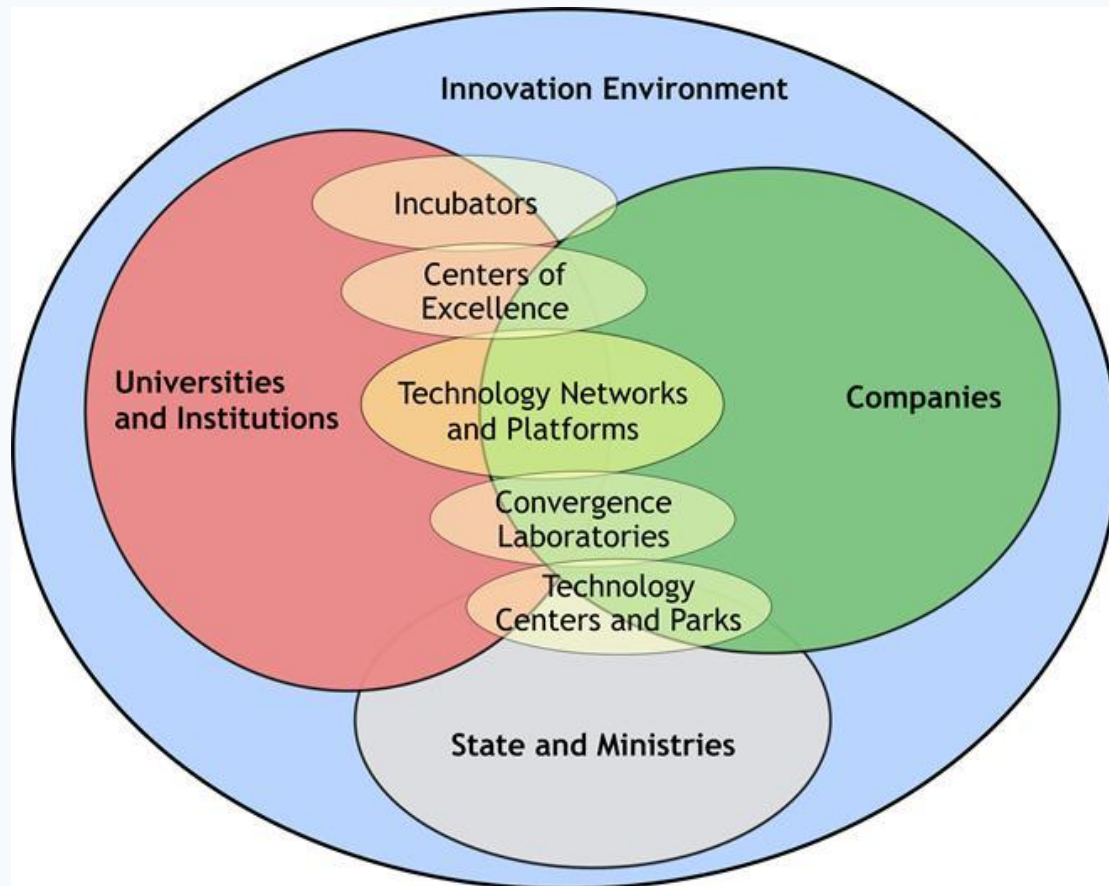- Normative concept (application in praxis)

Henry Etzkowitz

Loet Leydesdorff

Graphical description of „triple helix" model

Triple helix concept

- Inspiration by evolution theory: natural selection and random variation
- BUT much lower degree of stability and constant changes of TH
- **Three key dimensions:**
- 1. Internal transformation of helices
- 2. Mutual interaction of remaining helices
- 3. Creation of a new network of relationships to stimulate innovation process
- **Required mutual respect of players from all three helices**
- Possible both bottom-up and top-down process creating a trilateral relations
- knowledge space ⟶ consensus space ⟶ innovation space
- http://www.leydesdorff.net/th2/

Obstacles and limitations of the concept in practice

- Low levels of trust and other value rankings actors ("Two Worlds")

- Low relative mobility of workers

- The complex ecology of helices and often unintended side effects

- Different expectations of actors and the contribution of individual measures

- Narrowness normative dimension of the concept - rather it is important to emphasize the importance of ecology in all three spheres of building a knowledge-based economy

- Neglecting other dimensions - a relatively narrow concept (eg. neglected sociocultural context, etc.).

