



ECONOMICS AND MANAGEMENT OF ENTERPRISE

NEOCLASSICAL CONCEPT OF MARKETING INFORMATION SYSTEMS OF THE COMPANIES

page 4–9

The article shows that the new challenges facing enterprises necessitated concept modernization of marketing information systems. The neoclassical concept of marketing information system is proposed, its definition, purpose, objectives, principles on which the goal is achieved and tasks, solutions to problems faced by enterprises and structure of the system are given.

It is shown that marketing information system of the concrete and the concrete product manufacturer — is the organizational and administrative mechanism for the aggregation, processing, analysis of valuable information needed to develop forecasts for the enterprise under uncertainty and risk marketing environment.

It is proposed the scheme of neoclassical concept of marketing information systems of the enterprise which consists of the following four subsystems: monitoring; marketing research; risk assessment; forecasting.

Keywords: marketing information systems, marketing researches, monitoring, risk assessment, mixed concrete.

References

1. Blanchard, O., Leigh, D. (2013). *Growth Forecast Errors and Fiscal Multipliers*. IMF Working Paper. International Monetary Fund. Available: <http://www.imf.org/external/pubs/ft/wp/2013/wp1301.pdf>
2. Trenk, A., Kalnin'sh, G. (2014, May 20). Razumnoe finansovoe planirovaniye kak osnova gosudarstvennogo razvitiya. *DELFI*. Available: <http://rus.delfi.lv/news/daily/versions/razumnoe-finansovoe-planirovaniye-kak-osnova-gosudarstvennogo-razvitiya.d?id=44513680>
3. Aaker, D. A., Kumar, V., Leone, R., Day, G. S.; In: Bozhuk, S. (2004). *Marketing Research*. Translated from English. Ed. 7. SPb.: Piter, 848.
4. Kotler, Ph.; In: Pen'kova, E. M. (1990). *Principles of Marketing*. Translated from English. M.: Progress, 736.
5. Kotler, Ph., Armstrong, G., Saunders, J., Wong, V. (1998). *Principles of Marketing*. Translated from English. Kyiv: Williams, 1056.
6. Malhotra, N. K. (2003). *Marketing Research: An Applied Orientation*. Translated from English. Ed. 3. M.: Williams, 960.
7. Churchill, G. A. (2000). *Marketing Research*. Translated from English. SPb.: Piter, 752.
8. Evans, J. R., Berman, B.; In: Goriachov, A. A. (1990). *Marketing*. Reduced translated from English. M.: Ekonomika, 350.
9. Gates, B. (2001). *Business @ the Speed of Thought*. Translated from English. M.: Eksmo-Press, 480.
10. Official site of the State Statistics Service of Ukraine. Available: <http://ukrstat.gov.ua>
11. Pro zavershennia konsultatsii z mizhnarodnymy finansovymy orhanizatsiiam stosovno zaprovadzhennia tymchasylykh zakhodiv shchody stabilizatsii platizhnoho balansu Ukrayny. *Dispositions of the Cabinet of Ministers of Ukraine from 16.02.15 № 119-p*. Available: <http://zakon4.rada.gov.ua/laws/show/119-2015-p>

ECONOMIC EFFICIENCY OF HOT WATER SYSTEMS BASED ON SOLAR COLLECTORS

page 10–14

This paper focuses on the economic efficiency issues of the employment of hot water systems based on solar collectors establishing in Ukraine. There have been determined the standard solutions to create hot water systems based on solar collectors. There have been calculated capitalized and current charges related with the launch and operation of these systems and the payback period. There have been analyzed the amount of energy produced by solar collectors of different power for water heating.

As a result of the research conducted by the authors, they have reached a conclusion that the employment of hot water systems based on solar collectors is cost-efficient. Despite the high capitalized charges as compared to systems of electric and gas water heating they are compensated, on average, within 13–25 years.

It is worth mentioning that one of the most important moments of such systems employment is not only their economic efficiency but also significant reduce of gas consumption in housing and utilities sector. This fact plays a fundamental role in ensuring the energy independence of Ukraine. The main deterrent restraining the mass employment of hot water systems based on solar collectors in Ukrainian are sufficiently large initial expenses and lack of support on behalf of the state.

Keywords: hot water system, solar collector, economic efficiency, payback period.

References

1. Dosehova, E. (12.09.2014). Do the benefits of off hot water? *Business Capital*. Available: <http://www.dsnews.ua/society/iz-za-otklyucheniya-goryachey-vody-uvelichivaetsya-rashod-gaza-11092014211800>
2. A tour of the world trends in the use of solar water heating systems. *New Energy Systems*. Available: <http://progress21.com.ua/ru/solar-collectors/Solar-collectors-in-the-world>
3. *The group of companies «Atmosfera»*. Available: <http://atmosfera.ua>
4. Yuzhnyy, S. The cost of hot water. *Alternative Energy and Information*. Available: <http://altinfoy.ru/index.php/rashot/ekras/snv.html>
5. For setting in June 2015 retail electricity tariffs considering limiting tariff levels with a gradual transition to the formation of unified retail tariffs for consumers in Ukraine. *Resolution of NCREKS from 26.02.2015 № 1619*. Available: <http://www.nerc.gov.ua/?id=15849>
6. On the limitation of natural gas prices for industrial consumers and other business entities. *Resolution of NCREKS from 30.06.2015 № 1886*. Available: <http://www.nerc.gov.ua/index.php?id=16459>
7. Calculation of the solar collector. *New Energy Systems*. Available: <http://progress21.com.ua/ru/economical-calculation-of-systems>
8. Installation of solar collectors. *Company «Thermo Group»*. Available: <http://thermo-group.com.ua/service/montazh-solnechnyh-kollektorov>
9. Solar water heater. (31.06.2015). *Wikipedia*. Available: https://ru.wikipedia.org/wiki/Солнечный_водонагреватель
10. Internet-shop «Rozetka». Available: <http://rozetka.com.ua>
11. Klyon, A., Efremenko, V. (2015). Economic efficiency of network-based solar power stations employment in private housing estates. *Technology Audit And Production Reserves*, 3(1(23)), 8–13. doi:10.15587/2312-8372.2015.42789
12. Bereziuk, A. M., Dikarev, K. B., Papirnyk, R. B., Skokova, A. O., Kuzmenko, O. M. (2013). Application research and efficiency analysis of renewable energy resources using in housing construction. *Visnyk of Pridniprovske State Academy of Civil Engineering and Architecture*, 8, 28–32.
13. Voznyak, O. T., Dac'ko, O. S., Shapoval, S. P. (2008). Economic feasibility of using discrete orientation year round heliosystems. *Kommunal'noe khoziaistvo gorodov*, 84, 162–167.

FORMATION OF MANAGEMENT MECHANISM FOR SMALL BUSINESSES FINANCIAL SECURITY

page 14–19

The state of problem elaboration concerning the formation of the mechanism of small businesses financial security management (further SB) is analyzed; the concept of «financial SB security» is defined. The financial security of a small business is defined as a financial position which is characterized by balance and quality of the financial tools set, instruments used by small business, resistance to internal and external threats, the ability of small business financial policy for ensuring the implementation of its financial interests, mission and objectives with sufficient financial resources and to guarantee its efficient and sustainable development.

Its goals and objectives are formulated; methods of detection and assessment of threats to SB financial security and its criteria are defined; algorithm of the management of SB financial security functioning and logical-structural pattern of conducting structural analysis of SB financial security are worked out.

The need to use strategic analysis in the process of financial security management of business is caused by such reasons as: the

implementation of the effective management in relation to financial security; development of a strategy for ensuring the financial security of the company; identification of possible risks and threats to financial security at business level; determination of the factors that affect the level of business financial security; identification of internal resources and capabilities for ensuring financial security, etc.

Keywords: financial security, management mechanism, small businesses, threats to financial security.

