



The Impact of Government Measures on Business Development in the ICT sector

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References

- [1] Y. Vertakova, Y. Polozhentseva and M. Klevtsova, "Monitoring of the State and Dynamics of the Development of the Digitalization of the Industrial Economy," in International Scientific Conference "Far East Con" (ISCFEC 2018), Vladivostok, Russian Federation, published in Advances in Economics, Business and Management Research, vol. 47, pp. 1038-1041, 2019, doi: 10.2991/iscfec-18.2019.71
- [2] C. Zhang and X Wang, "The influence of ICT-driven innovation: a comparative study on national innovation efficiency between developed and emerging countries," Behaviour & Information Technology, vol. 38, no. 9, pp. 876-886, 2019, doi: 10.1080/0144929X.2019.1584645.
- [3] S. I. Cioacă, S. E. Cristache, M. Vuță, E. Marin and M. Vuță, "Assessing the Impact of ICT Sector on Sustainable Development in the European Union: An Empirical Analysis Using Panel Data," Sustainability, vol. 12, no. 2, p. 592, 2019, doi: 10.3390/su12020592.
- [4] V. Kathuria, "Access and Investment in the ICT Sector for Developing Countries," Law and Development Review, vol. 9, no. 1, pp. 1-27, 2016, doi: 10.1515/ldr-2015-0013.
- [5] R. Perez-Estebanez, E. Urquía-Grande and A. Rautiainen, "Technological and Economic Factors Determining ICT Level: Evidence from Rural Micro-Businesses in Democratic Republic of Congo," J. Int. Dev., Journal of International Development, vol. 29, No.8, pp. 118-133, 2017, doi: 10.1002/jid.3281.
- [6] N. Hanna, "A role for the state in the digital age," Journal of Innovation and Entrepreneurship, vol.7, no. 5, pp. 2-16, 2018, doi: 10.1186/s13731-018-0086-3.
- [7] European Commission, "Shaping Europe's digital future". https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/shaping-europe-digital-future_en (accessed Feb. 1, 2021).
- [8] A. Klemm and S. Van Parys, "Empirical evidence on the effects of tax incentives," International Tax and Public Finance., vol. 19, pp.393-423, June 2012, doi: 10.1007/s10797-011-9194-8.
- [9] P. Botolf Maurseth, "ICT, Growth and Happiness," in Digitalisation and Development Issues for India and Beyond, D. Maiti, F. Castellacci and A. Melchior, Eds. Singapore, Republic of Singapore: Springer Nature Singapore, pp. 31-86, 2020. doi: 10.1007/978-981-13-9996-1.
- [10] R. Hawash and G. Lang, "Does the digital gap matter? Estimating the impact of ICT on productivity in developing countries," Eurasian Economic Review, vol. 10, pp. 189-209, 2020, doi: 10.1007/s40822-019-00133-1.
- [11] I. Bestvina Bukvić and I. Đurđević Babić, "Catching the IT Development Trends: What are the Odds?," in Megatrends And Media - Digital Universe. Smolence, Slovakia, 2019, pp. 34-54.
- [12] M. I. Gariba. "Specific Tools of Regional Policy in Transforming Countries," Master Thesis, Faculty of Economics and Administration, University of Pardubice, Pardubice, Czech Republic, 2020. Available:https://dk.upce.cz/bitstream/handle/10195/75686/GaribaMI_RegionalDevelopment_MM_2020.pdf?sequence=1&isAllowed=y [Accessed: 22-Jul-2020].
- [13] Y. Ai-Chi Loh and A. Chib, "Tackling social inequality in development: beyond access to appropriation of ICTs for employability," Information Technology for Development, pp. 1 - 20, Sep. 2018, doi: 10.1080/02681102.2018.1520190.
- [14] O. A. Sinenko, "Methods of Assessing of Tax Incentives Effectiveness in Special Economic Zones: An Analytical Overview," Journal of Tax Reform, vol 2, no 3, pp. 168-178, 2016.
- [15] N. Crato and P. Paruolo, The Power of Microdata: An Introduction in Data-Driven Policy Impact Evaluation: How Access to Microdata is Transforming Policy Design, N. Crato and P. Paruolo Eds. Cham, Switzerland: Springer Nature Switzerland AG,

2019, doi: 10.1007/978-3-319-78461-8.

- [16] K. M. Vu. "ICT diffusion and production in ASEAN countries: Patterns, performance, and policy directions," *Telecommunications Policy*, vol. 41, no. 10, pp. 962-977, Nov. 2017, doi:10.1016/j.telpol.2017.04.005.
- [17] P. Pholphirul and V. Bhatiasevi "IT investment and constraints in developing countries: Evidence from Thai manufacturers," *Information Development*, vol.32, no. 2, pp 186-202, 2016, doi: 10.1177/0266666914535616.
- [18] K. Pitakdumrongkit, "Addressing Digital Protectionism in Asean: Towards Better Regional Governance in The Digital Age," Policy report, S. Rajaratnam School of International Studies, 2018. [Online]. Available:https://www.rsis.edu.sg/wp-content/uploads/2018/03/PR180321_Addressing-Digital-Protectionism-in-ASEAN.pdf [Accessed: 19-Jul-2020].
- [19] J. Sörvik and A. Kleibrink, "Mapping EU investments in ICT - description of an online tool and initial observations," Publications Office of the European Union, Luxembourg, 2016, EUR 27983 EN, doi: 10.2791/963062. [Online]. Available:<https://core.ac.uk/download/pdf/45616391.pdf>. [Accessed: 20-Aug-2020].
- [20] N. Bajpai, J. Biberman, and Y. Yingxin Ye, "National ICT-Driven Development Policy Comparing Approaches in India and China ICT India," Working Paper #2, CSD Working Paper Series: Towards a New Indian Model of Information and Communications Technology-Led Growth and Development, Center for sustainable development, Earth Institute, Columbia University, Nov. 2018.
- [21] European Commission, "European Structural and Investment Funds: Information & Communication Technology," 2021. [Online]. Available: <https://cohesiondata.ec.europa.eu/themes/2>. [Accessed: 20-Aug-2020].
- [22] I. Bestvina Bukvić, "Impact of Business Environment on the Development of Regional IT Sector: Case of Eastern Croatia," in 7th International Scientific Symposium Economy of Eastern Croatia - Vision and Growth. Osijek, Croatia, 2018, pp. 719-727. Available: https://www.bib.irb.hr/976637/download/976637.Bestvina_Bukvic_GIH_2018-2.pdf, [Accessed: 21-Aug-2020].
- [23] European Commission, Smart Specialization Platform, "ICT Monitoring - Planned ICT Investments under ESIF," 2017. Available:<https://s3platform.jrc.ec.europa.eu/ict-monitoring>. [Accessed: 20-Aug-2020].
- [24] R. Gatautis, "TOWARDS eBUSINESS SUPPORT POLICY DEVELOPMENT: LITHUANIA PERSPECTIVES," *Economics and Management*, vol. 14, 2009, pp. 388-396, doi:10.5755/j01.em.0.14.9395.
- [25] N. Kravchenko, S. Kuznetsova, A. Ivanova and A. Shemyakin, "Regional Aspects of Digital Economic Development," in Eurasian Economic Perspectives Proceedings of the 23rd Eurasia Business and Economics Society Conference, M. H. Bilgin, H. Danis, G. Karabulut and G. Gözgor Eds., 2020, pp. 265-277, doi: 10.1007/978-3-030-40375-1_19.
- [26] I. Domazet, J. Zubović and M. Lazić, "Driving Factors of Serbian Competitiveness - Digital Economy and ICT," *Strategic Management -International Journal of Strategic Management and Decision Support Systems in Strategic Management*, vol. 23, no.1, 2018, pp. 20-28, doi: 10.5937/StraMan1801020D.
- [27] A. Kleibrink, N. Radovanovic, H. Kroll, D. Horvat, D. Kutlaca, D. and L. Zivkovic, "The Potential of ICT in Serbia: An Emerging Industry in the European Context," Publications Office of the European Union, Luxembourg, 2018, EUR 29558 EN, doi:10.2760/994464, JRC114209. Available:<https://ec.europa.eu/jrc/en/publication/potential-ict-serbia-emerging-industry-european-context>[Accessed: 22-Jul-2020].
- [28] Ministry of Economy, Entrepreneurship and Crafts, "Invest in ICT in Croatia." [Online]. Available: http://investcroatia.gov.hr/wp-content/uploads/2018/11/AIK ICTinvest_web-1.pdf. [Accessed: 22-Jul-2020].
