THESIS COLLECTION

Ágnes Nagy

Interrelations between Economics and Communication

Conditions for sustainable economic growth in modern society on the problem-identification and solving scenes of global economic communication

to the Ph.D. thesis

Supervisor:

Dr. András Karácsony
Candidatus scientiarum (CSc)

Budapest, 2020
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I. Research precedents and the subject justification

Research into interrelations between Economics and Communication led to a comprehensive contribution in conjunction with the subject. The investigation of the subject allowed identifying problems in the socio-economic system that has been evolving over centuries, the description of which may inspire to reflect on the future. The analysis of the practical realization of Luhmann’s theory based on the economic theories and the empirical data measured by indicators clearly shows that in the current socio-economic situation effective problem management is essential for the future generation, where all participants face extreme complexity in modern society.

Nearly a decade of research was carried out to represent the above, which included the systematization of complex and heterogeneous results such as the consideration of the economic-related aspects of the system theory and the participation theory of communication, adapted from the latter the interpretation of linguistic and terminology researches as significations and the problems related to economic development. Heterogeneous topics had been structured as follows.

According to Luhmann's position, the functioning of the polycentric, modern society is determined by functionally differentiated sub-systems as well the interpenetration and the interdependency among them. (Luhmann 1995; Karácsony 2013, 2000)

Functional sub-systems are closed systems defined by their binary codes because of their autopoieses their communication may be modified by environmental impacts but the selection constraints cause negligence due to the complexity of the systems. This phenomenon can be observed in the society through the manifestation of the duality of inclusion and exclusion or the ecological problems. Examples of exclusion are the starving masses of people (a factor

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1 Heterogeneity means different perceptions of researchers.
that can be perceived by the indicators of poverty), while ecological problems can be *inter alia* the pollution (measured by ecological indicators). (Luhmann 1997, 2010; World Bank 2018; UNDP 2014; Giannetti 2015; Zheng, Chen 2016; etc.) For example, because of system specificities a particular problem cannot be interpreted in the economic functional sub-system (or institution) until it cannot be expressed in monetary terms, but the expectations expressed in the environment such as tax liabilities – proposed in the political functional sub-system and determined in the legal functional sub-system – may result in insolvency in the sub-system, affecting the development of economic growth (GDP). Furthermore, the signification of legal terms may lead to misunderstanding in the economy as an institution, depending on the significatum assigned to the significance in the possession of preparedness. The former are eloquent examples of the interpenetration and the interdependency among sub-systems or institutions.

The structural link among sub-systems (communication) is realized by organizations, which can be regarded as collective agents based on the participatory theory of communication (in the thesis knowledge communities), referring to the need for priori preparedness to identify and solve problems. (Horányi 2009) The subjects of linguistic researches might be considered as identified problems, which can be interpreted as significations of the researchers, where different significatums can be assigned to the same significance depending on the orientation of the linguistic researchers. *Ad exemplum*, identified problem can be the definition of the technical language where the problem elimination might be demonstrated by the variations of the interpretation of the technical language. The signification depends on the researcher's position and among the significatum assigned to the significance can be mentioned the interpretation of social dialect (Kovács 2003), umbrella term (Ablonczyné 2006), or sector

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2 For example, the interpretation of the green tax denotation or the subject and personal scope of the product fee under the Environmental Fee Act in connection to the payment obligation, the interpretation of which is based on the specific terminology, if someone has instrumental and reflexive knowledge (Burawoy 2005).
language (Proietti 2010). The differentiation of the composition of preparedness can be shown in the diversity of the definition of the economic communication term, which embraces diverse domains as an umbrella term. The domains comprise: the global economic communication at the macro level and the corporate (including financial) economic communication and economic communication of mass media at the micro level. Their characteristics can be described e.g. in a manner defined by linguists or communication scientists, specifying particular topics and organizations that can be assigned to the domain. (Borgulya 2010, Kővágó 2011, Scholl 2008, etc.) Topics may cover inter alia price-related subjects, such as price policy and domain-specific organization, which can be the OECD (Organization for Economic Cooperation and Development). The interpretation of the domain as a scene contributes to the analysis of problems in the global economic communication scenes, where problems can be quantified based on economic growth theories and socio-economic indicators. (Galor 2011; Mankiw, Romer, Weil 1990; Solow 1956, 1988, etc.).

