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ECONOMIC INTELLIGENCE: MODERN CONCEPT

In the last half-century, the economic relations between countries have become more difficult to manage. Economic intelligence is a new complex and multidisciplinary concept introduced to help countries to interact in the new more complex scenario. The intelligence involves researching and finding informative asymmetries between two actors to use the obtained information for economic purposes. This study makes use of a new scientific theoretical approach to explore the economic intelligence concept represented by different contributions in academic literature. As a result, a lexicographic definition of the economic intelligence concept is proposed as a specialized elucidation that involves a theoretical approach to form information set for developing strategies of international economic relations between countries.

Key words: economic intelligence, international relations; information asymmetry; knowledge; globalization.

Introduction. Economic Intelligence (EI) is a new complex and multidisciplinary subject. It has been proposed, in the last years, as a response to the increase in the importance of the economy in international relations [1], and "to help the countries and the other institutional organizations to confront with their environment, in a new intricate network of economic relations" [2, p 3]. The importance of the discipline derives from the fact that, in the last half-century, the economic relations between countries have become more difficult to manage. The expansion of the globalization, the development of the information & communication technology, the Fourth Industrial Revolution and the introduction of new concepts as the Big Data, the Internet of Things, and the Cyberspace have created a new environment in which the traditional strategies to interact with foreign national entities have turned out to be obsolete [3]. In the specific, there is a broad consensus that, with the fall of the Berlin Wall in 1989, the influence of the economic dimension in the national politics and international relations has grown in such a way to create a condition, in which the country's policy itself appears to be predominantly driven by the priorities of the economics [4]. The end of the Cold War led to the collapse of the previous bipolar balanced system (opposition between the two main blocs: USA and USSR). Subsequently, a new system, initially unipolar (based only on the American hegemony), and then multi-centric [5] appeared and catalyzed the expansion of a political-economic process known under the name of globalization. Consequently, there has been a multiplication of the interactions be-

tween the different national entities, not only from an economic, commercial and financial point of view but also from a political, social and cultural aspect. The most significant features of the globalization are represented by the expansion of the international trade volumes; the increase of the international capital flow; creation of regional integration unions; internationalization of scientific and technical researches; expansion of global transport, telecommunication, and informational infrastructures; increasing in income inequality between rich and poor countries; intensification of international cooperation among national authorities and private organizations; creation of international supranational institutional structures; globalization of competitiveness [2]. Furthermore, with (i) the development of the Information and Communication Technology, (ii) the increase in the use of the Internet and the social networking applications, and (iii) the digitalization of the information, the modern environment has been becoming more and more complex to understand and to manage with. The interaction of all these factors requires, in fact, a new different information basis. And a modern theoretical approach to provide useful information and the proper knowledge to the decision-makers is necessary for the new international economic relations' system. The purpose of the EI is in trying to address that new information set and methodologies requested by the economic operators (national entities; corporations; international organizations). In table 1, the main factors that make the EI as a multidisciplinary concept to interact in the new complex environment are illustrated.

Table 1. Factors of actualization of the role of EI in the development of the international economic system

№	Factors	Form of manifestation	Consequences	Requirements for EI
1.	Economic globalization.	- Increase in trade among countries; - Expansion in international capital flow; - Increasing in connectivity of people and business; - Growth of migration flows among areas; - Creation of new global supply chains.	Creation of a new global competitive environment in which traditional borders does not exist anymore.	Ability to analyze and understand more complex information deriving from culturally different sources.
2.	Tendencies to strengthen regionalism.	- Increase in international economic relations among group of countries; - Creation of new free trade areas; - Developing of sovranational entities challenging the traditional national power.	The emergence of new more complex entities with specific group interests.	More complex and articulated information bases.
3.	Increasing instability of international business environment factors.	Continuous change in the ratio of political, economic, scientific and technical, demographic, and other factors.	Difficulty in predicting changes and evolution of the main economic indicators.	Need for new approaches and tools to forecast future scenarios.
4.	4th scientific and technological revolution	Fusion of the technologies that is blurring the lines among the physical, digital and biological spheres.	Emerging of new technologies (robotics, nanotechnologies, blockchains) and new applications.	Capacity to understand the impact of new technologies and to use them to provide knowledge.
5.	Development of Information and Communication technology.	- Increase in power calculation of computers; - Growth of the store capacity of servers; - Development of Big Data analytics.	Increase in the capacity to elaborate information and to forecast different scenarios.	Ability to elaborate and analyze a greater quantity of data.
6.	Digitalization of the economy & Internet of the Things.	- Decrease of costs of storing and analyzing data; - Change in industrial organization; - Increase in competition among providers of information goods.	New ways to gather, elaborate, storage and disseminate information.	Need of new methods to analyze different types of data.
7.	Development of the Internet and the social networking.	Creation of a new global instrument of communication and data-sharing.	- Change of the people and organizations' behaviours; - New concerns about regulation of copyrights, security and antitrust.	Ability to use the Internet and the social media to improve the efficiency of the OSINT.
8.	Artificial Intelligence.	Use of computers or computer-controlled robot to perform tasks that require intelligence.	Development of programs performing specific activities (f.e. search engine, scenario forecasting, voice and handwriting recognition, medical diagnosis).	Implementing artificial intelligence algorithms to elaborate data and disseminate information.

