Introduction

▶ The development of cities is determined by the ability of their key actors to bring about successful solutions to existing/emerging challenges. Cities have considerable – although not yet fully exploited – potential. The new challenges that cities will be exposed require to secure sustainability of their ecosystems.

▶ These challenges will mean significant opportunities for domestic and foreign firms. All actors will be challenged to best reconcile their different interests so that the resulting effects benefit not only entrepreneurs with regard to their goals, but also the urban population in terms of comfortable living in a healthy environment and environmental sustainability.

▶ Cities are strategic enough to make connections globally and small enough to reflect local needs and opportunities and to involve stakeholders in decision-making process.

Introduction

- Parallel phasing concept (PPC), as our concept of the development of urban/regional socio-economic systems, and constructed regional advantage concept (CRAC), unlike traditional approaches, consider the cross-sectional plane of the economic space and thus adds another dimension to the analysis of the integration of three spaces.

- The term "parallel" reflects the simultaneous integration of different kinds of space together with active-adaptive approaches to phenomena such as openness, creativity, flexibility or variety that it is needed for the analysis of complex phenomena. In our case, it is the development of cities and their actors. Using all dimensions from PPC can provide new opportunities for companies and help cities reduce environmental burden.

II. Conceptual section

▶ Cyber-space forces city administrations to re-conceptualize their spatial situation. Solutions to cities´ environmental problems are not straightforward. Nor are all such problems open to quick technological and policy solutions.

▶ Decision-making on sustainable urban environments requires a perspective that extends beyond city frontiers and short-term priorities.

▶ The urban strategy´s environmental/development goals can only be successfully achieved by coordinated actions of stakeholders.
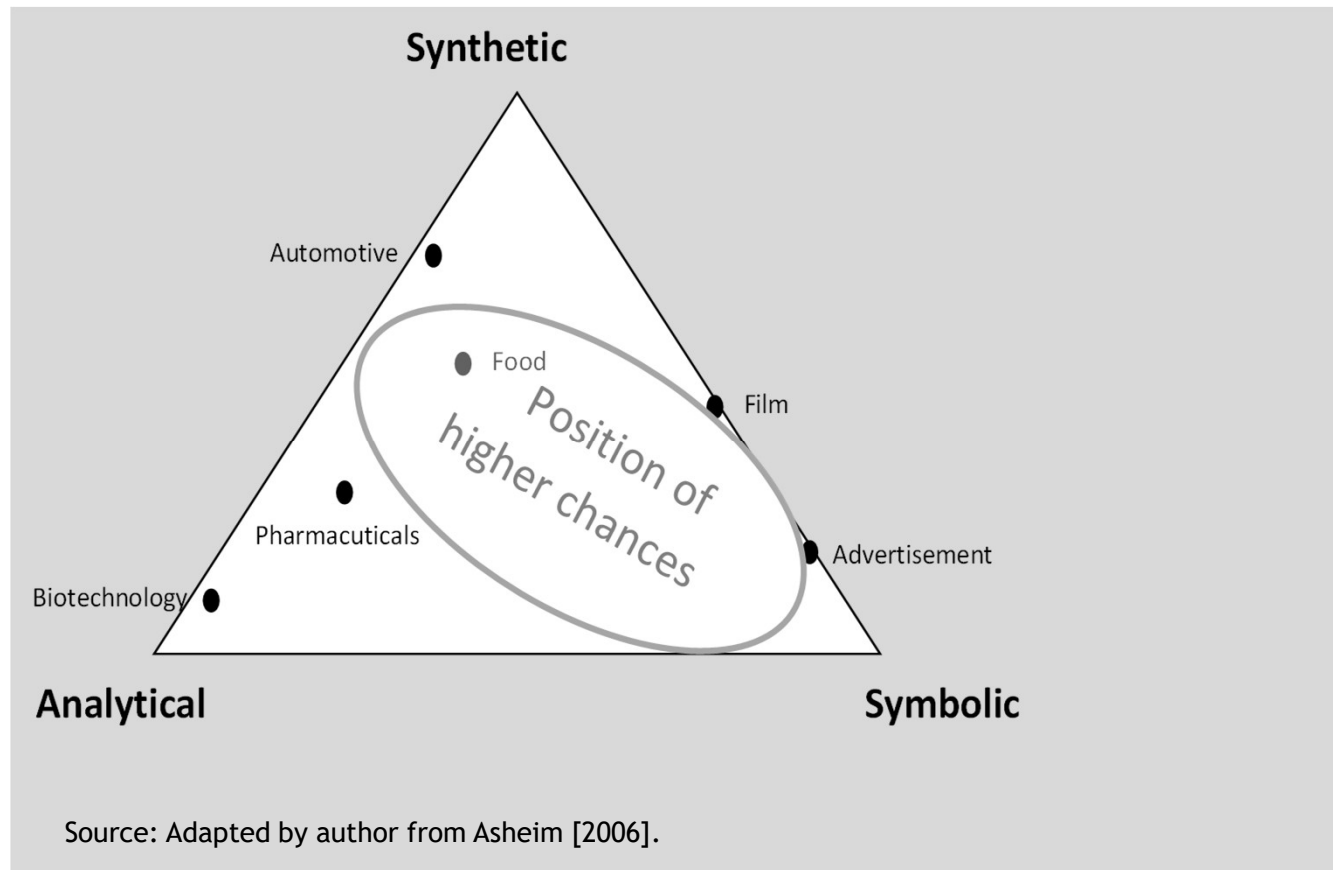
II. Conceptual section