The root of socio-economic problems lies in the economic sub-system (or institution) in relation to the three fundamental tasks of the economy: establishing the pre-conditions for economic growth for the business sector, creating jobs and ensuring the coverage of government expenditure. Constructive problem solving is possible after the consideration of economic theories, publications containing empirical data, drawing the consequences and answering funding questions. (Brunczel 2010; Décsy 2003; Elmendorf, Mankiw 1999; Krugman, Obstfeld 2003; Lőrinczné 1999; Mankiw 1990; Samuelson, Nordhaus 2012; etc.) The analysis of empirical data involves the enumeration of data measured and quantified by the indicator of economic development (GDP) as well by other indicators, which express explicitly social and environmental problems that are essential factors for problem management. The analyses of theoretical and empirical data lead to the determination of factors for sustainable economic development, defining eight factors in the conclusion as a
possible way of addressing global problems. (Galor 2011; Mankiw, Romer, Weil 1990; Solow 1956, 1988, etc.).

II. Methods used
The methods used are essentially *descriptive*, sometimes *comparative*, allowing to understand different concepts in order to provide methodological considerations for problem management. The terms are analyzed using a concept-based method of terminology by comparing conceptual markings and the equivalency analysis is used in case of terms in different languages. (Horváth 2013; Tamás 2014a, 2014b) Socio-economic problems are structured based on sub-systems and institutions in a *table*, in the phases of problem identification and solution. Moreover, the portrayal of the knowledge communities of problem identification and solution clarifies which competent knowledge community can promote the effective problem solution. (Brunczel 2010; Horányi 2009, 2006; Pete, P. Szilczl 2006)

*The descriptive methods* are intended to provide a presentation of the communication science and the economics theories discussed in the thesis. *The descriptio* includes the following:

- Fundamentally, from Luhmann’s system theory: basic concepts, social systems including functionally differentiated sub-systems (namely economic, political, legal, scientific and mass media functional sub-systems) (Luhmann 2000, 1995, 1997; Karácsony 2013, 2000; etc.);
- basic concepts from the participation theory of communication (PTC), the institutional concept of the PTC, linguistic signification (Horányi 2006, 2009; Pete P. Szilczl 2006);
- and some concepts of economic theories and topics related to socio-economic indicators (as identified problems). (Elmendorf, Mankiw 1999; Krugman, Obstfeld
Comparative methods mean the comparison among the various theories listed above and the analyses of data from secondary sources.

Thus, on the one hand, this includes the perceptions of the system theory and the participation theory (e.g. the concept of language in the system theory as medium and in the participation theory as institution) (Brunczel 2010; Pete P. Szilczl 2006); on the other hand, the specific interpretation of the signification of problems taking into account the positions of linguistic researchers (Ablonczyné 2006; Balboni 2000; Dósa 2006, 2010; Fóris 2005, 2013; Horváth 2013; Kovács 2003; Kurtán 2003; Nyakas 2010; Proietti 2010; Tamás 2014a, 2014b; etc.) and the methods of investigation of problem identification and solution related to socio-economic issues (Galor 2011; Mankiw, Romer, Weil 1990; Medvéné 2013; Mecatti, Cipra, Farina 2013; UNDP 2014; etc.). The problems related to technical language take the aspect of communication into consideration that involves issues of interpretation of technical terms as signification. Inter alia it can be the interpretation of technical language (e.g. Kovács 2003), technical teaching methods (e.g. Swales 1985), differentiation of technical language levels (e.g. Sosnowski 2005), technical linguistic communication (e.g. Heltai 2006), the signification of the economic language (e.g. Ablonczyné 2006) including the fields of economics (e.g. JEL 2017), examples of its terms (linguistic analyses of logistics and accounting) (Nyakas 2010; Dósa 2006, 2010) and the equivalency analysis (analysis of the concepts of the price index and the environmental product fee terms in different languages) (e.g. Tamás 2014a, 2014b).