References

1. Pro Natsionalnu prohramu spryannia rozyvku maloho pidprijemstva v Ukrainsi. *Law of Ukraine № 2157-III of 21.12.2000*. Available: <http://zakon3.rada.gov.ua/laws/show/2157-14>
2. Vitlinskyi, V. V., Velykoivanenko, H. T. (2004). *Rozvykoholii v ekonomitsi ta pidprijemnytstvi*. Kyiv: KNEU, 480.
3. Il'iaschenko, S. N. (2003). Sostavliaushchie ekonomicheskoi bezopasnosti predpriatiia i podhody k ih otsenke. *Aktual'ni problemi ekonomiki*, 3, 12–19.
4. Koval, L. P. (2012). Zmyny u sproshchenii sistemi opodatkuvannia ta yikh vplyv na finansovu bezpeku maloho pidprijemnytstva. *Naukovyi visnyk NLTU Ukrainsi*, 22.1, 244–250. Available: http://nbuv.gov.ua/j-pdf/vnltu_2012_22.1_46.pdf
5. Nazarov, V. V. (2002). *Formirovanie mehanizma stoikosti predpriaiia malogo biznesa*. Lugansk: Volodymyr Dahl East Ukrainian National University, 225.
6. Pokotylenko, R. V. (2003). *Mekhanizm formuvannia ta zabezpechennia ekonomicznoi bezpeky*. Donetsk: Institute of Industrial Economics of NAS of Ukraine, 20.
7. Szweda, R. (1998, December). University switches to financial security system. *Network Security*, 12, 2. doi:10.1016/s1353-4858(98)90133-7
8. Sommer, P. (1992, April). Information security in financial services. *Computer Fraud & Security Bulletin*, Vol. 1992, № 4, 20 doi:10.1016/0142-0496(92)90273-1
9. Dryha, S. H. (2009). *Male pidprijemnytstvo Ukrainsi: stanovlennia, mehanizmy upravlinnia ta pidtrymkhy*. Kyiv: DKS tsentr, 359.
10. Podolchak, N. Yu. (2002). Klasyfikatsiia ryzykiv ta metody yikh znyzhennia. *Visnyk Natsionalnoho universytetu «Lvivskopolitehnika»*, 457, 23–32.
11. PC Outlook Remains Cautious, Despite Modest Third Quarter Gains, According to IDC. (2014, November 25). IDC Research, Inc. Available: <http://www.idc.com/getdoc.jsp?containerId=prUS25267114>
12. Matviienko, H. L. (2005). Osnovnyi instrumentarii kontrolinhu na ukrainskykh pidprijemstvakh. *Nauchno-tehnicheskyi sbornyk*, 61, 175–180.
13. Kartseva, V. V. (2010). Systematyzatsiia instrumentariu kontrolinhu na pidprijemstvi: teoretychnyi aspekt. *Zbirnyk naukovykh prats Natsionalnoho universytetu derzhavnoi podatkovoi sluzhby Ukrainsi*, 1, 118–127.
14. Mann, R., Maier, E., Ivashkevicha, V. B., Zhukova, Yu. G. (1995). *Kontroling dla nachinaushchih*. Ed. 2. Moscow: Finansy i statistika, 304.
15. Anan'kina, E. A., Danilochkin, S. V., Danilochkina, N. G. (1998). *Kontrolling kak instrument upravleniya predpriatiem*. Moscow: Audit, IuNITI, 279.
16. Pushkar, M. S. (1997). *Kontrolinh*. Ternopil, 146.
17. Tyshchenko, O. I. (2011). *Operatyvnyi kontrolinh v upravlinni vyrobnychymy zatrataamy elektrotehnichnykh pidprijemstv*. Luhansk, 20.
18. Bazhan, I. I. (2006). *Kontrolinh*. Donetsk: TOV «Yuh-Vostok, Ltd», 211.
19. Darmanska, H. O., Svod, L. V. (2002). *Kontrolinh*. Khmelnytskyi: TUP, 107.
20. Storozhyk, M. I., Holubiatnikova, N. V. (2004). *Kontrolinh*. Lviv: LRIDU NADU, 210.
21. Prokhorova, V. V., Martiusheva, L. S., Petrusovich, N. Yu., Prokhorova, Yu. V. (2006). *Kontrolinh vid teorii do realizatsii na praktytsi*. Kharkiv: VD «INZhEK», 200.
22. Maliarets, L. M., Matviienko-Biliaieva, H. L. (2010). *Formalizatsiia zadach u kontrolinhu lohistychnoi diialnosti pidprijemstva*. Kharkiv: KhNEU, 228.
23. Sierpinska, M., Niedbala, B. (2003). *Controlling operacyjny w predsiebiorstwie centra odpowiedzialnosci w teorii i praktyce*. Warsaw: Wydawnictwo Nakowe PWN, 421.
24. Pisz, I. (2011). Controlling of logistics projects. *Total logistic management*, 4, 107–123.
25. Kolinski, A., Trajanowska, J., Pajak, E. (2015). *Theory of constraints as supporting element of logistics controlling*. Publishing House of Poznan University of Technology, 71–84.
26. Kalaitan, T. V. (2009). Kontrolinh: problemy terminolohii. *Visnyk Lvivs'koi komertsii no akademii. Seriia ekonomiczna*, 30, 43–47.
27. Chikita, I. (2013). Elastichnist popytu na kredyty yak faktor pidvyshchennia vplyvu bankivskoi systemy na ekonomiche zrostannia. *Visnyk NBU. Finansovi rynok. Makroekonomika*, 52–56.
28. Chornopyska, N. V. (2008). Metodychni pidkhody otsinuvannia lohistychnoi diialnosti pidprijemstva. *Visnyk Natsionalnoho universytetu «Lvivska politehnika»*, Lohistyka, 623, 265–271.
29. Krykavskyi, Ye. (2005). *Lohistychne upravlinnia*. Lviv: Natsionalnyi universytet «Lvivska polekhnika», 684.
30. Rudenko, H. R. (2011). Innovatsiinist zviazku obliku, analizu, kontroliu ta audytu lohistychnykh vytrat pidprijemstv. *Problemy nauky*, 5, 40–47.
31. Perevozova, I. V. (2014). Adaptatsiini aspekty zastosuvannia ekonomicznoi ekspertryzy v konturakh nimetskoi modeli kontrolinhu pidprijemstva. *Visnyk Natsionalnoho universytetu «Lvivska politehnika»*. Menedzhment ta pidprijemnytstvo v Ukrainsi: etapy stanovlennia ta problemy rozvytku, 797, 403–409.
32. Prokopenco, O. V., Kryvoruchko, L. B. (2011). Ekonomichna sut kontrolinhu, yoho mistse v sistemi upravlinnia pidprijemstvom. *Visnyk SumDU. Seriia «Ekonomika»*, 4, 27–34.
33. Petrovych, Y. M., Panas, Ya. V. (2013). Evoliutsiia kontrolinhu v suchasni teorii ta praktysi upravlinnia vitchyznianymy pidprijemstvamy. *Menedzhment i marketynh innovatsii*, 1, 129–137.

JUSTIFICATION OF BASIC SET OF TOOLS AND METHODS OF LOGISTIC CONTROLLING

page 19–25

The instrumental and methodological support of logistic controlling subsystem of the company is analyzed. A distribution logistic controlling of tools and methods by domestic and foreign scientists is overviewed. It is established that there is no generally accepted and universal set of tools and methods to logistic controlling. It is established that there is no consensus on the distribution of tools and methods into categories: tools and methods. That is often various scholars are included the tool to the tools and method of logistic controlling. A similar situation is classified for the methods. The expediency of category leveling of machine tools and methods of logistic controlling is proved. It is adopted a single set of tools/methods for logistic controlling are not separating them into categories. The necessity of forming a basic list of tools/methods for logistic controlling to implement logistic controlling subsystems in the overall system management is proved. It is identified that the proposed set of tools/methods for logistic controlling allow to fully ensuring the realization of its goals and objectives.

Keywords: logistic controlling, instrumental and methodological support of logistic controlling, controlled performance.

References

1. Naid'onov, O. G. (2010). Informatizatsiia iak golovna ideia tret'o go tisacholittia. *Uchenye zapiski Tavricheskogo natsional'nogo universitetu im. V. I. Vernadskogo. Seriia «Filosofija. Kul'turologija. Politologija. Sotsiologija»*, Vol. 23 (62), № 2, 161–165.
2. Romanenko, O. O. (2014). Vplyv merezhi Internet na diialnist promyslovykh pidprijemstv. *Ekonomichnyi visnyk. Ekonomika pidprijemstva*, 4, 141–147.
3. Carlton, J. (1997). *Apple: The Inside Story of Intrigue, Egomania, and Business Blunders*. New York: Random House Inc., 463.

