

РОЗДІЛ III. МІЖНАРОДНІ ЕКОНОМІЧНІ ВІДНОСИНИ

**Serdinova A.**, *PhD in International Economics,*  
*Lecturer Assistant, Dnipro University of Technology*  
*ORCID: <https://orcid.org/0009-0002-3782-521X>*

**DOI:** <https://doi.org/10.58521/2521-1390-2024-29-16>

**THE IMPACT OF TAX INCENTIVES ON GDP IN TURKEY**

**ВПЛИВ ПОДАТКОВИХ ПІЛЬГ НА ВВП ТУРЕЧЧИНИ**

**Abstract.** This article investigates the effectiveness of tax incentives in promoting sustained economic growth in Turkey – a topic marked by ongoing debate and uncertainty. With tax incentives widely employed to stimulate economic activity and attract investments, there is a critical need to assess their impact on the Turkish economy.

Amidst challenges faced by the Turkish economy, the research unfolds dual objectives – advocating for tax incentives as economic stimulants while acknowledging concerns about potential reductions in government revenue.

The study aims to scrutinize current tax incentive policies, evaluating their success in achieving intended objectives while balancing economic growth with government revenue sustainability. Through a rigorous empirical analysis, the research endeavors to contribute novel insights to the existing knowledge base, shedding light on the intricate relationship between tax incentives and economic growth. The research employs rigorous empirical analysis as its primary methodology. By scrutinizing the intricate relationship between tax incentives and GDP as the main indicator of economic growth, the study seeks to unravel patterns, implications, and potential trade-offs associated with these fiscal policies.

The significance of the study extends to the broader discussion on macroeconomic stability, offering valuable insights for evidence-based policymaking on a global scale.

As Turkey's strategic position in global trade and economic integration is paramount, understanding the impact of tax incentives becomes pivotal. The study's outcomes may guide not only Turkish policymakers but also those engaged in regional economic partnerships, promoting collective growth and development.

**Keywords:** tax incentives, GDP, economic growth, government policy effectiveness, fiscal sustainability, empirical analysis.

**Анотація.** У статті досліджується ефективність податкових пільг у сприянні сталому економічному зростанню Туреччини. Наголошено, що ця тема є предметом постійних дебатів і невизначеності. Податкові пільги широко використовуються для стимулювання економічної діяльності та залучення інвестицій, тому критично важливо оцінити їх вплив на економіку Туреччини. Дослідження має на меті розкрити закономірності, наслідки та потенційні узгоджені рішення, пов'язані з

задачами фіскальної політики. Встановлено що серед викликів, з якими стикається турецька економіка, переслідуються подвійні цілі - виступати за податкові пільги як економічні стимули та водночас долати обурення щодо можливих зменшень доходів. Дослідження спрямоване на докладний аналіз соціально-економічного впливу податкових пільг поряд з оцінкою їх успішності у досягненні задекларованих цілей при забезпеченні балансу між економічним зростанням та стійкістю доходів уряду. Проведено аналіз складного взаємозв'язку між податковими пільгами та ВВП, як основним індикатором покращення економічного стану країни. Використано емпіричний аналіз як основний методологічний підхід, який має на меті внести нові уявлення у наявну базу знань, розкриваючи складні взаємовідносини між податковими пільгами та економічним зростанням.

Важливість дослідження виходить за рамки обговорення макроекономічної стабільності, пропонуючи нові уявлення для доказового прийняття рішень на світовому рівні. Оскільки стратегічне положення Туреччини в світовій торгівлі та економічній інтеграції є значущим, розуміння впливу податкових пільг набуває статусу ключового моменту у формуванні перспективи економічного зростання. Результати дослідження можуть бути корисними не тільки для турецьких законодавців, але і для регіональних економічних партнерств.

**Ключові слова:** податкові пільги, ВВП, економічне зростання, ефективність державної політики, сталий фіскальний розвиток, емпіричний аналіз.

