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Coal industry of China and CIS: problems of functioning in context of modern challenges Section: Problems of development strategy and financial-economic regulation of industry Ekon. promisl. 2016, 74(2): 91-123 https://doi.org/ Language: Russian

Abstract: The substantial features of the coal industry of Kazakhstan, Russia and China in the face of decline of world prices for coal and growth of renewable energy sources are analyzed in the article to determine the adaptability of these countries' experience in solving actual problems on the strategic reforming regulations development of the coal industry in Ukraine. The selection of the countries is substantiated taking into account the systemic importance of the coal industry in the structure of the national economy. The features of the functioning of the coal industry in Ukraine, Kazakhstan, Russia and China are examined according to the criteria as follows: mining and geological conditions, quality indicators, exports and imports, organizational structure, and institutional features. The specific problems and prospects of industry development as to meet modern challenges for each of the countries are given. It is concluded that in Ukraine there is a need to consider different strategies for enterprises with various performance: for unprofitable and uneconomic enterprises the reduction targeted strategy involving the conservation and liquidation should be considered; for having prospects or promising enterprises the growth strategies are suitable including diversification and integration, and institutional strategies adapted to selective integration of innovative-investment strategy without privatisation to attract investors. For the promising state mines of Ukraine in the conditions of falling world prices for coal it is expedient to consider the possibility of integration into the domestic financial-industrial groups that form a closed technological chains. It is revealed that for Ukraine the experience of institutional transformation of the countries under consideration can be rewarding. In Russia and Kazakhstan the industry was fully privatized, unprofitable mines and cuts were closed, which allowed optimizing the structure of the industry and reaching the break-even level. It is advisable to use the experience of Kazakhstan on privatization of enterprises with involvement of foreign investors as well as the experience of Russia for attracting domestic effective owners. The full focus on coal imports could not be considered as an alternative development strategy due to a number of technological and social problems related to the limited capacity of the sea ports and remoteness of the major countries-importers of coal. However, China's experience should be used for infrastructure development of ports and railway services for promising possibilities of the implementation of imports. Opportunities for the development of clean energy in current conditions in Ukraine are also limited. This fact indicates that coal will remain the major energy resource for Ukraine in the short term.

Keywords: fuel energy balance; coal industry; institutional features; strategy of development

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References

Amosha, O., Starychenko, L., & Cherevatsjkyj, D. (2013). Status, the main problems and perspectives of the universities of Promyslovost in Ukraine. Ukraine. Donetsk: The Institute of the Economy of Industry of the NAS of Ukraine [in Ukrainian].

Finance.bigmir.net (2016). Without Ukraine: Experts told which countries the fastest growing alternative energy. Retrieved from

http://finance.bigmir.net/news/economics/27769-Bez-Ykraini-Eksperti-rasskazali-v-kakih-stranah -bistree-vsego-razvivaetsya-alternativnaya-energetika [in Russian].

Samruk-energy.kz (2016). Annual report of Samruk-Energo for 2014. Retrieved from http://www.samruk-energy.kz/images/2015/files/samruk_web.pdf [in Russian].

Smida.gov.ua (2016). State institution "Agency for the development of the infrastructure of the stock market of Ukraine". Retrieved from http://smida.gov.ua/ [in Ukrainian].

Rbc.ua (2016). Deficiency of coal will lead to a large-scale power outage in Ukraine. Retrieved from

https://www.rbc.ua/rus/news/defitsit-uglya-privedet-k-massh-tab-nym-otklyucheniyam-elektroen ergii-22102014120400 [in Ukrainian].

Dpvu.com.ua (2016). Dynamics of the world energy market. Retrieved from http://dpvu.com.ua/index.php?option=com_content&task=view&id=318&Itemid=35 [in Ukrainian].

Capital.ua (2016). Coal mining in 2013 set an anti-record. Retrieved from

http://www.ca-pital.ua/ru/publication/13586-ukrainskie-sha-k-hty-postavili-antirekord-v-2013-g-p otre-bi-tel-predpochitaet-importnyy-ugol [in Russian].

Focus.ua (2016). Extraction of coal in kopankah. Retrieved from https://focus.ua/long/338727/ [in Russian].

Uaenergy.com.ua (2016). 'Coal production in Ukraine in 2013 decreased by 2.6% - to 83560000 t. Retrieved from

http://uaenergy.com.ua/post/17467/dobycha-uglya-v-ukraine-v-2013-g-snizilas-na-26-do-8356/ [in Russian].

Uaenergy.com.ua (2016). Coal mining in Ukraine for 12 months. 2015 fell by 38.8%. Retrieved from http://uaenergy.com.ua/post/24502/dobycha-uglya-v-ukraine-za-12-mes-2015-g-upala-na/ [in Russian].

Uabio.org (2016). Energy balance of Ukraine for 2014. Retrieved from

http://www.ua-bio.org/img/files/news/pdf/energy-balance-uk-ra-ine-2014.pdf [in Ukrainian]. Iccua.org (2016). Energy potential of Ukraine. Retrieved from

http://iccua.org/wp-con-tent/uploads/2015/08/ENERGETICHNIY-POTENTSIAL-UKRAYINI.pdf [in Ukrainian].

Mpe.kmu.gov.ua (2016). Invitation of potential investors to participate in the tender for the purchase of assets of the coal mining sector are in state ownership: a list of mines. Retrieved from http://mpe.kmu.gov.ua/minugol/control/publish/article?art_id=245017933 [in Ukrainian].

Rg.ru (2016). Coal does not surrender. Retrieved from http://rg.ru/2015/12/22/ugoll.html [in Russian].

Ilyashov, M., Levit, V., & Che-re-vatskiy, D. (2015). Three-dimensional industrial parks: definition, features and directions of development. Econ. promisl., 1(69), 74-83 [in Russian].

Written by Покотиленко P.B. Monday, 10 July 2017 02:21 -

Informatsionno-analiticheskiy by-ulleten Chistyy chetverg (2015). The results of the work of the industry in 2014. Informatsionno-analiticheskiy byulleten Chistyy chetverg, 1, 3-11 [in Russian].

Articlekz.com (2016). The urgency of introducing new environmentally friendly and economically advantageous technologies for the use of coals. Retrieved from http://artic-lekz.com/article/12037 [in Russian].

Komissarova M. (2011). Prospects for the development of coal industry enterprises using new management methods. Gornyy informatsionno-analiticheskiy byul-le-ten, 12, 287-294 [in Russian].

Qclub.org.ua (2016). Who needs Ukrainian coal? Retrieved from

http://www.q-club.org.ua/articles/komu-potribne-ukrajin-ske-vuhillya/ [in Ukrainian].

Mpe.kmu.gov.ua (2016). The concept of the State target economic program for reforming the coal industry for 2015-2020. Project. Retrieved from

http://mpe.kmu.gov.ua/minugol/control/publish/article?art_id=245027382 [in Ukrainian]. Rg.ru (2016). Shale revolution and Russian coal. Retrieved from

http://rg.ru/2013/01/29/ugol.html [in Russian].

Legotin, F., & Akhmetova, A. (2013). Perfection of financial and economic mechanisms of introduction of new technologies of coal processing. Upravlenets, 1, 44-47 [in Russian].

Kazenergy.com (2016). National Energy Report Kazenergy. Retrieved from

http://www.kazenergy.com/images/stories/ob_association/ru_national_energy_report_general_d irector_a_magauov.pdf [in Russian].

Meta.kz (2016). Several coal mining companies of Kazakhstan have been included in the list of monopolists. Retrieved from

http://www.meta.kz/315747-neskolko-ugle-do-byvajushhikh-kompanijj-kazakhs-tana.html [in Russian].

Uaenergy.com.ua (2016). Do we need to "preserve" the coal industry? Retrieved from http://ua-energy.com.ua/post/25773/nuzhno-li-sohra-ny-at-ugolnuyu/ [in Russian].

Coal-coke.at.ua (2016). The review of the market of coal and coke. Retrieved from http://coal-coke.at.ua [in Russian].

Government.ru (2016). In the state and prospects of the development of the coal industry. Retrieved from http://government.ru/news/22437/ [in Russian].

Bakertilly.ua (2016). Sectoral review of the coal industry of Ukraine. Retrieved from http://www.ba-ker-tilly.ua/media/Baker%20Tilly%20-%20Report_coal_industry_rus.pdf [in Russian].

DTEK.com (2016). DTEK Report 2014. Financial and non-financial results. Retrieved from http://www.dtek.com/library/file/dtek-ar2014-ru.PDF [in Russian].

Pavlenko, I., & Tymchenko, I. (2014). Restructuring of the coal industry: world tendencies and domestic realities. Visnyk Kyjivsjkogho nacionaljnogho universytetu im. T. Shevchenka, 8, 10-15 [in Ukrainian].

Mining-media.ru (2016). Analysis of the development of mining, exports, imports of coking and energy coal, stone and brown coal in the CIS countries in the period from 2000 to 2013 and the trends of their further development in each country. Retrieved from

http://www.mining-media.ru/ru/article/eko-no-mic/6924-analiz-razvitiya-dobychi-eksporta-import a-koksuyushchegosya-i-energeti-ches-kogo-uglya-kamennogo-i-burogo-v-stra-nakh-sng-v-perio d-s-2000-po-2013-gg-i-tenden-t-sii-ikh-dalnejshego-razvitiya-v-kazhdoj-iz-stran [in Russian].

Plakitina, L. (2015). Analysis of the development of the coal industry in the Republic of Kazakhstan in the period from 2000 to 2014 and the trend of long-term development. Ugol, 4,

Written by Покотиленко P.B. Monday, 10 July 2017 02:21 -

80-82 [in Russian].

Popovich, I. (2014). Sustainability of the development of the coal industry is a priority of the state. Naukoviy visnyk NHU, 2, 30-34 [in Russian].

Nomad.su (2016). Resolution of the Government of the Republic of Kazakhstan dated June 28, 2014 No. 724 "On approval of the Concept of the development of the fuel and energy complex of the Republic of Kazakhstan until 2030". Retrieved from

http://www.nomad.su/?a=3-201407230031 [in Russian].

Zakon3.rada.gov.ua (2013). About the approval of the plan of measures to implement the concept of creating a system of social support for workers in the coal industry and the population of the territories where coal-mining and coal-processing enterprises are located, in the stage of liquidation (conservation). Order of the Cabinet of Ministers of Ukraine, No. 353-r. Retrieved from http://zakon4.rada.gov.ua/laws/show/353-2013-%D1%80/paran9#n9 [in Ukrainian].

Government.ru (2014). The program of development of the coal industry of Russia for the period up to 2030. Order of the Government of the Russian Federation, No. 1099-r. Retrieved from http://govern-ment.ru/docs/13333/ [in Russian].

Unece.org (2016). Development of the coal-chemical industry and utilization of mine methane in the Republic of Kazakhstan. Retrieved from

http://www.unece.org/fileadmin/DAM/energy/se/pp/coal/cmm/10cmm_gmi.cs.oct2015/5_KAZAK HSTAN_Update_RUS.pdf [in Russian].

Ukurier.gov.ua (2016). Reform of the coal industry, there are options. Retrieved from http://ukurier.gov.ua/uk/articles/reformuvannya-vugilnoyi-galuzi-ye-varianti/ [in Russian].

Oilcapital.ru (2016). Russia will remain the largest exporter of primary energy resources in the world. Retrieved from http://www.oilcapital.ru/ex-port/282085.html [in Russian].

Serdyuk, O. (2016). Investment support of the restructuring processes of coal-mining enterprises (Extended abstract of candidate thesis). Kyiv: The Institute of the Economy of Industry of the NAS of Ukraine [in Ukrainian].

Mineral.ru (2016). Status and use of mineral resources of the Russian Federation. Retrieved from http://www.mineral.ru/Facts/russia/147/420/03_ugol.pdf [in Russian].

Tarzanov, I. (2014). Results of the work of the Russian coal industry in January-December 2013, Ugol, 3, 52-66 [in Russian].

Tarazanov, I. (2015). Results of the work of the Russian coal industry in January-December 2014, Ugol, 3, 56-71 [in Russian].

Tarazanov, I. (2016). Results of the work of the Russian coal industry in January-December 2015, Ugol, 3, 58-73 [in Russian].

Imcmontan.ru (2016). Problems and perspectives of the development of the Russian coal industry. Retrieved from http://www.imcmontan.ru/files/imc_1.pdf [in Russian].

Gazeta.zn.ua (2016). Coal: and on the ruins of state extraction. Retrieved from

http://gazeta.zn.ua/ener-gy_market/ugol-i-na-ruinah-gosdoby-chi-_.html [in Russian].

Expert.ru (2016). Coal: Reboot. Retrieved from

http://expert.ru/siberia/2016/08/ugol-perezagruzka/ [in Russian].

Energo.gov.kz (2016). Coal branch of the Republic of Kazakhstan. Analytical information. Retrieved from http://energo.gov.kz/index.php?id=3743 [in Russian].

Russian.news.cn (2016). The coal revolution in China. Retrieved from

http://russian.news.cn/2015-10/29/c_134762212.htm.

Minprom.ua. (2016). Ukraine brought coal to 1,6 billion dollars. Retrieved from

Written by Покотиленко P.B. Monday, 10 July 2017 02:21 -

http://min-prom.ua/news/201822.html [in Russian].

Fesenko I. (2009). Shadow segment of the Ukrainian coal industry. Ekonomika ta pravo, 3, 155-160 [in Russian].

Fridman, Yu., Rechko, G., & Oskina, N. (2009). Kuzbass technopark and regional aspects of innovative development. Vestnik Kuzbasskogo gosudarstven-nogo tekhnicheskogo universiteta, 1, 77-89 [in Russian].

