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An Exploration of Personal Economic Theories Among Hungarian University Students

Economics Through the Lens of Constructivist PedagogyDoktori

Doctoral (PhD) Dissertation Theses

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1. Introduction and Research Objectives

The aim of this dissertation is to explore how Hungarian university students think about the economy and what kinds of personal economic theories they hold. The study was conducted within the framework of constructivist learning theory, which posits that new knowledge is integrated into the learner's existing cognitive structures (Nahalka, 2021). Particular attention is given to how students' pre-existing intuitions and logical frameworks influence the acquisition of economic knowledge, as well as to the factors that facilitate or hinder conceptual change.

The research also seeks to examine the extent to which students perceive the knowledge acquired in theoretical economics courses as adaptive, and to identify recurring patterns of economic thinking and dominant lines of reasoning among Hungarian university students studying in both economics and non-economics programs.

2. Theoretical Framework

2.1. Personal Economic Theories

Personal economic theories are intuitive, often implicit knowledge structures that guide the interpretation of economic phenomena. While they are not necessarily scientifically accurate, they are functional for everyday decision-making. According to constructivist learning theory, learners integrate new knowledge by fitting it to their existing cognitive schemas (Nahalka, 2021).

2.2. The Learning Process

Constructivist approaches to learning became widespread only in the 1960s and 1970s. Earlier views of learning – such as knowledge transmission models, learning through demonstration, and learning by doing – despite their significant differences, all describe learning primarily as a process of knowledge transfer. In contrast, the constructivist perspective regards knowledge as the result of an independent construction process in the learner's mind (Nahalka, 2021).

This dissertation adopts and builds upon a view consistent with the constructivist approach, inspired by the work of neuroscientist György Buzsáki. According to this view, brain processes are not solely determined by external stimuli but are fundamentally shaped by the brain's intrinsic, self-organizing activity. The brain does

not simply represent the external environment; rather, in a “inside-out” model, the nervous system continuously generates internal patterns, hypotheses, and predictions, which are constantly tested. Incoming information from the external world merely fits into these internal models or, when mismatched, serves as a corrective signal (Buzsáki, 2024). This perspective radically reshapes earlier conceptions of learning: the emphasis shifts to internal constructive processes, and experience functions as a means of continuously testing adaptivity.

From a constructivist standpoint, the alignment between prior knowledge, personal theories, and the material to be learned can determine various learning paths and pitfalls. Based on Piaget’s theory of adaptation, the following learning outcomes can be distinguished (Nahalka, 2021):

- **Smooth Learning:** Occurs when there is no contradiction between the learner’s prior knowledge/personal theories and the content to be acquired. The more seamlessly the new knowledge can be connected to existing cognitive constructions, the deeper and more durable the learning becomes, resulting in stronger anchoring.
- **Exclusion:** Occurs when the learner perceives a significant contradiction between prior knowledge and the incoming content and, as a result, is unable to interpret the material using existing structures.
- **Rote Learning:** Occurs when a contradiction exists, but the learner processes the material without resolving the inconsistency. The new knowledge remains disconnected from existing knowledge structures, making it prone to rapid forgetting.
- **Distortion:** Occurs when the learner resolves the contradiction by modifying or rewriting the learning material, leading to the consolidation of incorrect or misunderstood information.
- **Creative Adjustment:** The contradiction between prior knowledge and the new content is resolved by modifying existing knowledge structures, but often through superficial rather than substantial changes.
- **Conceptual Change:** Occurs when the learner resolves the contradiction by fundamentally restructuring their personal theory, ensuring anchoring and genuine internalization of the new knowledge.

Hybrid Theories

In this dissertation, the term *hybrid theories* is used to refer to certain learning outcomes, specifically the phenomena of distortion and creative adjustment. Constructivist authors emphasize that individuals often hold multiple, coexisting theories that may be activated in different contexts (diSessa, 1993; Vosniadou, 1994). My interpretation, however, is that creative adjustment and distortion do not merely result in the coexistence of several parallel theories, but in the emergence of a new, hybrid structure. This new construction may be regarded by the learner as relevant in more than one context, as it emerges from the interaction between prior knowledge and the material to be learned: the new content is partially integrated but is also modified and rewritten according to the rules of existing logical systems. In the empirical part of the dissertation, I attempt to distinguish between these two processes—creative adjustment and distortion—and to demonstrate their presence in economic theories through concrete examples.

2.3. Household Economic Knowledge and Contextual Economic Knowledge

One of the main theoretical innovations of this dissertation is the distinction between *household economic knowledge* and *contextual economic knowledge*. While this categorization shows similarities to previous typologies described in the literature, it diverges from each of them in significant ways.

Household Economic Knowledge

In this dissertation, *household economic knowledge* refers to the knowledge necessary for the financial well-being of the individual and the family. I interpret this category primarily as a perspective, an optimization level, and an implicit logical system underlying optimization; the specific body of knowledge associated with it can be understood as subordinate to this. Although household economic knowledge largely consists of financial knowledge, it cannot be restricted solely to financial matters.

