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## **FINANCIAL MODELING APPROACHES TO INFRASTRUCTURE AND INSTITUTIONAL SUPPORT INNOVATIVE DEVELOPMENT OF SERVICE INDUSTRIES**

*The article provides an analysis of theoretical positions regarding the definition of "service sector" as well as offers financial modelling approaches to the infrastructure and institutional support innovative development of service industries. The authors state that the activities of service industries in terms of the economy transformation becomes increasingly important, and high-quality customer satisfaction is the main goal of companies that aim to achieve a sustainable permanent competitiveness. The services sector, especially highly intellectual services in a complex phase of the country crisis is an area whose successful development conditions a developed society. It has been proved that the infrastructural-institutional provision is an important endogenous factor that affects the operation of the majority of enterprises. And it is this provision that ultimately creates forms and sizes of investments that may be directed to the innovative development. The authors also analysed a theoretical and methodological basis for the definition of "a service sector as well as introduced their own definition of " service market ", viewed as a complex system of relations between producers and consumers in order to achieve the strategic goal of creating businesses and meet the interests of their owners". It has been defined that the most important factors ensuring a high efficiency of an enterprises are the scientific-and-technological progress and innovation processes. In this regard it is essential and timely to search for the most efficient sources of financing the innovative development of enterprises. It has also been proved that the economic state that forms the institutional support of innovative development should ensure the functioning of an innovative model of economy and industry, develop flexible mechanisms for financial support of innovative industries, reform policies as well as take measures to improve companies. To optimize the investment activity it is proposed to use mathematical modelling techniques.*

**Keywords:** innovative development, services, infrastructure institutional provision.

**General target setting and its relation to important scientific and practical tasks.** The activity of service industry enterprises in conditions of transformation of economy becomes more and more important. Quality service to the customers in its full scope becomes the main goal of the activity of the enterprises aiming at reaching the sustainable permanent competitive performance. The satisfaction of needs is an actual basis of realization and providing of new orders during a long period of time.

Industry sphere, and highly intellectual services – in particular, especially in phase of complex crisis in the country is the sphere the successful development of which is a criterion condition of community's development.

The level of service sphere intellectualization is closely connected with the innovative level of its subjects. New solutions and ideas, implemented in this sphere, should guarantee the increase of quality of customers' service, and gradually lead to rise of the competitiveness of enterprises. .

**The analysis of recent studies and publications, which initiated the solution of the given problem and upon which the author relies; accentuation on previously unsolved aspects of the general problem, which the given article is devoted to.** In modern studies there is a great variety of articles, connected with investigation of the essence, role and meaning of the innovative development and its institutional provision.

However the research of these questions with the specific features of this sphere being taken into account requires deeper studies.

In our study it would be appropriate to define the theoretical and methodological basis of the definition of “service industry”.

Nowadays among the scientists, who study economy, and those practicing it [1-11 та ін.] there is no unanimous idea concerning the origin and theoretical definition of the notion “service industry”. This is actually the reason for major controversies in questions, connected with the innovative development in the service industry.

Thus the authors of the article [1] suggest that the service industry is a complex of quite heterogeneous spheres of economy, the produce of which is of non-financial form and which is manifested as a useful effect, indistinguishable from manufacturing or economic activity connected with process of community production service».

In the article [2] the essence of the notion “service sphere” is defined as “a system of sphere of state economy, products, the value proposition of which is manifested via the delivering services”. We distinguish the sphere of services of material production (transport, communication, household services); spiritual services’ sphere (education, physical education, science, art); social sphere’s services (trade, housing and public utilities, health care)».

In such study as [3] the service industry is defined as “a united generalizing category, which includes the recreation of various types of services, delivered by the enterprises, organizations and physical entities” and in case [4] – as «a complex of enterprises, bodies, organizations and types of activities been involved in production of the whole range of services”.