*Formulation of the problem.* Tax incentives have been widely utilized as a policy tool in Turkey, strategically deployed to stimulate economic growth and attract investments. However, the ongoing debate surrounding their effectiveness in fostering sustained and rapid economic development has introduced a layer of uncertainty. Against the backdrop of Turkey's economic goals, there is an imperative to comprehensively understand the true impact of tax incentives on the nation's economic landscape. The central challenge addressed in this study revolves around the assessment of tax incentives' effectiveness in propelling economic growth in Turkey. This involves a critical examination of the current tax incentive policies to ascertain their alignment with intended objectives and their ability to strike an optimal balance between promoting economic growth and ensuring adequate government revenue. Unintended consequences, such as potential revenue losses or distortions in resource allocation, warrant thorough investigation.

*Analysis of recent research and publications.* A substantial body of literature investigates the correlation between investment incentives and their consequential economic impacts. This research is broadly categorized into two main domains: studies concentrating on the repercussions of investment incentives on macroeconomic variables and those scrutinizing their influence on regional development policies. Additionally, certain inquiries delve into the nuanced effects arising from diverse types and combinations of investment incentives on various economic variables.

The potential of investment incentives to exert a direct influence on pivotal economic indicators, including overall economic growth and national development, is underscored.

However, the complex dynamics prevalent in developing nations introduce a layer of intricacy. The concentration of resources, production, income, and economic activities in specific regions can result in disparate development trajectories. This inequality poses a challenge, wherein certain regions witness substantial growth while others encounter obstacles to progress.

In response to these challenges, governments adopt a meticulous approach, navigating the realms of regional development and the broader national context when formulating investment incentive programs. Notably, the nomenclature employed in many countries emphasizes the regional focus of these incentives, often categorizing them as regional investment incentives. This discourse within the economic domain not only enhances our understanding of the interplay between investment incentives and economic variables but also guides policymakers and scholars in crafting effective programs that foster equitable and sustainable economic development.

Monica Ferrari, Stefania Tomasini, and Tsvetomira Tsenova [1] conducted a comprehensive examination in 2019 into the ramifications of corporate taxation policies on Italy's macroeconomic performance. This study also delved into the potential effects that future policy changes in this domain could exert on the overall economy. Italy, positioned as the third-largest economy in the Eurozone, grapples with high public debt, sluggish economic growth, and stringent fiscal rules, presenting formidable challenges amid the global economic crisis. The authors leveraged Italy's historical context of frequent alterations to its corporate tax system to offer a valuable opportunity for appraising the efficacy of corporate taxation as a policy instrument. The investigation specifically scrutinized the potential impact of proposed policy measures geared towards reducing or eliminating certain corporate taxes, with the aim of shedding light on their plausible effects on the economy.

In a separate study, Yongzheng Liu and Jie Mao [2] undertook an exploration using a distinctive firm-level dataset spanning from 2005 to 2012. Employing a quasi-experimental design, the researchers tested the impacts of tax incentives within the tax reform on firms' investment and productivity. The findings revealed that the reform contributed to a notable increase of 38.4 percent in investment and 8.9 percent in productivity for the treated firms in comparison to the control firms.

Ying Sun [3] conducted a detailed investigation into the interactions among tax incentives, tax enforcement, and R&D investment within Chinese businesses. The primary goal was to assess how tax incentives affect enterprise investment in research and development (R&D) and to scrutinize the role of tax enforcement in shaping R&D behavior. The study also explored how tax enforcement moderates the relationship between tax incentives and R&D investment. The findings highlighted that China's tax policies, which offer preferential treatment, positively impact innovation activities in businesses. Consistent application of tax incentives was identified as a factor that encourages businesses to increase their investments in R&D.

