



ЕКОНОМІЧНІ ГОРИЗОНТИ

ISSN 2522-9273 (print)
ISSN 2616-5236 (online)

Economies' Horizons,
No. 4(11), pp. 37–48.

DOI: [https://doi.org/10.31499/2616-5236.4\(11\).2019.206059](https://doi.org/10.31499/2616-5236.4(11).2019.206059)

Homepage: <http://eh.udpu.edu.ua>

UDC 657.372.5:005

Intangible assets and integrated management systems

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Received: 30 September 2019

Accepted: 2 November 2019

Linkova, H. Yu. (2019), "Intangible assets and integrated management systems", *Economies' Horizons*, no. 4(11), pp. 37–48, doi: [https://doi.org/10.31499/2616-5236.4\(11\).2019.206059](https://doi.org/10.31499/2616-5236.4(11).2019.206059).

Abstract. *The purpose of the research.* It is established that in order to enter new markets and increase the competitiveness of goods in the international market in the conditions of information economy and distribution of intangible assets for domestic enterprises, the role of integrated management systems is increasing. The purpose of the study is to analyze the challenges for Ukrainian enterprises in the times of European integration, which requires solving the problems related to the definition of an algorithm for the implementation of international quality standards and mechanisms for assessing the productivity of their use. *Methodology.* In this work a retrospective analysis of quality management systems at the enterprise is carried out, the results of which revealed the evolutionary components of the quality requirements and the structures of its implementation at the enterprise: input control of raw materials; production processes; international standards; environmental and social management; security of activity and information. *Results.* The basic world tendencies of economic development are revealed: increasing of global competition, growth of the sphere of services, acceleration of scientific and technological progress, internationalization of financial markets. Characteristics of the modern economy of Ukraine: resource structure of exports; a small component of intangible assets; static attitude to quality. The classification of intangible assets of the enterprise by assets and competencies as a basis for accelerating the process of obtaining the effect of economic activity. Thus, for the implementation of the strategy of entering the European markets, domestic enterprises need to activate the management of the formation of potential capabilities of the enterprise through the development of staff competencies for quality, management systems and negotiation activities to attract additional investments, as well as the adoption of quality standards. Based on the study of the evolution of quality management concepts at the enterprise, the process of integration of management systems is proposed. Integrated management tools (affinity, relationships, lead times): maximize the synergistic effect of integration. *Practical meaning.* It is established that the spread of integrated management systems will allow: consumers – to get the product with the maximum combination of price and quality; to business owners – to form a systematic attitude of staff to quality, to partners – to reduce the risks of implementation of agreements; to society – to obtain additional sources of funding by increasing export revenues from processing industries and improving environmental and safety performance. *Prospects for further research.* The direction for further research on the introduction of integrated management systems is proposed – the

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search for economic-mathematical models that optimally combine internal tangible assets and intangible assets that fall outside the competence of an individual enterprise.

Keywords: information economy, product competitiveness, product quality, competencies, potential.

JEL Classification: Q01; O10; P50; J39; F15.

Number of references: 18; number of tables: 0; number of figures: 0; number of formulas: 0.

Нематеріальні активи та інтегровані системи управління

Олена Юрїївна Лїнькова¹, к. е. н., доцент

Стаття надійшла: 30.09.2019

Стаття прийнята: 02.11.2019

Linkova H. Yu. Intangible assets and integrated management systems. *Економічні горизонти*. 2019. № 4(11). С. 37–48. DOI: [10.31499/2616-5236.4\(11\).2019.206059](https://doi.org/10.31499/2616-5236.4(11).2019.206059).

