



Research article

UDC 34:004:346.6:004.8:004.896:349.2

EDN: <https://elibrary.ru/vluyug>

DOI: <https://doi.org/10.21202/jdtl.2025.28>

# Robot Taxation as a Tool for Labor Market Protection: Legal Analysis of the Prospects for Developing Economies by the Example of Nigeria

Deborah Elohozino Otighi

Redeemer's University, Ede, Nigeria

## Keywords

artificial intelligence,  
digital technologies,  
employment,  
labor market,  
labor relations,  
law,  
robotics,  
tax,  
tax law,  
taxation

## Abstract

**Objective:** to provide a comprehensive legal and economic analysis of the validity of robot taxation as a measure to protect the labor market under the increasing automation, taking into account the socio-economic realities of Nigeria's developing economy.

**Methods:** the research is based on doctrinal and comparative legal methodology. The author systematically analyzed scientific publications, legislative acts, statistical data and empirical materials related to the impact of robotics and artificial intelligence on global labor markets. Special attention was paid to studying tax policy in the field of automation in South Korea and the European Union, in order to identify universal patterns and specific features of automation regulation in various jurisdictions. Methodological tools include content analysis of regulatory documents, economic and statistical analysis of data from international organizations, and a critical analysis of doctrinal provisions regarding the prospects for robot taxation.

**Results:** the research demonstrates the ambiguity of the robot taxation institute in the modern legal and economic system. It was found that the robot taxation may slow down the pace of automation, provide workers with time to adapt and retrain, compensate for the reduction in income tax revenues and ensure economic equity by redistributing corporate income from automation. At the same time, significant limitations of this concept were identified: the risk of inhibiting innovation, the lack of a unified

© Otighi D. El., 2025

This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence (CC BY 4.0) (<https://creativecommons.org/licenses/by/4.0>), which permits unrestricted re-use, distribution and reproduction, provided the original article is properly cited.

legal definition of the “robot”, the threat of capital outflow and the shift of production to jurisdictions with a more favorable tax environment. In relation to Nigeria, the conclusion is that a robot tax is premature due to low automation, high structural unemployment, the dominance of the informal employment sector, and poor digital infrastructure.

**Scientific novelty:** the work is a systematic study of the legal and economic aspects of robot taxation in the Nigerian legal system. The study is novel as it substantiates a contextual approach to determining the feasibility of a robot tax, taking into account the stage of economic development, the structure of the labor market and the degree of penetration of automation technologies. For the first time, the author formulates the concept of responsible automation for developing economies, which implies not punitive taxation, but a system of incentives combining moderate fees with investments in human capital and digital infrastructure.

**Practical significance:** the research results are valuable for forming state policy in the field of labor automation regulation. The proposed recommendations include the reform of corporate tax codes taking into account responsible automation, the introduction of mandatory assessment of the impact of automation on employment, the creation of a system of tax incentives for companies retraining workers displaced by technology, and the formation of a multilateral platform for ethical automation management. They can be used by the legislative and executive authorities of Nigeria and other developing countries to create legal mechanisms for regulating the digital economy and protecting workers’ rights under the technological transformation

## For citation

Otighi, D. El. (2025). Safeguarding the future of work in Nigeria: robot taxation in the age of automation. *Journal of Digital Technologies and Law*, 3(4), 705–721. <https://doi.org/10.21202/jdtl.2025.28>

## Contents

### Introduction

#### 1. Understanding Robot Tax: Definition and Rationale

#### 2. Exploring the Case for Robot Taxation

##### 2.1. Slowing Job Displacement to Protect Labour Markets

##### 2.2. Compensation for Declining Income Tax Revenues

##### 2.3. Ensuring Equity in Corporate Gains from Automation

#### 3. Challenges and Critiques of Robot Taxation

##### 3.1. Risk of Stifling Innovation and Technological Adoption

##### 3.2. Ambiguity in Defining what a robot is

##### 3.3. Risk of Capital Flight and Job Exportation

#### 4. Localising the Debate: What then does this mean for Nigeria?

Conclusion

References

## Introduction

In the rapidly evolving world of labour, automation and robotics are reshaping the very foundation of the labour markets globally. Technology continually transforms the global workforce, replacing traditional jobs with automated systems (Rayhan, 2023). Over the past decade, the global stock of industrial robots has risen dramatically and is projected to grow even faster in the next 10 years<sup>1</sup>. By 2030, robots and artificial intelligence are projected to displace over 20 million manufacturing jobs globally – a seismic shift that threatens to exacerbate inequalities, leaving workers stranded without viable means of livelihood<sup>2</sup>. While these technologies in some ways offer significant gains, such as increased efficiency and reduction of business costs, to others, they pose a critical socio-economic dilemma, ethical issues, and legal concerns for governments, threatening human workers. Hence, Bill Gates, co-founder of Microsoft, in 2017, re-echoed the proposal of a robot tax to slow automation and fund workers' retraining programmes.

Currently, no country has fully implemented a robot tax in its pure form; however, policy experiments have often taken the shape of incentive reductions or broader tax reforms rather than direct levies on automation. For a developing country such as Nigeria, where the unemployment rate has consistently exceeded 30%<sup>3</sup>, automation and the implementation of robot tax present both an opportunity and a challenge. Industries such as banking, manufacturing, and legal services are integrating technology. However, it still raises concerns about job security – should the government implement robot taxes to protect human workers? Within this discussion, the term robot will be categorised as industrial robots and actual AI-driven automation systems in labour practices (Gaus & Hoxtell, 2019; Graetz & Michaels, 2018; Guerreiro et al, 2023).