- [29] European Commission, "Digital Economy and Society Index 2020, The EU ICT Sector and its R&D Performance." [Online]. Available: https://ec.europa.eu/newsroom/dae/document.cfm?doc_id=67083. [Accessed: 21-Aug-2020].
- [30] E. Oršić, "CISEx u brojkama: rezultati članica za 2019. i očekivanja za 2020. godinu," Croatian Independent Software Exporters,- Cisex.org.[Online]. Available: <https://www.cisex.org/hr/blog/cisex-u-brojkama-rezultati-clanica-za-2019-i-ocekivanja-za-2020-godinu>. [Accessed: 22-Aug-2020].
- [31] B. Žitnik, D. Subotičanec, "Analiza hrvatske IT industrije 2014. - 2019," Zagreb, Hrvatska, Hrvatska gospodarska komora, Dec. 2020.
- [32] B. Žitnik, "Analiza hrvatske IT industrije 2008. - 2017," Zagreb, Hrvatska, Hrvatska gospodarska komora, Nov. 2018. [Online]. Available:<https://www.hgk.hr/documents/analizahrvatskeitindustrije5c372c1f59ebb.pdf>. [Accessed: 22-Jul-2020].
- [33] Agency for investments and Competitiveness, Republic of Croatia, "Best cost destination: Invest in ICT in Croatia." [Online]. Available: http://investcroatia.gov.hr/wp-content/uploads/2018/11/AIK ICTinvest_web-1.pdf. [Accessed: 22-Aug-2020].
- [34] Ministry of Economy and Sustainable Development of Republic of Croatia. "Incentive measures for investment projects." Available: <http://investcroatia.gov.hr/en/incentives/incentive-measures-for-investment-projects/>. [Accessed: 21-Aug-2020].
- [35] A. Fernández-Portillo, M. Almodóvar-González, J. L. Coca-Pérez and H. V. Jiménez-Naranjo, "Is Sustainable Economic Development Possible Thanks to the Deployment of ICT?," *Sustainability*, vol.11, no. 22, p. 6307 (pp. 1-15), 2019; doi: 10.3390/su11226307.
- [36] E. Toader, B. N. Firtescu, A. Roman and S. G. Anton, "Impact of Information and Communication Technology Infrastructure on Economic Growth: An Empirical Assessment for the EU Countries," *Sustainability*, vol.10, p. 3750 (pp. 1-22), 2018, doi: 10.3390/su10103750.
- [37] D. Kapur, "Why Does the Indian State Both Fail and Succeed?," *Journal of Economic Perspectives*, vol. 34, no. 1, 2020, pp. 31-54, doi: 10.1257/jep.34.1.31.
- [38] V. V. Ivanov, N. A. Lvova, N. V. Pokrovskaia and S. V. Naumenkova, "Determinants of tax incentives for investment activity of enterprises," *Journal of Tax Reform*, vol. 4, no. 2, pp. 125-141, 2017, doi: 10.15826/jtr.2018.4.2.048.
- [39] C. Slattery and O. Zidar, "Evaluating State and Local Business Incentives," *Journal of Economic Perspectives*, vol 34, no. 2, pp. 90-118, 2020, doi: 10.1257/jep.34.2.90.
- [40] R. Hassink and H. Gong, "Six critical questions about smart specialization," *European Planning Studies*, vol. 27, no.10, pp. 2049-2065, 2019, doi: 10.1080/09654313.2019.1650898.
- [41] C. Karakas, C. Stamegna and I. Zachariadis, "Public economic support in the EU: State aid and special economic zones," European Parliamentary Research Service, Briefing PE 646.164, Feb. 2020. Accessed: Jan. 7, 2021. [Online]. Available: [https://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_BRI\(2020\)646164](https://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_BRI(2020)646164)
- [42] H. Vedamani, "Business Environment - Conceptual Framework and Policies," *International Educational Scientific Research Journal*, vol. 4, no. 3, pp. 67-74, Mar. 2018. Accessed: Jan. 28, 2021.
- [43] K. Jurlin, V. Samardžija and M. Basarac Sertić, "Konkurentnost, pametna specijalizacija i investicije u novim državama članicama

- EU-a i Hrvatskoj,” Institut za razvoj i međunarodne odnose (IRMO), Zagreb, Croatia, POLO-Cro28 Policy Paper, 2018. Accessed: Jan. 21, 2021. [Online]. Available: <https://irmo.hr/wp-content/uploads/2020/03/Polo-PP-Konkurentnost-27-2.pdf>
- [44] N. Šimurina and B. Galić, “Usporedna analiza poreznih poticaja za istraživanje i razvoj u Europskoj uniji,” *Zbornik Ekonomskog fakulteta u Zagrebu*, vol. 15, no. 2., 2017, pp. 105-126.