Source: Author's owner.

Table 1 clearly shows that in the new complex environment there is a need for a discipline, which can deal with more articulated information, deriving from different typologies of sources, characterized by dissimilar cultures. Furthermore, the frequency of environmental changes and the volatility of the main political and economic drivers require new approaches and tools to forecast future scenarios. The big amount of new information that now is available due to the evolution of ICT and the new communication systems necessitate the ability to gather, elaborate and analyze a huge mole of data. The EI, thanks to its ability to implement new technologies and use them to provide knowledge, represents a modern concept to help countries to use the information for supporting the decision-makers.

Despite the strong importance of the EI concept, there is neither a common view nor a unique definition about the EI [6]. Moreover, without a clear idea about what EI is, the conception of a new theory, which explains how EI works and how it could be implemented, is not possible [7]. Different explanations justify the absence of a commonly accepted theory [8], or using the words of the historian and expert of intelligence, Walter Laqueur, to discover the reasons for the which all attempts to develop ambitious theories of intelligence have failed [9].

First, it is possible to affirm that, during the last years, an important variety of studies about intelligence has emerged, and different disciplines have individually started to develop a theory of intelligence using their methods and models. Consequently, "researchers located in longer-established disciplines such as politics, history, IR, criminology" [6, p. 210] have initiated to dedicate attention to this new field of study, previously ignored. The presence of different disciplines with dissimilar methodological approaches and divergent final purposes has generated a multitude of concepts and descriptions about intelligence. As a result of that use of the development of new sub-areas of study within the traditional disciplines, there is nowadays a vast unsystematic literature, several independent currents of researches, and different methods of

analysis, which are "impeding the field from developing as a coherent academic discipline" [10, p. 266-279].

Secondly, academics and practitioners have different positions in intelligence studies (IS). For the latter, the object of the investigation is just its practice, which is the activity of collection and analysis of the information, and generation of knowledge. In effect, the fundamental purpose of the intelligence theory is, in this case, the application of the epistemology, and the hermeneutic, to obtain the best knowledge necessary to support the decision-maker. Coherent with that view, Loch K. Johnson, when he states that "[i]n order to meet the decision maker's requirements for information, intelligence analysts use an approximation of the scientific method derived from the social sciences to determinate meaning from the raw intelligence" [11, p. 201]. For academics, instead, the main role of the epistemology and the scientific method is to define "how intelligence works" [6, p. 212]. The academic perspective is one of an outsider, and the relative theory could be considered as a meta-theory. It involves applying a scientific approach to create a theory, whose aim is the creation of knowledge through a rigorous scientific methodology of search, and analysis of information. Philip H. J. Davies refers to the two different approaches using the expressions: theory *about* intelligence, to indicate the meta-theory, and theory *of* intelligence, to address to the other [12]. Similarly, James B. Bruce and Roger Z. George use the expression *intelligence analysis* to indicate "one part of a multifaceted process of gaining specific, often secret, information [...] the thinking part of the intelligence process" [13, p. 1], that corresponds approximately to the idea about the IS that practitioners hold (theory *of* intelligence).

A further reason of the absence of a common theory about intelligence derives from the fact that the intelligence theory can be studied at different social levels. Peter Gill, in particular, individuates five of them: individual; group; organizational; societal and international. Thus, for example, at the individual level, cognitive psychology represents the basis for researches, whereas at the group level the main

instrument of study is the social network analysis [14]. Furthermore, there also could be different approaches of intelligence because of the investigated subject: national intelligence, corporate intelligence, and intelligence of international organizations.

