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**METHODICAL APPROACHES TO THE
ASSESSMENT OF STRUCTURAL
PROPERTIES OF INTEGRATED BUSINESS
STRUCTURES**

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Introduction. Integrated entrepreneurship creates special advantages for the development of small and medium-sized businesses in knowledge-intensive industries, which are manifested in the formation of a suitable business environment and provision of infrastructure (innovative, production, financial, transport, telecommunications, etc.), which was previously available only to large corporate organizations closed type. This opens access to participation in the real sector of the economy for a large number of the most active subjects of innovative and economic activity – developers of new products, private entrepreneurs and owners of free financial capital.

The hypothesis of the scientific research consists in the research of scientific-methodical approaches to the assessment of structural properties regarding the development of potential and strengthening of cluster interaction within corporations with the aim of obtaining competitive advantages and a synergistic effect.

The purpose of the study is to analyze methodological approaches to the assessment of structural properties of integrated business structures.

The methodology of scientific research is scientific-methodical approaches to the

assessment of structural properties of integrated business structures. Modeling of the organization of intellectual management of the integration of business entities of partners; clustering for the development of existing potential within corporations in order to obtain competitive advantages.

Conclusions. The development of integrated entrepreneurship through the creation of virtual enterprises, corporations, clusters and networks of suppliers is today the focus of theoretical developments that have great practical significance, as they reflect the changing conditions of the functioning of organizations in the business environment.

Integration processes in entrepreneurship are focused on more effective use of all types of resources (scientific and technical, production, raw materials, financial) with the use of the latest technologies and methods of highly productive business activities, which lead to the emergence of various forms of vertical and horizontal association of business entities.

Keywords: business environment; integrated business structures; integrated processes; integrated entrepreneurship; corporatization; clustering; association; entrepreneurship; synergy.

NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
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МЕТОДИЧНІ ПІДХОДИ ДО ОЦІНЮВАННЯ СТРУКТУРНИХ ВЛАСТИВОСТЕЙ ІНТЕГРОВАНИХ БІЗНЕС-СТРУКТУР

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Вступ Інтегроване підприємництво створює особливі переваги для розвитку малого і середнього бізнесу в наукомістких галузях промисловості, які проявляються у формуванні відповідного бізнес-середовища і забезпеченні інфраструктурою (інноваційною, виробничою, фінансовою, транспортною, телекомунікаційною, тощо), яка раніше була доступна тільки великим корпоративним організаціям закритого типу. Це відкриває доступ для участі в реальному секторі економіки великої кількості найбільш активних суб'єктів інноваційної та господарської діяльності – розробників нових продуктів, приватних підприємців і власників вільного фінансового капіталу.

Гіпотеза наукового дослідження полягає в дослідженні науково-методичних підходів до оцінювання структурних властивостей щодо розвитку потенціалу та посилення кластерної взаємодії в складі корпорацій з метою отримання конкурентних переваг та синергетичного ефекту.

Метою дослідження є аналізування методичних підходів до оцінювання структурних властивостей інтегрованих бізнес-структур.

Методологією наукового дослідження є науково-методичні підходи до оцінювання структурних властивостей інтегрованих бізнес

структур. Моделювання організації інтелектуального управління інтеграції підприємницьких суб'єктів партнерів; кластеризації для розвитку наявного потенціалу в складі корпорацій з метою отримання конкурентних переваг.

Висновки. Розвиток інтегрованого підприємництва через створення віртуальних підприємств, корпорацій, кластерів і мереж постачальників, – сьогодні знаходиться в центрі уваги теоретичних розробок, що мають велику практичну значимість, оскільки вони відображають мінливі умови функціонування організацій в бізнес-середовищі.

Інтеграційні процеси в підприємстві орієнтовані на більш ефективне використання всіх видів ресурсів (науково-технічних, виробничих, сировинних, фінансових) із застосуванням новітніх технологій і способів високопродуктивного ведення підприємницької діяльності, що призводять до появи різноманітних форм вертикального і горизонтального об'єднання суб'єктів підприємництва.