Contextual Economic Knowledge

Contextual economic knowledge, by contrast, is not directly necessary for the material well-being of the individual or the family. Rather, it refers to knowledge that

enables the understanding of the systems that frame our decisions and facilitates reflection on those systems. This type of knowledge adopts a perspective different from household economic knowledge and therefore operates according to a distinct set of implicit logical rules.

Although these two types of knowledge require fundamentally different perspectives, significant overlaps can be identified in terms of their subject matter. The ability to shift between these perspectives, and to use them adaptively, constitutes one of the central elements of the hypotheses formulated in this dissertation. The capacity for perspective-shifting and the adaptive use of different viewpoints may be crucial for successful learning processes. In my view, one of the key obstacles to solving many of today's societal and global challenges—indeed, even to framing such problems adaptively—is precisely the difficulty of shifting perspectives and understanding the logical systems associated with differing viewpoints.

2.3. Connection to the Literature

Two distinct research traditions, grounded in different theoretical frameworks, address the topic of personal economic theories: (1) studies in children's science and (2) research on folk economics.

Children's science refers to the body of theoretical constructions developed by children to explain and predict phenomena in the external world (Nahalka, 2002). The economic aspects of children's science research that I have reviewed focus primarily on age-related characteristics and the processes of social learning. In the international literature, relatively few studies explicitly examine children's personal economic theories within a constructivist framework, and studies focusing on contextual economic questions are particularly rare. Research on children's economic understanding is strongly influenced by Piaget's theory of cognitive development.

Folk economics investigates the intuitive economic beliefs and theories of adults. Researchers in this field primarily explore the beliefs and intuition-based theories that underlie economic behavior and political decision-making. The studies presented here are theoretically grounded mainly in evolutionary psychology.

3. Research Questions and Hypotheses

Research question K1 and its subquestions focus on students' experiences with theoretical economics courses. The subquestions emphasize the constructivist pedagogical perspective, highlighting adaptivity and the characteristics of perceived difficulties.

K1. How do university students perceive theoretical economics courses?

> K1.1. How do students evaluate the adaptivity of theoretical economics courses?
>
> K1.2. Which theoretical economic concepts do students find particularly difficult to understand, and why?
>
> K1.3. Which topics or issues have most engaged students' interest during their theoretical economics studies?

The hypotheses concern the functioning and qualitative characteristics of personal economic theories. I examined my hypotheses in relation to three contextual economic topics: first, international trade (focusing on the causes of imports and the effects of protectionist economic policy), second, monetary theory, and third, public debt.

H1. Students' economic thinking exhibits hybrid theories, formed by a combination of learned theories and prior knowledge.

Hypothesis H1 is based on the learning outcomes implied by the constructivist approach to learning. In testing this hypothesis, I searched for features in the responses that indicated the processes of creative adjustment or distortion.

H1.1. In hybrid theories concerning contextual economic issues, students rely on household economic experience; thus, they encounter difficulties in shifting away from a household perspective.

In formulating subhypothesis H1.1, I assumed the validity of H1 and examined whether the recurring patterns observed in hybrid theories could be associated with a household-level perspective.

H2. Students tend to interpret economic issues primarily in terms of their effects on social relationships.

Hypothesis H2 builds on the findings of folk economics research and its theoretical foundation in evolutionary psychology. It assumes that economic phenomena do not appear as independent modules in students' thinking. In testing this hypothesis, I searched for evidence in students' arguments of references to the effects on social relationships—such as mate-choice theory, coalition theory, and cheater detection.

4. Methodology

The research consisted of two complementary studies employing both qualitative and quantitative methods:

Questionnaire Survey

Students' opinions were examined regarding the usefulness of theoretical economics courses, the adaptivity of the knowledge they acquired, and the contribution of these courses to their understanding of economic issues. The questionnaire was created online using Google Forms and was accessible exclusively via the internet. Data collection took place in December 2024 and early January 2025. In total, 880 students completed the questionnaire. The majority of respondents had taken, or were currently taking, theoretical economics courses; 569 students (65%) answered "yes" to this question. Respondents came from six universities in total, although a significant proportion of responses came from two institutions: 51% of respondents studied at Eszterházy Károly Catholic University, and 48% at Neumann János University.

Clinical Interview-Based Research

To gain a deeper understanding of students' personal economic theories, interviews were conducted in which participants were encouraged to describe, in their own

words, how they think about economic phenomena. Particular attention was paid to identifying hybrid theories—cases where students simultaneously applied elements of intuitive and formal knowledge. In total, 19 students were interviewed, the majority of whom (11 participants) were enrolled in economics programs.

5. Results

5.1. Students' Perceptions of Theoretical Economics Courses

K1. How do university students perceive theoretical economics courses?

K1.1. How do students evaluate the adaptivity of theoretical economics courses?