The relatively young age of the IS also represents a reason for the absence of more stable and coherent literature. In fact, despite the ancient origins of intelligence (the search for the information about the environment or about the enemy has been a relevant issue since the beginning of the history [15, p. 19]), until 1955, as Sherman Kent observed, there was no literature about the topic. For this reason, as previously affirmed, it is generally accepted the idea according to which the intelligence represented the missing dimension of the history and the international relations until the last decades. Non-dissimilar considerations could be advanced for the EI: it started to be studied as a genuine discipline during the cold war and has become a pivotal instrument to succeed in the complex international relations environment only after the fall of the Berlin wall.

Finally, the last cause of the absence of a common theory in the IS is a particular feature of the discipline: the secrecy. Consequently, it is hard for scholars and researchers to collect documents and materials, which are often covered by state secret privileges if connected with the country, or jealously guarded by the owners in case of corporations' information. In the specific, the study of intelligence has been conducted "one way on the outside, with no official access to original records, and another way on the inside, where a

few scholars have intermittently enjoyed sanctioned (if not always complete) access to the extant documentation. The differing natures of the source materials available to scholars on the inside and the outside, naturally, have caused academic researchers and students of intelligence to work differently from official historians and investigators in the employ of the state. Intelligence studies in academia, on the other hand, have quickened over the last two decades in the fields of history and political science as more scholars of the diplomatic and military arts grasp the importance of intelligence for their disciplines, and gain familiarity with the relevant documentation. In so doing, they have begun to create a community of intelligence scholars and have helped to reclaim the study of intelligence from those who would have us believe in the omniscience or the omnipotence of the discipline's practitioners" [16, p. 17–18]. Furthermore, the concept of intelligence is often associated with the security services and with espionage activities, and for these reasons disregarded by the academic environment.

Literature Review. The fact that the IS have become the melting point of the numerous human sciences [17] has produced two different effects: (i) the birth of several new sub-areas of study, within each one of the main traditional disciplines presented in figure 6; (ii) the recognition of the IS as distinctive field of research, but, at the same time, the use of the divergent approaches of investigation, borrowed by the same respective traditional disciplines, to propose a new theory of intelligence (table 2).

Table 2. An interdisciplinary approach to the interpretation of the substance and content of the EI concept

Discipline	Object of Study	Contributes to EI	Main Authors
Biology	Interaction of living being with the external environment.	Knowledge of the mechanisms of perceiving information.	Kahn
History	Study of the dissimilar approaches of EI in different periods.	Understanding the impact of dissimilar EI strategies in shaping the World.	Knight; Ilari; Andrew; May
International Relation	Understanding the missing dimension of diplomatic history.	How international entities gather, share and disseminate knowledge.	Johnson; Gori; Sims
Sociology	Research of a theoretical conception of Intelligence.	Methodologies for deducing information from data and evaluating sources.	Arlacchi; Knorr; Sheptycky
Political Science	Description of different national intelligence systems in a different political environment.	Explanation of the gap in logic between the secrecy of the intelligence, and the transparency of the democracy.	Galli; Johnson
Organizational Theory	Study of how different organizations elaborate and disseminate knowledge internally.	Explaining the intelligence failures as the result of the trade-off between coordination and flexibility.	Wilensky; Hastedt; Skelley; Betts
Economics	The relation between national economic development and use of intelligence.	Methodologies to increase the growth of the country by using intelligence activities.	Harboulot; Davies; Gagliano
Psicology	Investigating the intelligence pathologies, the cognitive weaknesses and the role of surprise.	Improving the intelligence analysis process.	Heuer; Wirtz
Maths	Application of statistical and mathematical formulae to the theory of information.	Making more precise and amenable to testable prediction.	Shannon; Treverton

Source: Author's owner.

It is worth noting that different disciplines have started to show a large interest in the topic and are trying to develop individually a theory of intelligence using their methods and models, thus providing a specific contribution. For instance, notwithstanding the fact the roots of intelligence are biological "[e]very animal, even a protozoan, must have a mechanism to perceive stimuli, such as noxious chemicals, and to judge whether they are good or bad for it" [18, p. 57], in the last decades of the previous century, the intelligence has also conquered a respectable position in the historical studies. That, despite the fact it has been completely ignored or

treated as of little importance by academics [19]. The Italian historian Virgilio Ilari, as an illustration, remembers the contributions: of Robert C. Knight [20] about the importance of the intelligence in the Second World War; of Ernest R. May [21] on the knowledge of the enemy; and Christopher Andrew [22] about the political and institutional history of the British Secret Services [17, p. 37]. The IS has gained momentum in the realm of another discipline: international relations. The intelligence, which "Sir Alexander Cadogan, Permanent Under-Secretary at the Foreign Office from 1938

