CHAPTER «PHILOLOGICAL SCIENCES»

BUSINESS MODEL AS A SUBJECT FOR LINGUAL AND COGNITIVE ANALYSIS

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Abstract. Lingual analysis allows structuring and rationalizing human perception of the real world through the primacy of semantics, the encyclopedic nature of linguistic meaning, the perspectival nature of pure lexical meaning. Cognitive science focuses on human mind, assuming it has mental representations similar to computer data structures, and computational procedures identical to computational algorithms. Supposedly, human mind relies on such mental representations as declarative knowledge including logical propositions, rules, concepts, images, and analogies. Additionally, the mind uses procedural knowledge including operations such as search, matching, retrieval and deduction. The combination of lingual and cognitive analyses turns out to be an effective tool for providing a comprehensive approach to studying and deep understanding of language concepts that reflect the phenomena of the real world.

The paper deals with BUSINESS MODEL as a complicated economic concept, whose profound analysis and understanding is of great practical value for business analysis segment.

Proceeding from the above, lingual and cognitive analysis of the concept BUSINESS MODEL also requires an inter-disciplinary approach, related both to linguo-cognitive and economic studies. Thus, the paper

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represents an attempt to clarify the mental essence of BUSINESS MODEL, which is implied by diverse language units verbalizing this concept, and to give it a rational structured form that can be easily understood and used by skillful experts in the field of economics. The research also focuses on major stages of linguo-cognitive analysis, used for establishing the relationship between mental and language representation of BUSINESS MODEL as an extralinguistic essence. The analysis offered enables determining a generalized definition of the BUSINESS MODEL in terms of cognitive linguistics and business-modeling/reengineering. At the long last, the cognitive paradigm of modern linguistic studies gives linguists the possibility to discover extralinguistic reality, mechanisms of human thinking through the lenses of language data, and processes of coding and knowledge objectification on the world in language structures.

The relevance of the paper resulted from a very important scientifically practical task, namely the necessity to generalize the definition of the concept of BUSINESS MODEL in order to provide business-modeling and reengineering services to corporations.

The aim of the paper is to create the conceptual interframe net of BUSINESS MODEL; to determine semantic roles (actants) as part of propositions that form frames; to find out the structure of the universal BUSINESS MODEL. The research focuses on the concept BUSINESS MODEL and a set of semantic roles and connections between them that form the concept under examination.

Moreover, it has been established that BUSINESS MODEL belongs to semiotic fractal systems. The lingual and cognitive analyses gave an opportunity to figure out the preconditions for specification of top-down levels of the business-model as a multi-level construction with iterative nature.

1. Introduction

According to the doctrine of cognitive science and linguistics the language is embedded in the general cognitive capacities of humans. The lingual and cognitive (linguo-cognitive) analysis focuses on structural features of natural language categories (such as prototypicality, regular polysemy and homonymy, cognitive models and maps, mental images and concepts, and metaphor); the main principles of linguistic organization (natural essence and iconicity); the interaction between declarative data

(semantics) and procedural data (syntax); the experiential perception and pragmatic background of real language; and the relationship between language and thinking [23].

Chronologically, cognitive approach in linguistics appeared wayback in 1989. The pioneers of this approach are prominent American scientists such as Lakoff, Langaker, Dzhakendoff and others. Their ideas were reflected and further developed by a Russian cognitivist Kubryakova. According to her position, cognitive science «includes the descriptive systems, knowledge representation and information processing, at the same time including the study of the general principles of organization of human cognitive abilities in a single mental mechanism, and their constant relationship and interaction». There is a variety of interpretations and definitions of cognitive approach in linguistics and its categories. We can assert the interdisciplinary nature of cognitive research framework that relies on cognitive psychology, cognitive linguistics, philosophical theory of cognition, cognitive anthropology, cognitive sociology and other field-related sciences.

From the late 1950s until 1975 scientists treated cognition mainly as independent and self-contained symbol manipulation in cognitive psychology, linguistics, artificial intelligence, and cognitive science in general. Then the idea of embodied cognition appeared in the field of cognitive linguistics early in 1975. Since then, cognitive linguists, working with neuroscientists, computer scientists, and experimental psychologists, have been developing a neural theory of thought and language connection. It is asserted that people think with their brains, i.e., thoughts are physical and exist through functional neural circuitry. Human thoughts bear some meaning depending on the ways the neural circuits are connected to the body and characterize embodied experience. And finally, the so-called abstract ideas are objectified in this way as well, as is the language.

Due to the emergence and spread of modern recording devices, it became possible to study experimentally the processes of generation and perception of speech, and justify the results of experiments – the domain of psycholinguistics and theory of speech production. Thus, the scientific tradition emerged which focused on studying the connection of the concepts and words. However, until the mid-twentieth century, the term concept functioned only in philosophy. In view of the fact that the question of the nature of the meanings of words has always belonged to philosophy,

linguists insisted that a concept is a common value that requires deep analysis through not only philosophy but linguistics as well. In general, under the concept we understand the thought construct (clot thought), serving as an operational unit to explain the elements of information structure of our consciousness that reflects the knowledge and experience of a person in the form of mental lexicon («quantum of structured knowledge» according to Popova and Sternin). Various definitions of the concept can be found in the papers of such researchers as Arutiunova (1993), Stepanov (1997), Babushkin, Vezhbitskaya, Kubryakova, Nikitina, Teliya, Bulygina and others. Being an element of knowledge, the concept allows us to represent the relationship between language and reality reflected in its units.

2. Research methodology

This paper heavily relies on linguistic toolkit, based on cognitive research methods, namely *semantic* and *conceptual* analysis, and seeks to formalize the knowledge of BUSINESS MODEL as a concept.

Specifically, semantic analysis enables linguists to figure out the meaning of linguistic input (construct meaning representations), process language to produce common-sense knowledge about the world (extract data and construct models of the world). Lexical semantics focuses on meanings of component words – word sense disambiguation (e.g."entity" in business or mathematical sense). Compositional semantics studies how words combine to form larger meanings. Roughly speaking, semantic analysis deals with understanding language.

The semantic (or component) analysis makes it possible to find out all the components of the definitions of the word "business-model" based on massive lexical data and thesauruses including synonymous chains, lexical-semantic groups and fields [20]. The semantic analysis is followed by conceptual analysis i.e. the analysis of the reality with the help of the discovered and pre-analyzed word definitions (concepts) [15]. It should be noted here that we do not consider conceptual analysis as a tool of analytic philosophy, ontology, formal analysis, content analysis, cultural analysis, discourse analysis, purely linguistic analysis, or formal text analysis, we only rely on methodology of each of these studies when relevant to the research. Conceptual analysis is supposed to be a means of explicating and defining, setting the extent of meaning to ordinary and concrete/abstract expressions.

3. Presentation of the main research material

The cognitive paradigm of modern linguistic studies allows one to study and explore the extralinguistic reality, mechanisms of human thinking through the lenses of linguistic data and language units, and processes of coding and knowledge objectification on the world in language structures. Language and thinking are two inter-related complementary essences that co-exist and constantly cooperate. Therefore, human brain operates the information about the language as a semiotic system and also the information coded in the language itself – that means knowledge of the world that is included into definitions or concepts which are activated with the help of language units [6; 13]. As a result, it is possible to describe the principles of information ordering in the human mind by means of studying the definitions of language units.

4. Pre-theoretical background

It should be pointed out that the term **concept** is a generic term for various mental essences such as images (generalized sensual-illustrative images), notions (thoughts about the most common, essential features of an object or ideas as a result of the rational cognition), gestalt (complex, integral, functional structure that includes emotional and rational elements), the scheme of actions [6, p. 82]. Therefore, operational units of the cognition with different contents can act as concepts [12, p. 143; 19, p. 56–58]. Consequently, the concept is a unit of the cognition of the world that has different degrees of information content. Concepts are dynamic units that "can change and reflect human experience and at the same preserve the integral structure" [21, p. 77].

BUSINESS-MODEL is an object of reality which has its conceptual structure that consists of a set of notional elements and connections between them [7, p. 54]. The lexical definition of BUSINESS-MODEL includes some part of information about extralinguistic essence, the volume of which is to be clarified. For example, according to a standard vocabulary definition BUSINESS MODEL is "a set of standardized ways of conducting a business by an organization, the rules of running this business that underlie the company's strategy, as well as the criteria for evaluating its business performance" [24].

To make the research truly comprehensive it is necessary to take into account extra-linguistic data on business-modelling. Economically, in its

prosaic form, any business model incorporates three segments: production (things necessary to manufacture something: design, raw materials, manufacturing, labour, etc.; sales including strategies and techniques: marketing, distribution, logistics, service/goods delivery, and processing the sale; and financial aspects (fiscal operations: pricing strategy, payment methods, payment timing, etc.

Obviously, a business model is simply an exploration of what costs and expenses one has to bear and how much on can charge for the finished product or service being offered. A workable and effective business model must be profitable (a manufacturer or service provider gets more money from customers/clients than it costs to make the product/provide the service. Every new business model is dynamic: it can refine and improve any of the above components.

What is relevant to the study is that most often one can take a standard existing business model and adapt it to the needs appearing. Here is where linguo-cognitive approach come out to help.

To generalize, BUSINESS MODEL can be thought of as a sustainable way of doing business. Here sustainability means the business ambition to survive over time and create a successful and profitable entity in the long run. The application of business models can be very diverse and is a meaningful concept both in relation to public-sector administration, non-governmental organizations, schools and universities and individuals (physical entities). The extralinguistic meaning of BUSINESS MODEL, in contrast to the vocabulary one, is an open body of knowledge, the components of which have varying degrees of relevance to clarify this essence [28]. A number of existing terminological definitions of business model can be found in the work of Y.S. Vykhodets and N.Y. Rovinskaya [2, p. 69–70].

Proceeding to cognitive tools and terminology, we need to determine some basic notions of cognitive science.

In cognitive linguistics concepts are the building blocks of thinking process. As a result, they are essential to such psychological processes as categorization, inference, memory, learning, and decision-making [23].

It is necessary to mention the notion of a **domain** that corresponds to an “open body of knowledge”, which means “any integral area of conceptualization towards which the semantic structure is characterized”

[7, p. 54; 29, p. 547]. Domain is a conceptual structure that serves as a context (background) to highlight (single out) some particular concept.

The idea of domain follows from the central principle of cognitive semantics, in accordance with which the concept should not be considered as an isolated, discrete unit of human perception or experience. The concept can be adequately explained only in terms of background knowledge structures, part of which it is. Domain is the most common term used to refer to such background structures.

Thus, a single concept determines the existence of a number of more specific concepts; they, in turn, create domains within which other concepts appear, and so on. Such conceptual hierarchies can be continuously completed and change in scope, as long as human mental representations and experience build up and change.

Thus, some concept becomes a potential source for a number of more

specific concepts, these concepts, in turn, create domains within which other concepts appear, and so on. As human mental representations increase or improve, conceptual hierarchies of various volumes and degrees of complexity emerge. To analyze these hierarchies, it is necessary to distinguish between domains at different levels. In this relation we can talk about **conceptual sphere** (the entire analyzed conceptual field), **domains** (information clusters within the conceptual sphere), and concepts (often denoted by a single word or other linguistic unit).

To interpret the meaning of a linguistic unit representing a specific concept, as a rule, one needs to extract knowledge related not to one discrete domain, but to a certain set of domains. The domain that makes up the immediate scope of the concept, is correlated with other domains containing all the knowledge needed to understand the concept, ie make up the maximum scope of the concept (maximal scope)

For example, BUSINESS MODEL can be a concept in the BUSINESS domain, on the other hand, BUSINESS MODEL itself can become a domain for such concepts as an ENTERPRISE, ENTREPRENEUR, CONSUMER, OFFER, INFRASTRUCTURE, PRODUCT, etc.

Accordingly, BUSINESS MODEL as a concept / domain will include all the diverse information about this phenomenon – about its components, properties and relationships, about its involvement in various activities, etc.

Conceptual structure of BUSINESS MODEL. In order to build the conceptual structure of BUSINESS MODEL, it is necessary to use the notions of frame and proposition [3; 4; 7]. According to Ch. Fillmore **frame** is a set of concepts connected in such a way that in order to understand one of them you need to understand the whole structure in which they are involved [25]. The relations between the two concepts form a **proposition**, which is the basic element of the frame and at the same time an elementary frame. The semantic-syntactic structure of a proposition is a relational structure that has two types of components: terms or actants that represent objects, faces, phenomena, etc., in the general case – entities. In the case of a business model, such entities are the participants of the business process and the involved objects, phenomena, etc.; predicates that display the properties of entities and the relationship between them – actions of business participants performed by themselves, in relation to and over other agents (people), objects, etc.

Terms, depending on the place in the predicate structure, can significantly change their semantic meaning. For example, "COMPANY 1 sold goods to COMAPNY 2" and "COMAPNY 1 bought goods from COMPANY 1", where the act of sale/purchase remains the predicate.

Predicates can also differ from each other in the number of arguments (single, double, triple, rarely more than three) and order. First-order predicates use terms as arguments only (COMPANY 1 grows), predicates of higher order can use other predicates (COMPANY 1 trades with COMPANY 2).

The inventory of semantic roles can have a varied classification and range (cf. in particular [1, p. 370–377; 16, p. 587–588]), depending on various approaches and theoretical problems in [17, p. 160–165; 25]), which is largely determined by the specific needs of its use. At this point, the role is an invariant of many morphosyntactic methods of coding a participant; semantically, this is also a generalization of the participant's functions in a range of situations denoted by a group of predicates.

Semantic roles as part of BUSINESS MODEL conceptualization. Linguistically, semantic roles show various semantic relations that a noun or noun phrase has with respect to the action or state described by a predicate of a sentence. In a number of linguistic theories semantic roles are also expressed by terms like thematic roles, participant roles, theta roles, and case frames (Fillmore 1968), theta-grids (Stowell 1981) and deep cases (Fillmore 1966, 1968) etc. In order to clarify the multiple relations between constituents of

the situation and overlapping relations within semantic roles, in this research, we provide accurate descriptions for semantic roles and specific features to distinguish one role from the other. Based on the multitude of semantic roles described in linguistics, the following set is relevant to the conceptualization of the BUSINESS MODEL: ACTOR (AGENT) BLOCK, PATIENT BLOCK, MEANS (TOOL) BLOCK and CIRCUMSTANCES BLOCK. In the process of creating a business model, the task of linguistics is to determine all the blocks and their content, and the task of a business expert is to successfully / optimally combine block elements (semantic roles):

ACTOR is a causal source which can be expressed by alternative hyponym roles **AGENT** and **CAUSER**. Agent is a particular actor who performs a deliberate controlled action and has a physical, visible effect on its object. In language it can be a noun or noun phrase. In this paper we employ the term **AGENT** as somebody / something that produces or is capable of producing an effect: an active or efficient cause; somebody / something that is authorized to act for or in the place of another.

AGENT BLOCK can operate the following roles:

– EFFECTOR (fulfills an order) – BROKER / INTERMEDIARY;

– COAGENT (collaborates) – PARTICIPANT OF UNION OF ENTERPRISES, CONGLOMERATE, CONCERN, CONSORTIUM, HOLDING, FINANCIAL AND INDUSTRIAL GROUP, etc.;

– CONTRACTOR (reference standard) – AGENT-COMPETITOR;

– CAUSATOR (creates / produces) – CREATOR (entrepreneur, producer, inventor);

– INITIATOR (sells) – DISTRIBUTOR / TRADE ORGANIZATION (trader, dealer, wholesaler, retailer);

– POSESSOR (owns) – OWNER OF TURNOVER AND NON-TURNOVER ASSETS;

– ELEMENT (counteracts the agent) – RISK FACTORS (external and internal, taking into account the specifics of each type of agent).

PATIENT is an object/person that is affected by some action or undergoes a physical change. It is a noun or noun phrase syntactically, and the direct object of a two-place predicates.

PATIENT BLOCK includes:

– BENEFICIARY (a person or an object which gains or benefits from an action or a person) – CLIENTS, PARTNERS;

– FACTITIVE (STATAL PERFECT) (forms, mutates, disappears) – COMPANY PRODUCTS, such as GOODS and SERVICES.

Means is a medium or a method by which another action can be accomplished or an end achieved. It is the hypernymous concept of instrument. Means is an N, NP, V, VP or S syntactically,

MEANS is a medium or a method by which another action can be accomplished or a goal achieved. More specifically it implies **TOOLS**. It can be expressed as a noun, noun phrase, verb, verb phrase syntactically.