- It shows the need to work more on the concept of pro-innovative-oriented public sector (in the past neglected)

Further developments of the model: "N-dimensional helix"

Zdroj: Carayannis et al. (2012) - Journal of Innovation and Entrepreneurship
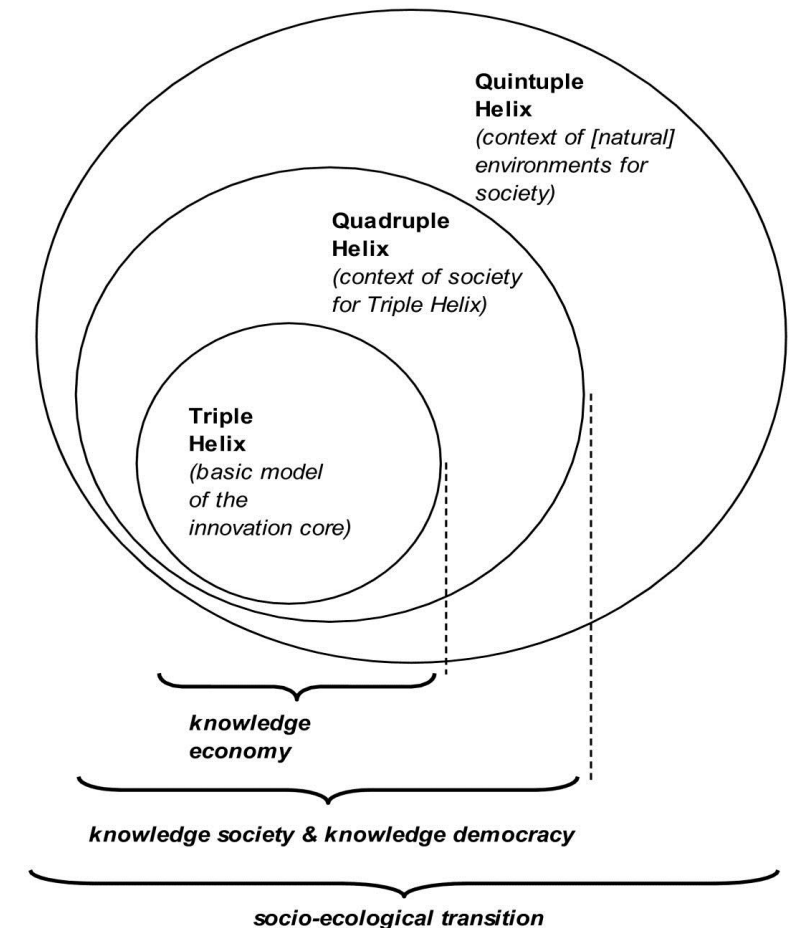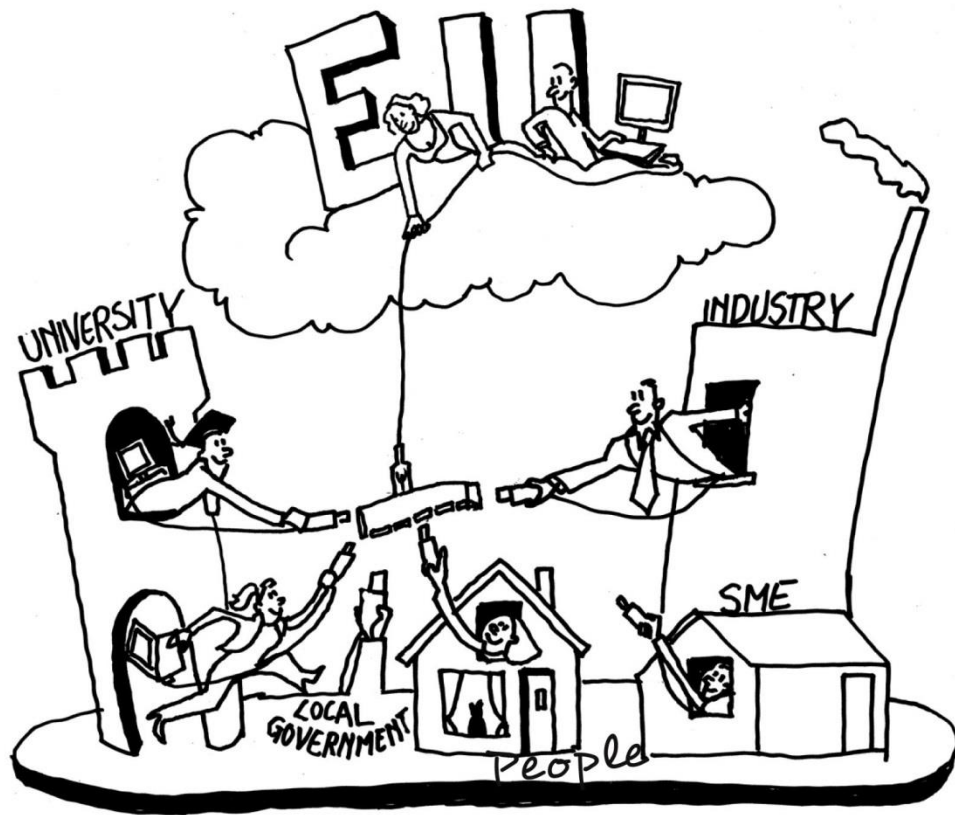
CEE countries – institutional context