## 1. Understanding Robot Tax: Definition and Rationale

The concept of robot tax stems from taxing companies that heavily rely on automation, robots and AI for their operational activities. As of the 2023 reports by the International Federation of Robotics, there had been 553,052 industrial robot installations in factories

---

<sup>1</sup> In developed nations, self-checkout kiosks have replaced cashiers, AI-powered chatbots handle customer service inquiries, and industrial robots now perform complex manufacturing tasks.

<sup>2</sup> Lambart, J., & Cones, E. (2019, June 26). How Robots Change the World: What Automation Really Means for Jobs and Productivity. Oxford Economics. <https://clck.ru/3QmTfr>

<sup>3</sup> Mbachu, D. (2025, February 13). Nigeria's revamp of economic indicators sparks debate' African Business. <https://clck.ru/3QmTis>

around the world – a growth rate of 5% from the previous year, with China being the world's largest market<sup>4</sup>. Hence, as taxation is imposed on workers based on income earned, companies that deploy robots capable of autonomous decision-making are taxed to the degree to which they are deployed. The term can refer to a proposed fiscal policy where companies that replace human workers with robots or automation systems are taxed either directly on using those systems or indirectly through adjustments to corporate tax rates.

The central aim of levying this tax is to serve as a legislative strategy to disincentivise the replacement of workers by machines, bolster the social safety net for those who are displaced, redistribute the economic gains from technological progress by supporting workers displaced by automation, and enhance societal equity<sup>5</sup>. Broadly, robot tax proposals have classified these taxes into three categories, which are;

A. The direct taxation of firms that benefit from taxes levied on a robot's hypothetical 'salary' based on calculations of the robot's productivity, or the AI automation tools, and the wages that would be paid to a human worker doing the same job (Prettner & Strulik, 2020).

B. Tax is levied on the use of robots rather than the robots<sup>6</sup>. This category connotes the usage-based levy, which depends primarily on how extensively firms deploy automation in their operations.

C. The 'markup' corporate tax will be levied on excess profits generated when robots and AI are used to enhance market power<sup>7</sup>. This adjusted corporate model increases tax rates on profits derived from high-level automation, especially where such automation contributes to job displacement.

## 2. Exploring the Case for Robot Taxation

With a clearer understanding of what robot taxation entails and the objectives it seeks to achieve, it is now important to assess the main arguments made in support. Thus, this section explores these propositions and their broader policy implication.

---

<sup>4</sup> Heer, C., & Bieller, S. (2023, September 26). World Robotics 2023 Report: Asia ahead of Europe and the Americas. IFR Press Room. <https://clck.ru/3QmTko>. This number would have grown by now in 2025 when this paper was written.

<sup>5</sup> Ahn, M. (2024, May 13). Navigating the Future of Work: A case of a Robot Tax in the age of AI. Brookings Institution. <https://clck.ru/3QmTnc>

<sup>6</sup> In this case, firms would pay for the negative externalities of using robots instead of humans, and the value of robots is assessed according to the income they generate and taxed accordingly. Essentially, this proposal is akin to a property tax, which is based on evaluating depreciable assets and avoids the potential stagnation of innovation.

<sup>7</sup> Morinobu, Sh. (2022, June 28). Can a Robot Tax Help Narrow the Social Divide? The Tokyo Foundation. <https://clck.ru/3QmTtQ>

## 2.1. Slowing Job Displacement to Protect Labour Markets

One of the strongest propositions for robot tax is its potential to mitigate mass unemployment in the workforce, ensure job protection and maintain economic stability<sup>8</sup>. The International Labour Law standard defines a worker in the workforce as someone who performs work for remuneration or profit for a minimum period, often at least one hour, within a specific reference period (Creighton & McCrystal, 2016). The central issue here is that as technology advances, more jobs are becoming obsolete, displacing human workers who are not in tandem with the multifaceted capabilities of robotics, leading to retrenchments and job losses. Recent data from the Organisation for Economic Co-operation and Development (OECD) in 2024 shows that employment and labour force participation across member countries reached historic highs with 70.3% and 74% respectively, and the unemployment rate fell to just 4.9%. Nevertheless, amid this market performance, concerns persist about automation's long-term effects, particularly its silent displacement of workers in routine and low-skilled roles<sup>9</sup>. Machines are increasingly capable of performing the mundane and even highly specialised tasks once reserved for humans. So, corporations would safely pick an investment in robots over human workers, leaving millions of jobs at risk<sup>10</sup>.

Thus, a government robot tax could help slow down the automation rate, giving workers sufficient time to adapt and upskill and for the government to develop support systems for human labour (Carbonara et al, 2024; Costinot & Werning, 2022). Undoubtedly, it would serve as a cushioning policy and regulatory pause button in the face of technological advancement<sup>11</sup>, while economic and welfare plans for displaced workers are made. For countries with limited social security systems and high youth employment rates, such as Nigeria, this will be critical because, without deliberate intervention, automation may worsen social instability, drive unemployment and intensify migration pressures. A robot tax allows policymakers to create transformative and comprehensive labour market policies, including upskilling strategies and inclusive digital education reforms. It could also open doors for laws requiring companies to conduct automation impact assessments before laying off workers.

