

Pobirchenko Viktoriya Viktorovna,
PhD in Geography, Associate Professor,
Associate Professor of the Department of World Economy,
Institute of Economics and Management,
V.I. Vernadsky Crimean Federal University,
Simferopol, Russian Federation.

COMPARATIVE ASSESSMENT OF INNOVATION DEVELOPMENT IN BRICS MEMBER STATES

(GII),

(ECI) ..

This article presents a comprehensive comparative analysis of the innovation development of BRICS countries. The object of study is the innovation development process of the five founding BRICS member states—Brazil, Russia, India, China, and South Africa. The research covers key strategies of national innovation policies, examines the dynamics of investments in research and development (R&D), evaluates the contribution of major technology companies, and assesses the impact of international cooperation on the innovation potential of BRICS countries.

The study systematizes the main indicators of innovation development, including the Global Innovation Index (GII), the Economic Complexity Index (ECI), and others, which makes it possible to determine the position of BRICS countries in the global innovation landscape. The analysis reveals differences in the innovation strategies of BRICS nations. The findings indicate that China demonstrates rapid technological growth, relying on active state support; Russia focuses on the development of science and industry under the constraints of sanctions; India prioritizes digital transformation; Brazil strengthens biotechnological and agricultural innovations; and South Africa emphasizes sustainable development and green technologies.

Keywords: BRICS, innovation policy, R&D investments, government support, international cooperation, technological development.

•

[1, c. 94].

 $(\quad .1),$

1.

*

		-5, 2024
(Global Innovation Index) [2]	, - - - -	1. 2. 3. 4. 5.
(Economic Complexity Index) [3]	, -	1. 2. 3. 4. 5.
(Global Competitiveness Index) [4]	, - - -	1. 2. 3. 4. 5.
(Top Science and Technology Clusters) [5]	, -	1. — 2. — — 3. 4. 5. - - -
(IMD World Digital Competitiveness Ranking) [6]	, - -	1. 2. 3. 4. 5.

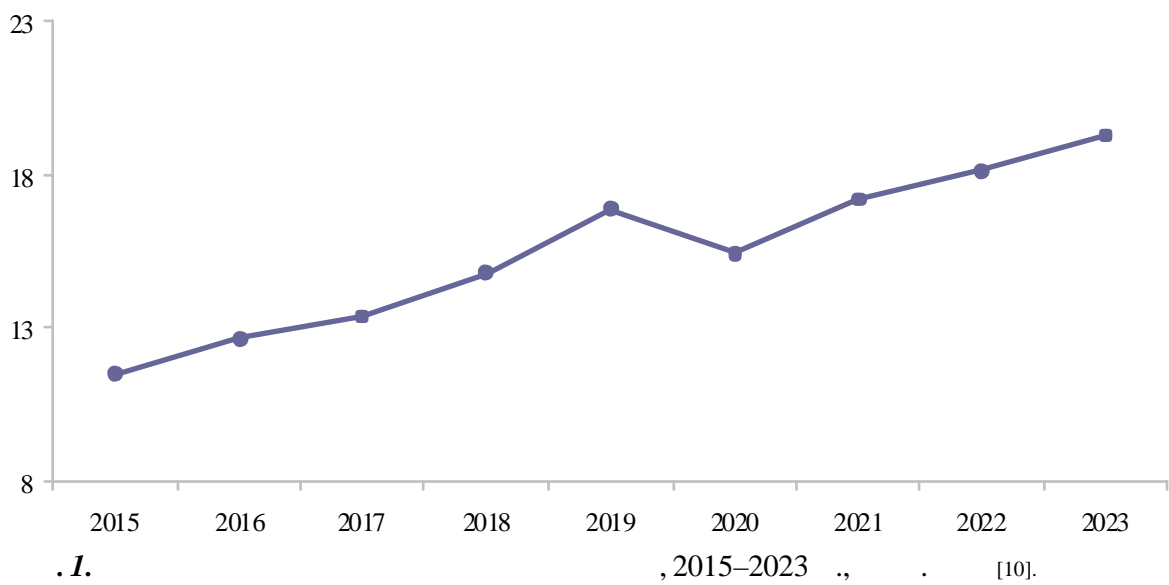
❁

17 % , 27 % Scopus Web of Science [7].

[8].

[9].

(.1).



2016 2023 33,4 % — 12,7 .

19,3 , (196,39 . . 298,45 . . 2025).