TOOL BLOCK includes:

– RESOURCE (takes part in agent's action without being its result) – ASSETS;

– METHOD – DISPOSAL OF ASSETS (preservation, isolation, rent, sale, liquidation, alienation, etc.).

CIRCUMSTANCES imply quite a diversified set of conditions, facts, or events accompanying, conditioning, or determining another concomitant/ other concomitants. Any circumstance is a piece of evidence that indicates the probability or improbability of an event (e.g. sale), being the sum of essential and environmental factors (as of an event or situation).

CIRCUMSTANCES BLOCK includes LOCATIVES (ablative / region (starting place), TARGET (directive) / REGION (final place), transitive / level / region (intermediate place); ROUTE/ DIRECTION – on determining LOCATIVES, the geography of the company activity from the closest surrounding to far-abroad countries can be visualized. After determining LOCATIVES, the geography of both AGENT (company) and BENEFICIARY (clients and a consumer market) can be formed including the REASON (reasons for the company/ department activity, etc.).

Below are given examples of constructing an action frame consisting of a proposition with semantic roles and describing a causative situation: (1) "SOMEONE-CAUSATOR (producer) makes (manufactures) a SOMETHING-FACTITIVE (candy) THERE-PLACE (at a factory) using a SOMETHING-TOOL (equipment)"; (2) "SOMEONE-INITIATOR (online store) makes (sells) SOMETHING-PATIENT (drugs) THERE-PLACE (in the city of Kharkov) using SOMETHING-TOOL (Internet);

By framing thematically related propositions with attributed semantic WE can structure the original concept of BUSINESS MODEL (Figure 1):