We consider the next approach as the most suitable for defining the role and the essence of the service market; it was suggested by our native scientist in the article [5]: «The service market is a complex system of relations, in which there is a cooperation between the producers of the services and the customers, this is a place, where the interaction of producers and customers (services’ recipients) takes place, the prices are set, the economy connections and socio-economical contacts are set and preserved with different target audiences in the process of organizing ad consuming the

services» [5]. In the aforementioned work there is also a mentioning that «the peculiarity of the service market is that unlike physically manifested goods the services are created and consumed simultaneously, and thus the service market can’t exist separately from the market of goods, assets, working labour and correspondingly is very closely interconnected with them» [5].

**Setting objectives.** Infrastructural and institutional provision is the most important endogenous factor, which influence the functioning of the enterprises themselves. And this very provision is ultimately forming the types and amounts of investments, which could be directed to innovative development. That’s why the studying of this problem is of a vital importance.

**Presentation of the main research material with complete justification of the obtained results.** In addition taking into account the necessity of reflecting the satisfaction of the enterprises’ owners in the sphere of services delivery we suggest the following: «Service market is a complex system of relations between the services’ producers and customers, a place where the interaction between services’ producers and recipients takes place with the view to reach the strategic goal of creating the enterprises and serving the interests of their owners”.

That’s why it is necessary to take a closer look at improving of the financial levels of infrastructural and institutional provision of the services’ sphere enterprises innovative development in particular.

We should also take into account that the economy of Ukraine is now in its phase of market economy formation. In this phase of formation of the economy Ukraine has a formed institutional structure of service market, which is determined by legislative regulations as well as infrastructural provision.

The most important factors of provision the high efficiency of enterprise are the scientific-technological progress and the innovative processes on the enterprises. That is why it is of vital importance to search for the most rational sources of financing the innovative development of the enterprises. Separate aspects of scientific justification of the theoretical and methodological approaches to defining the enterprises’ innovations’ financial sources is a research subject for many

scientists, e.g., O.M.Alymov, I.O.Blank, G.G.Kyreitsev, A.M.Podderiyogin, A.M.Turylo [1-9]etc.

In the process of studying the works of Ukrainian scientists touching the questions of innovations' development in Ukrainian industry appeared the necessity to conduct the analysis of the problems, connected with the financing of the innovative process and search of the mechanism of its solution.

The character of economic development during the process of reaching the market relations proved that it is impossible to reach positive results just via improvement of partition ratio. Sadly today, in conditions of community's attention being concentrated on creation of market infrastructure, the questions of scientific technical progress seem to have become of secondary importance. What is more, a misconception has formed that market itself will solve the problems of technological recess and infrastructural and institutional provision of innovative development. But the world's experience shows that the implementation of great innovations is not always possible for small or even medium enterprises. The reason is the absence of sufficient sources of innovative projects' funding. The primary goal for every innovation-oriented enterprise is the formation of capable financial mechanism of the enterprise, the engaging of sufficient financial sources and the optimization of their structure.

Economic policy of the country concerning the infrastructural and institutional provision in pre-crisis years was directed at maintaining the macroeconomic stability. At the same time it is important to admit that reaching the macroeconomic stability is important but not the primary goal. Economic bodies of the country, which form the institutional provision of the innovative, should work from the perspective point of view – to secure the functioning of the innovative model of economy and industry development, develop flexible mechanisms of financial support of innovative enterprises, reform the depreciation policy, take measures concerning the increase of the level of companies' self-funding, integrate more actively into international financial and investment market etc. The problem of infrastructural and institutional provision of innovative process is caused by a high level of indeterminacy, unpredictability and riskiness. World's experience proves that even in

mature economies these risks are minimized with the help of measures of state financial support of innovations.

Among the problems, the solution of which influences the tendencies of dynamics of country's economic development in pre- and post-crisis period, one of the dominant places is occupied by the problems connected with optimization of the investment activity' funding sources.

Various studies state that the activation of the investment and innovative activity is the basis of economic development. This is confirmed by many economic theories, the discrepancies in which are only in fact that investments should play a certain role in helping the economy getting out of crisis depending on their form of ownership. Thus the proponents of the classic economy theory say that the private investments with market mechanism of allocation should be of a priority. But on the other hand the proponents of Keynesian economy school give the dominant role to state investments with administrative-market mechanism of allocation. But all of them view the investments as a basis of economic growth.