Анотація. *Мета статті.* В роботі встановлено, що з метою виходу на нові ринки збуту та підвищення конкурентоспроможності товарів на міжнародному ринку за умов інформаційної економіки та поширення нематеріальних активів для вітчизняних підприємств зростає роль інтегрованих систем управління. Виявлено – метою дослідження є аналіз викликів для підприємств України за часів Європейської інтеграції, що потребує вирішення завдань, пов'язаних з визначенням алгоритму запровадження міжнародних стандартів якості та механізмів оцінки продуктивності їх використання. *Методологія.* В роботі проведено ретроспективний аналіз систем управління якістю на підприємстві, за результатами якого виявлено еволюційні складові вимог до якості та структур її реалізації на підприємстві: вхідний контроль сировини; виробничі процеси; міжнародні стандарти; екологічний та соціальний менеджмент; безпека діяльності та інформації. *Результати.* З'ясовано основні світові тенденції економічного розвитку: посилення глобальної конкуренції, зростання сфери послуг, прискорення науково-технічного прогресу, інтернаціоналізація фінансових ринків. Охарактеризовані риси сучасної економіки України: ресурсна структура експорту; незначна складова нематеріальних активів; статичне ставлення до якості. Визначено класифікацію нематеріальних активів підприємства за активами і компетенціями як базу для прискорення процесу отримання ефекту від господарчої діяльності. Так, вітчизняним підприємствам для реалізації стратегії виходу на європейські ринки необхідно активізувати управління формуванням потенційних можливостей підприємства завдяки розвитку компетенцій персоналу стосовно якості, систем управління та переговорної діяльності щодо залучень додаткових інвестицій, а також сприйняття стандартів якості. На основі вивчення еволюції концепцій управління якістю на підприємстві запропоновано проведення процесу інтеграції систем управління. Комплексне використання інструментів управління (спорідненість, зв'язки, терміни роботи): дозволить максимально збільшити синергетичний ефект інтеграції. *Практичне значення.* Встановлено, що поширення інтегрованих систем управління дозволить: споживачам – отримати товар з максимальним сполученням ціни та якості; власникам бізнесу – сформувати системне ставлення персоналу до якості, партнерам – знизити ризики реалізації угод; суспільству – отримати додаткові джерела фінансування за рахунок збільшення надходжень від експорту переробних галузей та покращити показники екології та безпеки. *Перспективи подальших досліджень.* Запропоновано напрямок для проведення подальших досліджень щодо запровадження інтегрованих систем управління – пошук економіко-математичних моделей, які оптимально поєднують внутрішні матеріальні активи та нематеріальні активи, що виходять за межі компетенцій окремого підприємства.

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Ключові слова: інформаційна економіка, конкурентоспроможність товару, якість товару, компетенції, потенціал.

Кількість джерел: 18; кількість таблиць: 0; кількість рисунків: 0; кількість формул: 0.

1. Introduction.

In the World Economic Forum's Annual Competitiveness Rating, Ukraine ranked 85th out of 141 in 2019 (104th in terms of state institutions, 57th in infrastructure, 78 in technology implementation). Macroeconomic ratings prove the need for continuous development of management systems by international standards. The spread of information technology has led to an increase in the intake of intangible goods by business organizations. The current task of the study is to expand integrated management systems in domestic enterprises in the context of information economy in order to expand markets and increase the competitiveness of goods in the international market.

2. Literature review.

Intangible assets and integrated management systems are being explored by many scientists. I. Bryl (2015) studies aspects of the use of intangible assets. Q. Zhang (2018) studies the impact of organizational culture on supply chains. I. Bulieiev, A. Bersutskyi and I. Bryl (2013) systematize the strategy of managing intellectual capital. J. Zhai and Y. Wang (2016) analyzes the quality of information for the choice of investment object. V. Boikov, G. Boltunov and O. Mansurova (2010) engaged in the design of integrated control systems. H. Zhavoronkova (ed.) (2012) elaborate on the features of the intellectual capital of the agroindustrial complex. O. Yankovyi (2013) offers the basic directions of increase of competitiveness of the enterprise. P. Kutsyk, I. Drohobytskyi, Z. Plysa and Kh. Skop (2016) are involved in accounting for intangible assets. P. Mykytiuk (Mykytiuk, 2014, pp. 8–30) assesses the impact of innovation on the performance of the business entity. V. Porokhnia (2012) allocates intellectual capital as the basis for business growth. N. Puzinya (2013) assesses the results of management of intangible assets of the enterprise. V. Kachalov (2017)

explores management systems based on international standards. But in our opinion, the issues of practical implementation of integrated management systems in the times of information economy remain insufficiently systematic and theoretically grounded.

3. Methods.

A retrospective analysis of enterprise quality management systems was conducted for the study, the results of which are proposed: variants of algorithm construction of integrated control systems and combination of methods of evaluation of their efficiency.