Cherevatskiy, D. (2012). Industrial policy for the coal industry. Econ. promisl., 1-2(57-58), 39-49 [in Russian].

Dtek.com (2016). DTEK Dobropolyeugol's mines in 2016 reduce planned coal production. Retrieved from

http://www.dtek.com/ru/media-centre/press-releases/details/shakhti-dtek-dobropoljeugolj-v-2016 -godu-sokrasshajut-planovuju-dobichu-uglja#.VySno7aLRkg [in Russian].

Minenergo.gov.ru (2016). Energy Strategy of Russia for the period up to 2035. Retrieved from http://minenergo.gov.ru/node/1913 [in Russian].

Artemiev, I., & Haney, M. (2002). The privatization of the Russian coal industry: policies and processes in the transformation of a major industry. Policy, Research working paper, WPS 2820. Washington, DC: World Bank. Retrieved from

http://docu-ments.worldbank.org/curated/en/2002/04/2874405/privatization-russian-coal-industry-policies-processes-transformation-major-in-dustry.

Bp.com (2016). BP Statistical Re-view of World Energy 2015. Retrieved from http://www.bp.com/content/dam/bp/pdf/energy-econo-mics/statistical-review-2015/bp-statistical-review-of-world-energy-2015-full-report.pdf.

Greenpeace.org (2016). UK buys coal from Russian oligarchs with close ties to Putin. Retrieved from

http://www.greenpeace.org.uk/newsdesk/energy/investigations/uk-ties-rus-sian-coal-oligarchs. Chinadaily.com.cn (2016). Over 1,000 coal mines in China to be shut down. Retrieved from http://www.chinadaily.com.cn/china/2016-01/17/content_23120259.htm.

Eia.gov (2016). China Internati-o-nal energy data and analysis. Retrieved from

https://www.eia.gov/beta/international/analysis_includes/coun-tries_long/China/china.pdf. En.sxcoal.com (2016). China 52 coal firms output exceeding 10 mln T in 2014. Retrieved from http://en.sxcoal.com/0/132015/DataShow.html.

Cleantechnica.com (2016). China Renewable Energy Growth Soars & Coal Use Declines. Retrieved from

http://cleantechnica.com/2016/03/06/china-renewable-growth-soars-fossil-fuel-use-declines/. Chinadaily.com.cn (2016). China stops approving new coal mines. Retrieved from

http://www.chinadaily.com.cn/china/2016-02/05/content_23412192.htm.

Worldwatch.org (2016). China Tackling Corruption, Safety Concerns in Coal Production. Retrieved from

http://www.worldwatch.org/china-tackling-corruption-safety-con-cerns-coal-production.

Cbsnews.com (2016). China to ban new coal-fired power plants around Beijing over pollution concerns.

http://www.cbsnews.com/news/china-to-ban-new-coal-fired-power-plants-around-beij-ing-over-p ollution-concerns/.

News.xinhuanet.com (2016). China unveils energy strategy, targets for 2020. Retrieved from http://news.xinhuanet.com/english/chi-na/2014-11/19/c_133801014.htm.

Oxfordenergy.org (2016). China's Coal Market: Can Beijing Tame King Coal? Retrieved from

Written by Покотиленко P.B. Monday, 10 July 2017 02:21 -

http://www.oxfordenergy.org/wpcms/wp-content/uploads/2014/12/CL-1.

Aperc.ieej.or.jp (2016). China's Coal Supply and Future Development. Retrieved from http://aperc.ieej.or.jp/file/2015/4/24/4._China_s_Coal_Supply_and_Future_Development.pdf. Bloomberg.com (2016). Chinese Coal Miners Said to Lobby Government for Price Floor. Retrieved from

http://www.bloomberg.com/news/articles/2016-02-24/chinese-coal-mi-ne-rs-said-to-lobby-gover nment-for-price-floor.

Asef.org (2016). Coal and Climate Change: "The Chinese Way"? Retrieved from http://www.asef.org/images/docs/asef-coal-and-climate-change-the-chinese-way.pdf.

Argusmedia.com (2016). Coal daily international. Retrieved from

https://www.argusme-dia.com/~/media/files/pdfs/samples/argus-co-al-daily-international.pdf/?la =en.

Platts.com (2016). Coal trader international. Retrieved from

https://www.platts.com/IM.Platts.Content/ProductsServices/Products/co-altraderintl.pdf.

Pesd.fsi.stanford.edu (2016). The future of South African Coal: market, investment and policy challenges. Retrieved from

http://pesd.fsi.stanford.edu/sites/default/files/WP_100_Eberhard_Future_of_South_African_Coa l.pdf.