4. PC Outlook Remains Cautious, Despite Modest Third Quarter Gains, According to IDC. (2014, November 25). IDC Research, Inc. Available: <http://www.idc.com/getdoc.jsp?containerId=prUS25267114>
5. Matviienko, H. L. (2005). Osnovnyi instrumentarii kontrolinhu na ukrainskykh pidprijemstvakh. *Nauchno-tehnicheskyi sbornyk*, 61, 175–180.
6. Kartseva, V. V. (2010). Systematyzatsiia instrumentariu kontrolinhu na pidprijemstvi: teoretychnyi aspekt. *Zbirnyk naukovykh prats Natsionalnoho universytetu derzhavnoi podatkovoi sluzhby Ukrainsi*, 1, 118–127.
7. Mann, R., Maier, E., Ivashkevicha, V. B., Zhukova, Yu. G. (1995). *Kontroling dla nachinaushchih*. Ed. 2. Moscow: Finansy i statistika, 304.
8. Anan'kina, E. A., Danilochkin, S. V., Danilochkina, N. G. (1998). *Kontrolling kak instrument upravleniya predpriatiem*. Moscow: Audit, IuNITI, 279.
9. Pushkar, M. S. (1997). *Kontrolinh*. Ternopil, 146.
10. Tyshchenko, O. I. (2011). *Operatyvnyi kontrolinh v upravlinni vyrobnychymy zatrataamy elektrotehnichnykh pidprijemstv*. Luhansk, 20.
11. Bazhan, I. I. (2006). *Kontrolinh*. Donetsk: TOV «Yuh-Vostok, Ltd», 211.
12. Darmanska, H. O., Svod, L. V. (2002). *Kontrolinh*. Khmelnytskyi: TUP, 107.
13. Storozhyk, M. I., Holubiatnikova, N. V. (2004). *Kontrolinh*. Lviv: LRIDU NADU, 210.
14. Prokhorova, V. V., Martiusheva, L. S., Petrusovich, N. Yu., Prokhorova, Yu. V. (2006). *Kontrolinh vid teorii do realizatsii na praktytsi*. Kharkiv: VD «INZhEK», 200.
15. Maliarets, L. M., Matviienko-Biliaieva, H. L. (2010). *Formalizatsiia zadach u kontrolinhu lohistychnoi diialnosti pidprijemstva*. Kharkiv: KhNEU, 228.
16. Sierpinska, M., Niedbala, B. (2003). *Controlling operacyjny w predsiebiorstwie centra odpowiedzialnosci w teorii i praktyce*. Warsaw: Wydawnictwo Nakowe PWN, 421.
17. Pisz, I. (2011). Controlling of logistics projects. *Total logistic management*, 4, 107–123.
18. Kolinski, A., Trajanowska, J., Pajak, E. (2015). *Theory of constraints as supporting element of logistics controlling*. Publishing House of Poznan University of Technology, 71–84.
19. Kalaitan, T. V. (2009). Kontrolinh: problemy terminolohii. *Visnyk Lvivs'koi komertsii no akademii. Seriia ekonomiczna*, 30, 43–47.
20. Chikita, I. (2013). Elastichnist popytu na kredyty yak faktor pidvyshchennia vplyvu bankivskoi systemy na ekonomiche zrostannia. *Visnyk NBU. Finansovi rynok. Makroekonomika*, 52–56.
21. Chornopyska, N. V. (2008). Metodychni pidkhody otsinuvannia lohistychnoi diialnosti pidprijemstva. *Visnyk Natsionalnoho universytetu «Lvivska politehnika»*, Lohistyka, 623, 265–271.
22. Krykavskyi, Ye. (2005). *Lohistychne upravlinnia*. Lviv: Natsionalnyi universytet «Lvivska polekhnika», 684.
23. Rudenko, H. R. (2011). Innovatsiinist zviazku obliku, analizu, kontroliu ta audytu lohistychnykh vytrat pidprijemstv. *Problemy nauky*, 5, 40–47.
24. Perevozova, I. V. (2014). Adaptatsiini aspekty zastosuvannia ekonomicznoi ekspertryzy v konturakh nimetskoi modeli kontrolinhu pidprijemstva. *Visnyk Natsionalnoho universytetu «Lvivska politehnika»*. Menedzhment ta pidprijemnytstvo v Ukrainsi: etapy stanovlennia ta problemy rozvytku, 797, 403–409.
25. Prokopenco, O. V., Kryvoruchko, L. B. (2011). Ekonomichna sut kontrolinhu, yoho mistse v sistemi upravlinnia pidprijemstvom. *Visnyk SumDU. Seriia «Ekonomika»*, 4, 27–34.
26. Petrovych, Y. M., Panas, Ya. V. (2013). Evoliutsiia kontrolinhu v suchasni teorii ta praktysi upravlinnia vitchyznianymy pidprijemstvamy. *Menedzhment i marketynh innovatsii*, 1, 129–137.

MODEL THE EFFECTIVENESS OF A SYSTEMATIC PROCESS OF TECHNICAL RE-EQUIPMENT OF PRODUCTION

page 25–31

In the article the modern definition of «technical re-equipment of production», outlines the methodological approach to the analysis of its nature and content, as a system process efficiency is determined by performing technical-technological, organizational-economic and innovation-implementing subsystems consisting of technical object retooling.

Developed the optimization mathematical of model system function efficiency of technical industry re-equipment aimed to the combination consisting of generalized analytical performance ratio

of all nominated subsystems defined functional and technical components. Essential author's suggestion is calculating a priori and actual performance across all functional components of technical upgrading facility, comparison of achieved performance and efficiency and using of partial indices composed of system function performance. The possibility of interpreting the indicators of efficiency of the system function is not only to assess the outcomes of technical re-equipment of production, but also to identify the functional components of the overall system, which targets technical upgrading achieved with deviations from planned values.

Proposed author deals with both scientific-methodological significance and practical orientation that tested by the example of a concrete manufacturing plant and can be implemented in other enterprises industries.

Keywords: enterprise, model of efficiency, functional components, technical re-equipment, the system function.

References

1. In: Goncharov, V. V. (1992). *Adaptatsiya promyshlennyyh predpriyatiy k nauchno-tehnicheskim novshestvam*. Kyiv: Tehnika, 132.
2. Pererva, P. G., Zhegys, O. V. (2011). *Naykovo-innovatsiyniy potentsial Ukrayini ta sучasni problemi yogo vikoristannya*. Available: http://archive.nbuv.gov.ua/portal/Natural/vcip/TPtEV/2011_26/statya/Pererva.pdf
3. In: Pererva, P. G., Mehovich, S. A., Pogorelov, M. I. (2008). *Ekonomika ta organizatsiya innovatsiynoyi diyalnosti*. Kharkiv: NTU «KhPI», 1080.
4. Pererva, P. G., Mehovich, S. A., Pogorelov, M. I. (2008). *Organizatsiya ta ypracchinnya innovatsiynoyi diyalnosti*. Kharkiv: NTU «KhPI», 1025.
5. Grabchenko, A. I., Pererva, P. G., Smolovik, R. F. (1999). *Osnovy marketinga vysokih tehnologii*. Kharkiv: KHPGPU, 242.
6. Larina, K. V. (2008). *Upravlinnya tehnichnimi pereozbroennyam pidpriemstva na osnovi kontsepsiyi marketingu*. Kharkiv, 24.
7. Melkumov, Ya. S. (2002). *Organizatsiya i finansirovanie investitsiy: ucheb.-posobie*. Moscow: INFRA, 248.
8. Pererva, P. G., Tovazhnyanskiy, V. L. (2010). Antikrizovy monitoring finansovo-ekonomicznykh pokaznikiv roboti mashinobydivnogo pidpriemstva. *Ekonomika rozvitky*, 2 (54), 46–50.
9. Pererva, P. G., Tkachova, N. P. (2011). Rozvitok metodiv analizy faktichnogo stany konkyrentnih perevag pidpriemstva. *Ekonomika rozvitky*, 4(60), 116–120.
10. Pererva, P. G., Kotsiski, D., Sakay, D., Vereshne Shomoshi, M. (2012). *Transfer tehnologij*. Kharkiv: Virovets A. P. «Apostrof», 668.
11. Pererva, P. G., Kosenko, A. V., Kosenko, O. P. (2012). *Antikrizovi instrumenti stalogo rozvitky pidpriemstva: innovatsiyna, investitsiyna ta marketingova politika*. Available: http://www.nbuv.gov.ua/portal/natural/vcip/TPtEV/2012_25/statti/16Pererva.pdf.
12. Samochkin, V. V. (2000). *Gibkoe razvitiye predpriyatiya: Analiz i planirovanie*. Moscow: Delo, 376.
13. Sapozhnikov, E. O. (2005). *Innovatsiyni problemi tehnichnogo pereozbroennya virobništva*. Kharkiv: KhNU im. Karazina, 260.
14. Dhaoui, M. L. (2003). *Metodological guide: restructuring, upgrading and industrial competitiveness*. Vienna: UNIDO, 87.
15. Narayanan, V. (2001). *Managing Technology and Innovation for Competitive Advantage*. UK: Prentice Hall, 168.
16. Pererva, P. G., Gladenko, I. V. (2010). Monitoring innovatsiynoyi diyalnosti: interpretatsiya rezylativ. *Marketing i menedzhment innovatsiy*, 2, 108–116.
17. Drucker, P. (2007). *Innovation and Entrepreneurship*. UK: Harper-Business, 288. doi:10.4324/9780080549415
18. Pererva, P. G. (2003). *Samomarketing menedzhera i biznesmena*. Ros-tov-on-Don: Feniks, 592.
19. Bezugla, D. V. (2013). Organizatsiyno-ekonomiczni aspekti innovatsiynoyi diyalnosti pidpriemstv Harkivskoyi oblasti. *Visnik Nacionalnogo tehnichnogo universitetu «KhPI»*. Seriya: *Tehnickiy progres i efektivnost virobništva*, 20(993), 112–120.
20. Pererva, P. G., Tkachova, N. P. (2011). Sinergetichniy efekt benchmarking konkyrentnih perevag. *Marketing i menedzhment innovatsiy*, 4(1), 55–66.

