

Published by the decision of the Scientific Council  
of Khachatur Abovian  
Armenian State Pedagogical University



Department of Philosophy and Logic  
named after Academician Georg Brutian



# W I S D O M

Special Issue 1(2), 2022

PHILOSOPHICAL ISSUES OF ECONOMICS



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Citation Index service*

YEREVAN – 2022

## PHILOSOPHICAL CATEGORY OF INTEGRATION AS A CONDITION OF ECONOMIC SYSTEMS DEVELOPMENT

### Abstract

The article analyzes the concept of integration in dialectic unity with differentiation by its application during the study of economic systems development, including supply chains. The differentiation is a problem, i.e. the nature of occurrence of a critical situation in the system stipulating the need to generate new goals for the interaction of its components; integration is a solution to a problem, the basis for the transition to a new stage of system development. The study results reveal that the main integration drivers are factors that ensure the complementarity and compatibility of system components. It is stated that the functionality is the first condition for integration, that is, the potential for the unhindered implementation of individual goals and objectives which are not destructive to the system. The homology is the second condition, which ensures the compatibility of system components. The integratedness is the third condition that can be defined as the degree of firmness of links between system parts on which the system stability and viability depend. The author notes the importance of permanent diagnostics of connections within and between the economic system and environment since inter-organizational links constitute a differentiation factor.

*Keywords:* integration, differentiation, system, supply chain, integration drivers, structural functionalism.

### Introduction

Integration issues accompany humanity at all historical stages of its development. Many scientists believe that integration is a development of the cosmopolitanism concept, which originated in the Ancient World (Balabaeva, 1990). Cosmopolitanism is based on the consciousness of humankind's unity and the interests and solidarity of the individual nations and countries as parts of humanity (Kirshin, 2013). In Russia, cosmopolitanism ideas were developed by such prominent figures as D. I. Mendeleev, V. I. Vernadsky, P. A. Florensky, V. S. Solovyov, F. M. Dostoevsky, L. N. Tolstoy, N. F. Fedorov, etc. In the late XIX century, Russian philosopher and sociologist P. L. Lavrov introduced the concept of "cosmopolitan industry and trade". He wrote about the unity and solidarity of humanity. He

believed that the emergence of an understanding of the unity of humanity and its fundamental interests and needs, regardless of race, nationality and state, was one of the most critical moments in the history of humanity during the struggle for world domination (Lavrov, 2011, 2013). Joining together to achieve a common goal, whether it is people's life-saving safety, achieving a certain general social standard of living, etc., people cease to divide interests into national and patriotic, thereby coming to the ideas of cosmopolitanism. In a word, integration, as a process of joining people together, underlies cosmopolitanism.

The concept of "integration" in philosophy, sociology, economics and political science appeared in the middle of the 20<sup>th</sup> century. It means integrity and structure.

After the end of World War II, in search of security facilities and eliminating social dispari-

ty, the elite of Western European countries turned to the idea of unity, which outgrew into the philosophy of Western European integration. The most significant example of implementing the so-called “European idea” was the establishment and following development of the European Union. In 1967, the Association of Southeast Asian Nations (ASEAN) was established, the primary tasks of which were to ensure political-military stabilization in the region and promote the economic growth of countries. Integration processes occurred across the ocean much later in North and South America. In the 90s of 20<sup>th</sup> century North America, the US, Canada and Mexico signed the NAFTA agreement. MERCOSUR, the South American Common Market, was established in South America during the same period.

Today, integration issues are relevant globally and at a particular region, industry, and enterprise level. Over the past decades, many scientific works dedicated to integration theory development have been written. Indeed, this is because integration processes affect all human life spheres – education, culture, economics, politics, or business.

With advances in information technologies, in the context of global IT penetration, the implementation of the integration theory ideas has become accessible and authentic.

### Challenges

The integration theory was developed by such scientists as R. Schmed, H. Kelsen, D. Schindler, I. Wallerstein, T. Parsons, E. Durkheim, B. V. Akhlibinsky, G. Paveltsig, etc. Researchers studied integration as a modern feature of the development of society (Wallerstein, 2003; Paveltsig, 1989). Based on the analysis of their works, we have refined the concept of integration. Integration means combining several components into one, which results in qualitative changes in the components and/or their relationships, thereby creating a new system and its connections with the external environment.

The works of scientists B. A. Akhlibinsky, B. M. Kedrov, A. D. Ursula, etc., state the various options for developing inter-organizational, inter-functional relations in integration. The components that form a new system, firstly, can retain the ability to exist independently of integration links; secondly, they can acquire new properties that are lost without this interaction; thirdly, they form such relationships that create a qualitatively new set of properties and links that cannot exist outside the given system (Akhlibinskiy, 1989).

Thus, the demand for the organization of the integration process in society arises when it is necessary to bring the system to a new level, combining the functions of various components and creating new goals for interaction between them. Therefore, integration is a condition for system development (Zhdanova, 2009).

Integration processes involve all human life spheres, so they cannot be considered separately from each other. Global integration defines cultural, political and economic integration, which in turn determine integration in education and business. Being rapidly developed in the post-war 1950s, the integration idea is now widely and generally used. Thus, in the late 20<sup>th</sup> century, under the conditions of international economic integration, the concept of logistics appeared in business, which later transformed into supply chain management. Supply chains are considered a combination of heterogeneous components, creating a closed circuit between production and consumption. This circuit is defined by the internal consistency of the chain links, on the one hand, and internal balance, on the other hand (Puzanova, 2015). In synergetics, integration is considered a process and result of finding the optimal structure of communication between components, which activates the development of each component. In the general theory of systems, the defining feature of integration is the presence of a composition in which the effect of the cooperation of parts exceeds the sum of the effects of their separate functioning (the principle of holism).

In Russia, companies are at the stage of active

formation of integration links in the supply chains. Manufacturing and trading companies jointly introduce information technologies that enable them to plan and manage business processes online jointly (Puzanova, 2020). X5 Retail Group, a prominent Russian retailer, has successfully introduced and uses the “S&OP” (Sales and Operations Planning) process in its supply chains. Today, the company, together with principal suppliers, introduces a Collaborative Planning Forecasting and Replenishment (CPFR) technique.

The history of global integration process development allows us to conclude that a depth of penetration defines integration: the integration processes are organized “from top downward”, starting with the combination of components of the upper level and descending to the integration of components of the lower levels.

However, you cannot speak about the success of integration processes at the inter-organizational level without preliminary integration of functions within a separate organization.

Therefore, we can conclude that integration is a two-way process. A trend is set, the need for integration processes is determined at the top level, and a basis for forming links in inter-organizational relations is created at the organization level.

In philosophy, integration is considered in dialectic unity with differentiation. In the interaction process of heterogeneous components, processes appear to contradict the integration trend sooner or later. Under certain circumstances, disintegration gets the advantage and interrupts the integration process. Throughout the entire historical period of human development, an imbalance of both tendencies existed. The manifestation of the correlation of these processes explains the development of any system since it is due to the differentiation of the unit, the separation of new functions in it and the integration into a new unit (Kedrov, 2006).

The inter-organizational relations shall be one of the factors of disintegration, which are constantly in progress and tend towards synergy or

conflicts either. Supply chain management will always remain a compromised control, finding balances of interests of partner companies. Consequently, logistical integration will be limited by economic realities, which in this case serve as disintegration processes.

Thus, we can forecast that at a particular stage of business integration, excessive differentiation will disrupt the supply chain stability because of more complicated relations between its links, internal inconsistency and the energy consumption of such a system, which will lead to the supply chain disintegration and the further emergence of a new approach to the organization of integration processes therein.

Investigating the matters of integration and differentiation concerning economic systems, you cannot fail to notice that these philosophical categories correspond to the fundamental provisions of the organization’s life cycle theory. The classical theory of the organization’s life cycle (OLC) distinguishes four main stages:

1. The generation stage: the economic system starts to be generated, opportunities for cooperation are identified, the goals of cooperation are unclear, and inter-organizational relations are being established.
2. The development stage: the goals of the economic system partners are agreed upon, an optimal algorithm for cooperation is developed, and an integration growth of key business processes is noted.
3. The growth stage: the structure of the economic system is stable; forms and conditions of cooperation are formalized.
4. The decline stage: inertia in inter-organizational cooperation; decrease in the level of innovative activity; artificially maintained system life.