<sup>8</sup> Korner, K., Schattenberg, M., & Heymann, E. (2018, May). Digital Economics. How AI and Robotics are Changing our Work and our Lives. EU Monitor. <https://clck.ru/3QnAgv>

<sup>9</sup> OECD. (2025, January 16). OECD employment and labour force participation rates stable at record highs in the third quarter of 2024. <https://clck.ru/3QmU2q>

<sup>10</sup> Mitha, S. (2017, September 14). Robots, Technological Change and Taxation. (1368) Tax Journal. <https://clck.ru/3QmU9h>

<sup>11</sup> Damijan, J., Damijan, S., & Vrh, N. (2021, March 9). Tax on robots: Whether and How much. Growinpro. Working Paper. 5/2021. <https://clck.ru/3QmUBZ>

## 2.2. Compensation for Declining Income Tax Revenues

As fewer people work due to automation, income tax collection by the government will naturally shrink. Hence, this argument is centred on the premise that a robot tax could aid the government in funding social programs that better equip displaced workers with new skills. It is well known that taxation is one of the most excellent means of revenue generation among world nations (Adekanmbi et al., 2024). As robots become more prevalent in the workforce, income tax may significantly decline, which would be detrimental to this germane source of governmental revenue (Mazur, 2019).

However, the robot tax offers a novel and interesting stream for the government, which must ensure its citizens' welfare and security on retained fiscal capacity (Abbott & Bogenschneider, 2018). A robot tax helps plug this gap by shifting the tax burden partly onto firms that automate. Consequently, the revenue generated from robot taxes could be reinvested in digital education, core vocational training and employment transition initiatives (Thuemmel, 2023; Zhang, 2019; Zhang, 2021). The implication is that robot taxation offers a long-term fiscal sustainability strategy, especially for tax systems overly reliant on payroll contributions as part of a broader tax reform and revenue diversification for future-proof governance.

## 2.3. Ensuring Equity in Corporate Gains from Automation

Another justification for the robot tax is ensuring corporate ethical accountability and fairness anchored on economic justice (Dimitropoulou, 2024). Economic justice is a component of social and welfare economics that seeks to provide avenues for financial prosperity and equality to individuals who have been marginalised in an economy<sup>12</sup>. For instance, if a multinational company replaces 100 workers with robots, it has saved significantly on salaries, health benefits and even pensions. By general principles of law and equity, these robot replacements do not pay tax as the law does not recognise them as taxable persons, creating imbalances as companies are not taxed on the basis of the profits accrued. More so, results from the 2022 McKinsey Global Industrial Robotics Survey reveal that industrial companies are set to spend heavily on robotics and automation<sup>13</sup>.

Thus, on the precepts of economic justice, a robot tax would act as a redistributive mechanism in correcting these systemic imbalances by ensuring that companies that

---

<sup>12</sup> Hayes, A. (2023, September 13). Economic Justice: Meaning, Examples of How to Achieve It. Investopedia. <https://clck.ru/3QmUMv>

<sup>13</sup> Ajewole, F., Kelkar, A., Moore, D., Shao, E., & Thirtha, M. (2023, January 6). Unlocking the Industrial Potential of Robotics and Automation. McKinsey & Company. <https://clck.ru/3QmUQr>

benefit from automation contribute to the social and economic systems that keep society alive and functioning<sup>14</sup>. A study by economists at the Massachusetts Institute of Technology suggests a robot levy, but only a modest one, could help combat the effects of automation on income inequality in the U.S. if it ranges from 1 per cent to 3.7 per cent of the robot's value<sup>15</sup>. Hence, implementing such a tax could form part of corporate responsibility legislation, encouraging fairer profits investment into human capital development.

### 3. Challenges and Critiques of Robot Taxation

While the case for robot taxation continues to gain traction in public discourse, it is not without significant criticism. There are concerns about the practical, economic, and ethical ramifications of such a tax, particularly in developing countries with fragile economies and low automation levels. Hence, this section evaluates these counterarguments and potential drawbacks of implementing robot taxes.

#### 3.1. Risk of Stifling Innovation and Technological Adoption

One of the most vigorous counterarguments is that robot taxes may stifle innovation, productivity, and technological advancement, especially in developing economies trying to match the global pace, by penalising productivity against the economic growth it brings<sup>16</sup>. In this context, for these economies, the robot tax is viewed as a punishment by the government instead of a blessing for attaining technological prowess, even benefiting the nation. In developing countries where blooming industries like agriculture, transport, tourism, and fintech are only beginning to adopt automation, the government implementing robot taxes on intelligent systems may prove overly premature and counterproductive, creating additional financial barriers (Mazur, 2024).

The economic implication of this thought is that robot taxation may signal a policy hostility to innovation, which could deter foreign jurisdictional investment in AI and robotics, and slow down much-needed industrial modernisation (Kovacev, 2020) which already positively impact core sectors like healthcare, where AI Robotics diagnostics save lives and detect cancers earlier than human practitioners. Also, robot taxes limit and remove the potential to develop and create new jobs. In the words of Joseph Schumpeter, technological creative destruction drives long-term progress, even if it temporarily disrupts the labour market (Perihan, 2015).

---

<sup>14</sup> It entails public trust and equality in ensuring that automation does not disproportionately benefit the wealthy at the expense of the everyday citizen.