▶ When creating a strategy and trying to enforce social innovations, it is necessary for politics to consider:

   ▶ macro-organizational changes;

   ▶ behavioral parameters of 5H (Penta helix) actors (their interactions and dynamics);

   ▶ different knowledge bases

II. Conceptual section - CRAC

- CRAC (Constructing Regional Advantage Concept) (Asheim et al., 2006)
  - Three key elements:
  - Related variety
  - Differentiated knowledge bases (synthetic, analytical and symbolic)
  - Distributed knowledge networks
- These three dimensions provide the basis for formulating trans-sectoral platform policies for possible use in a wide range of industries
- Concept applied, e.g., in Trieste (Italy) and Brno (Czech Republic)

Graphical depiction of CRA concept
(Position of higher chances - estimate)

Source: Adapted by author from Asheim [2006].

II. Conceptual section - Wicked Problems

▶ Characteristics of WPs

▶ They are characterized by some specific features:

  ▶ no definition;

  ▶ no opportunity to learn from previous solutions;

  ▶ they involve many various stakeholders with different interests and goals;

  ▶ there is no „good/bad" solution to wicked problems;

  ▶ the impossibility of learning from past decisions,

  ▶ ambiguous optimal solutions, etc.

II. Conceptual section - PPC

▶ PPC (Parallel Phasing Concept) (Brzica, 2017)

  ▶ When creating a strategy and trying to enforce social innovations, it is necessary for politics to consider macro-organizational changes, behavioral parameters of 5H actors, their interactions, and dynamics.

  ▶ PPC uses Penta helix (5H) to highlight the fact that the urban economic space cannot be perceived only as the physical space of action of 3H (triple helix). It means that the operational dimension of urban entities must contain the entire set of urban actors (5H), three knowledge bases (synthetic, analytical, and symbolic) as well as the three types of economic space integrated (physical space, cyber-physical space, and digital space).

Parallel Phasing Concept (Parallel spaces segment only)

Parallel phasing concept

		Parallel spaces *Characteristics of urban business environment*		
		Physical space	Cyber-physical space	Digital space
Corporate/city dimensions	City dimension	**(I)** **Traditional administrative activities (office-based)** • Governance • Management • Services • Others	**(II)** **Semi-virtual activities** • Energy networks • Other utilities networks • Global marketing (large-scale cities)	**(III)** **Emerging city activities** • Artificial intelligence • Smart city (transport management etc.) • Digitalization of city space • The same as in (I) but virtual office-based (assisted by AI)
	Corporate dimension	**(IV)** **Traditional production/service activities** • Industrial production • Trade • Services • Consulting • Others	**(V)** **Robotics/Semi-virtual production facilities** • Cyber-physical production units • Robotics	**(VI)** **Virtual business** • Virtual shops • E-commerce • B2B platforms • Services (consulting, banking, finance etc.) • AI-base services and consulting

Source: Brzica, D.