In a separate study, Yawei Qi, Wenxiang Peng, and Neil N. Xiong [4] expressed the viewpoint that the regulation of fiscal and tax policies plays a crucial role in enhancing

regional innovation capability. Using a dynamic panel data model, their research emphasized the spatial variations in the effects of fiscal policies on regional innovation capability. The results pointed out that inputs into research and development (R&D) and the structure of industries are key factors contributing to improved innovation capability. The study highlighted the significant positive impact of fiscal expenditure for science and technology, fiscal and tax policy texts, macro tax burden, business tax (BT), and value-added tax (VAT) on regional innovation capability. On the flip side, corporate income tax (CIT) was found to hinder regional innovation capability. The robustness test on invention patents confirmed the positive effects of fiscal and tax policy texts, macro tax burden, and business tax, while revealing a shift in the role of VAT from promotion to obstruction, and CIT emerging as a substantial obstacle to invention patents. Yawei Qi, Wenxiang Peng, and Neil N. Xiong concluded by advocating for the establishment of a tax system in China that promotes fair competition, reduces the tax burden on enterprises, encourages independent R&D, and guides the transformation of enterprises from low-tech to high-tech innovation through improvements in the tax structure and fiscal technology expenditures.

*Formulation of the goals of the article.* By leveraging empirical evidence and conducting an empirical analysis, this study aims to contribute to the existing body of knowledge on the relationship between tax incentives and economic growth in Turkey. The ultimate goal is to empower policymakers with evidence-based insights, paving the way for more effective measures that foster sustainable and inclusive economic growth.

*Presenting main material.* In October 2021, the G20 Leaders Declaration marked the milestone achievement of the Two-Pillar international tax package, a consensus reached through the collaboration of the OECD/G20 Inclusive Framework on Base Erosion and Profit Shifting. This report, commissioned by the Indonesian G20 Presidency, delves into the scrutiny of Pillar Two of this package. Pillar Two is designed to address concerns related to profit shifting, harmful tax competition, and the downward spiral of corporate tax rates. The report specifically investigates the implications of Pillar Two on the utilization and structure of tax incentives, with a particular focus on its impact on developing countries [5].

Pillar Two introduces a global minimum effective corporate tax rate of 15% for large multinational enterprises (MNEs) with the objective of curbing tax competition and alleviating the pressure on jurisdictions to provide tax incentives. The implementation of the Global Anti-Base Erosion (GloBE) Rules, a pivotal element of Pillar Two, dictates that MNEs with an effective tax rate below 15% in a jurisdiction may face supplementary taxes [6]. Traditionally, various jurisdictions have employed tax incentives to attract investment, but these incentives have frequently proven ineffective and inefficient, especially in developing countries. The primary goal of Pillar Two is to discourage profit shifting by MNEs, fostering a more balanced approach for jurisdictions in attracting investment while ensuring the generation of domestic revenues.

While jurisdictions retain the ability to leverage the tax system for attracting investments under the GloBE Rules, these regulations aim to discourage the deployment of detrimental tax incentive policies. Corporate Income Tax (CIT) incentives are frequently

employed by jurisdictions to pursue diverse objectives. Nevertheless, poorly devised incentives may have limited efficacy and lead to substantial revenue depletion. The impact of the GloBE Rules on various tax incentives will vary, with some experiencing minimal or no influence. Incentives proving successful in attracting tangible investment and fostering job creation will encounter less disruption. Conversely, incentives facilitating multinational enterprises (MNEs) to generate substantial low-taxed profits without substantial tangible investment or job creation will be subject to GloBE Rules protecting the corporate tax base [7].

The revenues derived from Pillar Two can serve jurisdictions in promoting economic development and improving their investment environments. This may encompass investments in physical infrastructure and the advancement of workforce skills. Post-Pillar Two, non-tax factors valued by investors will gain prominence as jurisdictions seek to enhance competitiveness through policies extending beyond taxation.

Preparations for Pillar Two implementation should be initiated by jurisdictions, encompassing a thorough evaluation of existing tax incentives [8]. The introduction of Pillar Two presents a distinctive opportunity for tax incentive reform, especially beneficial for developing and emerging economies. Procrastination or sluggish progress may lead to foregone tax revenues as other jurisdictions impose top-up taxes. Reforming tax incentives may pose governance challenges in certain jurisdictions. When contemplating reform options, jurisdictions should account for stabilization clauses in contracts and obligations stemming from specific investment agreements.