IMPROVING THE METHODICAL APPROACH TO FORMATION OF ORGANIZATIONAL AND ECONOMIC MECHANISMS TO FORM AND USE OF SMB INCOME

page 31–36

An improved methodological approach for the selection of organizational and economic measures for the development and use

of income are proposed in the article. Groups of financial strategies for SMB are revealed. Organizational and economic measures for forming financial strategies are established. The mechanism for positioning companies in the proposed matrix, the coordinates of which are integral indicators of financial performance, production and marketing activities is developed. Application of an improved methodological approach to the choice of organizational and economic measures for the formation and use of the profit in the practical activities of domestic enterprises allows visually detect changes in the conditions and results of management, provides the necessary information base to make effective management decisions. Methodical recommendations for the organization of the working group on the formation and use of income whose goal is the timely improvement of process management on a strategic and operational level in order to improve the profitability of its activities are developed. The use of these recommendations will enable the director and functional managers to make timely management decisions on the formation and use of income, taking into account all the peculiarities of the processes occurring in the enterprise.

Keywords: organizational and economic activities, small and medium-sized businesses, financial strategy, industrial enterprises.

References

1. Blank, I. A. (1998). *Upravlenie pribyliu*. Kyiv: Nika-Tsentr, Elga, 543.
2. In: Kruk, D. M. (1982). *Organizatsiya, planirovanie i upravlenie promyshlennym predpriyatiem*. Moscow: Ekonomika, 376.
3. In: Rumyantseva, Z. P., Salomatkin, N. A. (1995). *Menedzhment organizatsii*. Moscow: INFRA-M, 432.
4. Ponomarenko, V. S., Yastremskaia, E. N., Lutskovskii, V. M. et al. (2002). *Mehanizm upravleniya predpriyatiem: strategicheskii aspekt*. Kharkiv: KhSEU, 252.
5. In: Hrynova, V. M. (2011). *Mekhanizm stratehichnogo upravlinnia pidprijemstvom na zasadakh lohistyky*. Kharkiv: KhNEU, 230.
6. In: Darnay, A. J., Magee, M. D. (2007). *Encyclopedia of Small Business*. Detroit: Thomson Gale, 1216.
7. Vargas-Hernández, J. G., Reza Noruzi, M., Sariolghalam, N. (2010, April 19). Risk or Innovation, Which One Is Far more Preferable in Innovation Projects? *International Journal of Marketing Studies*, Vol. 2, № 1, 233–244. doi:10.5539/ijms.v2n1p233
8. Bilyk, M. D., Bilyk, T. O. (2012). *Finansovi rezul'taty diyalnosti malykh pidprijemstv: otsinka ta prohnozuvannia*. Kyiv: TOV «PanTot», 280.
9. Volokhova, M. P. (2012). *Finansovo-ekonomiczni vazheli ta stymuly v zabezpechenni dilovoii aktyvnosti malykh pidprijemstv*. Odessa: ONEU, 206.
10. Donets, L. I., Barantseva, S. M. (2008). *Upravlinnia formuvanniam prybutku pidprijemstva v umovakh rynkovykh form hospodariuvannia*. Donetsk: DonNUET, 255.
11. Egorov, P. V., Kobets, A. A., Serdiuk-Kopchekchi, Yu. V. (2010). *Formirovanie mehanizma upravleniu pribyliu predpriyatiia v usloviyah rynochnyh otnoshenii*. Donetsk: Iugo-Vostok, 2140.
12. Zinchenko, O. A. (2011). *Osnovy upravlinnia yakistiu prybutku pidprijemstva*. Kryvyi Rih: Vydavnychyi dim, 292.
13. Makarevich, L. M. (2004). *Upravlenie effektivnostiu kompanii: (nadezhnaia garantija pribylnosti biznesa)*. Moscow: OOO «Vershina», 192.
14. Nait, F. H. (2003). *Risk, neopredelennost'i pribyli'*. Moscow: Delo, 360.
15. Orlov, O. O., Riasnykh, Ye. H., Havlovska, N. H. (2009). *Planuvannia prybutku pidprijemstv v umovakh rynkovoi ekonomiky*. Khmelnytskyi: KhNU, 155.

CARS' SALES SYSTEMS IMPROVEMENT ON THE GLOBAL MARKET

page 36–40

The modern car market is the basis of the global economy. Car's sales make strong influence at economic growth and crisis in the global economy. The car market is one of more competitive market among others and just here all innovations and technologies as in management as in marketing and production are implemented. Car market is cyclic very much by its nature. So, car market has suffered crisis for several time during last 15 years. And such car makers as Chrysler and SAAB could not managed to survive demand's fluctuation. The negative trends of sales are to be seen even now. Therefore

car producers have to change and develop its sales system with the aim to increase competitiveness. The classic cars' sales schemes which have been used since 30th of the last century as well as new sales channels have been viewed at the article. It is realized that the classic cars' sales system is changing in the modern time. Cars are becoming more complicated. New sales channels have been researched and proposed to be realized. It is offered to upgrade the cars' sales system and develop new sales channels. It will help to sell more active at target segments and allows specialized dealers to focus at clients.

Keywords: sales, sales channels, car market, distribution, dealer, marketing.

References

1. Pylypchuk, V. P., Dannikov, O. V. (2011). *Upravlinnia prodazhem*. Kyiv: KNEU, 627.
2. Kim, W. Chan, Mauborgne, R. (2013). *Blue Ocean Strategy*. Translated from English. Moscow: Mann, Ivanov i Ferber, 304.
3. Zoltmers, A. A., Sinha, P., Lorimer, S. E. (2005). *Sales Territory Alignment: An Overlooked Productivity Tool*. Translated from English. Dnepropetrovsk: Balans Biznes Buks, 512.
4. Magretta, J. (2013). *Understanding Michael Porter: The Essential Guide to Competition and Strategy*. Translated from English. Moscow: Mann, Ivanov i Ferber, 272.
5. Trout, J., Rivkin, S. (2013). *The Power Of Simplicity: A Management Guide to Cutting Through the Nonsense and Doing Things Right*. Translated from English. Moscow: Mann, Ivanov i Ferber, 208.
6. Ivanov, V. V., Bogachenko, P. V. (2007). *Avtomobil'nyi menedzhment*. Moscow: INFRA-M, 430.
7. Porter, M. (1993). *International competition*. Translated from English. Moscow: Mezhdunar. Otnosheniia, 896.
8. Kaplan, R., Norton, D. (2004). *The Strategy-Focused Organization*. Translated from English. Moscow: ZAO «Olimp-Biznes», 416.
9. Global Automotive Industry hits the all-time record in the 2014. Available: <http://focus2move.com/global-automotive-industry-2/>
10. Sokol, M. (2012). *Marketing na rynke legkovykh automobilei*. Kyiv: Al'fa Reklama, 502.

ELABORATION OF MANAGEMENT MECHANISM OF INNOVATIVE DEVELOPMENT OF COAL INDUSTRY IN UKRAINE

page 40–43

Theoretical and methodological approaches to the management of innovative development of coal enterprises in Ukraine have been considered in the article, a common approach to the definition of «innovative development of the enterprise» were analyzed. Results of the analysis helped to identify that most authors give a definition of a position evaluation is only one aspect, it prompted the author to summarize the existing approaches and give his own definition of innovative development of coal-mining enterprise that takes into account the specifics of the industry.

Analysis of problems of innovative development of national coal industry was conducted. Based on this analysis the organizational and economic mechanism of innovative development of the Ukrainian coal industry is proposed. This mechanism involves the financing, material and personnel support in the area of production, work organization, marketing services and other.

Implementation of innovative mechanisms for development of the coal industry will help achieve a balance of income and expenditure, improve productivity, competitiveness of coal production in the domestic and international coal markets, and increase comfort and create a safe working environment.

Keywords: innovative development, mechanisms of development, organizational and economic mechanism, coal industry.

References

1. Ahmed, P. K. (1998, April). Culture and climate for innovation. *European Journal of Innovation Management*, Vol. 1, № 1, 30–43. doi:10.1108/14601069810199131
2. Van de Ven, A. H., Garud, R. (1993). Innovation and industry development: the case of cochlear implants. *Research on Technological Innovation, Management and Policy*, Vol. V. Greenwich, CT: JAI Press, Inc., 1–46.

3. Poole, M. S., Van de Ven, A. H. (2004). Theories of Organizational Change and Innovation Processes. *Handbook of Organizational Change, Chapter 13*. New York: Oxford Univ. Press, 374–398.
4. Garud, R., Tuetscher, P., Van de Ven, A. H. (2013). Perspectives on innovation processes. *Academy of Management Annals*, Vol. 7, № 1, 773–817.
5. Magda, R., Woźny, T., Głodzik, S., Jasiewicz, J. (2010). Innovative planning and design for the needs of mining production management. *Mining Review*, 9, 34–37.
6. Turek, M., Ganszczyk, Z., Jonek-Kowalska, I. (2011). Innovativeness determinants in mining enterprises. *Scientific textbooks of Silesian University of Technology. Series: Management*, 55. Gliwice, 159–172.
7. Amosha, A. I., Kabanov, A. I., Neienburg, V. E. (2005). Voprosy gosudarstvennogo regulirovaniia innovatsionnyh protsessov v promyshlennosti. *Naukovi pratsi Donetskoho natsionalnoho tekhnichnogo universytetu. Ser.: Ekonomichna*, Vol. 100, № 2, 4–12.
8. Amosha, A., Logvinenko, V. (2006). Aktual'nye problemy razvitiia ugol'noi promyshlennosti Ukrayiny. *Ekonomika Ukrayiny*, 12, 4–10.
9. Drachuk, Yu. Z., Rassuzhdai, L. N. (2007). Osnovnye aspekty organizatsionno-ekonomicheskogo mehanizma innovatsionnogo razvitiia ugol'noi otrassli. *Kul'tura narodov Prichernomor'ia*, 102, 126–129.
10. Neienburg, V. E., Drachuk, Yu. Z. (2004). Ob innovatsionnoi modeli strukturnoi perestroiki ugol'noi promyshlennosti Ukrayiny. *Ugol' Ukrayiny*, 12, 20–23.
11. Jonek-Kowalska, I. (2011). The sources of risk in the process of implementing technological innovations. *MMK 2011 – Mezinárodní Masarykova Konference Pro Doktorandy A Mladé Vědecké Pracovník*, 2. Hradec Králové, Česká republika, 280–290.

A STRATEGIC APPROACH TO IMPROVING THE EFFICIENCY OF SOCIO-ECONOMIC ACTIVITIES OF CONSUMER COOPERATION

page 43–48

Strategic approach to the development of measures to improve the efficiency of socio-economic activities of organizations and enterprises of consumer cooperation based on an adapted balanced scorecard is proposed in the article. The urgency of the problem, lack of elaborated theoretical and methodological framework applied to ensure the effectiveness of socio-economic activities of enterprises and organizations, including the system of consumer cooperatives, have necessitated more detailed study of the problem, which is the purpose of researching this article. The study suggested for organizations and enterprises of consumer cooperation: the causal relationships between prospects, the relationship system of main elements of the balanced scorecard, strategy maps and matrix to the overall strategy map. The recommendations are proposed to improve the efficiency of socio-economic activities of organizations and enterprises of consumer cooperation based on a balanced scorecard designed for online analytical information about the effectiveness of management, level of implementation of the main objectives in all areas of activity. Calculation of key indicators in key areas of organizations and enterprises of consumer cooperation would allow the evaluation of the management system of these enterprises, identify its weaknesses and their timely elimination.

Keywords: balanced scorecard, consumer cooperatives, causal relationship, strategic map, matrix.

References

1. Kaplan, R. S., Norton, D. P. (2004). *The Balanced Scorecard: Translating Strategy into Action*. Translated from English. Moscow: Olimp-biznes, 344.
2. Kyzym, M. O., Pylypenko, A. A., Zinchenko, V. A. (2007). *Zbalansovana sistema pokaznykiv*. Kharkiv: INZhEK, 192.
3. Fomenko, E. V. (2007). Metodika formirovaniia sistemy sbalansirovannyh pokazatelei. *Vestnik Astrahanskogo gosudarstvennogo tehnicheskogo universiteta*, 4, 87–90
4. Zaikov, D. V. (2015). *Postroenie sbalansirovannoi sistemy pokazatelei metallurgicheskogo predpriatiia*. Available: <http://www.finanalis.ru/litra/325/10384.html>
5. Tkachov, S. A. (2009). Upravlenie kompleksnym sotsial'no-ekonomiceskim razvitiem munitsipal'nyh obrazovanii v usloviyah reformirovaniia mestnogo samoupravleniya. *Izvestiia RGPU im. Gertse-na*, 12 (90), 224–229

6. Sheikina, O. V. (2012). Upravlenie kompleksnym sotsial'no-ekonomiceskim razvitiem munitsipal'nyh obrazovanii na osnove sistemy sbalansirovannyh pokazatelei. *Izvestia Altaiskogo gosudarstvennogo universiteta*, 2–1, 353–357
7. Kartseva, V. V. (2011). Zbalansovana sistema pokaznykiv yak instrument kontrolinu na pidprijemstvakh ta orhanizatsiakh spozhyvchoi kooperativi. *Ekonichnyi forum*, 3. Available: <http://dspace.puet.edu.ua/bitstream/123456789/776/1/14.pdf>
8. Tarasiuk, H. M. (2006). *Planova dijalnist yak systemnyi protses upravlinia pidprijemstvom*. Zhitymyr: ZhDTU, 469.
9. Kaplan, R. S., Norton, D. P. (2004). *The Strategy-Focused Organization: How Balanced Scorecard Companies Thrive in the New Business Environment*. Translated from English. Moscow: Olimp-Biznes, 416.
10. Kaplan, R. S., Norton, D. P. (2005). *Strategy Maps: Converting Intangible Assets into Tangible Outcomes*. Translated from English. Moscow: Olimp-Biznes, 512.

DIAGNOSTICS OF FUNCTIONAL HARMONY OF THE LABOR COLLECTIVE

page 49–53

It is analyzed the behavior of labor, which consists of spontaneous behavior, destroys the ordering of the characteristics of the collective and processes that take place in it. The main aim is to study methodological principles of diagnostics of functional harmony of the labor collective. Ideas of A. Davydov modular theory of social systems and k-means methods are used for the quantitative assessment to determine the functional harmony of the collective. These methods allow determining the presence of quantitative relationships between the various elements of the labor collective relevant to the Fibonacci numbers and reproduced in the «golden ratio». Diagnostics of the «golden ratio» in the distribution of the members of the collective and characteristics of their internal motives to labor activity showed that each group has its own reserves of strengthening harmony and therefore their needs, original system of regulation. It must be consistent with the business strategy, values, organizational culture, competence of the manager and socionics analysis of the collectives. Results of the study can be applied by middle and senior managers, as well as scientists and experts in human resource management.

gement. We offer to diagnose functional harmony of the collective to save life and development of labor collective in terms of knowledge economy. Value of proportions and disparities in the characteristics of the collective is an important diagnostic indicator, which reflects the quality of its features and possible ways of its development.

Keywords: diagnostics, functional harmony, «golden ratio», labor collective.