1,02 % [10].

2012 1,16 % , 2023 —

Boeing Embraer Airbus [11].

34- , 131- , 10,6 % [10].

, — , , [12].

: 18,5 % [10],

- .

« 229,5 . . . », 53 2024 [13].

, : 2024 « » [14],

2030 . 700 . [15].

(.2).

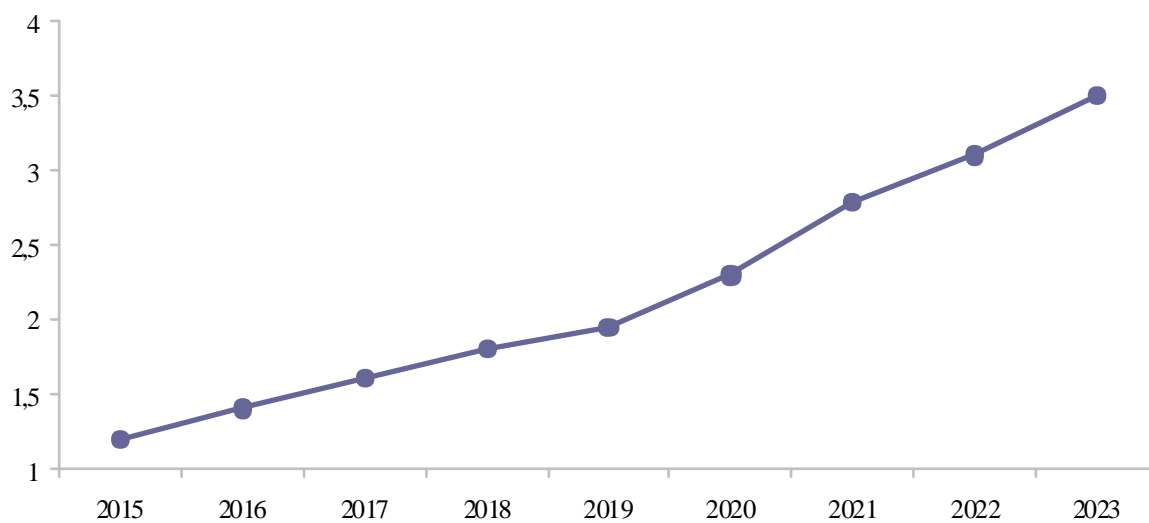
2023 , 3,5 , 23 % - (34,6 %) 2022 . (32,9 %).

15,6 % 2022 16,9 % 2023 , —22,5 % [16].

, « » , IT- « » ,

167

: , , -2025- 2



.2. , 2015 – 2023 ., . [16].

, , 1,1 % , [17]. , 11 %, 2019 2020 2022 [16].

, 2018 560 [18]. (NRI 2024). 133 [19]. 11 60- NRI 2023, 49- — 2024 [19].

2023 18000 (.3). [20], «Startup India», 2025 (IN- SPACe) 5 (57,58 . .) [22]

1,4 , 2018 17- 168 [19].