The approach, which emphasizes the complexity of the linguistic competence focuses on the knowledge of the characteristics of the vocabulary, the linguistic levels, the communication cases, the theoretical background of concept-based terminology analysis (equivalence) in order to the description and the comparison of economic linguistic characteristics.
The comparative method of the identification and solution of problems is based on the *theorem* that problems cannot be solved in modern society in the sub-system where they have arisen and difficult to define them without the consideration of the specificities of the sub-systems. The former build on Luhmann's perception that problems need to be formulated in relation to functional sub-systems in the context of the economic, political, legal, scientific, and mass media sub-systems, which were mentioned earlier in the discussion. (Luhmann 2010) Specific examples (pollution, poverty, unpaid work) are *structured* using a *table* that highlights possible shortcomings in identifying and/or solving problems for each sub-system.

Sub-systems are considered to be institutions when we think about the relevant skills needed to solve problems, such as competences. The subjects can be considered as identified problems by agents, adapted from the concept of participation theory. (Horányi 2009; Pete, P. Szilczl 2006) Agents can be organizations (knowledge communities) involved in problem identification and solution, the *illustration* of which shows whether in practice there is a competent institution with the sphere of authority to solve a socio-economic objective.

### III. Results of the thesis

1. The thesis seeks to contribute to the scientific literature by means of a wide interpretation of the interrelations between Economics and Communication, and by the methodology of analyzing socio-economic problems relying on the results of scientific researches.

The examination of the practical implementation of Luhmann’s system theory complements the approaches taken so far, considering the non-economic starting point for the reflection of economic processes in comparison with the positions of economic theorists. The meta-analysis facilitates the contrast of concepts, the way in which problems can be formulated in the sub-systems and the realization of the structural links among knowledge communities (e.g. organizations).
2. Furthermore, the thesis analyses the issues of specialized language researches on the basis of the concept developed by the participation theory of communication: a representation of linguistic significations where different significatums are associated with the same significants. 

Among the forms of significatums, possible variants are the grouping of economic linguistic vocabulary, an illustration of the arrangement of economic sciences, and the primary researches of the terminology equivalent analysis, which complement the theory of linguistic and terminology researches. The forms of implementation of the significations can be the next:

1. **table: Economic linguistic and terminological problems**

<table>
<thead>
<tr>
<th>Signification</th>
<th>Description of the characteristics of the economic language</th>
<th>Methods of allocating the economic language</th>
<th>Characteristics of economic vocabulary</th>
<th>Characteristics of Economics as scientific language</th>
<th>Terminological aspects of Economics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Significant</td>
<td>Concepts of linguistics</td>
<td>Methods of typology, categorization</td>
<td>Typology of the vocabulary</td>
<td>Grouping of economic sciences, field analyses</td>
<td>Generally about researches of terminology</td>
</tr>
</tbody>
</table>

*Source: Author (adapted from Horányi 2006a, 2009, Demeter 2014)*
3. Furthermore, considering the institutional approach of the participation theory, the thesis complements the concepts of the economy and offers reflection on socio-economic problems based on the concepts of Luhmann’s theory and the participation theory of communication, which is shown in the following table and chart:

2. Table: Problem identification and solution in functionally differentiated sub-systems and institutions

<table>
<thead>
<tr>
<th>Scientific sub-system/ institution</th>
<th>Mass media sub-system/ institution</th>
<th>Political sub-system/ institution</th>
<th>Legal sub-system/ institution</th>
<th>Economic sub-system/ institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem identification</td>
<td>Scientific truth</td>
<td>Informative event</td>
<td>Governmental program</td>
<td>Solvency or insolvency</td>
</tr>
<tr>
<td>Problem identification and solution</td>
<td>New knowledge (theory or method)</td>
<td>Information: e.g. news</td>
<td>Decisions to be followed by everyone</td>
<td>Legislation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Enterprise (business) sphere: Price calculation; Cost internalization (possible price increase and/or redundancy). Public sector: support, taxation, sanctions.</td>
</tr>
</tbody>
</table>