The choice of the investing activity as a main factor of economic growth states the problem of using limited financial resources with the view to provide faster and more stable economic growth. In order to solve this task it is necessary to study investments in scopes of modern system of economic processes' financial management on enterprises.

According to authors the sources of funding [13, c.321] might be: proprietary financial resources; lent financial resources, acquired from securities' sale; dues of working collective' members; the funds of state and local budgets; the funds of foreign investors.

First of all the sources of funding of innovative projects depend on the financial mechanism of a particular enterprise. From the prospects of modern studies of financial management the financial mechanisms are divided into directive and regulatory according to the level of financial management. Direct influence on the financial activity of the enterprise is performed via the financial mechanism of state regulation (tax quotes, various incentives and sanctions), via infrastructural and institutional provision, but nevertheless the effective organizing and functioning

of enterprise's funds influence the level of state funding (fill rate of state and local budgets, extra-budgetary funds) and economic growth in general. While the social product is the result of economic activity of the enterprise, the financial mechanism requires additional attention. With all the aforementioned taken into account it is pertinent to view it as internal one, and state regulatory financial mechanism – as external in regard to financial mechanism of the enterprise.

Financial regulation is comprised of the system of instruments, with the help of which the state influences the financial activity of the enterprise. On the one hand, these are tax rates and the mechanism of their charging, and on the other hand – the instruments of state support in the form of budget loans and subventions. This part of the financial mechanism doesn't depend on the internal efforts of the enterprises and shall be accepted by it as a condition of external environment, to which it shall adapt in the process of its economic activity.

The other thing is the internal financial mechanism of the enterprise, the efficiency of which is defined with forms, methods and instruments, used by the enterprise in the process of its activity. That is why this part requires special attention when it comes to organizing of its functioning.

The possibility to raise funding from different sources, financial market including, provides the enterprise with the opportunity to change the structure of these resources relatively freely, choosing their ultimate combinations. But there are factors that influence the amount and the structure of financial resources of the enterprise. These are the following: ownership form and form of legal entity's incorporation (e.g., state enterprises depend to a great extent on the structure and amount of state financial resources as an additional source of capital formation), the sphere of enterprise's occupation, the aims and the tasks of financial and economic activity during a certain period of time, internal financial policy of the enterprise etc.

The authors of study [5] state that «the main sources of direct investments in the service sphere are Cyprus, Germany, the Netherlands, the Russian Federation, Austria, Great Britain, Virgin Islands, France, Sweden, Switzerland, Italy, the USA etc. Among the most investing attractive there are the following spheres: the sphere of transport and communication, the operations with immovables,

retail and repair of automobiles, household appliances and individual items. With the view to activate the processes of raising foreign investments into Ukraine it would be pertinent to create an effective rating system, which will facilitate reaching the balance of economic growth and economic safety of investors. Correspondingly it requires the usage of leverages of state institutions' influence while such services as transport, communications, trade, telecommunications are of strategic value from the point of view of national security, so they should undergo state control, which is possible only in conditions of structural transformation of state economy into innovative one along with engaging and activation of regional poles of growth» [5].

In order to activate the innovative development of the enterprises it is of primary importance to justify the choice of ultimate financing sources of such development. In our opinion, the diversification of funding sources of innovative projects is the main condition of decreasing the financial risks, connected with the realization of such projects. In addition, the investments, acquired from various sources, are usually raised on more favourable terms. At the same time the development of corresponding models of investing development is of a primary importance during the planning of corresponding actions. The prospects of further scientific studies in this direction are more detailed analysis of the specific funding sources of enterprises' innovative activity and suggestion of their practical application in conditions of a real functioning enterprise.

#### **Conclusions of the presented study and prospects for the further research in this field.**

Thus the financial approaches of modeling of infrastructural and institutional provision of service sphere enterprises' innovative activities, stated in this article, may favor the activating of such development.