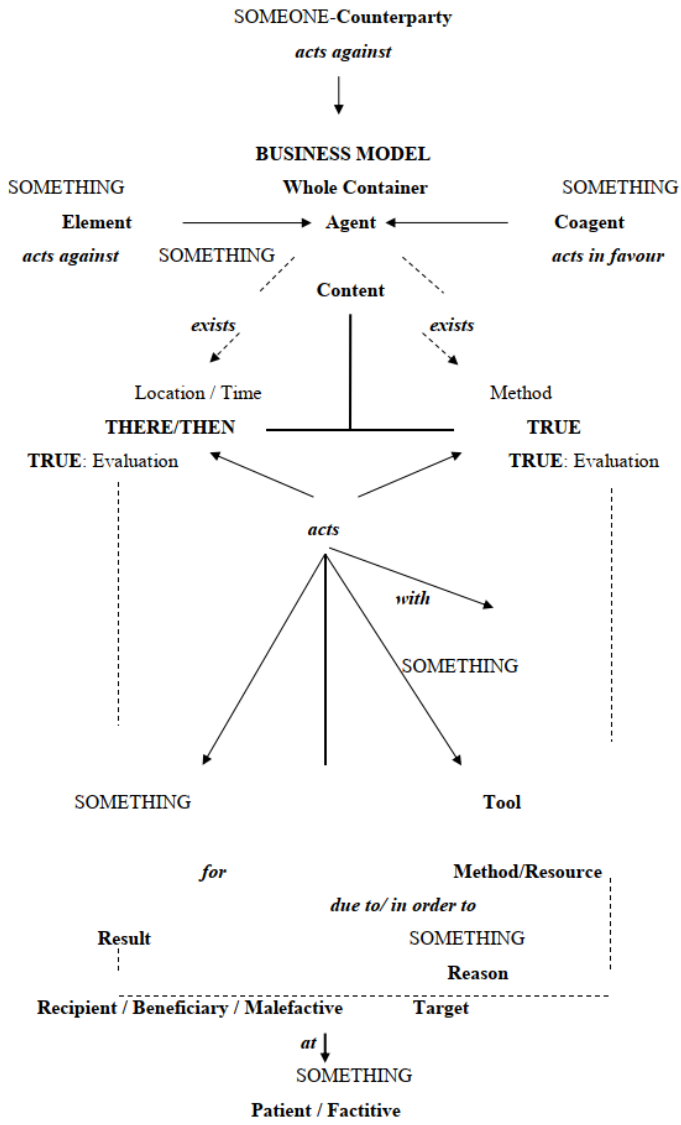

Figure 1. Schematic conceptual interframe network for BUSINESS MODEL

Fractality of BUSINESS MODEL as a concept. A fractal is a mathematical notion denoting a shape whose basic form reappears in different scales and it is defined by a recursive process that generates the same structures, independently on a specific scale, combining at the same time structural irregularity and consistency. The term was coined by the mathematician Benoît Mandelbrot in 1975. In a real world it can be exemplified with such a thing as forest ecosystem from seeds and pinecones, to branches and leaves, and to the self-similar replication of trees, ferns, and plants throughout the ecosystem. It has been revealed that fractal structures are present in natural language. Specifically, descriptions in language are invariant under scale. In other words, the same terms may be used to describe things and situations at different levels of resolution.

Having considered a combined interframe net of BUSINESS MODEL, we concluded that it represents a semiotic fractal system as new details appear when its components are studied precisely [22]. The structure of BUSINESS MODEL has properties of fractality (auto-similarity), i.e. small signs-parts similar to large ones begin to lay over large elements-signs. Fractality suggests that specific structures, or patterns, happen repeatedly at lower levels in such a way that parts at any level are similar to the whole in form (e.g. a Koch snowflake, a frond or a cauliflower head). Thus, the form of the whole resembles itself at any level of the selected range. In this regard, the main method for constructing fractals in mathematics is iteration, or a continuous repetition of a certain geometric operation [7, p. 52–69; 10, p. 155–159].

Therefore, a frame BUSINESS-MODEL repeats itself in each of its components through the same set of interdependent semantic roles. Only a partial rearrangement is possible. That is, this frame will serve as a domain / background for other concepts, structured as frames. The centre of an interframe net of BUSINESS-MODEL is AGENT or a subject of action. It means that BUSINESS-MODEL itself is AGENT as it functions/ works. As an agent, BUSINESS MODEL works for BENEFICIARY (for example, an enterprise). On the other hand, ENTERPRISE itself is AGENT working to satisfy requirements of BENEFICIARY (for example, clients and consumers). In addition, the enterprise AGENT can perform one of the semantic roles prescribed by its functions, i.e. to be CAUSATOR (produce goods); INITIATOR (sell finished goods); POSESSOR (own an area for producing/ selling goods); EFFECTOR (find customers for CAUSATOR).

Therefore, BUSINESS-MODEL is a model consisting of similar models that structure self-knowledge at lower levels.

Practical value.

The research conducted focused mainly on conceptual analysis bearing linguistic value and helping to understand the cognitive processes involved in human thinking and world perception. However, there is extralinguistical practical value of the study, namely for business and economy. Using the frame of business model any business entity can structuralize, elaborate and implement a particular business model to satisfy his/her needs. Now it will be enough to rely upon the generalized frame developed and described in this paper. What we offer is to exploit the algorithm divided into four steps (here come semantic roles and the relations between the correspondent terms).

So, how linguistics and cognitive approach can be of use for business and economy? The answer is in the following recommendations for the experts on building a business model.

Step 1. Identify the AGENT block or WHO AM I? Who and what surrounds me?

– EFFECTOR (implements the task or the arrangement) – broker / intermediary;

– COAGENT (collaborates) – the participant of the association of enterprises, conglomerate, concern, consortium, holding, financial and industrial group, etc.;

– CONTRAGENT (rival agent) – competitors;

– CAUSATOR (creates / produces) – creator (entrepreneur, producer, inventor);

– INITIATOR (sells) – distributor / trade organization (trader, dealer, wholesaler, retailer);

– POSESSOR (owns) – owner of turnover and non-turnover assets;

– The role of the ELEMENTIVE (counteracts the agent) is also associated with the agent – RISK FACTORS (external and internal, taking into account the specifics of each type of agent).

STEP 2. Determine the PATIENT block or WHAT and WHO am I doing business for?

– BENEFACTIVE (benefits) – customers, partners. each type of agent will have its benefits;

– FACTIVITY (RESULT) (forms, modifies, disappears) – firm activity product: GOODS (consumer and industrial) / SERVICES (production – engineering, leasing, equipment maintenance and repair; distribution – trade, transport, communications; professional ones – banking, insurance, financial, consulting, advertising; consumer ones – the so-called mass services related to household and pastime; public television, radio, education, culture, medicine).