to 1945 described [...] as the missing dimension of most diplomatic history" [23, p. 321–330], has started to represent, in the recent years, the essential element for "new interpretations of both the course of the Cold War and of the political dynamics of authoritarian states" [24, p. 170]. Lock K. Johnson, in particular, finds a "close relationship between intelligence and structural realism" [25, p. 57], in consideration of the circumstance that both "share a common core concern and, to an extent, employ a common language" [25, p. 57]. The importance of intelligence in the international relations dominion is also sustained by the Italian professor emeritus Umberto Gori. The academic offers an interesting and useful suggestion about the path to follow toward a new theory of intelligence within the international relations field. He states that, in the new chaotic international system, the approaches to the study of the intelligence should implement the mathematics of chaos and the fractals theory [17, p. 65]. In the same direction, the studies of Jennifer Sims, based on similar considerations about the new complexity in relations among international entities, introduce her own "theory of intelligence, lashed to the dynamics of international politics" [26, p. 158]: the Adaptive Realism. Numerous other disciplines made their contributions to the IS. Thus, the social sciences have provided intelligence with "methods of gathering data, of deducing data from other data, and of establishing the validity of data that are of particular value" [27, p. 23], although there has been, according to some scholars [28, p. 73], some moments of competition among the two disciplines. The political science, which "appears to be the natural home for researching the U.S. intelligence community" [29, p. 23], has analyzed, instead, the gap in logic between the secrecy of the intelligence, and the transparency of the democracy [30, p. 57]. The organizational theory, thanks to the contribution of Harold L. Wilensky [31], Glenn Hastedt, and B. Douglas Skelley [32, p. 112], suggests a different approach, which contributes to explain the intelligence failures as the result of the typical trade-off between coordination and flexibility. In the same direction the work proposed by Richard Betts [33]. James Sheptycky, in its place, uses the methodology of the sociology to introduce the "human security intelligence paradigm" [34, p. 167], a new theoretical conception, alternative to the international relations realism. David Kahn differentiates himself from other scholars, arguing that, other than using the historical method, intelligence can be explored using both a mathematical and a psychological approach. The advantage of the former consists in the possibility to quantify the intelligence, by dividing the information into bits [35, p. 379-423], "and so make it more precise and amenable to testable prediction" [36, p. 4]. The benefit of the use of psychology [37], instead, allows investigating the intelligence pathologies, the cognitive weaknesses [38], and the role of surprise in the IS [39]. Finally, other disciplines that in this paragraph are just cited, as the criminology [40], the pedagogic [41], the juridical science [42], and the ICT studies [43] have tried to develop the subject within their respective areas of belonging, using their methodological approaches and models to advance a definition of intelligence. Economics, also, has been "[o]ne of the most useful source of theory for the study of intelligence" [12, p. 193], and "[m]ost recently and innovatively, ethnography [44] and anthropology [45] have been applied to intelligence analysis at CIA" [12, p. 193].

In the most recent years, following the spreading of several new sub-areas of study within the multitude of long-standing disciplines, the second effect of the increasing interest of the human sciences on the intelligence studies has started to take place: the accreditation of the IS as distinctive field of research. The reason of that acknowledged independence has the origin from the idea that the "[i]ntelligence

[...] has taken on the aspects of a discipline: it has developed a recognized methodology; it has developed a vocabulary; it has developed a body of theory and doctrine; it has elaborate and refined techniques" [46, p. 1]. Nevertheless, the recognized above-quoted methodology consists, in reality, in numerous different methodologies of investigation aimed to develop a new unique area of study. Wesley Wark [47], for example, individuates eight different approaches to the IS: the research project; the historical project; the definitional project; the methodological project; memoirs; the civil liberties project; investigative journalism; and the popular culture project. Peter Gill and Mark Phythian, instead, "[d]rawing on Wark, Scott [48], Kahn [49], Rudner [50], Denécé and Arboit [51], and Matey [52], [...] identify four main areas of work: research/historical; definitional/methodological; organizational/functional; and governance/policy" [53, p. 5–17].