## References

1. *Jekonomika SShA: uchebnik dlja vuzov* / pod red. V. B. Supjana. SPb.: Piter, 2003. S. 125
2. *Novyj jekonomicheskij i juridicheskij slovar'* / pod red. A. N. Azrilijana. M., 2003. S. 879
3. Pankrat'ev N. Sistema statisticheskikh pokazatelej sfery uslug kak sektora jekonomiki // *Voprosy statistiki*. 1998. № 4. S. 16.
4. Stahanov V. N., Stahanov D. V. *Marketing sfery uslug*. M., 2001.
5. Sagajdak M.P. Rinok poslug v Ukraïni: stanovlennja, suchasnij stan i perspektivi rozvitku / M.P.Sagajdak // zb. nauk. prac' «*Strategija ekonomichnogo rozvitku Ukraïni*». – K.: DVNZ «KNEU», 2015. – №36. – S.173-182
6. Zadoja A.O. Formuvannja sistemi novih rinkovih vidnosin / A.O. Zadoja, V.Č. Momot// *Ekonomist*. – 2004. – № 5. – S. 44—50.
7. Galicja I.O. Konceptual'ni osnovi ta mehanizmi zabezpečennja konkurentospromozhnosti v umovah «ekonomiki stresu» / I.O. Galicja // *Visnik NAN Ukraïni*. – 2007. – №11.— S. 32—37.
8. Cebrenko M. Innovacijna model' rozvitku nacional'noï ekonomiki Ukraïni / M. Cebrenko. – [Elektronnij resurs]. – Rezhim dostupu: <http://www.iweir.org.ua/cebrenko.rtf>.
9. Pojta I.O. Suchasnij stan ta perspektivi rozvitku rinku poslug v Ukraïni / I.O. Pojta // *Konkurentospromozhnist' v umovah globalizacii: realii, problemi ta perspektivi: Materiali VII mizhnar. nauk.-praktich. konferencii / za red. Sauh I.V.* – Zhitomir: Vid-vo ZhDU im. I. Franka, 2013. – S. 89—92
10. Danilishin B.M. *Sfera ta rinok poslug u konteksti social'noï modifikacii suspil'stva: [monografija]* / B.M. Danilishin, V.I. Kucenko, Ja.V. Ostafijchuk. – K.: ZAT «Nichvala», 2005. – 328 s.
11. *Sfera uslug: jekonomika, menedzhment, marketing* [Jelektronnyj resurs] : jelektron. uceb. kurs / pod red. T.D. Burmenko.- Jelektron. dan. I progr. – M. : KnoRus, 2008. – 1 jelektron. opt. disk (CD-ROM)
12. Verba V.A. Strukturna konfiguracija vitchiznjanogo rinku konsaltingovih poslug //V. Verba // *Visnik NU «L'vivs'ka politehnika» «Problemi ekonomiki ta upravlinnja»*. —2010. – № 683. – S. 49—54.
13. Podder'ogin A.M. *Finansi pidpriemstv: Pidruchnik/ Za red. A.M. Podder'ogina.- K.:KNEU, 2005.- 546s.*

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## MANAGEMENT OF DIGITAL-MARKETING COMPANY

*The article reveals the importance of digital-marketing approaches and methods of budget planning campaigns, cooperation with advertising agencies and their specificity, evaluating the effectiveness of digital-marketing, acquires relevance due to the rapid increase in the number of companies that use digital tools to promote products and services in the market. Proved that widespread digital-marketing becomes due to the significant increase in income due to the impact of marketing campaigns. It was established that today digital can't be considered a significant competitive advantage as instruments of this type of marketing is widely used in all sectors. The subject of the research work is digital-marketing tools, its impact on the management of marketing activity of the enterprise, organization and methods of budgeting digital-marketing. The essence of the purpose of the work is to study the management of marketing activities. We explored digital-marketing tools: website, SMM, SEO, organization of events. It is established that each tool simplifies the organization of marketing opens new prospects for the company, automates labor and reduce marketing costs. For the study used the following scientific methods: comparison and evaluation of the study budgeting, monitoring in certain ways of organizing digital-marketing management, analytical method when forming conclusions about the impact of new technologies on economic governance. It was found that each of the tools greatly simplifies the organization of marketing opens new prospects of development for the enterprise, automates and reduces marketing costs. The analysis of influence of digital-marketing, found that digital-marketing significantly influences the budgeting, organization and management of marketing department. Analyzed changes in marketing management, namely the organization of marketing activities, changes in budgeting, analysis of advertising effectiveness research target customers, competitors, development and commodity pricing, advertising strategy of the company.*