<sup>15</sup> Dizikes, P. (2022, December 21). Should we tax robots? MIT News. <https://clck.ru/3QmUSe>

<sup>16</sup> Summers, L. (2017, March 5). Picking on Robots won't deal with Job Destruction. Washington Post (Washington DC). <https://clck.ru/3QmUWe>



### 3.2. Ambiguity in Defining what a robot is

Over the years since this debate, policymakers have struggled and are impasse on what constitutes robots, especially for taxation and liability purposes (Perihan, 2015). Questions arise on whether tax should apply to robotic industrial arms, physical humanoid machines replacing factory workers, AI software robots or basic software algorithms. Consequently, the EU's failed attempt at ascribing a definition to intelligent robots in its 2017 Liability Directive further deepens this ambiguity<sup>17</sup>. Enforcing a robot tax becomes unworkable without a clear legal or operational definition.

Hence, by these inconsistencies in classification, corporations are bound to manoeuvre these loopholes and regulatory arbitrage, as there is no absolute threshold in sight. Implementing any robot tax in this condition may become messy and prone to numerous abuses. Globally, countries already struggle with general tax compliance and policy enforcement (Monyake, 2023), and so introducing a robot tax could open the door to more corruption, confusion, mismanagement, bureaucratic complexities and loophole exploitation instead of streamlining tax governance. Furthermore, introducing robot taxes without foundational administrative capacity could lead to bureaucratic bottlenecks, policy misapplication and could be the exact opposite of what is intended for the public.

### 3.3. Risk of Capital Flight and Job Exportation

Owing to the competitive nature of the global market, corporations may choose to respond to new taxes by relocating to jurisdictions with favourable tax policies (Ossandón Cerda, 2020). Where they do stay, it could lead to higher prices of goods and services and companies that use robots may pass on the production cost of the tax to the customers in the form of higher prices, which could negatively impact household budgets. For instance, when the United States introduced tariffs on Chinese automation imports in 2019, manufacturers shifted operations to Vietnam<sup>18</sup>. Thus, a robot tax, if unilaterally applied, could accelerate capital flight and worsen job losses, especially in emerging economies that lack bargaining power in global markets. Furthermore, implementing a

---

<sup>17</sup> On 16 February 2017, the European Parliament voted on the recommendations made by the committee. However, it rejected the introduction of a statutory definition of robots, new corporate reporting requirements, and an advisory code of conduct for robotics engineers to guide the ethical design, production and use of robots because these measures could stifle innovation. Instead, it voted for a resolution calling upon the European Commission to propose legislation for a legal and ethical framework for robots and a debate on new employment models and the sustainability of tax and social security systems.

<sup>18</sup> Cyrill, M. (2019, January 24). Shifts in China's Industrial Supply Chain and the US-China Trade War. China Briefing. <https://clck.ru/3QmUiq>



robot tax can be viewed as a misdirected solution to a systemic flaw. The automation that robots bring only exposes deeper flaws in administrative systems and is not necessarily an inherent concern with the rise in technology per se.

A case analysis of South Korea shows that it granted a 3-7% tax credit to corporations that invest in automation and robots in 2017. Studies demonstrated that South Korean businesses increase employment and decrease their automation expenditure whenever the tax credit rate is lowered (Kang et al., 2024). The tax credit has had a positive fiscal externality, meaning that behavioural responses to tax credit reductions increased government revenue beyond the direct mechanical impact of the policy. The tax reform also decreased wage inequality by slowing wage growth in the upper half of the income distribution (Kang et al., 2024).

#### 4. Localising the Debate: What then does this mean for Nigeria?

Taxation is not merely a tool for revenue generation but a moral and legal instrument for redistributing societal benefits and burdens. The Federal Inland Revenue Service in 2025 reported that its agency generated ₦21.6 trillion in revenue in 2024, exceeding its initial target of ₦19.4 trillion by 11.34%<sup>19</sup>. Moreover, the Nigerian financial sector generated a whopping ₦570.91 billion in corporate income tax in Q3 in 2024, a significant 21.5% of the total sums collected during that period<sup>20</sup>. The tax rate provided by the Tax Reform Act 2025 portrays the belief that wealth and responsibility should be shared in a fair and functioning society (Makar et al., 2025). Thus, taxing robots treats a symptom while ignoring the disease for a developing system like Nigeria and many African nations. This begs a critical question for diagnosis: Should a country like Nigeria focus its limited policy capital on taxing robots when the real need lies in building a fairer economic system that embodies inclusivity for all and is future-proof? At what point does innovation, while beneficial to firms and markets, become a form of exploitation, displacing workers somewhat without compensation, concentrating wealth in the hands of a few?

Unlike advanced countries where automation displaces millions of jobs, Nigeria's labour market remains informal, mainly low-skilled and unautomated. With many sectors still heavily relying on human labour, automation is not deeply embedded. As such, robot tax may be a misplaced policy attention attempting to solve a future problem while avoiding keen and urgent realities like poor digital infrastructure, low employability and

---

<sup>19</sup> Federal Inland Revenue Service. Tax and Statistics Report: 2024 Statistics. <https://goo.su/yLdKU>

<sup>20</sup> Ojoko, I. (2025, June 27). Nigeria's Financial Sector generates N570.91 billion in corporate income tax in Q3 2024, leading all sectors – Reports. Nairametrics. <https://clck.ru/3QmUvp>

tech literacy, high unemployment, informal sector dominance and weak legal labour protections.