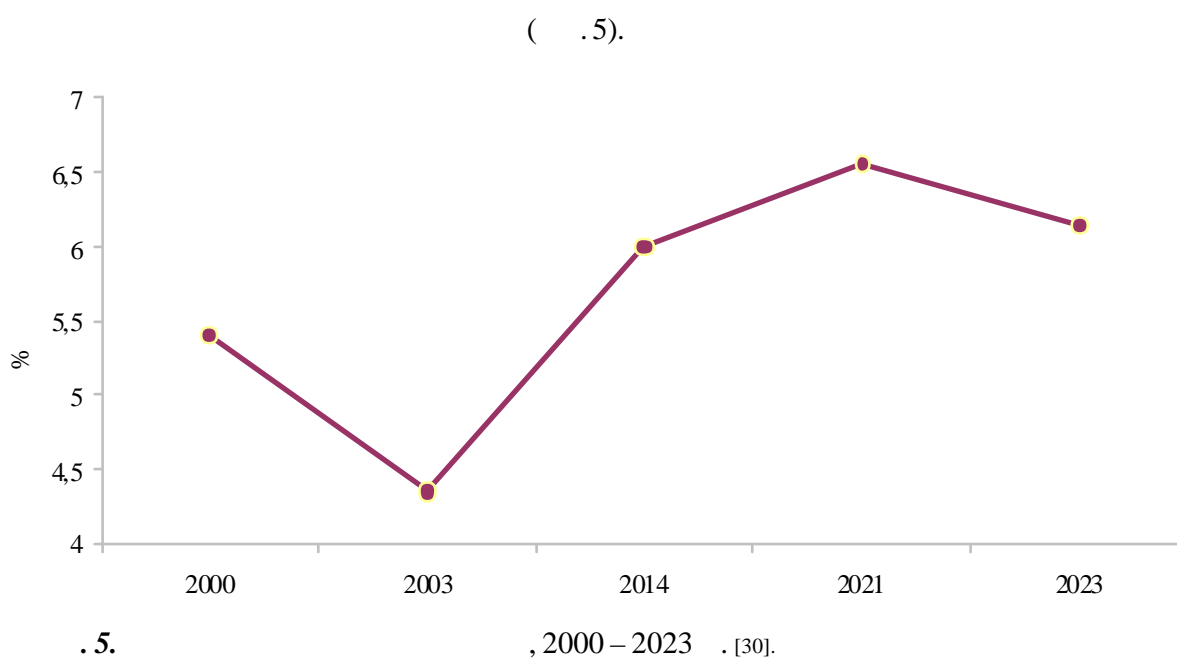
169

3.	*	
		(State Council of China, 2023)
		(China Academy of Science, 2022)
		(Ministry of Industry and Information Technology, 2023)
		(National Development and Reform Commission, 2023)
		(China Science and Technology Exchange Center, 2022)
		Huawei, Alibaba Tencent (China Economic Review, 2023)
		(Asian Venture Capital Journal, 2023)
		985 211, (Ministry of Education of China, 2023)
		« », (National Natural Science Foundation of China, 2022)
		(China National Intellectual Property Administration, 2023)
		(Cyberspace Administration of China, 2023)
		« », (Belt and Road Initiative, 2023)
		(World Economic Forum, 2023)

*

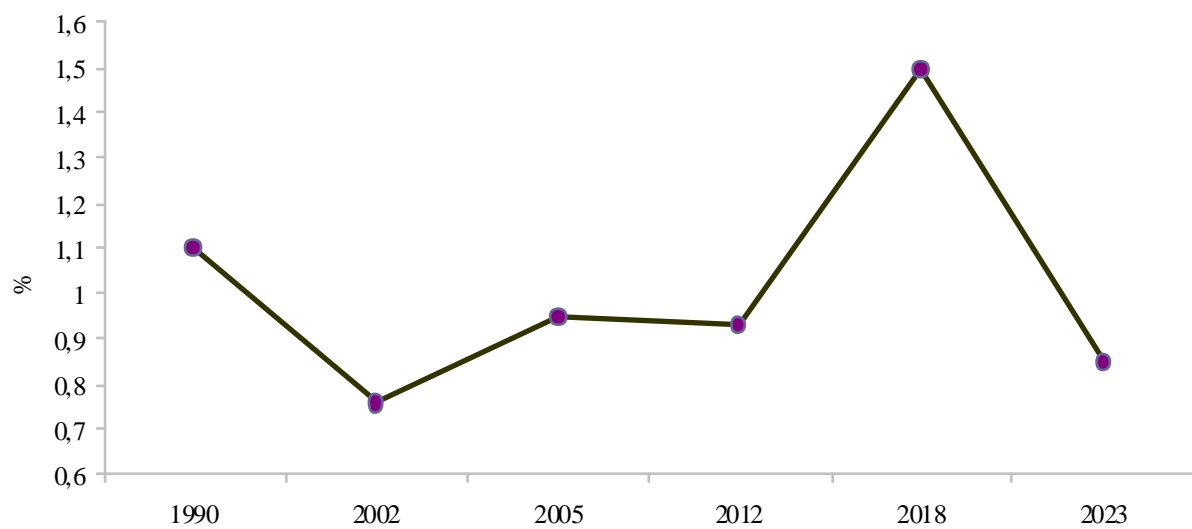
QS World University Rankings [29]

30



[32],

[33].



6.

, 1990 – 2023 . (

[30, 31]).

1.

2.

3.

4.

1. — 288 .
2. Global Innovation Index. — URL: www.wipo.int/global_innovation_index (date of the application: 27.01.2025–31.01.2025).
3. Economic Complexity Index. — URL: atlas.cid.harvard.edu (date of the application: 27.01.2025 – 31.01.2025).
4. Global Competitiveness Index. — URL: www.weforum.org (date of the application: 27.01.2025 – 31.01.2025).
5. Top Science and Technology Clusters. — URL: www.wipo.int (date of the application: 27.01.2025 – 31.01.2025).
6. IMD World Digital Competitiveness Ranking. — URL: www.imd.org (date of the application: 27.01.2025 – 31.01.2025).
7. . — URL: issek.hse.ru/forsconf-2017/BRICS (: 27.01.2025 – 31.01.2025).
8. , — 2018. — / //
13. 1. — .34-50. — DOI 10.17323/1996-7845-2018-01-02. — EDN YSQBNZ.
9. . — URL: russiancouncil.ru/analytics-and-comments/analytics/model-nauchnoy-diplomatii-v-brazilii-i-perspektivy-razvitiya-dvustoronnego-nauchnogo-sotrudnichestva/?sphrase_id=127173235 (: 27.01.2025 – 31.01.2025).
10. Instituto Brasileiro de Geografia e Estatística (IBGE). — URL: www.ibge.gov.br/en/ (date of the application: 27.01.2025 – 31.01.2025).
11. : . — URL: www.perspektivy.info/oykumena/ekdom/brazilija_postup_voskhodashhego_giganta_2010-04-15.htm (: 27.01.2025 – 31.01.2025).
12. . — URL: tvbrics.com/bloggers-team/vliyanie-novogo-banka-razvitiya-brics-na-torgovlyu-vyzovy-i-vozmozhnosti-dlya-brazilii-v-ramkakh-obe/ (: 27.01.2025 – 31.01.2025).
13. « » . — URL: government.ru/rugovclassifier/823/events/ (: 27.01.2025 – 31.01.2025).
14. « » . — URL: xn—80aapampemcchfmo7a3c9ehj.xn—p1ai/new-projects/ekonomika-dannyykh/ (: 27.01.2025 – 31.01.2025).
15. , // : . — 2016. — 12(435). — .165-177. — EDN XEJOVD.
16. . — URL: issek.hse.ru/news/988973111.html (: 27.01.2025 – 31.01.2025).
17. . — URL: www.sbs-consulting.ru/upload/iblock/42c/42cd7e741d84ab0453af1f82265a0442.pdf (: 27.01.2025 – 31.01.2025).

18. — URL: russiancouncil.ru/analytics-and-comments/analytics/tsifrovizatsiya-indii-bolshie-dannye-novaya-neft/ (: 27.01.2025–31.01.2025).
19. — URL: kaktus.media/doc/514536_innovacii_i_investicii._za_schet_chego_eshe_indiia_yverenno_dvijetsia_k_cifrovomu_liderstvu.html (: 27.01.2025 – 31.01.2025).
20. 300 . — URL: tvbrics.com/news/kolichestvo-startapov-v-indii-uvelichilos-v-300-raz/ (: 27.01.2025 – 31.01.2025).
21. — URL: issek.hse.ru/news/1006779921.html (: 27.01.2025 – 31.01.2025).
22. India's space regulator launches \$58 million fund to boost startups, cut reliance on imports. — URL: www.reuters.com/technology/space/indias-space-regulator-launches-58-million-fund-boost-startups-cut-reliance-2025-02-19/ (date of the application: 27.01.2025 – 31.01.2025).
23. National Bureau of Statistics of China. — URL: www.stats.gov.cn/english/index.html (date of the application: 27.01.2025 – 31.01.2025).
24. 2024 500 . — URL: russian.china.org.cn/china/txt/2025-01/23/content_117682619.htm (: 27.01.2025 – 31.01.2025).
25. : R&D- . — URL: issek.hse.ru/news/704062411.html (: 27.01.2025 – 31.01.2025).
26. 12- 2 « ». — URL: kg.china-embassy.gov.cn/rus/ggwj/202209/t20220922_10769597.htm (: 27.01.2025 – 31.01.2025).
27. — URL: chinaved.com/kitay-sohranil-mirovloe-liderstvo-v-sfere-innovaciy? (: 27.01.2025 – 31.01.2025).
28. : ESG- . — URL: sber.pro/bcp-laika-public/ESG_UAR_1808_c70446e054.pdf (: 27.01.2025 – 31.01.2025).
29. QS World University Rankings. — URL: www.topuniversities.com/ (date of the application: 27.01.2025 – 31.01.2025).
30. Department: Statistics South Africa Republic of South. — URL: www.statssa.gov.za/ (date of the application: 27.01.2025 – 31.01.2025).
31. — URL: www.inafran.ru/sites/default/files/page_file/sbornik-uga.pdf (: 27.01.2025 – 31.01.2025).
32. — URL: www.unesco.org/ru/articles/afrika-potencial-nuzhdaetsya-v-finansirovanii-0 (: 27.01.2025 – 31.01.2025).
33. — URL: we.hse.ru/irs/cas/passsa (: 27.01.2025 – 31.01.2025).

