

# Tokenomics and Economic Models in Blockchain: A Critical Analysis and Future Trends

**Roomana Hasan, Md Sohail Ahmad**

*Assistant Professor in AI&DS (Artificial intelligence and Data Science), D. Y. Patil  
College Of Engineering, India  
Email: roomana.hasan@ymail.com*

This study aims to investigate the development, planning and execution of a social business, with the end goal of encouraging the improvement of social credit. For a business, this means less risk because they are being paid by a third party, and for the consumer, it means that if they are paralyzed, they will be able to pay their bills. Furthermore, blockchain innovation can improve its traceability and ethical sourcing. The study will also take a look at the significance of innovation in the business plan for financing, including methodologies that can be used to impress investors. The research will benefit from a series of supplementary articles as well as a meeting with the business to ensure that it has a complete understanding of all aspects of the business, including its target market and an assessment of its competition. Moreover, the research highlights the importance of studying the social and economic consequences of blockchain technologies in general. Going beyond traditional economic issues, this wider approach can show how blockchain solutions impact not only economic relations in general but also social structures. By looking deeper into the issue, the objective is to combine both theoretical approaches and practical insights at the same time and offer valuable insights into still developing blockchain economics.

## 1. Introduction

Geopolitical positioning and economic motivations (Creta & Tenca, 2021). Besides the fact that the different studies focus on a variety of aspects related to Turkey's foreign policy, a more profound examination of the interplay between Turkey's diplomatic turns and their repercussions on both the regional and global geopolitics as well as the underpinning categorical economic factors is disturbingly incomplete.

### Research Background

A significant research project is exploring Tokenomics and Economic Models in Blockchain. Within blockchain technology, Tokenomics refers to the study of the economic principles governing the creation, distribution, and utilization of tokens within a decentralized system. Tokenomics examines the relationship between technological innovation and economic frameworks to understand how token-based ecosystems influence user behaviour, motivate participation, and contribute to the decentralized network's operation (Lo & Medda, 2020).

The research context is rationalizing the complexity of Tokenomics to identify its relationship to economic models within the dynamic space of blockchain technologies.

### Research Rationale

The reason for this research is that it must be done for an important reason. And, it must be proven that it is important and necessary. That is to elaborate on the purpose of the investigation and to go on to explain what and where lacks or issues of existing knowledge are to be considered to conduct this research (Freni et al. 2022). To present the rationale in a written message in a paper is to contribute to the academic dialogue to present a subtly different understanding and suggest more theoretical or practical importance. It is an introductory paragraph set up to establish the base of intellectual structure guiding the whole study which impressed the significance academically.

### Research Objectives

- To investigate the strategic realignment and ambitions shaping Turkey's foreign policy.
- To assess the implications of Turkey's foreign policy choices on regional and global geopolitics.
- To examine the dynamics of Turkey-EU relations and their broader geopolitical impact.
- To identify key factors influencing Turkey's economic dimensions within the context of foreign policy.

### Research Questions

1. How has Turkey strategically realigned its foreign policy in recent years, and what are the underlying ambitions that drive these shifts?
2. What are the key dynamics characterising Turkey-EU relations, and how do these interactions contribute to broader geopolitical impacts in the international arena?

### Research Gap

The term "research gap" refers to the shortcomings or blind spots of the existing literature, which require further research and exploration. The research gap can be seen in this study especially in the lack of research to show the recent developments in Turkey's foreign policy, especially its foreign policy from the point of its strategic realignment, geopolitics of its realignment, and economic dimensions of the realignment (Malinova & Park, 2023). Existing literature may not analyse a compartmentalised approach to understanding the contemporaneous foreign policy of Turkey to outline the country's kingpin foreign policy mechanisms and the dynamic economic condition of Turkey in the wake of foreign policy shifts (Kampakis, 2018). In other words, there should be a holistic examination of Turkey's role in modern international politics and the economic factors behind Turkey's foreign policy decisions to fill this research gap.

### Chapter Summary

The emphasis of the study falls on the holistic exploration of Turkey's foreign policy with the *Nanotechnology Perceptions* Vol. 20 No. S15 (2024)

aim of identifying its historical, theoretical, and empirical underpinnings. The objective of this rationale, therefore, is to highlight the importance of the study using the gaps in the literature as challenges (Lamberty et al. 2020). The core objectives of the research are determined as follows: analyzing the shifting of Turkish foreign policy; distinguishing the global outcomes of Turkish foreign policy; analyzing the dynamics of Turkish relations with the European Union (EU); and identifying the economic determinants of Turkish foreign policy. For the conclusion, there is a gap in the existing research which has not yet collected sufficient data in the area of Turkey's foreign policy, and therefore the issue needs to be considered more thoroughly. (Kim & Chung, 2018). Turkey's recent foreign policy development has been widely spotlighted in the literature as it sheds a great light in studying Turkey's international role and economic factors which spur the foreign policy-making process.