Source: Author

1. Figure: Identified problem (IP) and Knowledge Communities (KC)

Source: Adapted from Nagy (2017)

The former approaches are possible demonstrations of the methodology of problem analysis, in particular by the determination of the role of sub-systems and organizations
(knowledge communities) and their status of problem identification and/or solving in order to detect possible shortcomings and to understand economic processes.

4. The grouping of indicators for measuring socio-economic development contributes to the categorical analysis of the empirical data based on the function of GDP and their summary in a table facilitates to examine the interpretation of development in a sophisticated manner. The indicators divided into three groups highlight explicitly both ecological problems and social exclusion. The three groups are indicators adjusting GDP, indicators that do not apply GDP and composite indicators including GDP, as shown in the following table:
Table 3: Indicators for measuring socio-economic development

<table>
<thead>
<tr>
<th>Indicators adjusting GDP</th>
<th>Indicators that do not apply GDP</th>
<th>Composite indicators including GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Social indicators</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indicators measuring quality of life</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indicators measuring gender inequality</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indicators measuring poverty</td>
<td></td>
</tr>
<tr>
<td>Green GDP (Zheng, Chen 2016)</td>
<td>Ecological indicators</td>
<td>Human Development Index (HDI) (Costanza et al. 2009)</td>
</tr>
<tr>
<td></td>
<td>Physical Quality of Life Index (PQLI) (Gianetti et al. 2015)</td>
<td></td>
</tr>
<tr>
<td>Index of Sustainable Economic Welfare (ISEW) (Gianetti et al. 2015)</td>
<td>Living Planet Index (LPI) (WWF 2014)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gross National Happiness (GNH) (The Center for Bhutan Studies 2015)</td>
<td></td>
</tr>
<tr>
<td>Genuine Progress Indicator (GPI) (Gianetti et al. 2015)</td>
<td>Happy Planet Index (HPI) (NEF HPI 2015)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Better Life Index (BLI) (OECD) (Wright, Pasquali 2015)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Subjective Welfare Index (Eurostat) (KSH 2015b)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gender Inequality Index (GII) (UNDP HDR GII 2015)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Income and living conditions (ILC) (Eurostat ILC 2015)</td>
<td></td>
</tr>
</tbody>
</table>

Source: adapted from Nagy (2016)

5. In addition, the thesis represents the multifaceted interpretation of economic communication, considering it an umbrella term; it describes the relative demarcation of its subjects and scenes, which is suitable for the separate analysis of economic topics, organizations and specific problems. For example, economic topics are in relation to price concepts from the perspective of scientific, political and legal sub-systems.
6. Last but not least, on the scenes of global economic communication, the methodology of problem identification and solution, the empirical data and economic growth theories contribute to determining the conditions for sustainable socio-economic development in modern society, showing the most important factors in the figure below:

2. Chart: The conditions for sustainable socio-economic development

![Chart: The conditions for sustainable socio-economic development](chart.png)

Source: Author (Galor 2011; Mankiw, Romer, Weil 1990; Solow 1956, 1988; WHO 2019; IMF, World Bank, WTO 2017; etc.)
IV. Main references


TAMÁS Dóra Mária (2014a) Gazdasági szakaszövegek fordításának terminológiai kérdéseiről. (Fordítástudományi értekezések 1.) ELTE Bölcsészettudományi Kar, Forditó- és Tolmácsképző Tanszék, Budapest


References of organizations


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WWF (2014) Élő Bolygó Jelentés 2014, Összefoglaló. Letöltve:
http://www.wwf.hu/media/file/LPR_Magyar_2014_bovitett_03.pdf, (Utolsó letöltés: 2015.06.29.)
V. Publications

Essay


Conference-essay


Conference report

Review


Conference presentation:


