

Successful Diffusion and Adoption of Innovation as a Means to Increase Competitiveness of Enterprises

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The context of innovation research (Boden, 1991; Slater, Narver, 1994; Bessant, 2003, Trott, 2003 and others) in theoretical as well as practical levels reveals the unity of researchers' opinions stating that innovation is manifested in the interaction of the scientific research base, technology development, and market needs. When studying the latter aspect (Porter, 1985; Sounder, 1988; Baker, 1999; Jakubavičius, 2003; Hoffman, Czinkota et al., 2005 and others), more and more often the innovation creation process is chosen as the scientific research object. When evaluating cases of innovation failure, attention is drawn to the management of the innovation creation process whereas enterprises experience much bigger losses due to innovation that failed during the process of diffusion and adoption. Therefore it is important for enterprises to seek exclusiveness by innovation to find ways that would allow increasing the probability of successful diffusion and adoption of innovation. On this basis this article analyses the following scientific problem: what are the factors that determine successful diffusion and adoption of innovation in the market, what are their links to the process of diffusion and adoption of innovation and outcomes of consumer behaviour? The aim of the article is to identify and substantiate theoretically the factors that determine successful diffusion and adoption of innovation, revealing their importance for increasing competitiveness of enterprises.

Striving to achieve the formulated aim, firstly analysis of the current research level of the problem of diffusion and adoption of innovation is performed in the article. Its results show that most identified factors that determine innovation success in the market are attributed to the process of innovation creation. In this context a question arises: what are the factors that determine success of adopted innovation during its further diffusion in the market? Therefore a more detailed analysis of factors, related to the diffusion process, that determine successful adoption of innovation is performed. Elements of the process of diffusion of innovation identified in the scientific discussion – innovation, communication, social system and time – are used for this study. Besides during the analysis the aim to reveal the link between factors that determine innovation success and the identified stages of the process of adoption of innovation as well as categories of adopters is pursued. Having summarized the results of the performed theoretical studies, proposed description of factors that determine successful diffusion and adoption of

innovation is made. This may be called the main result of the scientific research that unites factors that may be attributed to the process of innovation creation and new factors that were identified based on separate elements of the process of diffusion of innovation, all of which determine successful adoption of innovation. It is presumed that the systematic approach to factors that determine innovation success in the market substantiated in the article may be a clear methodological reference to increase competitiveness of enterprises that strive for exclusiveness through innovation.

Keywords: *innovation, diffusion and adoption of innovation, factors of success, competitiveness of enterprises.*

Introduction

In the context of contemporary market changes if enterprises seek to stay in the competitive environment, to ensure constant growth, and to achieve economic success, prediction of consumer needs is not enough. It is important to create new offers and to find new ways of satisfying them.

The constantly changing business environment, decreasing product lifecycle, globalisation of world economies, and fast technological development determine the need to find exclusiveness that would ensure competitive advantage, linked with innovation. Under such conditions of transformation the role of acknowledging and successful managing of the processes of creation, diffusion and adoption of innovation increases. Research of processes of creation, diffusion and adoption of innovation are essential for all participants of the dynamic market, especially since with the fast change of consumer needs and development of technologies not all offers and methods created and found by enterprises striving for exclusiveness by innovation are acknowledged and adopted by consumers. Results of research performed by researchers, who study innovation, show that consumers do not acknowledge and adopt 67–80 % of innovative offers (Robertson, 1993; Baker, 1999; Cooper, 2001; Kotler, Armstrong, Saunders, Wong, 2003; Hoffman et al., 2005; Winer, 2007 and others).

The research problem. The interpretation of innovation diffusion and adoption solutions presented in the scientific discussion is characterised by varied attitudes and ambiguity. Problems of defining factors that determine

successful diffusion and adoption of innovation become essential in this context. Results of research performed up to the present time enable to state that during the studies of factors that increase the probability of success of innovation mastering most attention was given to the process of innovation creation (Kinnear, 1995; Trott, 1998; Tidd, Bessant, Pavitt, 2001; etc.). Based on results of research of such nature success factors related to innovation design, manufacture, quality, and the management of the process of creation are identified. Meanwhile possibilities of diffusion and adoption of innovation and factors that determine success are studied rarely or fragmentarily emphasizing the moment of introduction of innovation to the market and leaving out their further development (Zikmund, Amico, 1993, Kinnear, 1995; Baker, 1999; Tidd et al., 2001; Cooper, 2001; Kotler et al., 2003; Hoffman et al., 2005; Winer, 2007 and others). This grounds the scientific novelty of studying successful diffusion and adoption of innovation and enables to formulate the scientific problem studied in the article in the following way: what are the factors that determine successful diffusion and adoption of innovation, what are their links to the process of diffusion and adoption of innovation and outcomes of consumer behaviour?

When solving the identified problem, **the objective of the article is** to identify and substantiate theoretically the factors that determine successful diffusion and adoption of innovation, revealing their importance for the increase of competitiveness of enterprises.

The research object is factors that determine the success of diffusion and adoption of innovation.

Research methods used are systematic and comparative analysis of scientific literature.

Current research level of the problem of diffusion and adoption of innovation

The concept of diffusion and adoption of innovation. Analysis of scientific literature shows that most innovations that experience failure fail during the process of their creation. But specialists who research innovation notice that losses experienced by enterprises because of failure of innovation introduced to the market are a lot greater than losses experienced when innovation fails during creation. According to Baker (1999), introduction of innovation to the market is the most expensive stage of the process of innovation creation. Meanwhile Hoffman et al. (2005) notice that even 45 % of innovations introduced to the market experience failure. According to Baker (1999), approximately 35 % of innovations that have passed the creation process fail. Kinnear (1995) states that only 56 % of innovations introduced to the market still exist in it after five years, i.e. 44 % of them fail during their introduction to the market.

Having become acquainted with the material of scientific studies, an opinion starts forming that introduction of innovation to the market is defined by authors with the term *the process of diffusion of innovations*, and control of success of innovations in the market is related to *the process of adoption of innovations* (Zikmund et al., 1993; Solomon, Stuart, 1997; Antonides,

Fred van Raaij 1998; Schiffman, Kanuk, 2004; Solomon, Bamossy, Askegaard, 2002; Lamb, Hair, Daniel, 2004; Hoffman et al., 2005 and others).

During the process of diffusion of innovation, innovations are diffused to members of the society in a certain moment in time through the media – i.e. communication channels. The following *elements of diffusion of innovation* are identified in scientific literature: *innovation, communication channels, social system, and time* (Baker, 2001; Schiffman et al., 2004; Bakanauskas, 2006, etc.). Whereas during the *process of adoption of innovation* consumers pass through the following stages of behaviour in sequence: *awareness, interest, evaluation, trial, adoption / rejection, and confirmation – they adopt or reject diffused innovations* (Schiffman et al., 2004; Solomon, Stuart, 1997 and others).

Summarizing all reviewed scientific studies, firstly it may be stated that the possibility of joining the process of diffusion of innovation and the process of adoption of innovation into one *process of diffusion and adoption of innovation* may be noticed in scientific works. Secondly, *insufficient attention of specialists who research innovation towards the process of diffusion and adoption of innovation and big influence of this process on the success of innovation in the market may be identified as the essential precondition of further studies of successful diffusion and adoption of innovation.*

Success / failure factors as the research object of diffusion and adoption of innovation. Innovation success / failure factors were more or less researched by Zikmund et al. (1993), Kinnear (1995), Baker (1999), Tidd et al. (2001), Cooper (2001), Kotler et al. (2003), Hoffman et al. (2005), Winer (2007) and other researchers who studied innovation. Having reviewed research results of the above mentioned authors the following *factors that determine innovation success* are identified: uniqueness and exclusiveness of innovation, strong and clear market orientation, thorough preparatory work, clear conception of innovation, high quality of performed work, correct organisational structure and favourable inner climate, optimal amount of performed projects, concentration and sufficiency of resources, a plan of innovation adoption that is well worked out and based on resources, interest of the highest leadership of the enterprise, proper time of innovation adoption, detailed process of innovation creation, possible technical problems predicted in time, predicted actions and behaviour of competitors, attraction of the target segment, product price that matches consumer expectations, sufficiency of objectivity among members of the innovation creation process.

The performed analysis shows that *most identified success / failure factors of innovation in the market are related to the process of innovation creation.* In this context aspects of market analysis and recognition of consumer wishes and needs are emphasized, importance of innovation design, manufacture, quality, price, organisation of creation process and planning are highlighted. Although scientists who research innovation acknowledge that *factors that determine consumers' decision to adopt or reject innovation are related to the process of creation as well as the process of diffusion and adoption* (Kinnear, 1995; Baker, 1999; Tidd et al., 2001;

Cooper, 2001; Kotler et al., 2003; Hoffman et al., 2005; Winer, 2007 and others), but *the latter's analysis is insubstantial and fragmentary*, distinguishing one success factor – *methodological, logical plan of adoption of innovation, based on resources* (Zikmund et al., 1993; Winer, 2007; Cooper, 2001; Baker, 1999 and others).

The summarized level of research of factors that determine innovation success / failure in the market is

depicted in Figure 1. It reveals the limitations of research of the research problem of successful diffusion and adoption of innovation that confirm the timeliness and direction of the scientific discussion of this article, defined by the following question: *what are the success factors of adopted innovation during its further diffusion and adoption?*

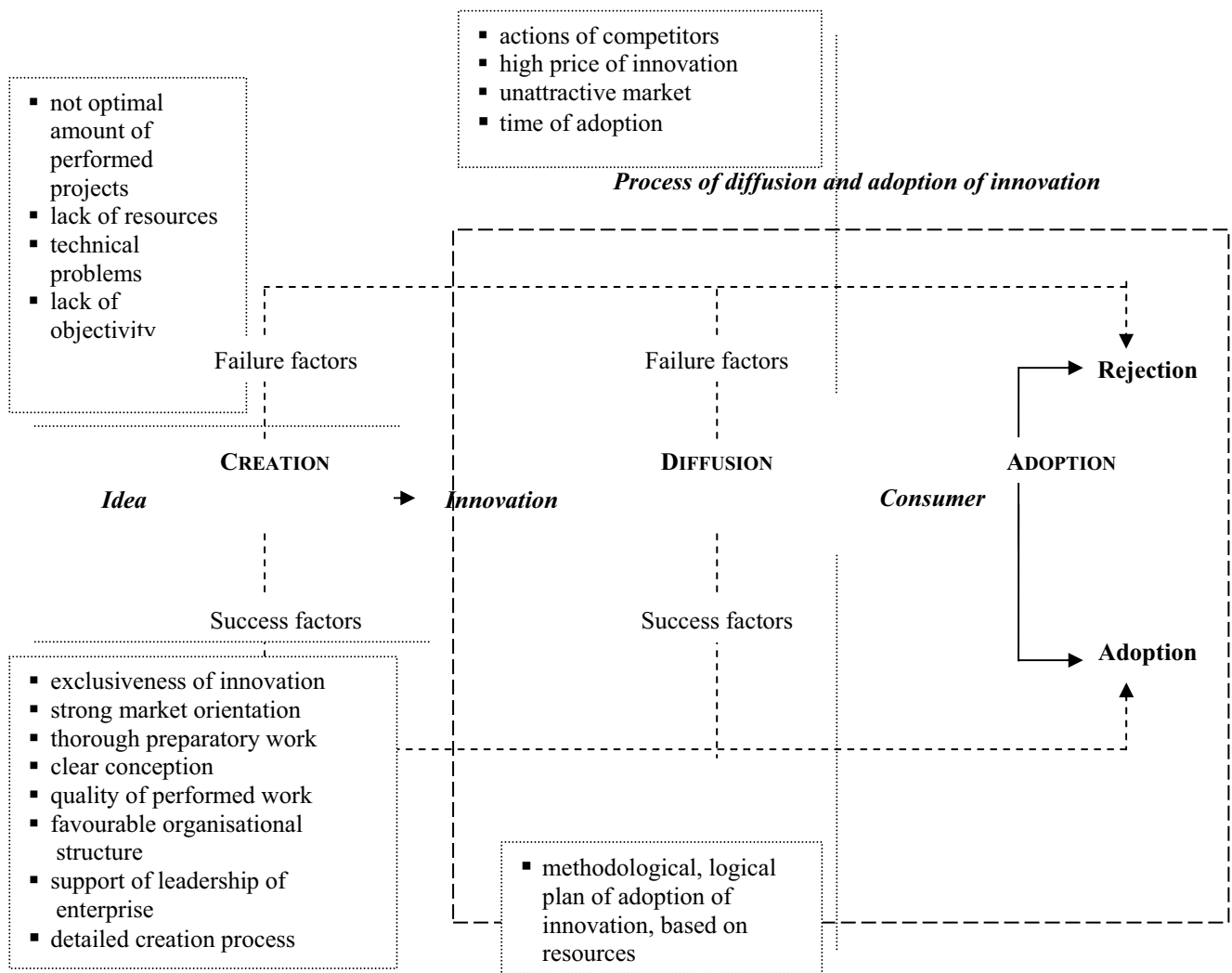


Figure 1. The current research level of factors that determine innovation success / failure in the market (compiled by the authors according to Zikmund et al., 1993; Kinnear, 1995; Baker, 1999; Tidd et al., 2001; Cooper, 2001; Kotler et al., 2003; Hoffman et al., 2005; Winer, 2007 and others)

Analysis of factors that determine successful diffusion and adoption of innovation

More detailed analysis of factors that are related to the diffusion process and determine innovation success and exclusiveness of enterprise through innovation is performed based on the following *elements of the process of diffusion of innovation – innovation, communication, social system, and time* (Baker, 2001; Schiffman et al., 2004; Bakanauskas, 2006 and others). The aim of the analysis is to reveal the link of the innovation success factors to *stages of the process of adoption of innovation: awareness, interest, evaluation, trial, adoption / rejection,*

and *categories of adopters: innovators, early adopters, early majority, late majority, and laggards.*

Innovation. Scientists agree that the essential innovation success factor is uniqueness and exclusiveness of innovation (Winer, 2007; Zikmund et al., 1993; Kinnear, 1995; Cooper, 2001 and others). According to Cooper (2001), unique innovations experience success 3 – 5 times more often than innovations that do not stand out. But Hoffman et al. (2005), Lamb et al. (2004), Baker (1999) note that innovations that are least risky, therefore having the biggest chance of success, are related to improvements of existing products and not to radical and unique solutions.

In this regard scientists in the scientific discussion agree that innovation success depends on the success of creating a product that is exclusive and has advantages when compared to competitors, and a product that offers consumers better quality, new properties, and bigger usage value (Winer, 2007; Zikmund, 1993; Kinnear 1995; Cooper, 2001; Hoffman et al., 2005 and others).

In the works of Solomon, Stuart (1997), Antonides et al., (1998), Schiffman et al. (2004), Tidd (2001), Lamb et al. (2004) and others, analysis of characteristics of innovation that determine success – relative advantage, compatibility, simplicity-complexity, visibility and trial possibility – is found. Based on this analysis the following *factors that are related to innovation and that increase the possibility of successful diffusion and adoption* are identified:

- Innovation corresponds greatly to the lifestyle norms and values and existing habits and skills of consumers.
- The benefit provided by innovation is clearly visible.
- Clear innovation visibility in the society, i.e. its public use and visibility of its benefit and easy memorizing.
- Use of innovation is defined clearly and uncomplicatedly.
- Easy opportunity to test innovation, i.e. necessity of innovation divisibility.

Communication. During the preformed theoretical studies it was determined that *marketing communication is one of the main factors that form favourable consumer attitude to diffused innovation and that increase the possibility of successful adoption of innovation* (Baker, 2001; Schiffman et al., 2004; Lamb et al., 2004; Wright, 2006 and others). In this context a question arises: what communication factors determine successful diffusion and adoption of innovation? The authors note that success of innovation is influenced by communication channels as well as communication messages (Schiffman et al., 2004; Wright, 2006). Considering this, more detailed analysis of communication factors is performed in these aspects: *communication methods, communication channels, and communication message*.

Communication methods. Innovation success is determined by marketing communication during the diffusion process (Cooper, 2001; Baker, 2001; Kotler et al. 2003, Schiffman et al., 2004; Bakanauskas, 2006 and others). In the analysed case communication methods used inside as well as outside the enterprise are important.

Inside the enterprise is the communication between the leadership of the enterprise and the innovation implementation team and between members of this team. The possibility of successful adoption of innovation increases if the leadership of the enterprise acknowledges the importance of innovation for further development of the enterprise, constantly communicates with the innovation creation team and searches for common ways of problem solution, analyses results together and evaluates efforts of the team members. Communication between members of the innovation implementation team also increases the possibility of successful adoption of innovation, when team members constantly communicate, discuss the course of the creation process, possible problems and ways of their solution together.

Outside the enterprise is the communication between the enterprise, its intermediaries, consumers or consumer groups. The possibility of successful adoption of innovation increases when advertisement, personal selling, sales stimulation, public relations, and direct marketing are used for communication with groups of persons interested in innovation. Success of innovation is influenced by communication between consumers that appears when consumers who have used the possibility of trying out the innovation share their positive impressions with other members of the environment that surrounds them.

Having reviewed communication methods used during the process of diffusion of innovation, it may be stated that one of the essential factors that determine innovation success is *constant cooperation of the innovation implementation team, its communication with the leadership of the enterprise and communication outside the enterprise that involves its intermediaries, consumers or consumer groups*.

Communication channels. Specialists who research innovation – Zikmund et al. (1993), Solomon et al. (2002), Hoffman et al. (2005), Antonides et al. (1998) – note that when seeking for successful adoption of innovation it is important to choose correctly the communication channels used during the process of diffusion. Authors state that correct communication channels are the ones that are chosen *with orientation towards the behaviour and preferences of the target category of adopters (innovators, early adopters, early majority, late majority, and laggards)*.

Presumption is made in the innovation study base that innovators and early adopters adopt innovation during its introduction to the market; early majority adopts it during its growth stage; late majority adopts it during its maturity stage; and laggards adopt innovation during its decline period (Hoffman et al. 2005, Wright, 2006).

Based on proposals for the use of marketing communication existing in marketing literature (Pranulis, Pajuodis, Urbonavičius, Virvilaitė, 2000; Kotler et al., 2003; Bakanauskas, 2004; Kriaucionienė, Urbanskienė, Vaitkienė, 2005), considering studies of adopters performed by Schiffman et al. (2004), Antonides et al. (1998), Solomon et al. (2002), Lamb et al. (2004), Hoffman et al. (2005), Wright (2006), and others, it may be stated that:

- *Orienting towards innovators and early adopters* it is advisable to use public relations and advertising in scientific and information publications.
- *Orienting towards early majority* it is advisable to use public relations, advertisement, and direct marketing.
- *Orienting towards late majority* it is advisable to use advertisement and sales stimulation.
- *Orienting towards laggards* it is possible to use advertisement and sales stimulation.

Having elaborated on the influence of communication channels on innovation success in the market, it was identified that in order to ensure successful diffusion and adoption of innovation it was important to *correctly choose communication channels used in the process of diffusion*. Having determined relation to adopter categories, groups of communication actions were identified that may be used to reach target segments of consumers. In order to identify

certain communication channels, suitable for reaching respective consumer categories, it is necessary to perform a more thorough analysis of adopter behaviour. In this article detailed research of consumer behaviour is not performed.

Communication message. Wright (2006) suggests evaluating expedience of communication message with respect to information that should be emphasized in it. The author notes that information should be clearly understandable and expedient. In this context a question arises: what information related to innovation should be emphasized in the communication message?

Based on studies of characteristics that determine success of innovation *it is identified that it is expedient to emphasize the following information in communication messages:*

- Consumer wishes and needs that the innovation is oriented towards.
- Benefit provided by the innovation.
- Exclusiveness of the innovation.
- Value of exclusiveness of the innovation in relation to other products.
- Economy and durability of the innovation.
- Relation of the innovation to values, norms and skills of consumers.
- Ease of use of the innovation.

In order to determine information that should be emphasized in communication messages and that corresponds best to the behaviour and preferences of the target consumer segment, the *link of the previously identified information with adopter categories and stages of adoption is determined.*

Based on *studies* by Zikmund et al. (1993), Churchill, Peter (1995), Antonides et al. (1998), Schiffman et al. (2004), Solomon et al. (2002), Lamb et al. (2004), Hoffman et al. (2005), Wright (2006), Winer (2007) and other scientists on *adopters, information that should be emphasised in communication messages with the following consumers is defined:*

- *Innovators:* to emphasize innovativeness and not the trade mark; to define clearly the benefit provided by the innovation, the value of exclusiveness and the possibility to create an individual image; to base information on as many facts as possible about properties of the innovation and benefits provided by it.
- *Early adopters:* to emphasize the prestige that the innovation provides, its exclusiveness, but to show the existing relation to norms and values accepted in the society.
- *Early majority:* to emphasize economic benefit of the innovation, to provide detailed information about properties of the innovation and its method of use; to show experience of consumers who adopted the innovation earlier.
- *Late majority:* to emphasize economic benefit of the innovation, to show negative attitude of other members of the society towards late adoption of innovation; not to demonstrate changes determined by the innovation.
- *Laggards:* not to demonstrate changes determined by the innovation, to emphasize its relation to established

lifestyle norms, to reveal the scope of adoption of innovation and its possible relation to traditions.

Based on studies on *adoption stages* performed by scientists who researched innovation – Solomon, Stuart (1997), Schiffman et al. (2004), Antonides et al. (1998), Solomon et al. (2002), Hoffman et al. (2005) – *it may be stated that:*

- *In the stage of awareness* it is important to acquaint consumers with innovation introduction to the market and its benefits.
- *In the stage of interest* it is important to provide detailed information to consumers about benefit of the innovation, value with regard to other products and to define needs and wishes that the innovation is oriented towards.
- *In the stage of evaluation* it is important to show consumers that benefit provided by innovation does not equal the cost related to its acquisition.
- *In the stage of trial* it is necessary to inform consumers about the simple possibility of trying out the innovation.
- *In the stage of adoption / rejection* it is important to impel consumers to make the final decision to buy or to motivate them to re-think the possibility of choice again (in case of rejection).

Having performed the analysis of communication message as one of the factors that determine success of innovation and having determined links with adopter categories and stages of the process of adoption, a conclusion is made that the *probability of successful adoption of innovation will be greater if communication with consumers during the process of diffusion will be performed by expedient and clearly understandable communication message, oriented towards the behaviour and preferences of the target consumer segment.*

Social system. The review of studies on the social system provided in scientific literature (Solomon, Stuart, 1997; Baker, 2001; Schiffman et al., 2004; Hoffman et al., 2005; Bakanauskas, 2006 and others) allows to state that *success of innovation depends upon:*

- *Modern orientation of the social system*, i.e. positive attitude of members of the social system towards changes in the market, progressive technologies, and positive attitude towards science and education, rational relationships among members of the social system.
- *Values and norms characteristic of the social system*, i.e. high level of their compatibility with innovation and high level of homogeneity.

Time. In scientific works the dominating opinion is that time is the basis of the *whole process of diffusion and adoption of innovation* (Schiffman et al., 2004), used by specialists who research innovation for segmentation of adopters (Zikmund et al., 1993; Antonides et al., 1998; Schiffman et al. 2004; Solomon et al., 2002; Lamb et al., 2004; Hoffman et al., 2005, etc.), for evaluation of buying frequency (Bakanauskas, 2006), and for measuring adoption rate (Schiffman et al., 2004; Solomon et al., 2002; Hoffman et al., 2005, etc.).

Having reviewed studies performed by Schiffman et al. (2004), Solomon et al. (2002), Hoffman et al. (2005), Bakanauskas (2006), and others on time as an element of

the process of diffusion, the factor that determines success of innovation – *proper time of introduction of the innovation into the market* – is supplemented by the following factors:

- *Frequency of buying*, i.e. the index that shows how often consumers, who have tried the innovation, buy it later. This factor determines success of innovation in two aspects: the more often the action of buying will be repeated, the more successfully the innovation will be adopted; the better the enterprise that implements innovation will predict the frequency of buying, the more optimally the system of product distribution will be planned (if this index is identified unsuccessfully, it may determine lack of supply for intermediaries, if demand is underestimated, or overstock, if demand is overestimated).

- *High adoption rate* influences success of innovation in the market because it determines its fast spread among consumers who will eventually adopt the innovation.

. *The performed analysis of factors of success of diffusion and adoption of innovation enables to determine certain consistent patterns characteristic of the analysed process, to systematize them and to provide suggestions for successful diffusion and adoption of innovation.*

Suggested description of factors that determine successful diffusion and adoption of innovation

Description of success factors of diffusion and adoption of innovation is composed with regard to the opinion prevalent in the scientific literature that *innovation success factors are related to the processes of innovation creation as well as diffusion and adoption* (Baker, 1999; Tidd et al., 2001; Kotler et al., 2003; Hoffman et al., 2005; Winer, 2007; etc.). Success factors that have been analysed more widely up till the present time, attributed to the process of innovation creation, and *factors* identified by the authors of the article during the performed research that *determine successful diffusion and adoption of innovation* are joined in the proposed description. Aiming to substantiate theoretically the importance of the latter factors for success of innovation in the market, their specification is performed based on the elements of the process of diffusion of innovation – innovation, communication, time, and the social system. This is depicted in Figure 2.

The description of success factors of diffusion and adoption of innovation composed by the authors of the article shows that according to separate elements of the process of diffusion of innovation the following factors may be distinguished:

- *Innovation* – exclusiveness and uniqueness, conformance to norms, values, habits and skills of consumer lifestyle, clearly noticed benefit provided by innovation, clear visibility of innovation in the society, clearly and uncomplicatedly defined use of innovation, easy possibility of innovation trial.

- *Communication* – constant communication of leadership of the enterprise with members of the innovation implementation team and regular communication among team members, communication outside the enterprise among intermediaries of the

enterprise, consumers or consumer groups, correctly chosen communication channels used during the process of diffusion, expediently formulated and clearly understandable communication message, oriented towards behaviour and preferences of the target adopter category.

- *The social system* – positive attitude of members of the social system towards changes, progressive technologies, positive attitude towards science and education, rational relationships, modern system orientation, high level of homogeneity, high level of compatibility of innovation and the social system.

- *Time* – proper timing of introduction of innovation into the market, correctly predicted frequency of buying, high rate of adoption of innovation.

Specification of success factors performed according to elements of the process of diffusion of innovation substantiates the *necessity of systematic attitude towards the solved problem* and enables to state that, firstly, *knowledge of characteristics of innovation and their adaptation to requirements raised by the social system* are important for successful diffusion and adoption of innovation. It should be noted that innovation success factors (especially proper choice of communication channels and messages) related to the *communication element* acquire equivalent topical value in the process of diffusion and adoption of innovation from the quantitative and qualitative points of view. Next to the above mentioned factors the importance of identifying success factors determined by the *time element* is reflected in the description suggested in the article. Summarizing consistent patterns characteristic of successful diffusion and adoption of innovation it is stated that their identification and evaluation becomes the basic instrument of increasing competitiveness of enterprises that seek exclusiveness through innovation.

Conclusions

The identified limitations of the present research level of the problem of diffusion and adoption of innovation, the performed analysis of success factors that determine successful diffusion and adoption of innovation, and description of success factors, compiled based on the analysis, enables to formulate the following conclusions and to project further research directions:

1. Theoretical as well as practical argumentation enables to state that, in the context of the search for new sources of increasing competitiveness, exclusiveness through innovation remains a topical object of scientific research and practical activity. Because of complexity of this object the role of problems of innovation creation, their adoption, and acknowledgement in the market increases. Therefore insufficient attention of specialists who research innovation to the process of diffusion and adoption of innovation and big influence of this process on innovation success in the market is named as the essential presumption of further successful studies of diffusion and adoption of innovation by authors of the article

2. Based on the present research level of the problem of diffusion and adoption of innovation a conclusion is made about identification of factors of successful

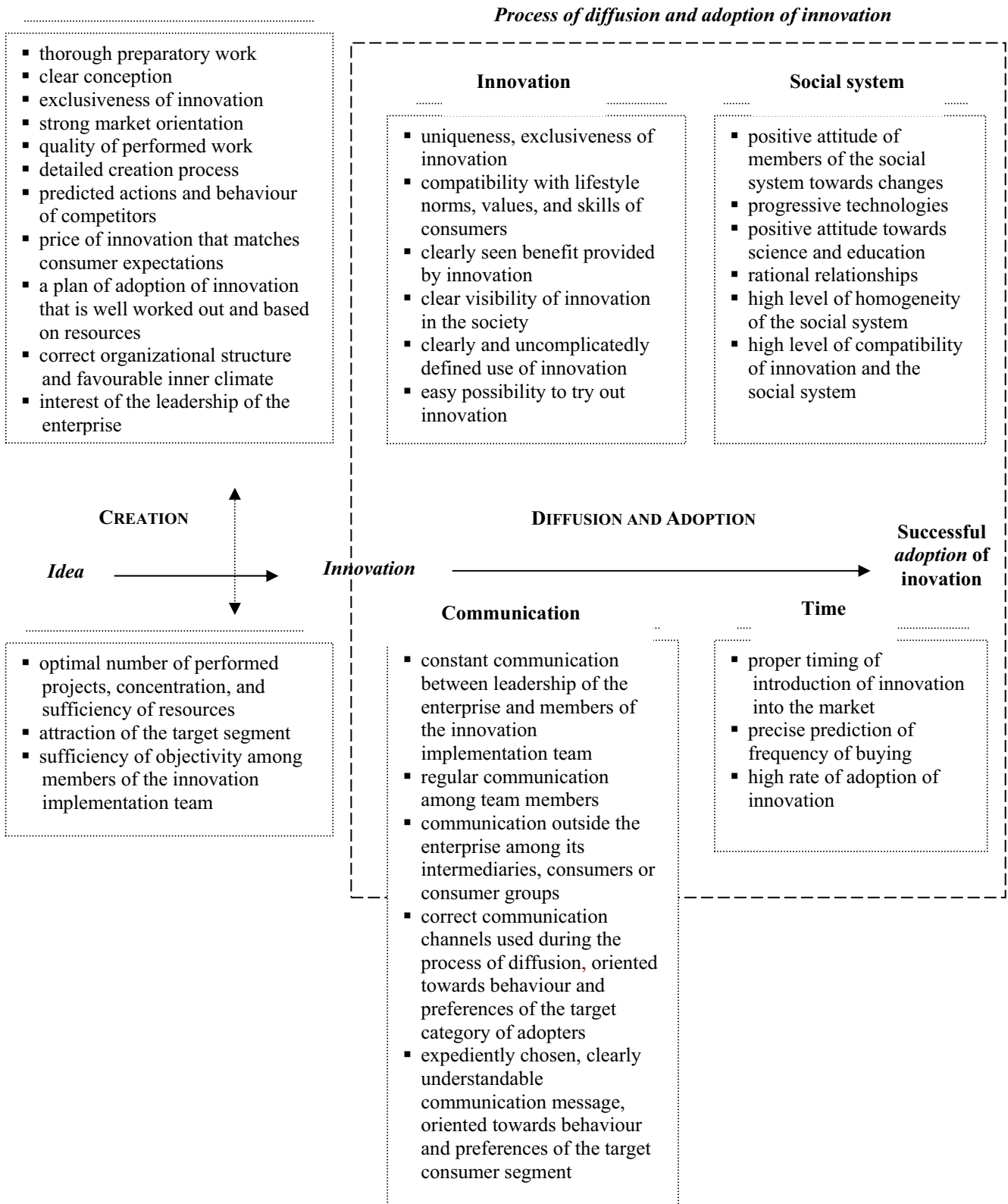


Figure 2. Factors of successful diffusion and adoption of innovation (compiled by the authors)

diffusion and adoption of innovation and topicality of the theoretical base. This conclusion is based on the statement that although scientific works acknowledge that factors that determine consumers' decision to adopt or reject innovation are related to the processes of creation as well

as diffusion and adoption, the latter factor is analysed fragmentarily, distinguishing one success factor – methodological and logical plan of introduction of innovation to the market, based on resources. Having in mind this research limitation, a question is raised in the

article: what are the factors that determine success of introduced innovation during its further diffusion and adoption?

3. The performed analysis of research on success of diffusion and adoption of innovation enables to identify and systematize factors that determine successful diffusion and adoption of innovation, providing theoretical description of these factors. The suggested description unites success factors attributed to the process of innovation creation and factors identified by the authors of the article that determine successful diffusion and adoption of innovation. Seeking for clear theoretical substantiation and consistency, it is proposed to specify the following factors according to elements of the process of diffusion of innovation.

4. Summarizing consistent patterns, characteristic of successful diffusion and adoption of innovation, it is stated that:

- From the point of view of identifying factors that determine success of innovation in the market, firstly, identification of characteristics of innovation (exclusiveness, compatibility with consumer lifestyle norms, clearly seen benefit provided by innovation, ease of trial, etc.) and their adaptation to requirements raised by the social system (positive attitude of members of the social system towards change, science and education, rational relationships, modern orientation of the system, high level of compatibility of innovation and the social system, etc.) are important.

- Innovation success factors (especially constant communication of leadership of the enterprise with members of the innovation implementation team and regular communication among team members, communication outside the enterprise, proper choice of communication channels, expediently formulated and clearly understandable communication message) related to the communication element acquire equivalent topical value in the process of diffusion and adoption of innovation. Next to the above mentioned factors, the importance of identifying success factors determined by the time element (proper timing of innovation introduction to the market, correctly predicted frequency of buying, high rate of innovation adoption) is also reflected in the description suggested in the article.

5. The factors that determine successful diffusion and adoption of innovation, identified by the authors of the article, and consistent patterns, revealed based on their analysis, substantiate the necessity of systematic attitude towards the solved problem and enable to name this as the basic instrument of marketing for enterprises that seek exclusiveness through innovation. In the context of the performed research a conclusion is made that the priority of further research should be determination of links of identified factors with categories of adopters and prediction of the outcomes of their behaviour.

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Sėkminga inovacijų sklaida ir įsisavinimas rinkoje – priemonė įmonių konkurencingumui didinti

Santrauka

Inovacijų tyrimų kontekstas (Boden, 1991; Slater, Narver, 1994; Bessant, 2003; Trott, 2003 ir kt.) tiek teoriniu, tiek praktiniu lygiu atskleidžia tyrėjų požiūrį vienovę, teigiant, kad inovacijos pasireiškia sąveikaujant mokslinių tyrimų bazei, technologijų plėtrai ir rinkos poreikiams. Studijuojant pastarąjį aspektą (Baker, 1999; Jakubavičius, 2003; Hoffman, Czinkota ir kt., 2005 ir kt.), kaip mokslinių tyrimų objektas vis dažniau pasirenkamas inovacijų kūrimo procesas. Vertinant inovacijų nesėkmės atvejus, susitelkiama į inovacijų kūrimo proceso valdymą, tuo tarpu dėl sklaidos ir įsisavinimo procese žlugusių inovacijų įmonės patiria kur kas didesnius nuostolius. Todėl išskirtinumo inovacijomis siekiančioms įmonėms svarbu rasti būdus, leidžiančius

padidinti sėkmingos inovacijų sklaidos ir įsisavinimo rinkoje tikimybę. Tuo remiantis, straipsnyje sprendžiama **mokslinė problema** – kokie yra sėkmingą inovacijų sklaidą ir įsisavinimą rinkoje lemiantys veiksniai, kokia jų sąsaja su inovacijų sklaidos ir įsisavinimo procesu bei vartotojų elgsenos pasekmėmis? **Straipsnio tikslas** – identifikuoti ir teoriškai pagrįsti sėkmingą inovacijų sklaidą ir įsisavinimą rinkoje lemiančius veiksnius, atskleidžiant jų reikšmę įmonių konkurencingumui didinti.

Siekiant suformuluoto tikslo, straipsnyje visų pirma atliekama **esamo inovacijų sklaidos ir įsisavinimo rinkoje problemos ištyrimo lygio analizė**. Susipažinus su mokslinių studijų medžiaga, formuojasi nuomonė, jog inovacijų pateikimas rinkai autorių apibrėžiamas **inovacijų sklaidos proceso** terminu, o inovacijų sėkmės rinkoje kontrolė siejama su **inovacijų įsisavinimo rinkoje procesu**. Inovacijų sklaidos proceso metu inovacijos yra skleidžiamos visuomenės nariams tam tikru laiko momentu per visuomenės informavimo priemones, t.y. komunikacijos kanalus. Mokslinėje literatūroje identifikuojami šie **inovacijų sklaidos proceso elementai**: inovacija, komunikacija, socialinė sistema, laikas (Baker, 2001; Schiffman ir kt., 2004; Bakanauskas, 2006 ir kt.). Tuo tarpu **inovacijų įsisavinimo rinkoje proceso** metu vartotojai nuosekliai pereina šias elgsenos stadijas – *suvoikimą, susidomėjimą, vertinimą, išbandymą, įsisavinimą/atmetimą, sutvirtinimą* – įsisavina arba atmeta rinkoje skleidžiamas inovacijas (Schiffman ir kt., 2004; Solomon, Stuart, 1997 ir kt.). Apibendrinant inovacijų sklaidos ir įsisavinimo rinkoje koncepciją, konstatuojama apie nepakankamą *inovacijas tyrinėjantį specialistų dėmesį inovacijų sklaidos ir įsisavinimo procesui ir tai įvardijama esmine tolesnių sėkmingos inovacijų sklaidos ir įsisavinimo rinkoje studijų prielaida*.

Išanalizuotas inovacijų sėkmę/nesėkmę rinkoje lemiančių veiksnių ištyrimo lygis rodo, kad *didžioji dalis veiksnių yra susiję su inovacijų kūrimo procesu*. Šiame kontekste akcentuojami rinkos analizės, vartotojų norų ir poreikių pažinimo aspektai, pabrėžiamas inovacijos dizaino, gamybos, kokybės, kainos, kūrimo proceso organizavimo bei planavimo reikšmingumas. Nors inovacijas tyrinėjantys mokslininkai pripažįsta, kad *vartotojų sprendimą, ar įsisavinti, ar atmesti inovaciją, lemiantys veiksniai yra susiję tiek su kūrimo, tiek su sklaidos ir įsisavinimo procesu, pastarasis analizuojamas fragmentiškai*, išskiriant vieną sėkmės veiksnį – *metodišką, logišką ir išteklių pagrįstą inovacijos įvedimo į rinką planą* (Zikmund, 1993; Winer, 2007; Cooper, 2001; Baker, 1999 ir kt.). Atliepiant į šį tyrimų ribotumą, straipsnyje keliamas klausimas – *kokie yra į rinką įvestos inovacijos sėkmę lemiantys veiksniai tolesnės jos sklaidos ir įsisavinimo rinkoje metu?*

Sėkmingą inovacijų sklaidą ir įsisavinimą rinkoje lemiančių veiksnių analizė atliekama pagal **inovacijų sklaidos proceso elementus** (Baker, 2001; Schiffman ir kt., 2004; Bakanauskas, 2006 ir kt.). Analizės metu siekiama atskleisti inovacijų sėkmę lemiančių veiksnių sąsają su **inovacijų įsisavinimo proceso etapais** bei **inovacijas įsisavinančiųjų vartotojų kategorijomis**.

Inovacija. Solomon, Stuart (1997), Antonides ir kt. (1998), Tidd (2001), Lamb ir kt. (2004) ir kt. mokslininkų darbuose aptinkama sėkmę lemiančių inovacijų charakteristikų – santykinis pranašumas, suderinamumas, paprastumas, pastebimumas bei išmėginimo galimybė – analizė. Remiantis jos rezultatais, identifikuojami *sėkmingos inovacijų sklaidos ir įsisavinimo rinkoje tikimybę didinantys veiksniai, tokie kaip inovacijos atitiktis vartotojams būdingoms gyvenimo normoms, aiškus inovacijos teikiamos naudos pastebimumas, nesudėtingai apibrėžiamas inovacijos naudojimas, lengva inovacijos išmėginimo galimybė* ir kt.

Komunikacija. Baker, 2001, Schiffman ir kt., 2004, Lamb ir kt., 2004, Wright, 2006 ir kt. inovacijas tyrinėję autoriai pastebi, kad inovacijų sėkmei rinkoje didelį poveikį daro *komunikacijos būdo, kanalo ir žinutės tinkamumas*.