Methodology. It is worth saying that due to the rich literature above presented, there is an extensive ambiguity related to the concept of the EI, which is often identified with dissimilar terminologies in different contexts. Not only do different authors attribute distinctive meanings (or even contradictory) to the EI, but also different lexemes are associated with the same descriptive conceptual model. Therefore, to propose a new definition of the EI, it is necessary to take into account all the other expressions used in the literature and by practitioners. The methodology used in this article is based on two phases. In the first one, an etymological analysis of EI is conducted to discharge some ideas of the intelligence, as those that describe it as just the manifestation of high mental abilities or as an intellectual capacity of human beings. The second stage consists in presenting all the dissimilar concepts of EI offered by academics and practitioners, to identify the most significant characteristics. Those criteria are used to find a correct and exhaustive representation of a new modern concept of the EI.

Results. In the case of economic intelligence, the locution is composed of two different words: a noun (intelligence), and an adjective (economic). The noun, according to the Oxford dictionary, has origin in the Latin *intellegere* (understand), which could be decomposed in *inter* (between), and *legere* (choose, gather, read). Accordingly, the core etymological essence of the intelligence is linked with the idea of looking inside, or searching for a deeper or hidden meaning. The ancient people, who invented that word, wanted to describe an action, or a result of an action aimed to collect and understand the connotative sense of an object or situation. About the adjective economic, according to the Oxford dictionary, it has origin in the Greek *oikonomikos* (household management), which is based on *oikos* (house), and *nemein* (manage), and refers to the administrative activities of an entity in the condition of scarce resources. Allowing for the fact that, in the locution EI, the word 'economic' occupies the position of an adjective, it could have two different functions: descriptive or restrictive. Accepting the first option, that is the descriptive function of the term economic, is it possible to say that the expression EI is connected with the search and the understanding of the hidden meaning of an object or situation with the purpose to better manage the limited resources in favor of an organization. The result of that description is very important because it represents the pivotal essence of the locution intelligence, which is used in this article. Supporting, instead, the idea of a restrictive function of the adjective economic, the central meaning of the EI should be limited to the activity, or the result of the activity aimed to gather the real understanding about a piece of reality, which belongs exclusively to the economic sphere. In another world, according to that second view, the only information that has an economic nature is the

object of the EI. One must admit that in case that the EI should be considered as an algebraic subgroup of the more general concept of intelligence, based on that economic topic restriction. In effect, the EI would represent just a particular type of intelligence, distinguished by the adjective economic, at the same level, for example, of the political intelligence, the business intelligence, and the military intelligence. However, as an algebraic subgroup, each theoretical consideration and propriety applicable to the more general concept of intelligence remains also valid for the EI. The different results obtained by attributing two different roles to the adjective economic do not represent a problem in a world where the economic aspect of the relationships between countries represents the main dimension of their interactions. In fact, in such a world, the EI could be considered as the most relevant and significant part of the IS. Thus, in any case, the essence of the EI consists in the activity of gathering valuable information (a scarce resource) and analyzing its hidden meaning to provide useful knowledge.

Now, having introduced those specifications, it is possible to proceed with the second step of the methodological approach used to organize the modern concepts of the EI, which is to present the different approaches to intelligence proposed by the literature. In fact, as above-mentioned, a multiplicity of expressions is used to identify the EI, although sometimes with diverse gradations of meaning. The literature, in particular, offers alternative terminologies, such as business intelligence, strategic intelligence, competitive intelligence, market intelligence, benchmarking, technology watch and knowledge management. Furthermore, diverse authors, from dissimilar fields of research, attribute slightly different meanings to the EI, which could be represented along multiple dichotomous directional lines. It is possible to accept an interpretation of intelligence, limited to the national level, which defines it as the economic activities carried out by the intelligence services of a country (Italian [54] and Spanish [55] approaches to the economic intelligence). The Italian general Carlo Jean and Paolo Savona, for example, states that the EI is part of the national security services [56]. Instead, on the opposite side of the dichotomous line, it is possible to agree with a different interpretation that considers EI as a system of collection, classification, and analysis of business data. A transversal dimension is represented by the public-private approach to economic intelligence, according to the French (post-Martre report), the Japanese, and the German academic traditions. Still, the literature is divided into other aspects, such as the economic intelligence purposes (to safeguard the "simple" national security as the EI before the Clinton reform of 1992, or, more extensively, to protect the national interest, in line with the French model of the EI); the methods of collecting economic information (exclusive use of open sources in compliance to the French definition emerging from the Martre Report [57], or also through illegal activities); the real nature of the activities carried out (only defensive, mainly achieved using the technology watch and the prevention of sharp practices by competitors, or with the coexistence of offensive activities, such as the economic and the industrial espionage). By classifying in a taxonomy several terminologies alternative to the EI, it is possible to individuate the most relevant characteristics [2] of the main recognized definitions, offered by scholars and practitioners, coherent (or at least compatible) with the essence heretofore determined. Furthermore, to find a correct and exhaustive representation of the essence of the EI, which has a single and unequivocal meaning, the following criteria, among those characteristics, are chosen for comparative analyses: (i) the object of the research (internal or external analysis); (ii) the time orientation (short or long term); (iii) the final users of the information (supranational