As a candidate country in the process of joining the European Union (EU), Turkey has been actively engaging in the submission of its Economic Reform Program (ERP) to the European Commission since 2001. This initiative was prompted by the request of the Economic and Financial Affairs Council (ECOFIN Council) on November 26-27, 2000. The current Economic Reform Program (2023-2025) underwent development under the coordination of the Presidency of the Republic of Turkey and the Presidency of Strategy and Budget, with significant contributions from relevant ministries and institutions. It has received official approval from the President.

The formulation of the Economic Reform Program (2023-2025) was guided by the Medium-Term Program (MTP, 2023-2025) and the 2023 Presidency Annual Program. This program holds substantial importance for the transitional period leading up to the formulation of the Twelfth Development Plan (2024-2028). The priorities of structural reforms will be subject to reassessment upon the implementation of the Development Plan. The costing of structural reform measures and their alignment with existing guidelines were finalized through constructive discussions conducted in workshops organized collaboratively with the Presidency of the Republic of Turkey, the Presidency of Strategy and Budget, and the Center of Excellence in Finance (CEF).

The macroeconomic framework of the Economic Reform Program (ERP) is crafted in the context of a global landscape characterized by persistent post-pandemic inflation, coupled with the tightening of global monetary and fiscal policies. Additionally, there are economic and social risks emanating from the Russia-Ukraine conflict, alongside

heightened expectations of a global recession. Diplomatic endeavors and international reconciliatory actions are directed towards alleviating the adverse impacts of these challenges.

Turkey, leveraging its advantageous geographical location and possessing dynamic and flexible production capabilities, stands poised to emerge as a significant contributor to the global economy. Recognizing the escalating internal and external risks, the primary objective of the ERP is to stimulate growth, emphasizing investment, employment, production, and exports. The overarching aim is to fortify the efficient and competitive production structure, diminish import dependency, attain sustainable price stability, enhance human capital and workforce quality, improve the business and investment environment, and achieve sustainable and inclusive growth through the economic transformation outlined in the Turkish Model of Economy.

In this context, monetary policy will be coupled with fiscal measures, income policies, and macro-prudential actions. Fiscal strategies will be put in place to foster an equitable and sustainable distribution of economic welfare, stabilize the current account deficit at a sustainable level, and support domestic savings and investments. Structural reforms will be actively pursued to reinforce physical, human, and technological infrastructure, with a particular emphasis on addressing three key challenges identified by stakeholders: improving workforce quality and formal employment, enhancing the education system, and increasing the share of high value-added production in the industry.

Throughout the program's duration, initiatives will be launched to adapt and revitalize all sectors and aspects of the economy. These efforts will align with development priorities and take into account the various impacts of climate change on the environment, society, and the economy. A medium-term strategy for low-carbon growth will be formulated to progress toward achieving net-zero emissions. The additional investment needs for sectors undergoing green transformation will be identified, and diverse support mechanisms will be established to ensure their competitiveness.

An updated investment incentive framework will be introduced, with a special focus on digital transformation and its broad influence. Ongoing endeavors will aim to facilitate and support the establishment and growth of women-led businesses, encouraging their participation in decision-making processes and e-commerce platforms. Measures will be implemented to ease the entry of young individuals into the labor market and enhance their skills. This encompasses expanding internship opportunities, implementing part-time and flexible work models, and placing emphasis on training programs and activities designed to increase their awareness of career possibilities.