4. Research objectives.

The purpose of the study is to analyze the challenges for Ukrainian enterprises in the times of European integration. Information Economy has certain tasks: development of productive forces and production traits (forms of ownership that best correspond to the development of information), re-evaluation of technical and economic relations (division of labor, specialization and combination of production), the ratio of market levers and state regulation, determining the impact on the economies of countries their union.

5. Results and discussions.

In the conditions of information economy change: the structure of cost of goods, competitive strategies of enterprises. The main global trends in economic development: increased global competition, growth in services, accelerated scientific and technological development, internationalization of financial markets.

The main features of the Ukrainian economy in the context of globalization:

- increasing the quality of goods and competitiveness of organizations;
- complication of business-to-consumer links;
- increasing the role of non-price forms of competition (quality).

Management of intangible assets of the enterprise as processing of received information in valuable recommendations (since 1994 USA, Japan, China, Germany) contains: creation of infrastructure of distribution of intangible assets (knowledge bases, computer networks, centers of research); interaction with external information providers; creation of new intangible assets; monitoring of intangible assets of the enterprise; implementation of intangible asset management strategy.

Intangible Asset Value Management (Knowledge Transformation into Value) is an integration: personnel management (professional and personal qualities of employees), innovation and communication management, the enterprise system itself (adaptation, diversification). Sources of modern economic impact: interconnections, knowledge, staff training, taking into account new consumer demands and social control by society. Therefore, it is important to manage at the domestic enterprises: information, models of interaction, organizational culture. In the information economy, the workforce becomes intellectually-informative, labor informatization increases, and its participants are the most skilled workers who become co-owners of the new facility.

By interpretation, intangible assets are divided into:

1) asserts – form regulated (licenses) and positional potential (reputation): trademarks, trademarks; patents; Copyright; registered models; contracts and licenses; trade secrets; databases; business reputation of the enterprise; product reputation; personal and organizational networks (purchased through purchase of goods);

2) competencies – form the potential of the enterprise:

- functional: know-how of the personnel (knowledge and experience in the production, technical, administrative, financial, economic fields); personal and organizational networks (human relationships that go beyond commercial relationships);

- organizational culture (determined by

the stage reached by the organization life cycle and formed by the activity of senior management of the enterprise): the perception of quality standards; perception of customer service; ability to manage change; ability to innovate; the ability to work with one team.

The introduction of integrated management systems requires the enterprise to work coherently on regulated, positional and possible (personnel) potentials.

An enterprise is competitive when:

1) the product meets the requirements of buyers;

2) the process of production of goods is the result of realizing the potential of the enterprise.

The value of quality improvement is constantly increasing, ensuring: the competitiveness of goods; development of the economy as a whole through the improvement of technologies and increase of economy.

Quality is an economic, political and moral category that consists of quality: labor, goods, environment. Modern quality improvement is an activity at every stage of the technological process.

Let us analyze the evolution of the quality concept:

In the 50s – the significant role of input control of raw materials, the combination of acceptance control with the operating (the structure of the production process defined the quality control system as compliance). The goal of quality management is to achieve the best quality in the world. Development of quality management: in management – organizational and socio-psychological issues; in technology – variants of production and production processes. Statistical methods of quality control are used, which allow it to be evaluated by a selective method with a given probability.

In the 70s – the quality management of production processes. The goal of quality management is to provide the required level of quality and maintain it throughout the product creation period. Quality management development: goals, control criteria, feedback

channels, analysis procedures, impact methods, compliance requirements and established market relationships.

In the 80s – the further development of integrated quality management in all departments of the organization (general quality management), the introduction of quality standards (established: the procedure and responsibility of each contractor; reliability and durability; specified requirements of standards for local production features). The quality management system made it possible to analyze the condition of the products during their operation (at the consumer).

The main disadvantage of the quality management periods listed is the lack of monitoring of the complete production process and the coverage of managing the largest number of elements without taking into account their relationships. To address the shortcomings in the practice of management introduced:

Total Quality Management (TQM) is a philosophy of general quality management (marketing concept – market research; Japan, USA), which includes complex improvement: product quality; quality of organization of processes; staff qualification level (main mechanisms: quality control and improvement). At the same time, TQM allowed to increase quality, reduce costs and deliver the goods at the exact time. Quality culture is a complex concept that includes the quality of service, reporting, production operations.

The International Organization for Standardization (ISO) has set requirements for a quality system, with little attention to cost-effectiveness, risk accounting and timeliness of deliveries.