- Prevailing concept of neoliberal approach in regional development

- Low level of mutual trust among helices

- Low level of interest to collaborate - rather competitive relation (till recently different missions of actors)

- Pro-innovative-oriented public sector as „unknown phenomena"!

- Public sector suffers many imperfections (institutional, personal etc.)

CEE countries – macroeconomic and regional context

- (Progressive) depletion effect of cheap labour and local (regional) "unrooted" economy

- Gradual reflection of this fact by local and regional authorities

- Efforts to transition to a knowledge-based society and economy (many existing concepts and tools)

- The pursuit of coordination and integration of key stakeholders who influence the formation of innovation in the regions (innovation infrastructure creation)

- On the CEE and national as well as regional levels large differences (timing, the role of individual actors) – a crisis as a triggering mechanism

CEE context: GERD (% GDP) – EU 28 and position of V4

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EU-28	**1,87**	**1,86**	**1,82**	**1,82**	**1,84**	**1,84**	**1,91**	**2,01**	**2,00**	**2,04**	**2,06**
Euro area (EA-17)	**1,88**	**1,87**	**1,85**	**1,84**	**1,87**	**1,88**	**1,96**	**2,06**	**2,07**	**2,12**	**2,14**
Bulgaria	0,48	0,48	0,49	0,46	0,46	0,45	0,47	0,53	0,60	0,57	0,64
Czech Republic	1,15	1,20	1,20	1,22	1,29	1,37	1,30	1,35	1,40	1,64	1,88
Denmark	2,51	2,58	2,48	2,46	2,48	2,58	2,85	3,16	3,00	2,98	2,99
Germany	2,50	2,54	2,50	2,51	2,54	2,53	2,69	2,82	2,80	2,89	2,92
Estonia	0,72	0,77	0,85	0,93	1,13	1,08	1,28	1,41	1,62	2,37	2,18
Ireland	1,10	1,16	1,23	1,25	1,25	1,28	1,45	1,69	1,69	1,66	1,72
Greece	:	0,57	0,55	0,60	0,59	0,60	:	:	:	0,67	0,69
Spain	0,99	1,05	1,06	1,12	1,20	1,27	1,35	1,39	1,40	1,36	1,30
France	2,24	2,18	2,16	2,11	2,11	2,08	2,12	2,27	2,24	2,25	2,26
Croatia	0,96	0,96	1,05	0,87	0,75	0,80	0,90	0,85	0,75	0,76	0,75
Italy	1,12	1,10	1,09	1,09	1,13	1,17	1,21	1,26	1,26	1,25	1,27
Cyprus	0,30	0,35	0,37	0,41	0,43	0,44	0,43	0,49	0,50	0,50	0,47
Latvia	0,42	0,38	0,42	0,56	0,70	0,60	0,62	0,46	0,60	0,70	0,66
Lithuania	0,66	0,67	0,75	0,75	0,79	0,81	0,80	0,84	0,79	0,91	0,90
Luxembourg	:	1,65	1,63	1,56	1,66	1,58	1,66	1,74	1,51	:	:
Hungary	1,00	0,94	0,88	0,94	1,01	0,98	1,00	1,17	1,17	1,22	1,30
Malta	0,25	0,25	0,51	0,55	0,60	0,57	0,55	0,53	0,66	0,72	0,84
Netherlands	1,88	1,92	1,93	1,90	1,88	1,81	1,77	1,82	1,86	2,03	2,16
Austria	2,12	2,24	2,24	2,46	2,44	2,51	2,67	2,71	2,80	2,77	2,84
Poland	0,56	0,54	0,56	0,57	0,56	0,57	0,60	0,67	0,74	0,76	0,90
Portugal	0,73	0,71	0,74	0,78	0,99	1,17	1,50	1,64	1,59	1,52	1,50
Romania	0,38	0,39	0,39	0,41	0,45	0,52	0,58	0,47	0,46	0,50	0,42
Slovenia	1,47	1,27	1,39	1,44	1,56	1,45	1,66	1,85	2,10	2,47	2,80
Slovakia	0,57	0,57	0,51	0,51	0,49	0,46	0,47	0,48	0,63	0,68	0,82
Finland	3,36	3,44	3,45	3,48	3,48	3,47	3,70	3,94	3,90	3,80	3,55
Sweden	:	3,80	3,58	3,56	3,68	3,43	3,70	3,62	3,39	3,39	3,41
United Kingdom	1,78	1,73	1,67	1,70	1,72	1,75	1,75	1,82	1,77	1,78	1,72