SPISOK LITERATURY

1. Geoekonomika. Ponyatiyno-terminologicheskaya sistema : akademicheskij slovar' / M. G. Nikitina, V. V. Pobirchenko, Ye. A. Shutayeva, I. N. Butsenko ; Pod redaktsiyey professora M. G. Nikitinoy. — Simferopol' : Arial, 2023. — 288 s.
2. Global Innovation Index. — URL: www.wipo.int/global_innovation_index (date of the application: 27.01.2025–31.01.2025).
3. Economic Complexity Index. — URL: atlas.cid.harvard.edu (date of the application: 27.01.2025 – 31.01.2025).
4. Global Competitiveness Index. — URL: www.weforum.org (date of the application: 27.01.2025 – 31.01.2025).
5. Top Science and Technology Clusters. — URL: www.wipo.int (date of the application: 27.01.2025 – 31.01.2025).
6. IMD World Digital Competitiveness Ranking. — URL: www.imd.org (date of the application: 27.01.2025 – 31.01.2025).
7. Kak sotrudnichayut uchenyye iz stran BRIKS. — URL: issek.hse.ru/forsconf-2017/BRICS (data obrashcheniya: 27.01.2025 – 31.01.2025).
8. Sidorova, Ye. A. Innovatsionnoye razvitiye stran BRIKS, predposylki i perspektivy sotrudnichestva / Ye. A. Sidorova // Vestnik mezhdunarodnykh organizatsiy: obrazovaniye, nauka, novaya ekonomika. — 2018. — T. 13, № 1. — S. 34-50. — DOI 10.17323/1996-7845-2018-01-02. — EDN YSQBNZ.
9. Model' nauchnoy diplomatii v Brazilii i perspektivy razvitiya dvustoronnego nauchnogo sotrudnichestva Rossii i Brazilii. — URL: russiancouncil.ru/analytics-and-comments/analytics/model-nauchnoy-diplomatii-v-brazilii-i-perspektivy-razvitiya-dvustoronnego-nauchnogo-sotrudnichestva/?sphrase_id=127173235 (data obrashcheniya: 27.01.2025 – 31.01.2025).
10. Instituto Brasileiro de Geografia e Estatística (IBGE). — URL: www.ibge.gov.br/en/ (date of the application: 27.01.2025 – 31.01.2025).
11. Braziliya: postup' voskhodyashchego giganta. — URL: www.perspektivy.info/oykumena/ekdom/brazilija-postup-voskhodashhego-giganta_2010-04-15.htm (data obrashcheniya: 27.01.2025 – 31.01.2025).