STEP 3. Identify the TOOL BLOCK or WHAT do I have? HOW DO I MANAGE THIS?

– RESOURCE (participates in the action of the agent, but is not its result) – ASSETS (according to purpose – material, intangible, financial; according to type – negotiable (current) and non-current; according to the services for certain types of activities – operational and investment, according to the nature of sources of asset formation – gross and net; according to the ownership of assets – own, leased; according to the degree of liquidity – absolutely liquid, highly liquid, medium-liquid, slightly liquid and non-liquid.

– METHODS deal with the analysis of the company's ASSETS carried out according to the distribution of all the assets of the company into core assets, fixed assets, intangible assets, objects and facilities that are being built by the company and are to be used to carry out the core business activities, and non-core assets of the enterprise that are not related to its core business.

With the correct assessment of the major assets of the company, the following disposal METHODS can be applied to non-core assets: PRESERVATION – preservation of a non-core asset in the ownership of the company for the purpose of their subsequent integration into the activities of the company which are aimed at the implementation of its strategies;

SEPARATION – the establishment of a new legal entity together with other individuals and / or legal entities or without their participation; REORGANIZATION in the form of spin-off, with transfer to the new legal entity of a non-core asset; reorganization in the form of a division with the transfer to one of the new legal entities of a non-core asset; TRANSFER of a non-core asset as payment for the authorized capital (additional shares) of an existing legal entity; LEASEING of a non-core asset; DEVELOPMENT – the development of a non-core asset through the

implementation of investment projects; SALE – onerous alienation of a non-core asset; BARTER – compensation for the alienation of a non-core asset in exchange for other property; GRATUITOUS ALIENATION – gratuitous transfer of a non-core asset to state or municipal property; LIQUIDATION – dismantling, destruction, etc. of non-core asset, including the subsequent possible sale of individual components.

Analysis of the production and sales of products / services may include such methods as ASSESSMENT of the dynamics indicators of the volume, structure and quality of products (works, services); REVISION of the balance and optimality of plans; IDENTIFICATION of how the main factors affect the indicators of the volume of production; STUDY of the relationship between the rhythm of production and the volume of output and production efficiency; DEVELOPMENT of the most important measures for the use of on-farm reserves to increase the growth rate of products, improve its range and quality.

STEP 4. Define THE BLOCK OF CIRCUMSTANCES or THE LOGISTICS I do.

– LOCATIVES (ablative / sphere (starting place); purpose (directives) / scope (final place); transitive / level / sphere (intermediate place); route / direction.

Defining LOCATIVES, one can get the geography of the company business, which may include the following elements: city (city) of the enterprise; the area of the enterprise assets; region; adjacent regions; the whole territory of the country; neighboring countries; foreign countries

In turn, by defining LOCATIVES, it is possible to form the geography of not only the AGENT (company), but the BENEFICIARY (customers or the consumer market). Obviously, transforming one element, the company will have to think about the transformation of the remaining elements of the business model.

– REASON or WHY am I doing this?

- to increase the competitiveness of the products;
- to improve the market image;
- to focus on new strategic units and market segments;
- to conquer new markets;
- to increase cash flow;
- to reduce the resource consumption for the product;

- to stand up to import restrictions;
- to provide regional diversification;
- to protect market positions or expand the company network;
- to ensure long-term growth in market share; short-term growth in turnover;
- to make profitable financial investment, etc., which will potentially lead to the innovative activity of the enterprise.

Having defined the concept of BUSINESS MODEL using lingual and cognitive approaches, we have to mention the transformation of business models both from the point of view of linguistics and business.

Nothing in our world remains stable for a long time. The business model represents all static elements of the management system within a company (that is, the entire internal environment of the company, controlled and lead by management), except for the dynamic ones, the so-called business strategies. If the company's strategy is wrong, then no business model will help it, no matter how balanced and effective its conceptual structure may be. If the company's strategy is viable, then its success depends on whether the management is able to transform the business model for new strategic objectives. During the transformation, the sequence of the changes is important. Once the strategy has been developed, changes need to be made in the organizational structure. After defining the structure and powers of departments, one is supposed to design an updated business model (with new semantic roles attributed). Here is where the issue of business transformation appears.