The results appear somewhat contradictory. Students who reported having taken theoretical economics courses mostly responded that they consider the teaching of such courses to be "rather useful." At the same time, the most frequently voiced critical remarks about the difficulty of completing these courses referred precisely to their lack of practical applicability and their abstract nature. According to the feedback, many students feel that the concepts taught in these courses are difficult to connect to everyday experience and do not provide direct guidance for the practical interpretation of economic problems.

K1.2. Which theoretical economic concepts do students find particularly difficult to understand?

A significantly larger proportion of students identified microeconomics-related concepts as difficult compared to macroeconomic topics. The most frequently mentioned problematic areas included the interpretation of market equilibrium and price mechanisms, dilemmas related to consumer decision-making and the concept of utility, as well as issues surrounding production costs and profit maximization. In addition, students frequently reported general methodological difficulties, such as interpreting technical terminology, following symbolic notations, or working with functions.

Beyond specific topics, the lack of sufficient prior knowledge and familiarity with the subject matter was often highlighted. Some students reported that at the beginning of their studies it was difficult to see the connections or understand the practical purpose of the subject, even if they believed it to be useful in principle. They

attributed these difficulties either to their own lack of preparation or to that of their peers, which hindered them from adopting the alternative perspective required by economics.

K1.3. Which topics or issues most engaged students' interest during their theoretical economics studies?

Interestingly, here too microeconomics appeared more prominently than macroeconomics, though the difference was much smaller than in the case of the most difficult concepts. Students' responses frequently mentioned terms and topics related to business studies. Among the most commonly cited themes were market equilibrium, sustainability and the integration of environmental considerations into economic thinking, as well as investment and financial issues.

5.2. Hybrid Theories: Creative Adjustment and Distortion

H1. Students' economic thinking exhibits hybrid theories, formed by a combination of learned theories and prior knowledge.

Numerous signs of both distortion and creative adjustment were observed in students' responses, leading me to consider this hypothesis confirmed. Most interviewees had some prior education in economics, yet even students from non-economics programs frequently referred to and used formal economic concepts. In many cases, however, the scientific economic concept was partially rewritten, or prior knowledge was only superficially modified.

H1.1. In hybrid theories concerning contextual economic issues, students rely on household economic experience, and thus find it difficult to shift away from a household perspective.

Based on students' argumentation, I consider subhypothesis H1.1 confirmed. In arguments related to public debt, reasoning derived from household economic socialization frequently appeared, in several cases with explicit references to personal family experiences and lessons. Reflection on the fact that the state and households operate according to different underlying logics was largely absent.

Students often project household-level economic logic onto macroeconomic issues, such as public debt or monetary policy, which can distort their understanding of systemic relationships.

H2. Students tend to interpret economic issues primarily in terms of their effects on social relationships.

I can only partially accept this hypothesis. Among students outside the field of economics, moral reasoning appeared more frequently in the sample. For example, in the context of imports, references to a lack of patriotism appeared multiple times among non-economics students, whereas among economics majors it was mentioned in only one case.

6. Conclusions and Recommendations

Activating Prior Knowledge

The research highlighted that household logic plays a key role in students' economic thinking, but its dominance may limit the systemic understanding of the economy. From the perspective of constructivist learning theory, the learning process must consciously build on prior knowledge, while at the same time creating a learning environment in which students can understand why contextual economic knowledge is important.

My pedagogical recommendations include the use of interactive, debate-oriented methods in order to make prior knowledge and personal theories explicit, as well as the deliberate juxtaposition and integration of household and contextual perspectives.

Presenting Economic Theories in Their Social and Historical Context: The Role of the History of Economic Thought

As noted several times in this dissertation, lay theories should not necessarily be regarded as errors. While they often diverge from mainstream economic perspectives, they frequently parallel certain schools of thought that have appeared throughout the history of economic theory, and even resonate with today's heterodox economic approaches. For this reason, both in assessing the adaptivity of economic theories and in fostering consistency for learners, it would be beneficial for students

to gain a “big picture” perspective, rather than encountering isolated fragments of theories. Tools for achieving this may include complex introductory courses, as well as a renewed emphasis on the role of the history of economic thought, which can provide broader theoretical literacy and embed economics more firmly within the social sciences.

7. Social and Scientific Relevance

This dissertation may contribute to the renewal of economics education, the increased effectiveness of introductory theoretical courses, and the development of science communication. Strengthening the social embeddedness of economics and broadening students’ theoretical literacy can support the pluralism of academic economics and help the profession formulate more adaptive responses to pressing societal issues.

At the societal level, the development of contextual economic knowledge promotes responsible civic engagement and a deeper understanding of collective-action problems—such as climate change and social inequality—that require coordinated responses.

8. Directions for Future Research

The personal economic theories identified in this study may provide a basis for large-sample, representative investigations. Future research could explore:

- the factors that explain differences between personal theories (for example, in groups with different socio-economic backgrounds),
- intervention-based experiments that measure how the understanding of certain economic concepts—such as modern money creation—affects perceptions of justice or sustainability.

Such studies could contribute to the more comprehensive, systemic development of economic literacy and strengthen democratic dialogue.

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