Apžvelgus inovacijų sklaidos proceso metu naudojamus *komunikacijos būdus*, galima teigti, jog vienas esminių inovacijų sėkmę lemiančių veiksnių – nuolatinis inovacijas diegiančios komandos bendradarbiavimas, jos komunikacija su įmonės vadovybe bei išorinė

komunikacija. Detalizavus komunikacijos kanalų įtaką inovacijų sėkmei rinkoje, nustatyta, jog sėkmingai inovacijų sklaidai ir įsisavinimui užtikrinti svarbu *teisingai parinkti sklaidos procese naudojamus komunikacijos kanalus*. Nustačius sąsają su inovacijas įsisavinančiųjų vartotojų kategorijomis, identifikuotos komunikacijos veiksmų grupės, siūlytinos naudoti tiksliniams rinkos segmentams pasiekti. Atlikus *komunikacijos žinutės* kaip vieno iš inovacijos sėkmę lemiančių veiksnių analizę ir nustačius sąsajas su inovacijas įsisavinančiųjų vartotojų kategorijomis bei įsisavinimo proceso etapais, daroma išvada, *jog sėkmingo inovacijų įsisavinimo tikimybė bus didesnė, sklaidos proceso metu su vartotojais komunikuojant į tikslinį segmentą orientuota ir aiškiai suprantama žinutė*.

Socialinė sistema. Mokslinėje literatūroje pateikiamų socialinės sistemos studijų apžvalga (Solomon, Stuart, 1997; Baker, 2001; Schiffman ir kt., 2004; Hoffman ir kt., 2005; Bakanauskas, 2006 ir kt.) leidžia tvirtinti, *jog inovacijų sėkmę rinkoje lemia moderni socialinės sistemos orientacija bei socialinei sistemai būdingos vertybės ir normos*.

Laikas. Mokslininkų darbuose vyrauja nuomonė, kad laikas – *tai viso inovacijų sklaidos ir įsisavinimo proceso pagrindas*, kuris gali būti naudojamas inovacijas įsisavinantiems vartotojams segmentuoti, pirmo dažnumui vertinti ir įsisavinimo greičiui matuoti. Apžvelgus Schiffman ir kt. (2004), Solomon ir kt. (2002), Hoffman ir kt. (2005), Bakanauskas (2006) ir kt. atliktas laiko kaip sklaidos proceso elemento studijas, identifikuotas inovacijos sėkmę lemiantis veiksnys – *tinkamas inovacijos įvedimo į rinką laikas* – papildomas *pirkimo dažnumu ir dideliu inovacijos įsisavinimo greičiu*.

Atlikta inovacijų sklaidos ir įsisavinimo rinkoje sėkmės studijų analizė leidžia identifikuoti sėkmingą inovacijų sklaidą ir įsisavinimą rinkoje lemiančius veiksnius. Juos apibendrinus, sudaromas **sėkmingą inovacijų sklaidą ir įsisavinimą rinkoje lemiančių veiksnių aprašas**, kuris vienija inovacijų kūrimo procesui priskirtinus sėkmės veiksnius bei straipsnio autorių identifikuotus veiksnius, lemiančius sėkmingą inovacijų sklaidą ir įsisavinimą rinkoje. Siekiant aiškaus teorinio pagrindimo bei nuoseklumo, pastarieji veiksniai detalizuojami pagal inovacijų sklaidos proceso elementus.

Apibendrinant sėkmingai inovacijų sklaidai ir įsisavinimui rinkoje būdingus dėsningumus, konstatuojama, kad:

- Inovacijų sėkmę rinkoje lemiančių veiksnių identifikavimo požiūriu, visų pirma svarbus *inovacijų charakteristikų pažinimas* (išskirtinumas, atitiktis vartotojų gyvenimo normoms, aiškiai pastebima inovacijos teikiama nauda, lengva išmėginimo galimybė ir kt.) bei jų *adaptavimas socialinės sistemos keliamiems reikalavimams* (pozityvus socialinės sistemos narių požiūris į pokyčius, mokslą, racionalūs tarpusavio santykiai, moderni sistemos orientacija, didelis inovacijos ir socialinės sistemos suderinamumo laipsnis ir kt.).

Antra, inovacijų sklaidos ir įsisavinimo procese lygiareikšmiškai aktualizuojasi su *komunikacijos elementu susiję inovacijų sėkmės veiksniai*, ypač tokie kaip nuolatinis įmonės vadovybės bendravimas su inovacijas diegiančios komandos nariais bei reguliari jų komunikacija, įmonės išorėje vykstanti komunikacija, tinkamas komunikacijos kanalų parinkimas, tikslingai suformuluota ir aiškiai suprantama komunikacijos žinutė. Straipsnyje siūlomame apraše, be minėtų veiksnių, atsispindi ir *laiko elemento sąlygojamų sėkmės veiksnių* (tinkamas inovacijos įvedimo į rinką laikas, tiksliai numatytas pirkimo dažnumas, didelis inovacijos įsisavinimo greitis) pažinimo svarba.

Straipsnio autorių identifikuoti sėkmingą inovacijų sklaidą ir įsisavinimą rinkoje lemiantys veiksniai ir jų analizės bazėje atskleisti dėsningumai pagrindžia sisteminio požiūrio į sprendžiamą problemą būtinumą ir leidžia tai įvardyti kaip bazinį išskirtinumo inovacijomis siekiančių įmonių marketingo veiklos instrumentą. Atliktų teorinių tyrimų kontekste daroma išvada, kad tolesnių studijų prioritetu turėtų tapti identifikuotų veiksnių sąsają su inovacijas įsisavinančiųjų vartotojų kategorijomis nustatymas bei jų elgsenos pasekmių numatymas.

Raktažodžiai: *inovacijos, inovacijų sklaidą ir įsisavinimas rinkoje, sėkmę lemiantys veiksniai, įmonių konkurencingumas.*

The article has been reviewed.

Received in December, 2007; accepted in February, 2008.