Differentiation is a problem, the nature of occurrence of a critical situation in the system stipulating the need to generate new goals for the interaction of its components (stages 4 and 1 of the OLC); integration is a solution to a problem, the basis for the transition to a new stage of system development (stages 2 and 3 of the OLC).

Therefore, integration is a stage of system development.

This raises the question of how to determine when there is a need for integration both at a stage of development and the formation of the system integrity?

### Discussion

To answer the raised question, it is necessary to study the integration category in terms of structural functionalism, according to which society is considered as a system with a structure and mechanisms for the interaction of components, each of which performs its function, contributing to the maintenance and reproduction of the system (Parsons, 1998).

T. Parsons, E. Mayo, R. Merton, N. Smelser, and B. Malinovsky developed the structural functionalism theory.

According to E. Durkheim (1996), a necessary condition for the viability of an integrated system is the “value generalization”. To ensure the launch of the integration process, including within the supply chains, two key points are essential – the resources and knowledge that ensure the complementarity of components- the partners, creating the value of their interaction. Partners bring material, financial, process resources, capacities, personnel, intellectual property, brands, etc., to the relationship. By pooling resources, knowledge and capabilities, partners get competitive advantages, such as new products and sales technologies, new sales markets, joint research projects, etc. Such a driver primarily encourages companies to integrate within the supply chain.

According to T. Parsons, integration implies the presence of an “interpenetration area”. Therefore, the components to be integrated must have such a feature as compatibility. Compatibility is conditional on the conformity of the components’ development level, the presence of their cultural commonality, the similarity of political systems and views, etc. Compatibility makes it possible to quickly resolve conflicts, cope with

uncertainty and risks, generate ideas and seek mutually beneficial solutions. Developing this idea, we can conclude that the relationship between various integration associations arises not only on the basis of common economic and political interests but equally on the basis of the commonality of value paradigms and ideological views specific to all participants in cooperation (Strukov, 2016). So this driver is the basis for forming inter-organizational relations in an integrated economic system, including supply chains.

To build solid and long-term relationships in economic systems, including in supply chains, it is necessary to know the partner’s internal goals and objectives, be ready to comply with them and be sure that the partner will follow this line of conduct. In integrating logistics activities, the focus on harmoniously building collaborative business processes from research and development of new products and the production of goods or services to deliver the products to the end consumer becomes obvious (Puzanova, 2020). The success of this process depends on the conscious coordination of the efforts of all links in the supply chain.

T. Parsons notes that the main issue in integrated systems life support is determining the “obligations” that ensure loyalty to all components- the partners. It follows that the principal task in managing social and economic systems is coordinating the activities of its components. Upon the operation of integrated economic systems, including logistical ones, nothing can generate more serious negative consequences than situations when either party regularly fails to fulfil its assumed obligations to the partners. Hence, we conclude that the objectives are binding on all system components.

Thus, summarizing the abovementioned, we can lay down the conditions for the economic systems integration:

1. functionality means the potential for the unhindered implementation of individual goals and objectives which are not destructive to the system as a whole;

2. homology, ensuring the compatibility of components in the system;
3. integration, which can be defined as the degree of firmness of links between the parts of the unit on which the stability and viability of the system depend;

Summarizing the above, the following main integration drivers can be distinguished:

- the coincidence of development levels of components or systems;
- the similarity of political views and systems;
- the commonality of cultural origins and traditions;
- geographic proximity;
- the need to pool resources and capabilities;
- ability to build solid and long-term relationships.

### Conclusion

In the context of global IT penetration and digitalization development, the implementation of integration processes is greatly simplified. Nevertheless, to benefit from integration and ensure the stability and viability of systems, it is necessary to identify and analyze integration drivers that ensure the complementarity and compatibility of system components and provide “value generation” and loyalty to the interests of all participants in this process. Also, a critical point is the permanent diagnostics of connections within and between the economic system and the environment since we must not forget about disintegration processes. Constant monitoring of inter-functional and inter-organizational relations makes it possible to timely detect the complication in relations between components/systems and the emergence of systemic inconsistencies, identifying the problem and developing ways to address the issue.

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