In the 1990s the influence of society on the activities of business organizations increased; developing quality management (Management by Quality) – the structuring of strategic goals and the design of an organization system and the motivation to achieve these goals, which led to the emergence of ISO 14000 standards that set requirements for the management system in terms of environmental protection and product safety; management

based on the objectives of MEO (Management by Objectives).

So, the main stages of development of quality management:

- TQC (Total Quality Control);
- CWQC (Company Wide Quality Control);
- ZD (Zero Defect) – without defects;
- TQM (Total Quality Management);
- ISO 9000 Series – ISO 9000 International Standards;
- MBQ (Management by Quality);
- MEO (Management by Objectives) – goal based management.

In modern conditions of management there is a change in the cost of quality: from physical labor to intellectual (scientists, engineers, managers). Therefore, the role of the person and the training of the staff are increasing.

The main quality aspects of different hierarchical levels:

- technical (quality of innovative objects, state of the art);
- economic (effect of quality improvement measures);
- environmentally friendly (consumption of environmentally friendly goods safe for health and life);
- social (the status of the state is determined by the quality of goods, intellectual development, self-expression in employment);
- political (motives for quality assurance).

New quality requirements: environmentally friendly products, high quality of raw materials, processes, finished products.

Therefore, existing approaches to the definition of quality can be divided into:

- 1) production and commercial: constructive internal differences of the object (the purpose of management – saving material costs); main strategies for implementation: individual production, quality better than competitors (price), quality meets the general standard of consumption;
- 2) marketing: external manifestation of internal differences of goods (the purpose of

management is to better meet the needs of the constantly changing consumer); main implementation strategies: flexibility, diversification, innovation, uniqueness (*Medić, Karlović and Cindrić, 2016*).

Quality of life is evaluated comprehensively in the following areas:

- individual components: way of thinking; tastes; human interests; quality of work activity (degree of satisfaction with soy work: self-expression of the person and usefulness of the manufactured goods);

- quality of the human environment: products offered; conditions of production activity; education (intellectual development), recreation (productive, entertaining) and health care; information and transport communications; the political environment.

In 1991, the European Quality Management Fund, with the aim of stimulating and motivating European companies in their pursuit of excellence, established a quality award. Components of Excellence Concepts (EFQM – establish cause-and-effect relationships between organizational capabilities and results) (*International Organization for Standardization, 2019*): achieving balanced results; creating value for consumers; leadership: foresight, insight, integrity; process management; staff as a basis for success; support for creativity and innovation; building partnerships; responsibility for a sustainable future.

The RADAR logic is a dynamic assessment system and management tool that provides a structured approach to evaluating an organization's performance, the main requirements are: R (Results) – determining the results that are planned to be achieved within the strategy; A (Approach) – planning and developing a set of approaches to achieve the desired results in the present and future; D (Deployment) – deployment of system-based approaches for effective implementation; A (Assessment) and R (Review) – assessment and review of approaches used to monitor and analyze the results achieved, as well as information in the process of developing new knowledge.

Seven management tools enable the effective management of quality management problems (Union of Japanese Scientists and Engineers, 1979) (*International Organization for Standardization, 2019*):

1) affinity diagram allows you to group related problem data by directions of different levels;

2) an interrelationship diagram aimed at making logical connections between the main idea, problem, or different data;

3) tree diagram provides a systematic way to solve an existing problem;

4) matrix diagram or quality table shows the importance of different relationships;

5) arrow diagram allows to plan the optimal terms of work for successful achievement of the set goal;

6) process decision program chart – PDPC tool for estimating the timing and feasibility of carrying out works and executing programs in accordance with the arrow chart to correct them in the execution process;

7) matrix data analysis purpose – the choice of the optimal solution.

The implementation of quality management system in the enterprise in accordance with ISO 9000 includes the steps (*International Organization for Standardization, 2019*):

I. Pre-project analysis and training: analysis of organizational and technical and economic conditions (opportunity and feasibility) of the introduction of ISO 9000 and conducting basic training in the field of quality management of managers of the enterprise and leading specialists.

II. Developing quality policies and goals: prospects for further improvement; expected level of consumer satisfaction; improvement of qualification of the personnel of the enterprise; the needs and expectations of other stakeholders; resources required to go beyond the requirements of ISO 9000; the potential contribution of suppliers and partners; main activities in the quality management system; distribution of responsibilities and powers of management in the system.