12. Prisila Menin Vliyanie Novogo banka razvitiya BRIKS na trgovlyu: vyzovy i vozmozhnosti dlya Brazili v ramkakh ob"yedineniya. — URL: tvbrics.com/bloggers-team/vliyanie-novogo-banka-razvitiya-brics-na-torgovlyu-vyzovy-i-vozmozhnosti-dlya-brazili-v-ramkakh-obe/ (data obrashcheniya: 27.01.2025 – 31.01.2025).
13. Gosudarstvennaya programma «Ekonomicheskoye razvitiye i innovatsionnaya ekonomika». — URL: government.ru/rugovclassifier/823/events/ (data obrashcheniya: 27.01.2025 – 31.01.2025).
14. Natsional'nyy proyekt «Ekonomika dannykh». — URL: xn--80aapampemcchfmo7a3c9ehj.xn--p1ai/new-projects/ekonomika-dannykh/ (data obrashcheniya: 27.01.2025 – 31.01.2025).
15. Tereshchenko, D. S. Mesto i rol' vuzov v innovatsionnom razvitii regionov Rossii / D. S. Tereshchenko, V. S. Shcherbakov // Regional'naya ekonomika: teoriya i praktika. — 2016. — 12(435). — S. 165-177. — EDN XEJOVD.
16. Rost innovatsionnykh zatrat biznesa. — URL: issek.hse.ru/news/988973111.html (data obrashcheniya: 27.01.2025 – 31.01.2025).
17. Rol' universitetov Rossii v innovatsionnom tsikle. — URL: www.sbs-consulting.ru/upload/iblock/42c/42cd7e741d84ab0453af1f82265a0442.pdf (data obrashcheniya: 27.01.2025 – 31.01.2025).
18. Kulik L. Tsifrovizatsiya Indii: bol'shiye dannyye — novaya neft' / L. Kulik. — URL: russiancouncil.ru/analytics-and-comments/analytics/tsifrovizatsiya-indii-bolshie-dannye-novaya-neft/ (data obrashcheniya: 27.01.2025 – 31.01.2025).
19. Innovatsii i investitsii. Za schet chego yeshche Indiya uverenno dvizhetsya k tsifrovomu liderstvu. — URL: kaktus.media/doc/514536_innovacii_i_investicii._za_schet_chego_eshe_india_yverenno_dvijetsia_k_cifrovomu_liderstvu.html (data obrashcheniya: 27.01.2025 – 31.01.2025).
20. Kolichestvo startapov v Indii uvelichilos' v 300 raz. — URL: tvbrics.com/news/kolichestvo-startapov-v-indii-uvelichilos-v-300-raz/ (data obrashcheniya: 27.01.2025 – 31.01.2025).
21. Prioritety nauchno-tehnologicheskogo razvitiya Indii. — URL: issek.hse.ru/news/1006779921.html (data obrashcheniya: 27.01.2025 – 31.01.2025).
22. India's space regulator launches \$58 million fund to boost startups, cut reliance on imports. — URL: www.reuters.com/technology/space/indias-space-regulator-launches-58-million-fund-boost-startups-cut-reliance-2025-02-19/ (date of the application: 27.01.2025 – 31.01.2025).
23. National Bureau of Statistics of China. — URL: www.stats.gov.cn/english/index.html (date of the application: 27.01.2025 – 31.01.2025).
24. Kitay v 2024 godu potratil na NIOKR okolo 500 mlrd doll. SSHA. — URL: russian.china.org.cn/china/txt/2025-01/23/content_117682619.htm (data obrashcheniya: 27.01.2025 – 31.01.2025).
25. Prioritet nauki: pochemu Kitay stal odnim iz mirovykh R&D-liderov. — URL: issek.hse.ru/news/704062411.html (data obrashcheniya: 27.01.2025 – 31.01.2025).
26. Indeks innovatsiy Kitaya podnyalsya na 12-ye mesto v mire. Stat'ya 2 «Kitay za posledniye desyat' let». — URL: kg.china-embassy.gov.cn/rus/ggwj/202209/t20220922_10769597.htm (data obrashcheniya: 27.01.2025 – 31.01.2025).
27. Kitay demonstriruyet rastushchiy nauchno-tehnicheskii innovatsionnyy potentsial. — URL: chinaved.com/kitay-sohranil-mirovye-liderstvo-v-sfere-innovatsiy/ (data obrashcheniya: 27.01.2025 – 31.01.2025).
28. YUAR: ESG-dos'ye. — URL: sber.pro/bcp-laika-public/ESG_UAR_1808_c70446e054.pdf (data obrashcheniya: 27.01.2025 – 31.01.2025).
29. QS World University Rankings. — URL: www.topuniversities.com/ (date of the application: 27.01.2025 – 31.01.2025).
30. Department: Statistics South Africa Republic of South. — URL: www.statssa.gov.za/ (date of the application: 27.01.2025 – 31.01.2025).
31. Yug Afriki na sovremennom etape. Sbornik statey. — M., Institut Afriki RAN, 2016. — URL: www.inafran.ru/sites/default/files/page_file/sbornik-uga.pdf (data obrashcheniya: 27.01.2025 – 31.01.2025).
32. Makhmud Bukar Mayna Afrika: potentsial nuzhdayetsya v finansirovanii. — URL: www.unesco.org/ru/articles/afrika-potencial-nuzhdaetsya-v-finansirovanii-0 (data obrashcheniya: 27.01.2025 – 31.01.2025).
33. YUAR: tsifrovoye gosudarstvo. — URL: we.hse.ru/irs/cas/passsa (data obrashcheniya: 27.01.2025 – 31.01.2025).

24 2025

4 2025