**Key words:** marketing, digital-marketing, budget, management, Internet.

**Problem definition and its relation to important scientific and practical tasks.** The main digital-marketing tools that are popular in Ukraine are: website development, SMM, SEO, event management. Modern scholars commonly explore management of enterprise marketing in general and do not pay enough attention to the tools that also require organization and resources. Thus absolutely logical a step in marketing management research is to define the planning, organizing, budgeting and management processes of digital-marketing tools.

**The analysis of recent studies and publications, which initiated the solution of the given problem and upon which the author relies; accentuation on previously unsolved aspects of the general problem, which the given article is devoted to.** Digital-marketing management is somewhat different from traditional approaches. These approaches significantly affect the methods of calculation and budgeting, which creates the need to learn and improve them. Although digital-marketing appeared fairly recently, there are scientists involved

in studying this problem, as for example: I. Mann, El Rice, Michael Stelzner [3] as well as Ukrainian experts: V.V. Dergachova [2], I.V. Bozhkova [1] et al. It should be noted that marketing, and digital-marketing in particular, is constantly evolving and new methods, which affect strategy and enterprise financial state, are emerging.

**Setting objectives.** The objective of the study is the disclosure of digital-marketing subject matter, its impact on the economy in general business management and modern budgeting techniques with the use of various digital tools.

**Presentation of the main research material with complete justification of the obtained results.** The emergence of the Internet, smart phones and new technologies led to changes in marketing; actually that is thanks to new technologies that the digital appeared. Digital-marketing is a brand promotion into goods and services market by means of digital technologies.

In the digital-marketing one can distinguish several main tools such as website development,

SEO, SMM, event-management. Each of these tools has its own characteristics that are important for the management and organization of marketing activities. Let us consider them in detail.

Web development is one of the most popular digital-marketing tools. Creation of a website normally requires a whole team of specialists: web-designer, programmer, and copywriter. It is not surprising though that these days we are observing a significant change in the labour market. Thus the most popular and the most high-demand profession in 2014 was the one of a programmer, while the sphere of programming itself is annually growing by 20-25% [6]. Growth in demand for websites development has led to the emergence of new micro-branch – IT services. It is worth noting that not only IT professionals are in high demand but also SMM managers, SEO-optimizers, Internet marketing specialists. In this regard, we see the gap of education and employment spheres, as in Ukrainian universities the above mentioned specialists are not trained. Ukrainian National Occupational Classification does not hold record of any of these professions.

Particularly important activity in the marketing management is budgeting of the website development and maintenance costs. To start, the company needs to decide how to set up the website, either by company's own efforts or with the help of specialized agencies. One of the most popular ways of calculating the costs for website development is budgeting. Based on this we can understand which way is better to be used in a certain case.

The website, while being an intangible asset, should still bring benefit for the company. There are several factors which indicate the effectiveness of the tool: conversion, the number of purchases made using the website, citation index. All these indicators help an economist understand both how effectively marketing service works and the relevance between the funds allocated for website maintenance and the profit it actually brings.

However it is necessary to mention that the website needs not only be developed but also maintained. Therefore there are some additional costs which the company should consider. One of the website maintenance tools is SEO, i.e. search engine optimization. The budget for SEO depends on the amount of work that will be performed. It is usually calculated after auditing the optimization

object. The service may be available both as one-time and on an ongoing basis. To determine the effectiveness of SEO it is worth employing the comparative analysis of indicators before and after SEO introduction.