III. Design of the quality management system: the processes required for the quality management system; sequence and interaction of these processes; criteria and methods to ensure effectiveness in managing these processes; the resources needed to support these processes; monitoring, measuring and analyzing these processes; measures necessary to achieve the intended results and to continually improve these processes.

IV. Documentation of the enterprise quality management system: goals and policies in the field of quality; quality guide; quality programs; procedures; records.

V. Implementation of the quality management system at the enterprise: organizational changes in the part of the enterprise management structure, formation and staffing of the quality management services personnel, introduction of the documents of the quality management system and verification of compliance with their requirements, drawing up of the act on implementation of the quality management system; development and implementation of the internal audit program and corrective action in accordance with the results of the audit.

VI. Preparation for certification of the quality management system. The quality management system must pass a certain test at this enterprise: to choose a certification body; draw up a certification contract, conduct a certification audit of the quality management system and prepare the organization's staff to interact with external auditors.

Evolution of the organizational status of quality management in the enterprise: departments of technical control (quality of goods and production process without defect); quality control departments (quality planning and analysis to prevent defects); quality departments (quality assurance).

Organization and coordination of work related to: certification; processes; documentation; performed by a senior management group of managers. Quality management covers all activities and is related to: environmental protection, resources. TQM approaches are

reflected in the ISO 9000: 2000 standard (customer orientation, leadership leadership, employee engagement with quality management, process (resource management) and system approaches (process management), continuous improvement, mutually beneficial supplier relationships, relevant decision-making data).

According to the State Statistics Service, exports of goods in 2019 increased by 6.3% compared to 2018 (*The State Statistics Service of Ukraine, 2019*), which requires domestic producers to expand the use of international quality standards and the formation of integrated management systems. The combination of the main components of management (personnel, finance, quality, environment) allows to obtain the maximum synergistic effect in the field: strategies, missions, responsibilities, policies, design, motivation, control. The implementation of certain strategies with one campaign allows to maximize the accumulation of opportunities and to provide an advance development in comparison with competitors in the market. Analysis of exports of goods from Ukraine shows that: 41% is shipped to EU countries; 12% to the CIS countries; 10% to China. The commodity structure of exports mainly comprises exports of raw materials (cereals, ferrous metals, fats, ores). For Ukraine, the main task is to increase exports of manufacturing (instrumentation, mechanical engineering, food, light, information technology). The implementation of the strategy of entering new markets by domestic companies activates the potential of maximizing the use of intangible assets in the areas of: building integrated management systems, international certification of activity, exploring potential markets and cultural features of demand.

Integration in ACS is considered in the aspects: functional, organizational, information, software, technical, economic. The transition to the integration of automated systems is related to: systematic object analysis; with the formulation of a set of control problems as optimization problems in general for the system of the criterion of efficiency of functioning; using economic and mathematical

models of management object to combine private management tasks, forecast possible states and choose optimal management decisions (Boikov, Boltunov and Mansurova, 2010). In the development of IACS should be considered in the unity of man, machine, information, to, on the one hand, to prepare management personnel with the help of computers the necessary information for quality decision-making, and on the other hand – to limit flows that are not relevant.

An Integrated Management System (ISM) is a system built on the basis of compliance with the requirements of two or more international standards for management systems. ISM capabilities: high consistency, lower costs, maximum staff involvement in organizational development, reduced workflow, reduced internal and external communications. Common international standards for business organization management systems (quality; environmental management; occupational safety and health; social management; information security):

ISO 9000 series – improving the organization of work to maintain the system in a specified mode of operation.

HACCP (Hazard Analysis and Critical Control Points) is a concept focused on the systematic assessment and management of hazardous factors that directly affect product safety (food business management model).

ISO 14000 – environmental protection.

QS 9000 – a standard that takes into account the industry specificity of the enterprise while ensuring product competitiveness.

Total Quality Management (TQM) is a continuous improvement in quality, cost minimization and increased revenue.

GMP (Good Manufacturing Practice) is a set of quality system requirements developed by industry-leading suppliers (GMP documents are formulated to meet ISO 9001 and HACCP standards).