References

1. Bekh, I. D. (2008). *Vykhovannia osobystosti*. Kyiv: Lybid, 848.
2. Spitsnadel', V. N. (2000). *Osnovy sistemnogo analiza*. St. Petersburg: Publishing House «Business press», 326.
3. Andrushchenko, V. P., Mykhachenko, M. I. (1996). *Suchasna sotsialna filosofiya*. Kyiv: Heneza, 368.
4. In: Yadova, V. A. (2013). *Samoreguliatsia i prognozirovaniye sotsial'nogo povedenija lichnosti: Dispozitsionnaia kontsepsiya*. Ed. 2. Moscow: TsSPiM, 376. ISBN 978-5-906001-04-7
5. Kuz'min, S. A. (1996). *Sotsial'nye sistemy: Opyt strukturnogo analiza*. Moscow: Nauka, 191.
6. Radaev, V. V. (2005). *Ekonicheskaia sotsiologiia*. Moscow: Publishing House «GU VShE», 603.
7. Verhovin, V. I. (1991). *Sotsial'naia reguliatsia trudovogo povedenija v proizvodstvennoi organizatsii*. Moscow: University of Moscow, 80.
8. Davydov, A. A. (1994). *Modul'nyi analiz i konstruirovaniye sotsiuma*. Moscow: Institute of Sociology, 192.
9. Korobko, V. I. (2000). *Zolotaia proporsia: Nekotorye filosofskie aspekty garmonii*. Moscow, Orel: International Association Building Universities, OrelGTU, 204.
10. Yukhnovskii, I. R., Patsagan, O. V. (1990). Functional of the grand partition function in the method of collective variables with distinguished reference system. Multicomponent system. *Theoretical and Mathematical Physics*, Vol. 1, № 83, 387–395.
11. Armstrong, S., Green, K., Graefe, A. (2015). Golden rule of forecasting: Be conservative. *Journal of Business Research*, Vol. 8, № 68, 1717–1731.
12. Nazarova, H. V., Doronin, A. V. (2009). Dianostyka funktsii orhanizatsiinoi kultury na osnovi «zolotykh proporsii». *Ekonomika i upravlenie*, 2–3, 62–68.
13. Marutaev, M. A. (1990). *Garmoniia kak zakonomernost' prirody. Zolotoe sechenie*. Moscow, 130–233.

DEVELOPMENT OF PRODUCTIVE FORCES AND REGIONAL ECONOMY

THEORETICAL BASES OF FORMATION OF COMMERCIALIZATION MECHANISM OF INNOVATIVE TECHNOLOGIES

page 54–57

Common approaches to the definition of «technology commercialization» and «technology transfer» are discussed in the article. As a result of analysis definitions it was concluded that the concept of «technology commercialization» and «technology transfer» must be regarded as autonomous processes of innovation, as they can be held independently of each other.

Analysis of the problems and features of formation of modern mechanism of commercialization of innovation technologies was conducted, the main components of the commercialization mechanism of innovative technologies are considered and especially their manifestations in Ukraine are determined.

As a result of research was made the conclusion that the lack of a holistic methodology for studying the processes of commercialization of innovative technologies, the underestimation of the role and importance of commercialization in the formation of an innovative economy does not contribute to the effective technical-economic development of Ukraine on the basis of production using advanced technologies.

Keywords: technology commercialization, technology transfer, commercialization mechanisms, innovative technologies.

References

1. Antoniuk, L. L., Poruchnyk, A. M., Savchuk, V. S. (2003). *Innovatsii: teoriia, mekhanizm rozrobky ta komertsializatsii*. Kyiv: KNEU, 394.
2. Fathutdinov, R. A. (2007). *Innovatsionnyi menedzhment*. Ed. 5. SPb.: Piter, 488.
3. Schumpeter, J. A. (1935). *Théorie de l'évolution économique, Recherche sur le profit, le crédit, l'intérêt et le cycle de la conjoncture: Introduction*. Paris: Librairie Dalloz, 148.
4. Bozeman, B. (1997). Commercialization of federal laboratory technology: results of a study of industrial partners. *New Technology-Based Firms in the 1990s*, Vol. 3. London: Paul Chapman Publishing, 127–139.
5. Smoliar, L. H., Kamianska, O. V. (2004). Transfer tekhnologii – vazhlyva skladova innovatsiinoho rozvitu. *Visnyk Instytutu ekonomicznoho prohnozuvannia*, 1, 48–54.
6. Katsura, S. M. (2009). Transfer tehnologiy i diffuziya innovatsiy kak elementyi regionalnogo innovatsionnogo protsessa. *Problemyi razvitiya vnesheekonomiceskikh sotsiy i privilechiya inostranniyh investitsiy: regionalnyi aspekt*, 2. Available: http://www.nbu.gov.ua/portal/soc_gum/prvs/2009_2/0646.pdf
7. Autio, E., Laamanen, T. (1995). Measurement and evaluation of technology transfer: Review of technology transfer mechanisms and indicators. *International Journal of Technology Management*, Vol. 10, № 7–8, 643–664. doi:10.1504/IJTM.1995.025647

8. Lee, Y., Gaertner, R. (1994, June). Technology Transfer from University to Industry. A Large-Scale Experiment with Technology Development and Commercialization. *Policy Studies Journal*, Vol. 22, № 2, 384–399. doi:10.1111/j.1541-0072.1994.tb01476.x
9. Liashenko, O. M. (2007). *Modeli komertsializatsii ta transferu tekhnolohii v umovakh hlobalnoho seredovyshcha*. Ternopil: TNEU, 366.
10. Reamer, A., Icerman, L., Yotie, J. (2003, August). *Technology Transfer and Commercialization: Their Role in Economic Development*. Economic Development Administration, U. S. Department of Commerce Report, 239.
11. Solovev, V. P. (2006). *Innovatsionnaya deyatelnost' kak sistemnyiy protsess v konkurentnoy ekonomike (Sinergeticheskie effekty innovatsiy)*. Kyiv: Feniks, 560.
12. Hameri, A.-P. (1996, February). Technology transfer between basic research and industry. *Technovation*, Vol. 16, № 2, 51–92. doi:10.1016/0166-4972(95)00030-5
13. Komelina, A. A. (2012). Naukovi zasady formuvannia mekhanizmu komertsializatsii innovatsiynykh tekhnolohii. *Ekonomika i rehion*, 6, 35–41.

ECONOMIC CYBERNETICS

METHODS AND MODELS OF DEVELOPMENT OF INNOVATIVE TECHNOLOGIES IN LARGE ENTERPRISES MARKETING

page 58–61

It is studied software marketing activities for solving marketing problems. Automation of marketing activities in the enterprise has a number of significant advantages, such as faster and more efficient creation and promotion of content, advanced management of marketing companies, the ability to monitor the activity of visitors to the site. This article examines contemporary issues in the field of marketing research. There was also defined relationship with the degree of marketing innovations to various factors, among which the most weight is the geographical position of the country and the overall economic development. This study is aimed at the selection of functions to the needs of specific objects of automation and analysis of the programs used in the marketing activities of large enterprises. As a result of the study were presented groups, systems, marketing automation. Software, used in the marketing activities, has the different features and is selected in accordance with the specifics and requirements of a particular enterprise. In this article it is analyzed such systems as Integrated Marketing Management, MRM-system and EFM-system, derived their main features, advantages and disadvantages. This work is also an analysis of the program automation of marketing and marketing research, it examines the prospects for the development of innovations in the marketing of large enterprises.

Keywords: information systems, marketing automation, marketing research, marketing problems, marketing product.