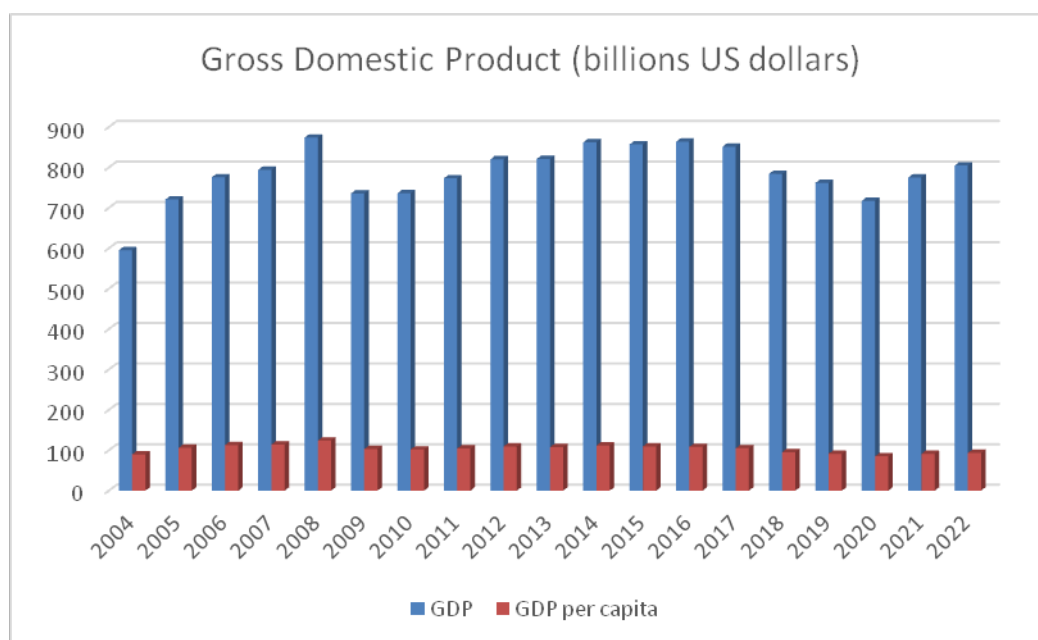


Figure 1. Dynamics of GDP rate

Source: Authors estimates

The assessment of Turkey's GDP trajectory spanning from 2004 to 2022 reveals a dynamic mix of growth, challenges, and subsequent recovery (see *Figure 1*). The economy experienced a notable expansion until 2008, entering a subsequent phase marked by economic challenges. Nevertheless, Turkey demonstrated resilience and resumed growth from 2012 onward, albeit at a more measured pace compared to the pre-crisis period. Recent GDP figures highlight the robust nature of the Turkish economy, showcasing its ability to navigate challenges and sustain a consistent growth path.

Between 2004 and 2008, Turkey witnessed substantial economic growth, culminating in a GDP of \$873 billion USD in 2008. This period represented a significant peak in the GDP rate, signifying Turkey's rapid economic expansion. Following the global financial crisis in 2008, Turkey encountered economic hurdles that impacted its GDP rate. Until 2011, there was a decline in GDP, reaching \$772 billion USD. The country faced slower growth and economic instability during this phase. However, from 2012 onward, Turkey's GDP embarked on a recovery and growth trajectory, gradually reaching \$851 billion USD in 2017.