Ключові слова: бізнес-середовище; інтегровані структури бізнесу; інтегровані процеси; інтегроване підприємництво; корпоратизація; кластеризація; об'єднання; підприємництво; синергія.

Problem statement. Companies join together to make the most of market opportunities that cannot be realized individually. As a result of their unification around the main business processes, multidimensional hierarchical organizational structures are formed – horizontal creative corporations, strategic alliances, modern modifications of diversified conglomerates, consortia, holdings, clusters – the new corporate business model of which involves the assessment of their structural properties, which are manifested through extensive production cooperation with suppliers of components, consumers and competing companies in order to use their production capabilities, professional knowledge and competences on the basis of outsourcing or contract manufacturing.

Analysis of recent research on the problem. If we summarize the definitions of integrated business structures that exist today, which have been analyzed in the scientific literature, we can come to the conclusion that the basis of ensuring the structural properties of IBS for the development of entrepreneurship is a temporary network of production cooperation of several business entities, individual collectives or people who own key competencies to execute a specific market order based on a single enterprise system/environment. The partnership is temporary and when a certain / set result is achieved, it can also be temporarily terminated until the next market order, and the dynamic network after the execution of the current order can be transformed with the arrival of the next regular order by attracting new or exiting / excluding old partners. The business network can also be transformed when the market situation changes, or at certain stages of the product's life cycle in the case of its moral aging (Bentler, 1990; Bert, 1981).

The purpose of the study there is research of scientific and methodical approaches to the assessment of structural properties of integrated business structures.

Presentation of the main material. The main property of business integration is that, unlike the traditional one, which focuses on centralized and decentralized structural properties, it is aimed at using common assets (resources and competencies) of several firms operating in different areas of the value chain. A comparative analysis of the structural properties of traditional and entrepreneurial integration is presented in Table 1.

Distinctive characteristics of business integration include its distributed structure open for cooperation; the modularity of construction, which consists in the autonomy and narrow specialization of the basic elements (participating enterprises) of the business network; the priority of interpersonal relationships; high status of information and telecommunication means of integration; dependence on the level of professional qualification, legal and self-awareness of the participants of the business network. As a result, it creates conditions for the formation of competitive advantages: high speed of execution of various

individualized orders; reducing the asymmetry of market information and, accordingly, transaction and aggregate costs; more complete satisfaction of individual requests of the customer; lowering barriers to entering new markets (Hanushchak-Iefimenko, 2014).

Table 1

Comparative analysis of structural properties of traditional and entrepreneurial integration

Structural properties	Traditional integration	Business integration
Advantages	Ensuring the release of affordable and high-quality goods of mass demand in large volumes; concentration of resources in order to preserve and develop the scientific, industrial and technological base of economic growth.	Adequate response to changes in individual consumer preferences and market conditions, creativity and receptiveness to innovations, which are able to ensure the realization of innovative entrepreneurial potential and the development of the economy.
Factors of competitive advantage	Material and financial assets (financial capital).	Intellectual and entrepreneurial assets (new knowledge, competences, goodwill).
Conditions of formation and development	Formal formation through the establishment of large industrial corporations with a limited right to independence; diversification of activities based on several technical areas that provide a wide range of products.	Institutional conditions for the development of knowledge-intensive industries and the material base of small innovative businesses; state support for small innovative enterprises ensures the development of promising areas of innovative activity in conditions of limited financial resources and a high risk of their non-return; legal support of innovative activity; development of production-technological, transport-logistics and information infrastructure of integrated production.
Limitations and risks	A high level of specialization and centralized regulation of activities aimed at obtaining maximum income by minimizing costs and low wages; weak receptivity to technological progress and low competitiveness, which cause low growth rates and disparities in social production, contribute to the deepening of crisis phenomena in the economy.	The complexity of the multidimensional distributed production and technological network and the associated high probability of loss of controllability, violation of economic proportions between the main types of economic activity and slowing down of economic growth; imperfect corporate adaptation and management of integrated business structures; insufficient level of corporate culture and organizational readiness for changes, lack of qualitatively new concepts, methods and tools of organizational management.