References

1. Pinchuk, N., Haluzynskyi, H. P., Orlenko, N. S. (2011). *Informatsiini systemy i tekhnolohii v marketynhu*. Kyiv: KNEU, 251.
2. Kotler, P. (1998). *Principles of Marketing*. Translated from English. Vil'nius, 1056.
3. Huzhva, V. M. (2001). *Informatsiini systemy i tekhnolohii na pid-priyemstvakh*. Kyiv: KNEU, 400.
4. Oksanych, A. P., Petrenko, V. R., Kostenko, O. P. (2008). *Informatsiini systemy i tekhnolohii marketynhu*. Kyiv: Profesional, 320.
5. Palekha, Yu. I., Palekha, O. Yu. (2013). *Marketynh informatsiynykh produktiv i posluh*. Kyiv: Lira-K, 480.
6. Sladjana, S. (2013). *The study of the concept of personality of the brand in marketing*. Vol. 44, № 2, 149–172.
7. Dodge, H. R. (2014, October 13). Innovations and Industrial Marketing Strategy. *Marketing Horizons: A 1980's Perspective*. Springer Science + Business Media, 81–84. doi:10.1007/978-3-319-10966-4_19
8. Trifilova, A. A. (2005). *Otsenka effektivnosti innovatsionnogo razvitiia predpriiatia*. Moscow: Finansy i statistika, 304.
9. Ostapenko, I. M., Porokhnia, V. M. (2007). Stokhastichni modeli zadachi pro reklamu v investytsiynykh rishenniakh. *Innovatsii, investytsii, kredytuvannia: metody, modeli, mekhanizmy. Nove v ekonomichnii kibernetytsi*, 3, 22–35.
10. Ostapenko, I. M. (2007). Rozrobka polozhen kontseptualnoi modeli rozvytku innovatsiinoho marketynhu. *Vivsyky Skhidnoukrainskoho natsionalnogo universytetu im. V. Dalia*, Vol. 2, № 11(117), 264–267.
11. Ostapenko, I. M., Holovkova, L. S., Ostapenko, I. M. (2007). Informatsiina sistema modeliuвannia biudzhetnykh protsesiv. *Derzhava ta rehiony. Seriia: Ekonomika i pidprijemnytstvo*, 6, 130–134.
12. Ostapenko, I. M. (2008). Pro deiaiki pidkhody do pytannia modeliuвannia biudzhetu prosuvannia. *Derzhava ta rehiony. Seriia: Ekonomika ta pidprijemnytstvo*, 1, 121–127.

THE ESTIMATION OF PROBABILITY OF THE DOWNTIME OF THE VEHICLES UNDER THE CHANGING CONDITIONS OF THE PORT INDUSTRIAL PROCESS

page 61–64

The estimation of the probability of downtime of the means of transport at varying conditions of port industrial process was suggested which affect the intensity and the time of processing vessel. The number of means of transport at the port terminal at a time and the number of efficient handling machines is referred under the productive process. The approach is based on the theory of queuing systems operating in a random environment.

The case of direct interaction option of two transport streams were considered at one berth. To solve this problem the use of a special algorithm is provided, which is a combination of the probability of an asymptotic expansion in powers of a small parameter and matrix algorithm. The results allowed to formulate probabilistic indicators of port industrial process under varying conditions.

The practical use of these parameters enables the management of a port terminal for more efficient process control and forecasting of possible economic losses caused by the decrease in the intensity of means of transport handling.

Keywords: port terminal, port industrial process, a simple means of transport, probabilistic indicators.

References

1. Belyaev, Yu. K., Bogatyrev, V. A., Bolotin, V. V. et al.; In: Ushakov, I. A. (1985). *The reliability of technical systems. Directory*. Moscow: Radio and Communications, 608.
2. Gnedenko, B. V., Belyaev, Y. K., Solov'yev, A. D. (1965). *Mathematical methods in the theory of reliability*. Moscow: Nauka, 524.
3. Korniets, T. E. (2006). On some problems of the design safety management system port equipment. *Methods and tools for managing the development of transport systems*, 11, 175–191.
4. Postan, M., Korniets, T., Moskalyuk, L. (2014). Development of method of risk assessment of ship's demurrage as a result of restricted reliability of port's mechanisms. *Technology Audit And Production Reserves*, 5(2(19)), 69–75. doi:10.15587/2312-8372.2014.26740
5. Voevduskiy, E. N., Postan, M. Ya. (1987). *Stochastic models in the project and management of the ports*. Moscow: Transport, 318.
6. Gnedenko, B. V., Kovalenko, I. N. (2005). *Introduction to queuing theory*. Ed. 3. Moscow: KomKniga, 400.
7. Postan, M. Ya. (2006). Multi-channeled serving system with constant service time in a random environment. *Economic cybernetic*, 3–4(39–49), 62–68
8. Postan, M. Ya. (2006). *Economic-mathematical models of multimodal transportation*. Odessa: Astroprint, 376.
9. Basharin, G. P. (1978). The matrix method for finding the stationary distribution for some non-standard queuing systems. *Automation and Remote Control*, 1, 29–38.
10. Legato, P., Mazza, R. M. (2001, September). Berth planning and resources optimisation at a container terminal via discrete event simulation. *European Journal of Operational Research*, Vol. 133, № 3, 537–547. doi:10.1016/s0377-2217(00)00200-9
11. Kia, M., Shayan, E., Ghobt, F. (2002, April). Investigation of port capacity under a new approach by computer simulation. *Computers & Industrial Engineering*, Vol. 42, № 2–4, 533–540. doi:10.1016/s0360-8352(02)00051-7

PROBLEMS OF MACROECONOMICS AND SOCIO-ECONOMIC DEVELOPMENT

THE EXPERIENCE OF AGRI-FOOD MARKET REGULATION IN THE EUROPEAN UNION UNDER GLOBALIZATION

page 65–70

The paper examines the approaches to the agri-food market regulation in the EU using innovative, scientifically based resource allocation rules. The fundamental principles of the agri-food market regulation in the EU in the context of binding regulations, directives and decisions were investigated. It was concluded that the measures of regulation of the agri-food market, including domestic pork market, competitiveness support of domestic production need substantial revision. Therefore, an attempt to prove the feasibility of the agri-food market regulation, which is based on respect for the fundamental principles of food law with the established procedures, which should be consistent with the production standards of domestic and imported goods was made.

The aforesaid will promote the application of experience of the EU member states in the area of agri-food market regulation by public application authorities, particularly in the issues of:

- a) regulation of speculative foreign competition, manifested through subsidized imports and dumped prices;
- b) acceleration of the implementation of the EU legislation in Ukraine;
- c) feasibility of dual agri-food market regulation as horizontal at the level of regulations and vertical at the level of directives.

Keywords: regulation, agricultural policy, industry, agri-food market, pork market, globalization, European Union.

References

1. Heiets, V. M., Kyzym, M. O., Klebanova, T. S., Cherniak, O. I. et al.; In: Heiets, V. M. (2006). *Modeluvannia ekonomichnoi bezpeky: derzhava, rehion, pidprijemstvo*. Kharkiv: INZhEK, 240.
2. Shkolnyi, O. O. (2013). Metodolohichni aspekty doslidzhennia svitovooho rynku ahropodovolchoi produktii. *Zbirnyk naukovykh prats Umansoho natsionalnoho universytetu sadiivnytstva*, Vol. 82, 191–197. Available: http://nbuv.gov.ua/j-pdf/zhpumus_2013_82_34.pdf
3. Ostashko, T. O., Voloshchenko, L. Yu., Lienivova, H. V.; In: Tochylin, V. O. (2010). *Vnutrishnii ahropodovolchyji rynok Ukrayiny v umovakh SOT*. Kyiv, 208.
4. Pavlenko, O. M. (2009). Shchodo perspektiv ahropodovolchoho vyrobnytstva v umovakh formuvannia zony vilnoi torhivli Ukraina – YeS. *Visnyk ahrarnoi nauky*, 4, 71–74.
5. Khorunzyi, M. Y. (2002). Rozrobka ahrarno-prodovolchoi doktryny Ukrayny – imperatyv chasu. *Osnovni napriamy vysokoefektyvnoho rozvytku poreformenooho ahropromyslovoho vyrobnytstva u Ukrayni na innovatsiini osnovi*. Kyiv: IAE UAAN, 214–220.
6. Sabluk, P. T., Kalednik, H. M., Kvasha, S. M., Vlasov, V. I., Lysak, M. A. (2011). Natsionalna doktryna prodovolchoi bezpeky v Ukraini. *Ekonomika APK*, 8, 3–12.
7. Kvasha, S. M., Kvasha, K. S. (2013). *Stan ta tendentsii rozvytku silskoho hospodarstva kraiin-chleniv Yevropeiskoho Soiuzu*. Kyiv: NNTs IAE, 40.
8. Hnatuk, S. A. (2015). Rezuliaty i perspektivny roboty hospodarstva korporatsii «Tvaryneprom». *Visnyk ahrarnoi nauky Prychornomoria*, Vol. 2, № 4, 15–22.
9. Kvasha, S. M. (2011). Napriamy udoskonalennia mekhanizmiv formuvannia rynkovoi rivnovahy na rynkakh silskohospodarskoi produktii. *Ekonomika APK*, 2, 161–167.
10. Kuzhel, V. V., Soltyk, Ya. V. (2012). Teoretychni zasady modernizatsii ahrarnoi ekonomiky. *Vektor nauki TGU. Seriya: Ekonomika i upravlenie*, 4(10), 83–87.
11. Mohylnyi, O. M. (2004). Spilna ahrarna polityka Yevropeiskoho soiuzu shchodo staloho silskoho rozvytku: uroky dla Ukrayny. *Ekonomika APK*, 7, 3–4.
12. Begemann, F., Ehling, C., Falge, R. (1996). Haltung und Erhaltung tiergenetischer Ressourcen in Ex-situ-Haltung in Zoos und Tierparks. *Schriften zu genetischen Ressourcen*, 60–77.
13. Kotler, P. (1991). *Marketing Management: Analysis, Planning, Implementation and Control*. Prentise-Hall, 686.
14. Burakovs'kyi, I., Movchan, V., O'Keefe, T. A., Ulgen, S., Shnyrkov, O. (2012). *The impact of an FTA between Ukraine and the EU*. Oxford Economics, 138.
15. Ivaniuta, V. F., Beidyk, N. M. (2008). Stan i problemy vyrobnytstva produktii svynarstva Ukrayini. *Ahrosvit*, 10, 25–27.
16. Antoniuk, P. O. (2002). Zberezhennia eksportnoho prodovolchoho potentsialu Ukrayini. *Ekonomika APK*, 1, 110–113.
17. Kravchenko, O. I., Hetia, A. A. (2012). Rynok svynyny — suchasni vymohy klasyfikatsii tush. *Prybutkove svynarstvo*, 5(11), 34–42.
18. Derevyankin, T., Kostiushko, O. (2003). Vitchyzniana ekonomichna dumka pro derzhavu i suspilni instytuty v systemi rynkovoho hospodarstva na rubzhi XIX–XX st. *Ekonomika Ukrayiny*, 11, 74–79.
19. Kuzubov, M. V. (2002). Analiz i otsinka sytuatsii na rynku ahropodovolchych tovariv. *Ekonomika APK*, 6, 88–92.
20. Kravchenko, R. G. (1978). *Matematicheskoe modelirovaniye ekonomicheskikh protsessov v sel'skom hoziaistve*. Moscow: Agropromizdat, 428.
21. Kostner, U.; In: Nivievskyi, O. (2012). *Osnovy analizu ahrarnoho rynku*. Kyiv: ADEF-Ukraina, 486.