Note: AI = Artificial Intelligence

Governance problems

▶ Successful solving of "wicked" city policy challenges require proper urban governance model. The reason for looking for solutions regarding urban governance is, e.g., that the functional area does not correspond to the existing boundaries of local/regional administration, and at the same time many strategic decisions and service provision must be made at this level. Even the most advanced big cities have gained limited autonomy only (London, Montreal). Examples are given in the OECD documents.

▶ The most radical solutions involve the creation of new authorities at the functional level, either by including an additional level of administration (London) or by expanding the boundaries of existing big cities (Montreal, Istanbul).

▶ There are also various forms of cooperation between existing bodies (specialized agencies, informal cooperation agreements, etc.).There is diversity in scope – some collaborations are multifunctional (Lyon) and others are created for individual services such as transport (Athens, Philadelphia).

▶ An effective governance model helps firms/residents realize their plans/goals.

III. Main points

▶ When creating a strategy and trying to enforce social innovations, it is necessary for politics to consider macro-organizational changes, behavioral parameters of 5H actors, their interactions, and dynamics. The PPC uses 5H to highlight the fact that the economic space cannot be perceived only as the physical space of action of 3H (triple helix). It means that the operational dimension of urban entities must contain the entire set of entities to face „wicked" problems and local/global challenges:

    ▶ urban actors (5H);

    ▶ three KBs ((synthetic, analytical, and symbolic); and

    ▶ three types of economic space integrated (physical space,   cyber-physical space, and digital space);

    ▶ (Multi-level) governance model(s).

III. Results and discussion

▶ The success of the future development of cities is related to a complex set of changes in different areas (in addition to the points mentioned):

  ▶ urban economy, education, energy,

  ▶ environment, financing and budget, fire rescue/crisis management,

  ▶ urban governance, health protection, recreation, safety, flood protection,

  ▶ (solid) waste management, telecommunications/ICT, innovation,

  ▶ transport (public/individual), urban planning, water supply/waste water.

▶ This set of transformational changes is critical for progress in transformation.

▶ The development of cities requires accepting changes in the entire mentioned complex of areas, taking into account their effects with respect to the environment and increasing the attractiveness of cities.

III. Results and discussion

▶ Changes in the global economy are reflected in the perception of the dynamics of changes of its actors, the extent of their influence or the forms of their actions. The synthesis of the CRAC, PPC, WPs extended perception of the complexity of structures and processes in today´s urban (business) environment.

▶ The challenges associated with these changes are an important signal for politicians, entrepreneurs and citizens that their success and the success of the cities in which they live will depend on knowledge/effective tools to cope with the increasingly demanding requirements for their performance.

▶ It can also help to manage wicked problems more effectively.

Conclusion

▶ TPPC/CRAC means coping with the trend of the need to integrate three types of space, while simultaneously adapting to a number of specifics of a complex environment, characterized by dynamism, variety and other components mentioned.

▶ The operational dimension of urban entities must contain the entire set of urban actors (5H), three knowledge bases (synthetic, analytical, and symbolic) as well as the three types of economic space integrated (physical space, cyber-physical space, and digital space).

▶ Thinking in the dimensions of PPC/CRAC can help actors in the formulation of such strategies/policies at the urban level, which will bring them the elimination of excessive heterogeneity in areas that excessive heterogeneity tends to harm. It can also help to manage wicked problems more effectively.

▶ Cities have a great chance to successfully engage in all knowledge base categories of business activities and avoid „locked-in" situations.

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▶ Thank you

Questions and Discussion

▶ United Nations Sustainable Development Goals

  ▶ https://sdgs.un.org/goals

  ▶ SDG 11:

  ▶ Make cities and human settlements inclusive, safe, resilient and sustainable

▶ Discussion questions

  ▶ How does the topic relate to issues of public concern or the common good?

  ▶ What communities might be involved in or affected by the topic? What are the histories, social contexts, assets, and needs of these communities?

  ▶ What community partners (e.g., public offices, nonprofit organizations, social enterprises, faith-based organizations) could collaborate on your topic for mutual benefit and growth?