The difficulty of distinguishing and systematizing the structural properties of integrated business structures of the entrepreneurial type is due to the fact that many different, similar associated and other organizational forms of production cooperation are used in the practice of entrepreneurial activity. For example, quite often the structural properties of integrated business structures of the entrepreneurial type mean one or another form of organization of the interaction of business entities working in the field of material and technical supply and sales, production and transport logistics, and some researchers (www.clairfield.com) distinguish them into local (internal company) technological networks of production cooperation and territorially distributed (corporate and inter-corporate) networks of globally integrated production. Other researchers, as a classification feature, use the type of management, the duration of the integration formation, the field of activity, mutual dependence and interest of partners, information and telecommunication technologies used to organize the interaction of integration participants, and many others (Gordon and McCann, 2000). From the standpoint of the organizational and management tasks of the research, in our opinion, the most appropriate classification of the structural properties of integrated business structures according to the first three of the above-mentioned features, namely, the type of IBS architecture (intra- and inter-corporate networks of production cooperation); the type of IBS management (concentrated, centralized and decentralized, distributed / coordination and intelligent) and the duration of the network (temporary and long-term). According to these characteristics, two main types of structural properties of integrated business structures of the entrepreneurial type, which use different approaches to the organization of management, can be quite clearly distinguished: temporary, which arise in virtual markets of goods and services, as well as in the system of production cooperation of large industrial enterprises, which are permanently formed upon receipt of a market order and are dissolved / modified after its execution; and permanent networks of scientific and technical and / or production cooperation, focused on the continuous search and receipt of market orders in a certain field of activity (integrated contract production). A version of this classification is presented in Table 2.

It should be noted that the characteristic features of long-term integrated business structures, as a rule, include: the presence of a general corporate spirit and an atmosphere of trust, which are able to unite and keep together different creative teams, differing in interests and areas of activity; unified information environment and interaction regulations; existence of a system of long-term contractual relations between cluster network participants; selection of groups that develop and implement long-term (innovative and investment) projects. At the same time, it should be noted that intra-firm localized cooperation, which allows to distinguish a class of intelligent integrated production systems of high-

tech enterprises, identical to globally integrated (territorially distributed among corporate) production systems according to the principles of construction, operation and development.

Table 2

Classification of structural properties of integrated business structures of the entrepreneurial type

Type of IBS	Internal company cooperation	Corporate	
		Temporary	Long-term
Vertically integrated IBS (centralized control type)	Traditional mass production	Production cooperation networks, logistics systems	Infrastructure cooperation
Horizontally integrated IBS (decentralized control type)	Flexible production	Electronic markets, companies selling goods and services	Wholesale and retail networks trade
Horizontally integrated IBS (coordination type of control)	Computer integrated adaptive production	Network clusters	High-tech industrial clusters
Horizontally integrated IBS (intelligent control type with elements of self-organization)	Intelligent production	Temporary creative teams	Virtual corporations and clusters

Within the framework of the study, the justification of the structural properties of integrated business structures of the entrepreneurial type is of greatest interest. In our opinion, the process of their formation requires the presence of a developed business environment, which is formed by uniting in strategic alliances a certain general population of individual small and large enterprises/contract factories that work in a certain sector of the economy and pursue common or similar goals, local production systems which in their consolidated mass form a distributed multidimensional production and technological matrix – a cluster. The structural properties of integrated business structures of the entrepreneurial type should be considered as optimal options for the formation of a multidimensional matrix with dynamic links of industrial cooperation between enterprises and nodal connections (Biggadike, 1976). In practical terms, this is done as follows.