Transformation has a number of definitions in various sciences: an act, process, or instance of transforming or being transformed; the operation of changing (as by rotation or mapping) one configuration or expression into another in accordance with a mathematical rule; the formula that effects a transformation; an operation that converts (as by insertion, deletion, or permutation) one grammatical string (such as a sentence) into another; genetic modification of a bacterium by incorporation of free DNA from another bacterial cell, also: genetic modification of a cell by the uptake and incorporation of exogenous DNA

In linguistics, this is the rule by which derivatives are obtained from the so-called nuclear sentences of a language. Thus, the **transformation of a business model** can be metaphorically defined as the process of

embedding other elements into a certain nuclear business model, which leads to the emergence of new inherited characteristics of an enterprise / donor business. In other words, business model transformation results in a new business model derived from some nuclear one. At the same time, the principle of fractality is preserved, that is, the same elements are built into the nuclear business model, which are stored at different hierarchical levels of the business model and differ only in their set (combination).

The set of roles in each block predetermines the further relationship – the position / positions of other roles in each subsequent block and vice versa. In view of this, the transformation of a business model is presented as a mutually determined choice of certain elements in each block, where the combination plays an important role. The task of linguistics is to determine all blocks and their content, and the task of a business expert is to successfully / optimally combine the elements of the block (semantic roles).

However, we should warn business experts that in some cases, changes begin and end with the reshuffling of the semantic role blocks and their constituents – physically new divisions are introduced, existing ones are merged or split, accountability changes. A new approved structure is approved, after which the changes are considered successful. At the same time, the dynamic side of the process is not taken into account. Interaction of departments with each other, unregulated information flows and document circulation between departments remain opaque and conflicting. In this case we have another portion of frame theory – procedural knowledge (scripts and scenarios) that must be specified, namely causal-effect connectivity among a sequence of events in the script.

The transformation of a business model is an activity where many specific incoming elements of the business environment are combined with each other, performing new roles, functions, generating new business models focused on achieving new goals and results. To understand how this activity is carried out, one needs to try to structure the business model and determine the constituting elements. For this purpose, linguistics offers tools related to cognitive studies of language and case grammar. It has been established that transformation in the language means the deployment of the deep structure of the sentence into the surface one with the help of an inventory of semantic roles. This process can be applied to transforming some basic (operating) business model into some other, refined, improved or

more sophisticated business model. This is achieved by isolating the static elements of the business model (corresponding to definite semantic roles) and embedding them in a dynamic situation (combination), e.g. Boeing company acquired KLX in May 2018 to expand its presence in supply chain management [31]. This paper focuses mainly on BUSINESS MODEL as a multi-element conceptual framework, but it would be of great interest to research into cognitive representation of business model transformations based upon semantic role inventory.

5. Conclusions and prospects

Cognitive linguistics is an important interdisciplinary branch of cognitive science, that is closely connected to linguistics. It is also considered to be an approach to language analysis, which views language as a kind of cognitive action, and studies the formation, the meaning, and the rules of language with cognition as its essential part. Of great significance is the possibility to apply cognitive and lingual approaches to any field of human activities. This gives a much better understanding of how humans perceive the world, form mental representations and gain new experience.

The lingual and cognitive analysis of BUSINESS MODEL is a technique that can be applied to boost and advance the study of this phenomenon from the standpoint of economic disciplines. It helps to clarify the mental essence behind the diverse language units by which the concept is expressed, and give it a rational and ordered form.

In terms of cognitive linguistics BUSINESS MODEL is a complex construct of fractal nature in the form of a conceptual interframe network consisting of semantic roles (actants) and a specific set of connecting propositions (connections) involved in the iteration multiple reproduction) process.

The research prospects can be seen in further specification of a frame structure of the concept/ domain BUSINESS MODEL for studying processes of business model transformation. The idea is to retain the frame system of a BUSINESS MODEL as a basic structure for events/actions to be taken in course of its transformation, and then to organize a script specifying the normal way of events happening in the specific situation via connecting some concerned lower level frames with causal relationship. The data received will form the basis for creating an interdisciplinary conceptual apparatus of BUSINESS MODEL.

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