and national organizations, national governments, or actors of international business); (iv) the methods of obtaining the information (legal or illegal); (v) the source of information (primary or secondary); (vi) the transparency of the information (overt or covert). About the first point, it is worth to say that the several approaches to the EI have a focus on the investigation and research of information that belongs to the same organization. For example, knowledge management has a special emphasis on the data owned by an entity, without awareness of that. The technology watch, on the opposite, is interested more in the external environment. The time orientation is another important criterion to classify the most common significances of the EI. The more the definition offered by the academic literature tends to use the strategic instrument, the more the time dimension is positioned toward the long term (for example the strategic management). In the cases, instead, in which the approaches to the EI adopt tactical and operational instruments, the orientation is in the short term (for example the technology watch). The third criterion proposed is the final user of the information, because, as previously affirmed, the EI approach and methods could be applied indifferently at different levels to all the various actors of the international relations system. Business intelligence, and competitive intelligence, having roots and traditions connected with the corporate environment, are generally implemented by multinationals. The technology watch, instead, is a typical approach adopted by governments, or industry's agencies, as a tactic to interact with other state entities. About the methods of obtaining information, it is possible to discriminate the different approaches of the EI in the one group that collects data only through legal actions, one that has habits to collect information by using illegal arrangements, and another that satisfy their need of knowledge by using both kinds of activities. Thus the knowledge management, the market intelligence, the benchmarking and the business intelligence generally adopt only behaviors that are compliant to the law and the most common accepted rules; the strategic intelligence and the competitive intelligence are opened to both licit and unlawful actions; the technology watch approach to the EI is instead sometimes used by some countries as a dishonest instrument to stole knowledge from more developed countries. Another criterion to identify and evaluate the different definitions is the source of information, which could be primary or secondary research. The primary research is characterized by the fact that it involves going directly to a source, for example, by visiting sites (official or unofficial); survey (mail; online; assisted by a qualified person); interviews (face-to-face; telephone; internet); questionnaires (mail; online; assisted by a qualified person); observations (hidden or opened); focus groups; ethnographic research. The secondary research, instead, involves the collection of data and information, which have already been produced, gathered, organized and published by other subjects. It includes, for example, official data offered by national and international agencies; studies produced by universities and centers of research; reports published by trade associations. All the different approaches to the EI offered by the academic literature are based on both activities of primary and secondary research, in consideration of the fact that each of the two ways to collect information has some specific advantages (primary research tends to gather higher valued data, which could be even customized; secondary research generally results to be less expensive and easier to organize). However, the strategic intelligence, the market intelligence, and the competitive intelligence, respect to the others, result to give specific importance to the primary research, to take advantage against potential competitors. Fi-

nally, the last characteristic, which can be used for a comparative analysis of the dissimilar definitions of the EI concept, is the transparency of the information. The specific kind of data, and in the process the particular technique to collect the information, allows us to distinguish three different levels of intelligence: open-source intelligence (OSINT); "grey" intelligence; covert intelligence. The OSINT refers to the intelligence generated from public or open-source information, such as articles published in the media, governmental agencies' reports, and any other piece of knowledge provided by public studies; websites; thesis; books; maps; satellite images. The fact that this specific level of information is neither closed access nor clandestine does not mean that it is free. In fact, in some cases, to gain open-source data, it is necessary to burden some of the costs (for example the price to pay the information provider for acquiring specific knowledge). In consideration of the fact, as mentioned above, that the open source can provide upward of 80 percent of the intelligence needs, its importance and relevance are nowadays increasing. With the expression "grey" intelligence, practitioners refer to the blurred boundaries between public and private information. In the specific, grey intelligence encompasses those informal data that, notwithstanding the fact they are not specifically covert by protocols of secrecy, have some characteristics of confidentiality. The collection and the use of grey intelligence are not generally considered as illegal, but could generate some specific ethical or moral concerns. Covert intelligence, instead, represents secret information, whose access is limited to possessing precise and explicit authorizations, without which the use is considered forbidden and subject to penalties. The unauthorized use of covert intelligence is considered a crime (for example spying and espionage).