Entrepreneurial nodal networks (IBS cells) identify market opportunities or receive orders, look for potential partners within and beyond the established business environment, and conclude appropriate operational agreements, primarily with those business entities with which they have established long-term partnerships relations within the framework of a strategic alliance. The key point in this case is the time of searching, evaluating, selecting, attracting and consolidating business partners into a permanent business network using a specially developed organizational and economic mechanism, visualization tools

and intelligent management support technologies, as well as telecommunications information networks. In order to reduce search time, a number of foreign scientists (www.clairfield.com; Gordon and McCann, 2000), propose to organize as part of long-term integrated entities special, continuously functioning holdings and metaholdings (they may include representatives of large enterprises, subjects of entrepreneurial activity, scientific teams, and invited experts), which should perform the role of a kind of intellectual coordination centers, competence management and goal-setting of joint activities of all participants, respectively (Biggadike, 1976). The operative production top management of the holding consists in: determining the organizational, technical and technological requirements for the business process related to the execution of the order, the involvement of possible executors of the order who possess key competencies (in the form of knowledge, experience, resources and production capabilities); distribution of work and additional resources required for their implementation; in coordinating the actions of the executors and joint control over the progress of the order, with the possible redistribution of tasks between the executors if it is necessary to speed up their execution. At the same time, there is a need to coordinate a large number of territorially distributed partners of participants as part of the IBS in order to balance the available resources. It is obvious that a natural and effective solution to this problem is the use of modern information and communication systems and technologies for the transmission and processing/analysis of operational information to support the process of making group management decisions as part of a single information system of the business environment. The results of the analysis of scientific and methodological approaches to the assessment of structural properties of integrated business structures are shown in table 3.

Comparative analysis of existing and promising scientific and methodological approaches to the assessment of structural properties of integrated business structures is widely presented in the scientific literature, including the works of the authors (Bert, 1981; Biggadike, 1976; Buzzell and Gale, 1987), made it possible to identify four possible approaches to evaluating the structural properties of integrated business structures, the description of which is presented below in the order that reflects the evolution of organizational structures of business management, characteristic of the development of corporate organizations in the 20th century.

We will consider in more detail the structural properties of integrated business structures with centralized, decentralized, coordination and intellectual types of management, which have a certain theoretical and practical significance, as they allow to identify and implement the main trends of

organizational development, including new forms and methods of management in entrepreneurship.

Table 3

Scientific and methodical approaches to the assessment of structural properties of integrated business structures for the development of entrepreneurship

Structural properties	Approaches to assessing the structural properties of entrepreneurial IBS			Self-organization
	Centralized management	Decentralized management	Coordination	Intelligent management of entrepreneurial IBS
The principle of business process organization	Functional specialization	Subject specialization	Integration	Creative cooperation is based on entrepreneurial initiative
Management structure	High hierarchy	Flat hierarchy	Network adaptation	Self-organization of participating partners (manufacturer, distributor and retailer)
Form of integration	Vertical	Horizontal	Conglomerate	Entrepreneurial IBS
Business model	to the warehouse	to order	to order / project	project
Reaction to changes in the external environment	Inert	Reactive	Adaptive	Proactive
Competitive advantages	Price	Price Quality Time	Time Customer-oriented approach	Customer-oriented approach Uniqueness
Staff motivation	Fulfilling of needs	Career growth	Professional growth	Intellectual development
Development factor	Capital	Qualified staff	Competences	Knowledge, entrepreneurial innovation

The analysis of the practice of using centralized management in IBS shows that they slowly adapt to market changes and respond poorly to customer needs, and the staff of such corporate entities is limited in creative initiative and decision-making, which is necessary for the effective implementation of economic activities in competitive market conditions. Under certain conditions, vertical integration and the corresponding "pyramidal" model of centralized management appear to be more effective and sustainable, as it ensures the programmed behavior of the corporate network based on end-to-end planning.