OHSAS 18001 – Occupational Health and Safety Management Systems, can be implemented with ISO 9001, ISO 14001, ISO 22000.

The choice of integration model requires determination of: the level of integration; optimal actions to increase the level of integration; basic integration model. Documents developed by the International Organization for Standardization (ISO) to assist in the construction of an integrated management system (Kachalov, 2017):

1) ISO Guide 72: 2001 “Guidelines for the justification and development of management system standards”, describes the terminology, structure, general elements of standards for systems development management;

2) Deming model – Schuhart PDCA model of continuous process improvement, PDCA cycle – Plan, Do, Check, influence (Act) (systematic basis of management);

3) Model process approach, based on ISO 9001: 2000.

Options for forming integrated management systems:

1) additive (ISO 9001 + OHSAS 18001);

2) creation of a fully integrated quality system (HACCP, QS 9000, OHSAS 18001, GMP).

Stakeholders in the implementation of integrated management systems: consumers, business owners, partners, employees, society. Integrated management systems contain the potential to improve the performance and competitiveness of business organizations.

ISM Documentation Rules: Effectiveness – Reduces management costs while maintaining performance; relevance – prompt reflection of changes in management systems; systematic – structured and interconnected by management levels; accessibility for users and experts; targeting by industry and contractor.

International standards specify that improving the efficiency and effectiveness of a quality management system can have a positive impact on the financial performance of an organization: internal (reducing process and product failure or wasting resources and time); external (reducing product rejections, reducing warranty costs, reducing the cost of losing consumers and markets).

Algorithm for certification according to

the international enterprise standard: to determine the type of goods (Classification of economic activities), taking into account the requirements of stakeholders (performed by top management); justify the requirements of the international standard, which the company will not apply to the selected product (structural units, geographical location of units, business processes, type of product); audit – evaluation: of the object, certification documents and stakeholder requirements.

Integrated use of methodological approaches to assessing the effectiveness and efficiency of the quality management system will accelerate the implementation of ICS (Boikov, 2010):

1) on the basis of benefits from its implementation, certification and functioning (motives for implementation and benefits of its implementation) – comparison of planned and achieved results. Disadvantage: surveys are based on estimates of subjective companies;

2) on the basis of establishing a causal relationship (functional or correlative) between the implementation of the quality management system and the economic performance of the company – the ratio: results and costs, benefits and costs to obtain them; analysis of the dynamics of economic indicators;

3) on the basis of the consumer satisfaction index – commitment (repeat purchase);

4) on the basis of a balanced scorecard (BSO) – the degree of achievement of results that are adequate to the defined goals, which satisfy certain needs of stakeholders and create conditions for the continuous development of the organization.

In 2004, the EU established the Rapid Alert System for Non-Food Consumer Products (RAPEX), which operates under the auspices of the Directorate-General for Health and Consumer Policy of the European Commission (*International Organization for Standardization, 2019*). The purpose of the system is to ensure that information on hazardous non-food consumer products found in one country has been quickly forwarded to all other national authorities and to the European Commission

for further action to prevent the supply of these products to consumers.

The Law “On Technical Regulation aims at harmonization of Ukrainian” legislation with existing international standards and effective use of the accumulated experience in the field of ensuring the safety and quality of products by countries with developed market economies (*The Verkhovna Rada of Ukraine, 2015*). According to the World Trade Organization (WTO) General Agreement on Tariffs and Trade, product safety is ensured through the development of technical regulations in force by laws and approved by the government of a WTO member country in accordance with the current practice of approving legislation. Advantages of technical regulation of product safety and ensuring the development of the national economy: improving product safety and protecting the market (increasing the responsibility of manufacturers for products that must meet the mandatory requirements of technical regulations); increase of competitiveness of products (transition to the international rules of trade promotes development of competition); introduction of innovations and modern technologies; enhanced contractual regulation; drafting relevant legislation with the involvement of all stakeholders.

The objectives of the adoption of technical regulations:

1) protection of life and health of individuals as well as property of individuals and legal entities;

2) environmental protection;

3) prevention of actions that mislead consumers;

4) ensuring energy efficiency.

The normative basis for product quality assurance is standardization (functions: economic, social, communicative). International Organization for Standardization (ISO) is a worldwide federation of national standardization organizations (164 Member States) whose purpose is to promote the development of standardization worldwide to ensure international trade and expand cooperation in the fields of intellectual, scientific, technical and

economic activities.