All the modern concepts used as synonyms of the EI above described attribute more or less importance to specific elements of the illustrated criteria. Thus, they represent special definitions focalized on specific semantic fields, and metonymies of a greater encyclopaedic concept of EI, which encompasses all the aspects of each criterion (internal and external analysis of covert and overt information, conducted by different actors, using primary and secondary researches with a short and long term orientation). That encyclopaedic concept represents the theoretical basis of a new unifying concept of the EI. In fact, by taking into consideration the same whole semantic field, but limited to a specific actor (special supranational or national organizations) and a precise scope (to support the decision maker), a new definition of the EI can be proposed: a systematic and well-organized process of identification of information needs, implementation of research activities, data analysis, and dissemination of knowledge, conducted by national entities or supranational organizations, to create and use informative asymmetries. The result is a lexicographic definition (the essence of the significance has roots in its etymological meaning) and hyponymy of the encyclopaedic concept of EI.

Conclusions. In the last half-century, the economic relations between countries have become very complex and difficult to manage. The globalization, the Fourth Industrial Revolution, and the development of the ICT has shaped the social environment and obligated the countries to find new strategies to interact with foreign national entities. The EI is a discipline developed to help the actors of the international economic relations' system to operate in this intricate scenario. In this article, the analysis of the EI concept has been conducted. A new scientific theoretical approach has been used to investigate the different contributes offered by the academic literature, and in the process, to create a theoretical basis of a new unifying theory of economic

intelligence. Because of a two-stage methodology, a lexicographic definition of the economic intelligence concept is proposed, which consists of hyponymy of a greater encyclopaedic concept of EI. That definition could be the basis for future researches, in consideration of the fact it encompasses all the criteria of different approaches about intelligence proposed by the literature. Thus, all the theoretical studies proposed by scholars and practitioners in specific semantic fields could be implemented in the developing models of economic intelligence. For example, social network analysis studies carried out by the strategic intelligence can be adopted by the EI (as defined in this article) to analyze the trading flow system among countries. The EI concept introduced in this article covers the whole semantic ground of the encyclopaedic notion, although limited to a well-defined actor: the national entities and the supranational organizations that operate in a more intricate network of global economic relations.

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ЕКОНОМІЧНА РОЗВІДКА: СУЧАСНА КОНЦЕПЦІЯ

В останні півстоліття економічні відносини між країнами стали складнішими для управління. Економічна розвідка – це нова складна й багатодисциплінарна концепція, запроваджена для допомоги країнам взаємодіяти за новим, більш складним сценарієм. Розвідка передбачає дослідження та знаходження інформативної асиметрії між двома суб'єктами для використання отриманої інформації з економічною метою. Це дослідження використовує новий науково-теоретичний підхід для вивчення концепції економічної розвідки, представленої різними внесками в академічній літературі. У результаті лексикографічне визначення концепції економічної розвідки пропонується як спеціалізоване тлумачення, що передбачає теоретичний підхід для формування інформації, розробленої для опрацювання стратегій міжнародних економічних відносин між країнами.

Ключові слова: економічна розвідка, міжнародні відносини; інформаційна асиметрія; знання; глобалізація.

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ЕКОНОМИЧЕСКАЯ РАЗВЕДКА: СОВРЕМЕННАЯ КОНЦЕПЦИЯ

За последние полвека экономические отношения между странами стали более сложными для управления. Экономическая разведка – это новая сложная и многодисциплинарная концепция, введенная для помощи странам взаимодействовать по-новому, более сложному сценарию. Разведка предполагает исследование и нахождения информативной асимметрии между двумя субъектами для использования полученной информации в экономических целях. Это исследование использует новый научно-теоретический подход к изучению концепции экономической разведки, представленной различными авторами в академической литературе. В результате лексикографическое определение концепции экономической разведки предлагается как специализированное трактование, которое предполагает теоретический подход для формирования информации, разработанной для разработки стратегий международных экономических отношений между странами.

Ключевые слова: экономическая разведка, международные отношения; информационная асимметрия; знания; глобализация.