With decentralized management, instead of vertical administration based on a set of functions and departments, small conditionally autonomous units are created, specializing in the performance of several objectively completed

fragmentary tasks as part of the overall business process. With such a management organization, the decision-making process moves to the lower level to the heads of business structures of the entrepreneurial type, closely related to the direct executors of work and specific production issues, and all coordination processes are carried out due to the local interaction of the participants of the horizontally integrated business structure. The governing body reserves the functions of organization, goal definition and general control over the implementation of business activities. This model is successfully applied in the conditions of a relatively stable competitive market of final products, which requires prompt and purposeful appropriate response of the corporate network to consumer requests. However, the decentralization of management requires the adoption of certain organizational and economic measures, including those of a costly nature, related to the retraining of managers, overcoming resistance and stereotypes of work in centralized corporate structures; by changing the accounting and reporting system. It should also be taken into account that the effectiveness of the application of a flat organizational structure of management decreases with the increase in scale and complexity of technological processes and, accordingly, chains of cooperation in integrated production. Distributed corporate networks of production cooperation have structural properties of inertia, because with the growth of the number of consolidated links of the technological network, uncontrolled dynamics of their spatio-temporal interaction arise.

The structural properties of coordination management are manifested in the associated form of management organization of various associations of heterogeneous business entities (autonomous unions/alliances, diversified conglomerates, long-term networks of industrial cooperation and entrepreneurial horizontally integrated corporate structures), consolidated into a single business process using mutual ownership of shares and the use of unified information and communication systems to coordinate the management of joint activities. The main advantage of multidimensional associative forms of business organization is related to the possibility of quickly attracting and using the resources, knowledge and professional competences of the participants of the value chain that are most suitable for the fulfillment of a specific order. This approach makes it possible to successfully use this form of organization and management in various sectors of the economy. This management model involves the voluntary active behavior of participants in the value creation chain and the development of a general coordination center as part of the governing body of a horizontally integrated corporation, which directly regulates the multidimensional production and technological network by non-directive formal methods using information technologies and telecommunications.

Many scientists in the field of organizational management and development suggest a transition to the informal construction and self-organization management of multidimensional integrated business structures with proactive behavior that corresponds to modern trends in the development of integrated organizations, namely, the reduction of management levels and the total number of middle and lower managers on the basis of broad involvement direct executors of work in solving scientific and industrial tasks using intellectual methods and management tools (Buzzell and Gale, 1987).

The intellectual management of entrepreneurial IBS, first of all, manifests itself through the improvement of the efficiency of the activities of small and medium-sized business entities of the participants' partners who possess the necessary competencies and the available innovative potential, through their integration at the national and international level into the target corporate business structures – clusters – with with the aim of producing a competitive.

Research Findings and Prospects. It should be noted that a fundamentally new object appears within the framework of intelligent management – a complex set of multidimensional cluster interactions in a spatial and temporal relation, which requires fine regulation and, accordingly, new approaches to the organization of management. This is due, first of all, to the fact that the role of participants in integration relations is distributed according to the business processes of supply, production and sale. It is quite obvious that the principles of formal unification and coordination of activities used by modern corporations/holdings of the adaptive type are not suitable for the organization of their successful work, since these integrated structures are the result of self-organization of innovative activity participants into entrepreneurial network structures.

Unlike IBS, managed with the help of formal orders of the administration and the establishment of work rules, these intelligent integrated business structures are independently formed under the influence of such factors as the motivation of cluster participants to obtain an additional synergistic effect from business cooperation and management of their self-organization and interaction processes. The main components of the effect are: high rates of commercialization of innovative developments, large-scale output of competitive products on the national market, favorable conditions for attracting investments, high rates of development of competencies of innovative leaders.

As a result of business integration (production cooperation, merger and/or takeover), open integrated business units (creative companies, virtual holdings, clusters, etc.) are created, which in most cases do not take the form of diversified conglomerates typical of the current market situation, and represent permanently forming virtual production and technological chains that unite territorially or administratively separated scientific, production, financial and other business processes into certain clusters.

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