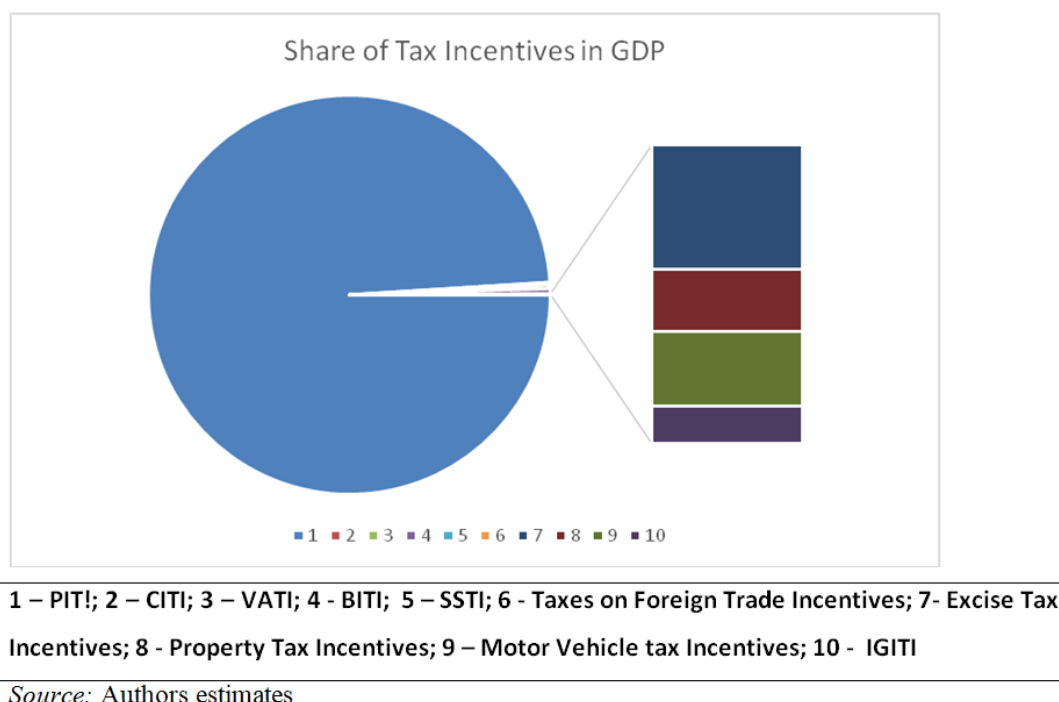


Figure 2. Share of Tax Incentives in GDP 2022

Drawing a comparison between the oscillations in GDP growth or decline and the government's implementation of tax incentives reveals a clear correlation, as illustrated in *Figure 2*. Notably, in 2008, when GDP reached its pinnacle, tax incentives were also at their zenith, while both GDP and tax incentives reached their nadir in 2004. This underscores the direct impact of tax incentives on GDP levels.

At first glance, the proportion of tax incentives in the GDP structure may seem trivial, but its significant influence on growth becomes evident. In 2004, Turkey's GDP amounted to \$595 billion USD, with tax incentives totaling \$5.5 billion USD. By 2008, GDP surged to \$873 billion USD, accompanied by tax incentives totaling \$8.5 billion USD. In 2022, with GDP at \$804.5 billion USD, tax incentives amounted to \$7.8 billion USD. Throughout the 2004-2022 period, the composition of tax incentives in the GDP structure fluctuated, with the government's most substantial incentives directed towards VAT, CIT, and PIT. In 2022, incentives related to these tax types constituted 90% of all incentives.

A thorough analysis of GDP growth or decline in conjunction with government-provided tax incentives unequivocally reveals a direct relationship. For instance, in 2008, when GDP reached its zenith, tax incentives were also at their peak, highlighting the direct impact of tax incentives on GDP levels. Turkey has witnessed an upswing in GDP and, consequently, an uptick in taxes remitted to the budget from 2004 to 2022. The most substantial leap occurred in 2008 when GDP grew by over \$300 billion USD in four years. Following a slight decline in the subsequent three years, gradual growth resumed from 2012 onwards. By 2017, GDP had reclaimed the 2008 level. Despite slight fluctuations in the subsequent years, the taxes paid nearly doubled for the 2004-2022 period. VAT, CIT, and PIT constitute the largest percentage in the structure of all taxes collected.



*Conclusion.* This study underscores the critical importance of gaining a comprehensive understanding of how tax incentives impact economic growth in Turkey. The nuanced insights derived from the empirical analysis not only inform evidence-based policymaking at the national level but also offer valuable lessons for the broader international community. The potential for cross-border collaboration and knowledge exchange, guided by the study's findings, holds the promise of fostering economic stability, attracting investments, and promoting sustainable development both within Turkey and on the global stage. As policymakers navigate the complexities of tax incentive design and implementation, the study advocates for a balanced approach that aligns economic growth with fiscal stability, ensuring a resilient and inclusive international economic system.