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ГНУЧКІ МОДЕЛІ УПРАВЛІННЯ КОМАНДНОЮ РОБОТОЮ ІНЖИНІРИНГОВИХ ПРОЕКТІВ

Досліджено проблематику впровадження гнучких методологій у процес функціонування вітчизняних підприємств сфери інжинірингових послуг. Визначено основні причини переходу із традиційної каскадної моделі управління проектними командами на гнучкі технології, зокрема, Scrum та Kanban. Виокремлено основні етапи реалізації інжинірингової послуги на основі методологій Scrum та Kanban відповідно до рівня організаційної зрілості підприємства. Сформовано комбіновану адаптивну модель Scrum-Kanban, що надає змогу імплементувати принципи Agile в систему управління командною роботою на підприємствах сфери інжинірингових послуг.

Ключові слова: гнучкі методи управління, Agile, Scrum, Kanban, проект, проектна команда, управління проектами.

Постановка проблеми. Протягом багатьох століть змінюються принципи та підходи організування і функціонування підприємств. Незмінним залишається сам процес адаптації до умов зовнішнього середовища, що зумовлює розвиток новітніх організаційних структур. На межі тисячоліть на арену стрімко вийшов проектний менеджмент, у межах якого продовжують невпинно розвиватись нові моделі функціонування проектних команд. Зокрема, гнучкі моделі організування командної роботи знайшли широке застосування у світовій практиці. Водночас, вітчизняні підприємства, у своїй більшості, ще й досі використовують каскадні моделі управління, де процеси та перехід між стадіями організаційного розвитку здійснюється тільки після повного завершення роботи на поточній стадії, повернення на пройдені стадії не передбачається [5]. Виняток можуть становити підприємства сфери ІТ, телекомунікацій та Startup-орієнтовані організаційні утворення. Змінити таке становище можливо шляхом синтезу принципів Agile управління та підходів зниження опору змінам, у результаті чого стає можливим упровадження та розвиток новітніх систем управління адаптованих до реалій бізнес-середовища.

Дослідження актуальної проблеми формування адаптивної Agile-системи управління командною роботою зумовлено рядом факторів, зокрема [1, 11]: максимізація продуктивності праці; оптимізація рівня самостійності та автономії командної роботи задля формування відчуття командної відповідальності за результат; зниження ймовірності впливу негативних ризиків командної роботи; прогнозування успішності досягнення кінцевого продукту; підвищення якості продукту та процесу його створення; прискорення операційних і логістичних бізнес-процесів; реінжиніринг вітчизняних підприємств на інноваційний тип, орієнтованих на глобальний ринок (відповідно до євроінтеграційних процесів) згідно з інноваційно-інвестиційним кліматом тощо.

Мета статті – формування концептуальної моделі адаптивної Agile-системи управління, що поєднувала б можливість розкриття потенціалу кожного учасника команди і поступової імплементції принципів гнучких методологій у практику функціонування вітчизняних проектно-орієнтованих бізнес-структур, зокрема інжинірингових проектів.

Аналіз останніх досліджень і публікацій. Гнучкі підходи почало формуватись у 30-х рр. ХХ ст., коли фізик і статистик Уолтер Шухарт із Лабораторії Белла почав застосовувати цикли PDCA (Plan-Do-Check-Act) для вдосконалення продуктів і процесів. Надалі У. Шухарт передав основи такої ітеративно-інкрементної розробки своєму учневі, Вільяму Демінгу, який популяризував модифікований метод PDSA (Plan-Do-Study-Act) під час відновлення Японії після Другої світової війни. Залучення Е. Демінга в організаційний процес виробництва компанії "Toyota" привело до створення особливої системи "Toyota Production System", що в подальшому стала базисом низки методологій, зокрема: бережливого управління (Lean Management), виробництва "точно в строк" (just-in-time, JIT), кайзен (Kaizen), загального обслуговування (Total Productive Maintenance, TPM), теорії обмежень (Theory of Constraints, TOC) тощо [6, 13].

Вивчаючи компанії, які лідирували на ринку інновацій і випереджали своїх конкурентів, було виявлено командно-орієнтований підхід, який повністю змінив класичний процес розробки продукту. У цьому підході, замість класичної "естафети" з передачею товару за етапами від одного функціонального фахівця до іншого, застосовувався підхід командної роботи, коли кожен учасник постійно задіяний у процесі розробки продукту. Основною причиною еволюції зміни методології стали трансформації кожної високотехнологічної сфери. Із поширенням технологій комп'ютерних обчислень, удосконаленням аерокосмічних та автомобільних сфер, постало питання кардинальної зміни каскадної моделі управління проект-