FISCAL DECENTRALIZATION: MODEL OF ITS IMPACT ON ECONOMIC DEVELOPMENT

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Today, fiscal decentralization is the most important characteristic of modern systematic intergovernmental relations. However, the problem of assessing its impact on economic growth underrepresented in contemporary Ukrainian researches. For Ukraine it is extremely important given the objectives of the Strategy for Sustainable Development «Ukraine-2020» and the program of the government to build an effective system of territorial organization of power in Ukraine with a maximum transfer of functions to the local level, including additional budgetary authority.

Existing models of the impact of fiscal decentralization on economic development are analyzed and systematized, possibility of further use of some of them to Ukraine is defined and approach to building an appropriate model for our country using the production function Cobb-Douglas based on regression analysis is proposed.

Keywords: fiscal decentralization, economic development, simulation.

References

1. Fukasaku, K., De Mello, L. R., Jr. (1997, November 20–21). Fiscal Decentralization and Macroeconomic Stability: The Experience of Large Developing and Transition Economies. *Paper prepared for the 8th International Forum on Latin American Perspectives: Managing Fiscal Policy in Decentralised Democracies*. OECD Headquarters, Paris, 121–148.
2. De Mello, L. R., Jr. (2000, February). Fiscal Decentralization and Intergovernmental Fiscal Relations: A Cross-Country Analysis. *World Development*, Vol. 28, № 2, 365–380. doi:10.1016/s0305-750x(99)00123-0
3. Oates, W. E. (1985, Sep.). Searching for Leviathan: An Empirical Study. *The American Economic Review*, Vol. 75, № 4, 748–757.
4. Ehdaie, J. (1994). *Fiscal Decentralization and the Size of Government: An Extension with Evidence from Cross-Country Data*. Washington, D.C.: World Bank, 22.
5. Jin, J., Zou, H. (2002, September). How does fiscal decentralization affect aggregate, national, and subnational government size? *Journal of Urban Economics*, Vol. 52, № 2, 270–293. doi:10.1016/s0094-1190(02)00004-9
6. Davoodi, H., Zou, H. (1998, March). Fiscal Decentralization and Economic Growth: A Cross-Country Study. *Journal of Urban Economics*, Vol. 43, № 2, 244–257. doi:10.1006/juec.1997.2042
7. Yilmaz, S. (1999). The Impact of Fiscal Decentralization on Microeconomic Performance. *Proceedings. Annual Conference on Taxation and Minutes of the Annual Meeting of the National Tax Association*, 92, 251–260. Available: <http://www.jstor.org/discover/10.2307/41>

- 954660?uid=3739232&uid=2134&uid=391601571&uid=2&u
id=70&uid=3&uid=391601561&uid=60&purchase-type=none&acc
essType=none&sid=21105984835931&showMyJstorPss=false&seq
=2&showAccess=false
8. Feld, L. P., Kirchgässner, G. (2004). Fiscal Federalism and Economic Performance: Evidence from Swiss Cantons. *Marburg Working Papers on Economics*, 20. Available: http://www.uni-marburg.de/fb02/makro/forschung/gelbereihe/artikel/2004-20-GrowthFederalismFeld_gesamt.pdf
9. Akai, N., Sakata, M. (2002, July). Fiscal decentralization contributes to economic growth: evidence from state-level cross-section data for the United States. *Journal of Urban Economics*, Vol. 52, № 1, 93–108. doi:10.1016/s0094-1190(02)00018-9
10. Barro, R. J. (1990, Oct.). Government Spending in a Simple Model of Endogenous Growth. *The Journal of Political Economy. Part 2: The Problem of Development: A Conference of the Institute for the Study of Free Enterprise Systems*, Vol. 98, № 5, 103–125.
11. Lunina, I. O. (2014). Biudzhetna detsentralizatsiya: tsili ta napriamy reform. *Ekonomika Ukrayny*, 11, 61–75.
12. Derkach, M. I. (2011). *Detsentralizatsiya fiskalnykh funktsii derzhavy u konteksti zabezpechennia staloho rozvitiyu Ukrayny*. Dnipropetrovsk: Styl, 419.
13. Hlukha, H. Ya. (2011). Osnovni pidkhody shchodo rozrakhunku rivnia fiskalnoi detsentralizatsii. *Visnyk Akademii mytnoi sluzhby Ukrayny. Ser.: Ekonomika*, 2, 139–144. Available: [http://nbuv.gov.ua/j-pdf/vamsue_2011_2\(46\)_18.pdf](http://nbuv.gov.ua/j-pdf/vamsue_2011_2(46)_18.pdf)
14. Salo, T. V. (2013). Detsentralizatsiya finansovoi systemy: stan ta otsinka rivnia v Ukrayni. *Efektynist derzhavnoho upravlinnia*, 35, 324–330. Available: http://nbuv.gov.ua/j-pdf/efdu_2013_35_42.pdf
15. Volokhova, I. S. (2012). Podatkovaya detsentralizatsiya ta metodolo-hia vyznachennia yii stupenia. *Visnyk sotsialno-ekonomicznykh doslidzhen*, 3(2), 144–150. Available: [http://nbuv.gov.ua/j-pdf/Vsed_2012_3\(2\)_24.pdf](http://nbuv.gov.ua/j-pdf/Vsed_2012_3(2)_24.pdf)
16. Havrylenko, A. S. (2012). Modeliuvannia optymalnoi struktury dok-hodiv mistsevykh biudzhetiv v umovakh biudzhetnoi detsentralizatsii. *Formuvannia rynkovykh vidnosyn v Ukrayni*, 8, 162–165.
17. Volkovskiy, Ye., Kotina, H., Stepura, M. (2015). Optymizatsiya struk-tury biudzhetnoho potentsialu m. Kyieva v umovakh polityky det-sentralizatsii. *Skhid*, 1, 5–11. Available: http://nbuv.gov.ua/j-pdf/Skhid_2015_1_2.pdf
18. Muradova, S. G. (2009). Otseňka vliiania urovnia fiskal'noi det-sentralizatsii na dinamiku ekonomicheskogo rosta v regionah Rossijskoi Federatsii. *Vestnik Severo-Kavkazskogo gosudarstvennogo tehnicheskogo universiteta*, 4(21), 195–198.