SMM is the newest but fast-growing digital-marketing branch. The essence of the tool lies in creating certain public image for a brand in the social networks. One of the features is that SMM campaigns are often created in collaboration with advertising agencies. This method is chosen by both small and large enterprises, since advertising agencies reduce costs for SMM due to greater resource capabilities and cash flow. SMM budget depends on the quantity, quality and type of services provided.

One of the popular ways of calculating the cost of SMM services is creating budget basing on the hourly pay for each of the experts who create an advertisement. The effectiveness of SMM campaigns can be measured with the help of such indicators as engagement rate, RTAT, CTR, CTP, conversion to the website and the number of leads. Many agencies use special software to determine the effectiveness of SMM campaign management, for example: Social Bakers, Popsters, Buzz sumo, Fan page karma, etc.

Events can be advertised not only offline but also online. However it should be noted that the advertising campaign promoted with the help of online event planning activities will have its own advantages for marketing management. The key advantage is the reduction of advertising costs through the use of digital tools. Digital-tools that are most often used for event planning are contextual advertising and SMM. A good example is the campaign "Winter country" on STB TV Channel. This event is actively promoted not only through the classical marketing tools, but also through digital tools.

Events are not necessarily held offline only. Many companies organize online events by using modern technologies such as Skype, YouTube, a website supporting the purposes of campaign, etc. Therefore, enterprises can save significant amounts of money on renting the venues for events, printing products, auxiliary materials, and so on.

Organizing events could be quite challenging, so in most cases it is more practical to use the services of advertising agencies. At the moment the

most effective approach to calculating the cost of agencies is a calculation of the actual costs and the net cost of services with added interest of agencies profit.

The budget of events will consist of two parts – online and offline costs, each having its own specific features and depending on the scale of the campaign. With the help of digital tools, the results of campaigns can be estimated much more accurately. In this case, it is appropriate to employ such an indicator as ROI (Return on Investment), i.e. the profit ratio of the advertising campaign, which illustrates the rate of return on investment.

**Conclusions of the presented study and prospects for the further research in this sphere.**

The scientific novelty of the research lies in the fact that in the result of the analysis of the digital-marketing influence through such tools as website development, SMM, SEO, event organization we managed to measure the impact on the management of enterprise marketing. The study helped to determine the efficiency and impact on organizational structure of the company; changes in funding; effectiveness of marketing budget planning; reducing costs on marketing, promotion of competitiveness.

Thus, at the present stage digital-marketing is an effective tool for an enterprise to conquer new markets. Impact on marketing management is performed by each of the mentioned digital tools. They help to achieve significant results with low costs. It is proved that successful use of digital makes revenue increase significantly. One of the high-priority and open issues for each company is a choice of marketing process organization, namely resorting to the agency or using their own workforce.

What is also worth noting is the trend that is evident in the digital marketing, which is a lowering of the difference between an organization and holding of advertising campaigns by large, medium and small businesses. Digital-marketing is an affordable tool of increasing sales and gaining new markets.



## References

1. Bozhkova V. V. (2010). Problems of communications strategic planning efficiency industrial. Sumy: Dream-1.
2. Dergachov V. V. Skibina O. O. (2007). The globalization of business and Internet marketing. Donetsk: DonNUET.
3. Michael Stelzner. (2012). Content marketing. New methods Attraction clients era in Internet. Moscow: Mann, Ivanov and Ferber.
4. Shpak N. O. (2011). Fundamentals of communication management industry. Lviv: NULP.
5. Yarlikov A.(2013). Tools of Internet-marketing. Retrieved from: <http://takmak51.ru/>
6. Ukrainian Business Resource (2014), "The labor market 2014: where and why easier to find a work", available at:<http://ubr.ua/labor-market/ukrainian-labor-market/rynok-truda-2014-gde-i-komu-legche-naiti-rabotu-312011>