Gül, Özcan (2008). Overcoming barriers: business consulting and lobbying in Kazakhstan. In R. Aidis & F. Welter In-novation and Entrepreneurship: Succes-sful Start-ups and Businesses in Emerging Economies (pp. 47-67). UK: Elgar Publishing Limited.

Guriev, S., & Rachinsky, A. (2005). The Role of Oligarchs in Russian Capi-talism. Journal of Economic Pers-pec-tives, 19(1), 131-150 DOI: dx.doi.org/10.1257/0895330053147994.

Lorenz, U. (2014). Węgiel ener-getyczny na świecie - sytuacja w 2013 roku i perspektywy. Przegląd Górniczy. Wyd. ZG SITG Katowice, 5, 17-25 [in Polish].

Eneken.ieej.or.jp (2016). Restruc-turing of the Coal Industry in Australia. Retrieved from http://eneken.ieej.or.jp/en/data/pdf/235.pdf.

lis-db.stanford.edu (2016). The Evolution of China's Coal Institutions. Retrieved from http://iis-db.stanford.edu/pubs/22612/PESD_WP_86.pdf.

Min-pan.krakow.pl (2016). Stra-tegy of coal industry development in Ukraine. Retrieved from https://www.min-pan.krakow.pl/Wydawnictwa/GSM2442/pivnyak-pilov.pdf.

Cornerstonemag.net (2016). The Development Strategy for Coal-Fired Power Generation in China. Retrieved from

http://cornerstonemag.net/the-development-strategy-for-coal-fired-power-generation-in-china/. Ey.com (2016). Renewable energy country attractiveness index'. Retrieved from

http://www.ey.com/Publication/vwLUAssets/Renewable_Energy_Country_Attractiveness_In-dex _43/\$FILE/RECAI%2043_March%202015.pdf.

Ir.ide.go.jp/dspace (2016). Corruption in Kazakhstan and the Quality of Governance. Retrieved from

http://ir.ide.go.jp/dspace/bitstream/2344/1380/1/ARRIDE_Discussion_No.475_satpayev.pdf. lis-db.stanford.edu (2016). Towards the end of the coal age in Ukraine? Retrieved from

http://iis-db.stanford.edu/pubs/22612/PESD_WP_86.pdf [accessed 10 May 2016].

Ec.europa.eu (2016). Share of renewables in energy consumption in the EU rose further to 16% in 2014. Retrieved from

http://ec.euro-pa.eu/eurostat/documents/2995521/7155577/8-10022016-AP-EN.pdf/38bf822f-8a df-4e54-b9c6-87b342ead339.

Written by Покотиленко P.B. Monday, 10 July 2017 02:21 -

Shenhuachina.com (2016). Shen-hua Group Corporation Limited. Retrieved from http://www.shen-huachina.com/cs/sh_china_en/1385662332430/sh_china_en_sh_china_en_co ntentDetai-led/PL.html.

Springeropen.com (2016). Under-standing China's energy strategy and its sustained economic growth: present and futu-re. Retrieved from

http://chinafinanceandeconomicreview.springeropen.com/articles/10.1186/s40589-015-0023-6.

Carnegieendowment.org (2016). Industrial organization of the Chinese coal industry. Retrieved from http://carnegieendowment.org/files/China_Coal_Value_Chain_Kevin_Tu3.pdf.

Raregeologybooks.files.wordpress.com (2016). Coal Geology. Retrieved from

https://rarege-ology-books.files.wordpress.com/2014/11/coal-geology.pdf.

Pubdocs.worldbank.org (2016). World Bank Commodities Price Data (The Pink Sheet). Retrieved from

http://pubdocs.worldbank.org/pubdocs/publicdoc/2016/4/670231459862777978/CMO-Pink-She et-April-2016.pdf.

lea.org (2016). World energy outlook 2015. Retrieved from

http://www.iea.org/publica-ti-ons/freepublications/publication/WEB_WorldEnergyOutlook2015Ex ecutiveSummaryEng-lishFinal.pdf.

Wu, A., Ni, B. (2015). Line Loss Analysis and calculation of electric power systems. Wiley. Wsj.com (2016). At Least 26 Killed in China Coal-Mining Accidents. Retrieved from http://www.wsj.com/articles/SB10001424052702304626304579509023076837450#:XDTYh754 0G KzA.

Wsj.com (2016). China to Ban Coal with Ash, Sulfur. Retrieved from

http://www.wsj.com/articles/china-coal-ban-highly-pollu-ting-types-banned-starting-in-2015-1410 852013.