Source: Eurostat (online data codes: t2020_20 and rd_e_gerdtot), OECD

Methodology and features

- Initial mapping based on interviews with actors of the innovation process in Jihomoravský kraj (South Moravia), (JIC, deputy director) and Olomoucký kraj (Olomouc region) (OK4I, S3 Manager)

- analysis of macroeconomic data, regional media

- **Differentiating factors of both regions:**

- The time factor (South Moravia started already in 2000 vs. Olomouc reg.)

- Role (importance) of individual actors and their position in the system – transparent vs. clientelist system

- Containment of Regions - a critical size, respectively. internal integrity region

GERD, BERD in 2012 – regions (kraje)

Region (NUTS III)	GERD as a percentage of regional GDP	BERD as a percentage of regional GDP	Total number of R&D personnel (FTE)
	2012	2012	2012
Praha	2.67	1.6	22,164
Středočeský	1.45	1.21	5,155
Jihočeský	1.30	0.69	2,15
Plzeňský	2.3	1.48	2,712
Karlovarský	0.26	0.26	116
Ústecký	0.46	0.38	1,036
Liberecký	2.29	1.17	1,899
Královéhradecký	0.92	0.70	1,695
Pardubický	1.86	1.47	2,617
Vysočina	0.59	0.58	778
Jihomoravský	3.63	1.53	10,607
Olomoucký	1.96	0.67	2,583
Zlínský	1.22	1.00	1,968
Moravskoslezský	1.17	0.66	4,742
Czech Republic	1.88	1.1	60,222

Source: Czech Statistical Office, March 2014

Mapa krajů ČR
Map of Czech Republic Regions

Case study South Moravia (Jihomoravský kraj)

Case study Olomouc region (Olomoucký kraj)

Own research: determinants of triple helix concept in two Czech regions

- <u>Common and general features:</u>
- The initiative mostly by the public administration – the role of triggering mechanism (bottom-up in SM – Flextronics left in 2002 vs. top-down in OR - S3)
- But "it does not work" if you do not realize cooperation and support their actors of the private sector: Cooperation can not be forced
- Large (initial) mistrust between the actors and the ability of other parties to help ("to harm the least")
- Very different expectations and „Measuring Success" of cooperation - for example. Third role of universities is still limited

Own research: determinants of triple helix concept in two Czech regions

- Different time perspective on each actor in achieving tangible results of cooperation

- A very important long-term and transparent relationships building

- Very important "chemistry" of relations between actors - depending on how open and "enlightened" individuals are in that position at specific locations

- Variability and fragility of relationships: simple distortions built up system

- Very high variability in the types and intensity of cooperation on the basis of the above factors

Conclusions

- In most of CEE countries uneven development of helices (neglected 3rd role of universities, low efficiency of regional and local administration)

- General mistrust of private sector to provide professional service by government and academia (but also other reasons – non-embedded foreign companies etc.)

- The role of triggering mechanism (often critical moment of regional economy)

- Positive example: South Moravian region (Brno), rather negative one: Olomouc region

- Challenge for changing of public policies (S3 RIS, rather positive role of EU regional policy)

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Thank you for your attention!

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