More than ever, Nigeria should channel its impact on policies that build a resilient, just and humane economy. However, even though a full-fledged robot tax may not be viable for Nigeria now, its symbolic value should not be ignored. Thus, it signals a nation thinking proactively about the impact of automation and is willing to demand accountability and responsibility from tech-integrating industries. In other words, the proposition is a part of a broader fiscal reform strategy that reflects the values of equity, innovation and dignity through labour.

In essence, Nigeria's priorities must remain centred on restructuring the existing social contract (Ibrahim & Lanre, 2022) between the government and the citizens to ensure that their welfare and security are paramount. Hereon, growth must be human-centred, and innovations are ethical and inclusive, not merely exploitative in form (Singh et al., 2024). Technology must be seen as domestically empowering, not just imported. This would mean aligning labour, industry, taxation and education policies to collectively build an economy that can fully harness automation for the future of work without essentially leaving people behind. In the words of economist Mariana Mazzucato<sup>21</sup> innovation must be mission-driven; for Nigeria, the mission must be jobs, economic justice, ethics and shared prosperity.

## Conclusion

The debate on whether the government should tax robots is intriguing and multifaceted, as it touches questions on equity, innovation, labour protection, and the state's role in shaping the future of work. Hence, this article has examined the arguments for and against taxing robots. It concludes that while robot taxation is not a universal remedy, when applied thoughtfully and contextually, it presents a strategic tool for navigating the impact of automation. In developed economies with advanced infrastructure and strong social safety nets, a robot tax can help mitigate job losses, redistribute gains from automation, and fund workers' retraining programmes without significantly stalling innovation.

However, for developing and underdeveloped nations like Nigeria, where automation is emergent and yet to reach critical mass, the urgent task lies in designing an inclusive, innovation-friendly economy anchored on digital infrastructure, job creation, and education reforms. In such a context, prematurely implementing a robot tax may hinder

---

<sup>21</sup> Mazzucato, M. (2018). Mission-Oriented Innovation Policy: Challenges and Opportunities. In SRIP Report 2018. <https://clck.ru/3QmVEJ>

growth and innovation at a critical stage of development. Therefore, governments must tailor their alternatives based on economic realities, embracing automation responsibly while prioritising equity and inclusive growth in meeting developmental goals. Global examples show that even advanced economies have shied away from direct robot taxation as of now. Robot taxation should not be viewed as an endpoint but instead as one of the many tools for managing the evolving relationship between humans, work, and machines in the 21st century. Ultimately, fiscal policy must evolve to capture value from technological gains and ensure that such gains lead to shared prosperity rather than deepening inequality. In so doing, Nigeria and other emerging economies can navigate the automation era with ambition and justice.

Based on the findings and conclusion from arguments for and against the debate of robot taxes, this paper proposes the following policy options for Nigeria to adopt.

1. Nigeria must reform its corporate tax codes to effectively and efficiently capture responsible automation gains. This strategy will also penalise future unjustified large-scale layoffs and encourage job-creating innovation. In addition, it will embed both legal, ethical and social considerations in Nigeria's digital economy policies and procurement frameworks. Specifically, the recent Tax Reform Law 2025, Companies and Allied Matters Act 2020, Corporate Affairs Commission's Regulations, the various Labour legislations and other future policies and regulations could be fine-tuned to contain these adjustments adequately.

2. Nigeria must establish a mandatory automation Impact assessment (AIAs). In this sense, for companies deploying large-scale automation, there will be a legal necessity to self-evaluate and disclose its impact on their current employees and wages. The AIA will visually explain the ensuing risks and offer workers a reconciliatory pathway.

3. Like South Korea, Nigeria may introduce incentive-based and modest levies on firms displacing workers through automation rather than punitive automation levies. Incentives to firms can include: tax breaks, grants or even soft loans to companies that retrain workers displaced by technology, create net employment through innovation or build local tech solutions or products. The levies can be allocated to create and fund national retraining and digital literacy programmes to produce a future-proof Nigerian workforce. Also, long-term strategies like labour market forecasting and youth entrepreneurship support will go a long way.

4. Finally, Nigeria can establish a multi-stakeholder policy forum to guide ethical automation and labour inclusion, involving public and private sector partnership made up of tech-savvy lawyers, AI researchers/ field experts, etc, academia and civil society groups.

## References

- Abbott, R., & Bogenschneider, B. (2018). Should Robots Pay Taxes? Tax Policy in the Age of Automation. *SSRN Electronic Journal*. 1659. <https://doi.org/10.2139/ssrn.2932483>
- Adekanmbi, A., Olaoye, A., & Fakiyesi, O. A., (2024). An Empirical Analysis of Tax Revenue and Total Revenue of West African Countries. *International Journal of Business Management and Economic Review*, 7(6). <https://doi.org/10.35409/ijbmer.2024.3623>
- Carbonara, E., Parisi, M. L., & Pellegrino, G. (2024). Mitigating the labor displacing effects of automation: Robot taxes versus wage subsidies. *Journal of Evolutionary Economics*, 34(1), 125–155. <https://doi.org/10.1007/s00191-023-00826-4>
- Costinot, A., & Werning, I. (2022). Robots, trade, and Luddism: A sufficient statistic approach to optimal technology regulation. *Review of Economic Studies*, 89(5), 2413–2448. <https://doi.org/10.1093/restud/rdac018>
- Creighton, B., & McCrystal, Sh. (2016). Who is a Worker in International Law? *Comparative Labor Law and Policy Journal*, 37(3), 691–725.
- Dimitropoulou, Ch. (2024). *Robot Taxation A Normative Tax Policy Analysis – Domestic and International Tax Considerations*. IBFD Doctoral Series. <https://doi.org/10.59403/cb75dv>
- Ibrahim, Ya., & Lanre, S. (2022). Social Contract Theory: A Model for Nation Building in Nigeria. *Journal of Administrative Science*, 9(1), 136–154.
- Gaus, A., & Hoxtell, W. (2019). Automation and the future of work in Sub-Saharan Africa. In *Automation and AI: Implications for African development prospects* (pp. 1–28). Center for Global Development. <https://doi.org/10.2139/ssrn.3473564>
- Graetz, G., & Michaels, G. (2018). Robots at work. *Review of Economics and Statistics*, 100(5), 753–768. [https://doi.org/10.1162/rest\\_a\\_00754](https://doi.org/10.1162/rest_a_00754)
- Guerreiro, J., Rebelo, S., & Teles, P. (2023). Should robots be taxed? *American Economic Journal: Macroeconomics*, 15(1), 1–38. <https://doi.org/10.1257/mac.20200441>
- Kang, D., Lee, J. H., & Quach, S. (2024). The Welfare Effects of a Robot Tax: Evidence from a Tax Credit for Automation Technologies in Korea. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.5005128>
- Kovacev, R. (2020). A Taxing Dilemma: Robot Taxes and the Challenges of Effective Taxation of AI, Automation and Robotics in the Fourth Industrial Revolution. *The Contemporary Tax Journal*, 9(2), 4. <https://doi.org/10.31979/2381-3679.2020.090204>
- Makar, D., Pilah, P., & Ayeh, R. (2025). New Tax Reforms 2025: You Earn, Spend, Buy, Sell, and Pay on Goods and Services already Taxed: A Comprehensive Analysis. *IRASS Journal of Economics and Business Management*, 2(5), 10–24.
- Mazur, O. (2019). Taxing the Robots. *Pepperdine Law Review*, 48(2).
- Mazur, O. (2024). The Taxation of Robots and Its Global Challenges. In S. V. Kostić et al. (Eds.), *Mobility of Individuals and Workforces*. <https://doi.org/10.59403/2j0zh11019>
- Monyake, J. (2023). The Challenges of Managing Tax Compliance in Developing Countries: A Case of Botswana. *International Journal of Engineering Science Technologies*, 7(6). <https://doi.org/10.29121/ijolest.v7.i6.2023.551>
- Ossandón Cerda, F. (2020). Taxation on Robots? Challenges for Tax Policy in the Era of Automation. *Revista Chilena De Derecho Y Tecnología*, 9(2), 187–219. (in Spanish). <https://doi.org/10.5354/0719-2584.2020.55578>
- Perihan, H. K. (2015). Joseph A. Schumpeter's Perspective on Innovation. *International Journal of Economics, Commerce and Management*, 3(8). <https://ijecm.co.uk/wp-content/uploads/2015/08/383.pdf>
- Prettner, K., & Strulik, H. (2020). Technology, robots, and the future of work: A macroeconomic analysis. *Macroeconomic Dynamics*, 24(5), 1153–1185.
- Rayhan, A. (2023). *The Future Of Work: How AI and Automation will Transform Industries*. ResearchGate. <https://doi.org/10.13140/RG.2.2.36092.51848>
- Singh, K., Chatterjee, Sh., & Mariani, M. (2024). Applications of Generative AI and the future of Organisational Performance: The Mediating Role of Explorative and Exploitative Innovation and Moderating Role of Ethical Dilemmas and Environmental Dynamism. *Technovation*, 133, 103021. <https://doi.org/10.1016/j.technovation.2024.103021>
- Thuemmel, U. (2023). Optimal taxation of robots. *Journal of the European Economic Association*, 21(3), 1154–1190. <https://doi.org/10.1093/jeea/jvac062>
- Zhang, P. (2019). Automation, wage inequality and implications of a robot tax. *Japan and the World Economy*, 51, 1–13. <https://doi.org/10.1016/j.japwor.2019.03.001>
- Zhang, P. (2021). You have been terminated: Robots, work, and taxation. *International Review of Economics & Finance*, 76, 1020–1034. <https://doi.org/10.1016/j.iref.2021.08.019>

## Author information



**Deborah El. Otighi** – LLB Bachelor of Laws, Redeemer's University

**Address:** P.M.B 230 Ede, Osun State, Nigeria

**E-mail:** [otighi21668307@run.edu.ng](mailto:otighi21668307@run.edu.ng)

**ORCID ID:** <https://orcid.org/0009-0007-8557-823X>

## Conflict of interest

The author declares no conflict of interest.

## Financial disclosure

The research had no sponsorship.

## Thematic rubrics

**OECD:** 5.05 / Law

**PASJC:** 3308 / Law

**WoS:** OM / Law

## Article history

**Date of receipt** – July 31, 2025

**Date of approval** – August 13, 2025

**Date of acceptance** – December 20, 2025

**Date of online placement** – December 25, 2025



Научная статья

УДК 34:004:346.6:004.8:004.896:349.2

EDN: <https://elibrary.ru/vluyug>

DOI: <https://doi.org/10.21202/jdtl.2025.28>

# Налогообложение робототехники как инструмент защиты рынка труда: правовой анализ перспектив для развивающихся экономик на примере Нигерии

Дебора Элохозино Отиги

Университет Искупителя, Эде, Нигерия

## Ключевые слова

занятость,  
искусственный интеллект,  
налог,  
налоговое право,  
налогообложение,  
право,  
робототехника,  
рынок труда,  
трудовые отношения,  
цифровые технологии

## Аннотация

**Цель** комплексный правовой и экономический анализ обоснованности введения налога на робототехнику как меры защиты рынка труда в условиях нарастающей автоматизации с учетом социально-экономических реалий развивающейся экономики Нигерии.

**Методы:** исследование базируется на доктринальной и сравнительно-правовой методологии. Автор осуществляет системный анализ научных публикаций, законодательных актов, статистических данных и эмпирических материалов, касающихся влияния робототехники и искусственного интеллекта на глобальные рынки труда. Особое внимание уделяется изучению опыта налоговой политики в области автоматизации в Южной Корее и Европейском союзе, что позволяет выявить универсальные закономерности и специфические особенности регулирования автоматизации в различных юрисдикциях. Методологический инструментарий включает контент-анализ нормативных документов, экономико-статистический анализ данных международных организаций и критический анализ доктринальных позиций относительно перспектив налогообложения роботов.

**Результаты:** проведенное исследование демонстрирует неоднозначность института налогообложения робототехники в современной правовой и экономической системе. Выявлено, что налог на роботов потенциально способен замедлить темпы автоматизации, предоставить работникам время для адаптации и переквалификации, компенсировать сокращение поступлений подоходного налога и обеспечить экономическую справедливость путем перераспределения корпоративных доходов от автоматизации. Вместе с тем установлены существенные ограничения данной концепции: риск торможения инноваций, отсутствие единого юридического определения понятия «робот», угроза оттока капитала и смещения производств в юрисдикции

© Отиги Д. Э., 2025

Статья находится в открытом доступе и распространяется в соответствии с лицензией Creative Commons «Attribution» («Атрибуция») 4.0 Всемирная (CC BY 4.0) (<https://creativecommons.org/licenses/by/4.0/deed.ru>), позволяющей неограниченно использовать, распространять и воспроизводить материал при условии, что оригинальная работа упомянута с соблюдением правил цитирования.



с более благоприятной налоговой средой. Применительно к Нигерии обоснован вывод о преждевременности введения налога на робототехнику в условиях низкого уровня автоматизации, высокой структурной безработицы, доминирования неформального сектора занятости и слабой цифровой инфраструктуры.

**Научная новизна:** работа представляет собой системное исследование правовых и экономических аспектов налогообложения робототехники применительно к правовой системе Нигерии. Новизна исследования состоит в обосновании контекстуального подхода к определению целесообразности введения налога на роботов с учетом стадии экономического развития, структуры рынка труда и степени проникновения технологий автоматизации. Автор впервые формулирует концепцию ответственной автоматизации для развивающихся экономик, предполагающую не карательное налогообложение, а стимулирующую систему мер, сочетающую умеренные сборы с инвестициями в человеческий капитал и цифровую инфраструктуру.

**Практическая значимость:** результаты исследования обладают высокой прикладной ценностью для формирования государственной политики в сфере регулирования автоматизации труда. Предложенные рекомендации – реформирование корпоративных налоговых кодексов с учетом ответственной автоматизации, введение обязательной оценки воздействия автоматизации на занятость, создание системы налоговых стимулов для компаний, переобучающих вытесненных технологиями работников, формирование многосторонней площадки по этическому управлению автоматизацией: могут быть использованы законодательными и исполнительными органами Нигерии и других развивающихся стран при разработке правовых механизмов регулирования цифровой экономики и защиты прав работников в условиях технологической трансформации.

## Для цитирования

Отиги, Д. Э. (2025). Налогообложение робототехники как инструмент защиты рынка труда: правовой анализ перспектив для развивающихся экономик на примере Нигерии. *Journal of Digital Technologies and Law*, 3(4), 705–721. <https://doi.org/10.21202/jdtl.2025.28>

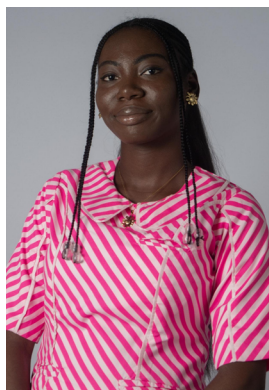
## Список литературы

- Abbott, R., & Bogenschneider, B. (2018). Should Robots Pay Taxes? Tax Policy in the Age of Automation. *SSRN Electronic Journal*. 1659. <https://doi.org/10.2139/ssrn.2932483>
- Adekanmbi, A., Olaoye, A., & Fakiyesi, O. A., (2024). An Empirical Analysis of Tax Revenue and Total Revenue of West African Countries. *International Journal of Business Management and Economic Review*, 7(6). <https://doi.org/10.35409/ijbmer.2024.3623>
- Carbonara, E., Parisi, M. L., & Pellegrino, G. (2024). Mitigating the labor displacing effects of automation: Robot taxes versus wage subsidies. *Journal of Evolutionary Economics*, 34(1), 125–155. <https://doi.org/10.1007/s00191-023-00826-4>
- Costinot, A., & Werning, I. (2022). Robots, trade, and Luddism: A sufficient statistic approach to optimal technology regulation. *Review of Economic Studies*, 89(5), 2413–2448. <https://doi.org/10.1093/restud/rdac018>
- Creighton, B., & McCrystal, Sh. (2016). Who is a Worker in International Law? *Comparative Labor Law and Policy Journal*, 37(3), 691–725.
- Dimitropoulou, Ch. (2024). *Robot Taxation A Normative Tax Policy Analysis – Domestic and International Tax Considerations*. IBFD Doctoral Series. <https://doi.org/10.59403/cb75dv>