- [45] European Commission, DG Competition. Policy and Strategy State aid, Policy and Strategy. State aid Scoreboard 2019. [Online]. Available: https://ec.europa.eu/competition/state_aid/scoreboard/state_aid_scoreboard_2019.pdf
- [46] A. Cappelen, F. Castellacci, J. Fagerberg and B. Verspagen, “The Impact of EU Regional Support on Growth and Convergence in the European Union.” *Journal of Common Market Studies*, vol. 41, no. 4, 2003, pp. 621-44, doi: 10.1111/1468-5965.00438.
- [47] S. M. Bergner, R. Bräutigam, M. T. Evers and C. Spengel. “The Use of SME Tax Incentives in the European Union,” *Zentrum für Europäische Wirtschaftsforschung*, Discussion Paper No. 17-006, Jan. 2017. Accessed: Jan. 5, 2021. [Online]. Available: <http://ftp.zew.de/pub/zew-docs/dp/dp17006.pdf>
- [48] I. Bestvina Bukvić, M. Basarac Sertić and M. Harc “Economic impact of government measures: Analysis of the construction sector,” in 8th International Scientific Symposium Economy of Eastern Croatia – Vision And Growth, Osijek, Croatia, 2019, pp. 260-277.
- [49] H. Zee, J. G. Stotsky and E. Ley, “Tax Incentives for Business Investment: A Primer for Policy Makers in Developing Countries.” *World Development*, vol. 30, no. 9, 2002, pp. 1497-1516.
- [50] J. Lerner, “Government Incentives for Entrepreneurship,” National Bureau of Economic Research, NBER Working paper series, Working Paper 26884, Mar. 2020, Accessed: Jan. 5, 2021. [Online]. Available: <http://www.nber.org/papers/w26884>
- [51] M. Ziolo and M. Ben Ghoul, “The role of the government in enhancing sustainable entrepreneurs,” *International Journal of Business and Globalisation*, vol. 22, no. 4, 2019, pp. 595-617, doi:10.1504/IJBG.2019.10021972.
- [52] O. Sinenko and I. Mayburov, “Comparative Analysis of Tax Incentives in Special Economic Zones in the Countries of the Asia-Pacific Region,” in 11th International Days of Statistics and Economics, Prague, Czech Republic, 2017, pp. 1421-1430.
- [53] E. Ohrn, “The Effect of Corporate Taxation on Investment and Financial Policy: Evidence from the DPAD” *American Economic Journal: Economic Policy*, vol. 10, no. 2, May 2018, pp. 272-301, doi: 10.1257/pol.20150378.
- [54] C. Gonzales, M. Kerlin, R. Schaff and S. Tucker-Ray, “How state and local governments win at attracting companies.” McKinsey & Company. <https://www.mckinsey.com/industries/public-and-social-sector/our-insights/how-state-and-local-governments-win-at-attracting-companies#> (accessed Feb. 1, 2009).
- [55] L. Yongzheng and J. Mao, “How Do Tax Incentives Affect Investment and Productivity? Firm-Level Evidence from China.” *American Economic Journal: Economic Policy*, vol. 11, no. 3, 2019, pp. 261-91, doi: 10.1257/pol.20170478.
- [56] M. I. Gariba, “Specific Tools of Regional Policy in Transforming Countries,” M.S. thesis, Faculty of Economics and Administration, University of Pardubice, Czech Republic, 2020. Accessed: Dec. 21, 2021. [Online]. Available: https://dk.upce.cz/bitstream/handle/10195/75686/GaribaMI_RegionalDevelopment_MM_2020.pdf?sequence=1&isAllowed=y
- [57] S. S. Surrey, “Tax Incentives as a Device for Implementing Government Policy: A Comparison with Direct Government Expenditures,” *Harvard Law Review*, vol. 83, no. 4, Feb. 1970, pp. 705-738.
- [58] Eurostat, ICT specialists in employment, 2020. https://ec.europa.eu/eurostat/cache/metadata/en/isoc_skslf_esms.htm (accessed Feb. 1, 2021).