The Law "On Standardization of Ukraine" came into force on 3 January 2015, which provides for the reform of the technical standardization area in accordance with the WTO Agreement (Agreement on Technical Barriers to Trade of 15.04.1994) and the Association Agreement with the EU of 30.11.2015.

The State Enterprise "Ukrainian Research and Training Center for Standardization, Certification and Quality Issues": implements the provisions of the WTO Agreement on Technical Barriers to Trade in the national legislation of Ukraine; implements European standards as national standards (harmonized European standards) in accordance with the Association Agreement between the EU Ukraine and the European Atomic Energy Community; abolishes conflicting national standards (interstate standards (state all-union standard GOST) developed before 1992 (*SE "UkrNDNC"*, 2019).

In international practice, certification as a certificate of conformity can be voluntary or compulsory in the following forms:

1) self-certification (first-party certification). In this form of certification, the manufacturer (seller) assumes full responsibility for the quality of products. It fills in a declaration stating that the product (service) or quality management system meets certain criteria (standards, specifications, norms, specifications, etc.). Appropriate documents are added for possible analysis by consumers or third parties;

2) the certification by the other party is carried out by the buyer, the customer, the enterprise that produces the final products from its suppliers; most often used for large-sized, difficult to transport products in the certification of quality management systems of suppliers;

3) certification by a third party is carried out by independent bodies accredited for the right of such assessment (*International Organization for Standardization*, 2019).

In order to overcome the obstacle limiting the development of international trade

(certification of conformity and reduction of certification costs) at the international level, cooperation between countries in the area of mutual recognition of conformity certification procedures and mutual recognition of certificates is stepped up (*Šatanová, Zavadský, Sedliačiková, Potkány, Zavadská and Holíková*, 2015).

European Union has developed a Global Approach (Conformity Assessment Systems) policy in the area of Conformity Assessment, which balances the need to ensure the free circulation of goods in the EU's single internal market, with the requirement to guarantee a high level of health, safety and environmental protection and consumer interests. For example, the system works Worldwide System for Conformity Testing and Certification of Electrotechnical Equipment and Components (IECEE).

Expectations of enterprises from international standardization: increase of competitiveness of production in the domestic and foreign markets; reducing the number of regulatory documents; gaining experience of best practices aimed at increasing production efficiency; adopting progressive standards for facility safety, environmental protection and occupational safety at hazardous manufacturing sites, contributing to the saving of all types of resources and improving the company's economic performance; expansion of the sales market; possibility of rapid introduction of innovative technologies; reducing barriers to international trade.

6. Conclusions.

Based on the analysis of challenges to the economy of Ukraine in the times of European integration, the decisive role in the global competition of intangible assets has been determined. Quality management requires the introduction of integrated management systems. Large enterprises allow the maximum use of synergistic effects of management when: accumulation of resources; production; implementation of investment and innovation processes; entering new markets; pricing; taxation; strategy implementation. The main problems in the

field of large business management, which are solved by the implementation of integrated management systems: distribution of powers of the management company; strategic management; implementation of environmental management concepts; marketing tools. Tasks of big business management: processing of information necessary for business management; business portfolio performance evaluation; autarchy units and duplication of management functions. Implementation of integrated quality management systems (ISO 9001: 2015 basis (performance), ISO 14001 (environmental management), ISO 18001 (industrial safety), ISO (food), ISO 27001 (information security), ISO 45001 (occupational security) are the basis for efficient solution of tasks and division of responsibility for success on the basis of matrix organizational structure (vertical heads – managers of business directions; horizontal – managers of functional units).

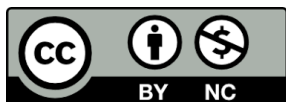
Models of implementation of integrated management systems: integrated; diversified; conglomerative. Regardless of the ISM implementation model, the main elements are: processes; responsible for implementing ISM; documentation. Certification gives the organization the advantages: the ability to confirm compliance with the requirements of the quality management system, entering the international market, the possibility of continuous improvement, improving the efficiency and status of the company's reliability, risk-oriented thinking, the benefits of part of participation in tenders.

The directions for further research are: the search for economic and mathematical models that optimally combine the internal and external formal links of the enterprise to form the information base of the integrated management system.

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