- Ibrahim, Ya., & Lanre, S. (2022). Social Contract Theory: A Model for Nation Building in Nigeria. *Journal of Administrative Science*, 9(1), 136–154.
- Gaus, A., & Hoxtell, W. (2019). Automation and the future of work in Sub-Saharan Africa. In *Automation and AI: Implications for African development prospects* (pp. 1–28). Center for Global Development. <https://doi.org/10.2139/ssrn.3473564>
- Graetz, G., & Michaels, G. (2018). Robots at work. *Review of Economics and Statistics*, 100(5), 753–768. [https://doi.org/10.1162/rest\\_a\\_00754](https://doi.org/10.1162/rest_a_00754)
- Guerreiro, J., Rebelo, S., & Teles, P. (2023). Should robots be taxed? *American Economic Journal: Macroeconomics*, 15(1), 1–38. <https://doi.org/10.1257/mac.20200441>
- Kang, D., Lee, J. H., & Quach, S. (2024). The Welfare Effects of a Robot Tax: Evidence from a Tax Credit for Automation Technologies in Korea. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.5005128>
- Kovacev, R. (2020). A Taxing Dilemma: Robot Taxes and the Challenges of Effective Taxation of AI, Automation and Robotics in the Fourth Industrial Revolution. *The Contemporary Tax Journal*, 9(2), 4. <https://doi.org/10.31979/2381-3679.2020.090204>
- Makar, D., Pilah, P., & Ayeh, R. (2025). New Tax Reforms 2025: You Earn, Spend, Buy, Sell, and Pay on Goods and Services already Taxed: A Comprehensive Analysis. *IRASS Journal of Economics and Business Management*, 2(5), 10–24.
- Mazur, O. (2019). Taxing the Robots. *Pepperdine Law Review*, 48(2).
- Mazur, O. (2024). The Taxation of Robots and Its Global Challenges. In S. V. Kostić et al. (Eds.), *Mobility of Individuals and Workforces*. <https://doi.org/10.59403/2j0zh11019>
- Monyake, J. (2023). The Challenges of Managing Tax Compliance in Developing Countries: A Case of Botswana. *International Journal of Engineering Science Technologies*, 7(6). <https://doi.org/10.29121/ijest.v7.i6.2023.551>
- Ossandón Cerda, F. (2020). Taxation on Robots? Challenges for Tax Policy in the Era of Automation. *Revista Chilena De Derecho Y Tecnología*, 9(2), 187–219. (in Spanish). <https://doi.org/10.5354/0719-2584.2020.55578>
- Perihan, H. K. (2015). Joseph A. Schumpeter's Perspective on Innovation. *International Journal of Economics, Commerce and Management*, 3(8). <https://ijecm.co.uk/wp-content/uploads/2015/08/383.pdf>
- Prettner, K., & Strulik, H. (2020). Technology, robots, and the future of work: A macroeconomic analysis. *Macroeconomic Dynamics*, 24(5), 1153–1185.
- Rayhan, A. (2023). *The Future Of Work: How AI and Automation will Transform Industries*. ResearchGate. <https://doi.org/10.13140/RG.2.2.36092.51848>
- Singh, K., Chatterjee, Sh., & Mariani, M. (2024). Applications of Generative AI and the future of Organisational Performance: The Mediating Role of Explorative and Exploitative Innovation and Moderating Role of Ethical Dilemmas and Environmental Dynamism. *Technovation*, 133, 103021. <https://doi.org/10.1016/j.technovation.2024.103021>
- Thuemmel, U. (2023). Optimal taxation of robots. *Journal of the European Economic Association*, 21(3), 1154–1190. <https://doi.org/10.1093/jeea/jvac062>
- Zhang, P. (2019). Automation, wage inequality and implications of a robot tax. *Japan and the World Economy*, 51, 1–13. <https://doi.org/10.1016/j.japwor.2019.03.001>
- Zhang, P. (2021). You have been terminated: Robots, work, and taxation. *International Review of Economics & Finance*, 76, 1020–1034. <https://doi.org/10.1016/j.iref.2021.08.019>

## Сведения об авторе



**Отиги Дебора Элохозино** – бакалавр права, Университет Искупителя

**Адрес:** Нигерия, штат Осун, г. Эде, P.M.B 230

**E-mail:** [otighi21668307@run.edu.ng](mailto:otighi21668307@run.edu.ng)

**ORCID ID:** <https://orcid.org/0009-0007-8557-823X>

## Конфликт интересов

Автор сообщает об отсутствии конфликта интересов.

## Финансирование

Исследование не имело спонсорской поддержки.

## Тематические рубрики

**Рубрика OECD:** 5.05 / Law

**Рубрика ASJC:** 3308 / Law

**Рубрика WoS:** OM / Law

**Рубрика ГРНТИ:** 10.07.45 / Право и научно-технический прогресс

**Специальность ВАК:** 5.1.3 / Частно-правовые (цивилистические) науки

## История статьи

**Дата поступления** – 31 июля 2025 г.

**Дата одобрения после рецензирования** – 13 августа 2025 г.

**Дата принятия к опубликованию** – 20 декабря 2025 г.

**Дата онлайн-размещения** – 25 декабря 2025 г.