The study delves into the financial implications and potential trade-offs associated with tax incentives, adding depth to the broader conversation on macroeconomic stability. By understanding how tax incentives affect GDP and investments, policymakers can make well-informed decisions, striking a delicate balance between nurturing economic growth and ensuring fiscal stability. This equilibrium is crucial not just for national economies but also for the resilience and stability of the global economic system. The study's findings promise valuable insights for policymakers in shaping and implementing tax incentive policies, effectively stimulating economic growth in Turkey. A nuanced understanding of the impact of tax incentives allows policymakers to optimize resource allocation and promote sustainable economic development.

The importance of the study on the effectiveness of tax incentives for economic growth in Turkey goes beyond the national spectrum, carrying implications for the global economy. The insights from the study can facilitate the exchange of knowledge and collaboration among researchers, economists, and policymakers worldwide. The findings can offer valuable lessons for other countries grappling with similar economic challenges and contemplating the adoption of tax incentive policies. A well-designed and effective tax incentive framework has the potential to enhance Turkey's attractiveness as an investment destination, fostering cross-border investment flows and strengthening economic ties with other nations.

Given Turkey's strategic position as a crossroads between Europe, Asia, and the Middle East, it plays a pivotal role in international trade and economic integration. Understanding how tax incentives impact economic growth in Turkey can contribute to discussions and initiatives aimed at promoting regional economic integration. The findings can assist policymakers in neighboring countries or those involved in regional economic partnerships to explore potential synergies and align tax incentive policies for collective growth and development.

### **Reference**

1. Manuel Bonucchi, Monica Ferrari, Stefania Tomasini, Tsvetomira Tsenova (2015). Tax policy, investment decisions and economic growth. Dans Revue de l'OFCE, 141, 225–262. Available at: <<https://www.cairn.info/revue-de-l-ofce-2015-5-page-225.htm>>.
2. Yongzheng Liu, Jie Mao (2019). How Do Tax Incentives Affect Investment and Productivity? Firm-Level Evidence from China. American economic journal: ECONOMIC

POLICY, 3, VOL. 11, 261-291. Availabel at:  
<<https://www.aeaweb.org/articles?id=10.1257/pol.20170478>>

3. Yung Sun (2022). Tax Incentives, Tax Enforcement, and Enterprise R&D Investment: Evidence From Chinese A-Share Liste. *Front Psychol*, 13, 149–161. Availabel at:  
<<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9304986/>>

4. Qi, Y.; Peng, W.; Xiong, N.N. The Effects of Fiscal and Tax Incentives on Regional Innovation Capability: Text Extraction Based on Python. *Mathematics* 2020, 8(7),1193. Availabel at:  
<<https://doi.org/10.3390/math8071193><https://www.ncbi.nlm.nih.gov/nlmcatalog?term=%22Front+Psychol%22%5BTitle+Abbreviation%5D>>.

5. OECD (2020). The effects of R&D tax incentives and their role in the innovation policy mix: Findings from the OECD microBeRD project, 2016-19. OECD Science, Technology and Industry Policy Papers, No. 92, OECD Publishing, Paris, <https://doi.org/10.1787/65234003-en>.

6. IMF-OECD-UN-World Bank (2015), Options for Low Income Countries' Effective and Efficient Use of Tax Incentives for Investment, A report prepared for the G-20 Development Working Group by the IMF, OECD, UN and World Bank, [pdf]. Availabel at <<https://www.oecd.org/tax/taxglobal/options-for-low-income-countries-effective-and-efficient-use-of-tax-incentives-forinvestment.pdf>>.

7. OECD (2021). Tax Challenges Arising from the Digitalisation of the Economy – Global AntiBase Erosion Model Rules (Pillar Two): Inclusive Framework on BEPS. Availabel at: <<https://www.oecd.org/tax/beps/tax-challenges-arising-from-the-digitalisation-oftheconomy-global-anti-base-erosion-model-rules-pillar-two.htm>>.

8. OECD (2022). FDI Qualities Policy Toolkit. OECD Publishing, Paris, Availabel at: <<https://doi.org/10.1787/7ba74100-en>>.