## **2. Literature Review**

### **Theme 1: Economic Dimensions of Turkey's Foreign Policy**

The economic dimensions of Turkey's foreign policy become apparent when it explores the intricate connection between its global engagements and economic pursuits. Turkey has recently realigned its foreign policy to best accommodate its economic goals (Sadykhov et al. 2023). This theme will expand on the various ways that a collection of economic factors contributes to Turkey's diplomatic choices. In Turkey's new turn in foreign policy, one significant goal is to talk about economic growth, to make powerful trading partners and to show how to get more influence in politics (Cong et al. 2021). Through this theme, Turkish readers will have information about Turkey's economic purposes in foreign relations. The main purpose of this study is to make a list of all domestic and international economic instruments which affect governmental politics.

### **Theme 2: Turkey's Geopolitical Balancing Act**

Understanding Turkey's fragile geopolitical game of chicken is a nuanced unravelling of sharp international manoeuvrings. Turkey successfully strikes a chord between preserving its agency while promoting a diplomacy that covers the earth, and doing all this in the context of a global power situation that is spinning dizzyingly. This study strips Turkey down to its endurance as a player of regional forces, as a weaver of confounding on-the-spot negotiations with a large set of interlocutors, and as a fiddler with a slew of alliance schemes (Marin et al. 2023). The keen Turkish sense of orchestrating the most possible influence with the slightest bit of polarization makes for a mystical geopolitical map to read. This research project aims to open the workings of this balancing act by revealing how powers compete to put their imprint on the momentous geopolitical choices Turkey is making every day. Capturing the inner workings of Turkey's regional calculus contributes to the projected solution of the puzzle of the emerging global power structure (Barreiro-Gomez & Tembine, 2019). In so doing, this frames Turkey as a powerful post-western actor marshalling global strategic balancing to vault through a world it is fast outgrowing.

### **Theme 3: Turkey's Relations with the West**

The examination of Turkey's relationship with the West intends to illuminate a critical dimension of its foreign policy. This theme probes the dynamics, difficulties, and opportunities

*Nanotechnology Perceptions* Vol. 20 No. S15 (2024)

that define Turkey's contacts with Western states (Tönnissen et al. 2020). Turkey's geographical location, straddling Eastern and Western realms, injects additional complexity into its diplomatic entanglements. This study will endeavour to parse the dimensionally nuanced facets of Turkey's relationship with countries of the West: political, economic, and cultural. By visually evoking all the highly textured relationships under the theme, it achieves a better understanding of the global landscape. It must delve into those relationships to attain a conceptual grasp of how Turkey functions in the real world (Letichevsky et al. 2022). This requires both a comprehensive overview and a detailed examination of Western-Turkish relations. The Western contacts theme is the author's way of lacing all that into a coherent whole.

### Literature Gap

The literature gap in the extant corpus concerning Turkey's foreign policy is conspicuous and must be examined in detail. Specifically, the lack of comprehensively addressing recent developments, particularly with Turkey's strategic reorientation, geopolitical implications, and economic dimensions is noticed (Dimitri, 2023). The existing revenue is often limited in providing an elaborate evaluation of Turkey's foreign policy's current landscape, which leads to a thwarted vision of its current geopolitical positioning and economic motivations (Creta & Tenca, 2021). Besides the fact that the different studies focus on a variety of aspects related to Turkey's foreign policy, a more profound examination of the interplay between Turkey's diplomatic turns and their repercussions on both the regional and global geopolitics as well as the underpinning categorical economic factors is disturbingly incomplete.

## 3. Methodology

### Research Method

Conducting an extensive literature review and synthesis is among the chief research methods utilised for this purpose. The inquiry within the academic discipline covered academic journals, books, governmental reports, and publications of reputable international organisations (Zheng et al. 2023). It not only allows Linh to represent multiple voices but adds depth to the exploration of the topic.

### Research Strategy

A systematic and structured review was conducted as the research strategy to ensure a thorough investigation of the relevant literature findings. Key themes, patterns and chronological developments in Turkey's foreign policy were identified (Cong et al. 2022). Additionally, the aim of employing this strategy was to identify important information and trends relevant to the objectives of the study.

### Research Approach

The research strategy follows a deductive path. According to the Compendium, the procedure allows the analysis to be driven by existing theories, concepts, and frameworks of international relations and foreign policy that are being looked up by the researcher (Canidio et al. 2021). The selection of themes allows the researcher to systematically investigate the chosen themes and astute connections and conclusions could be doggedly drawn by using pre-established

theories.

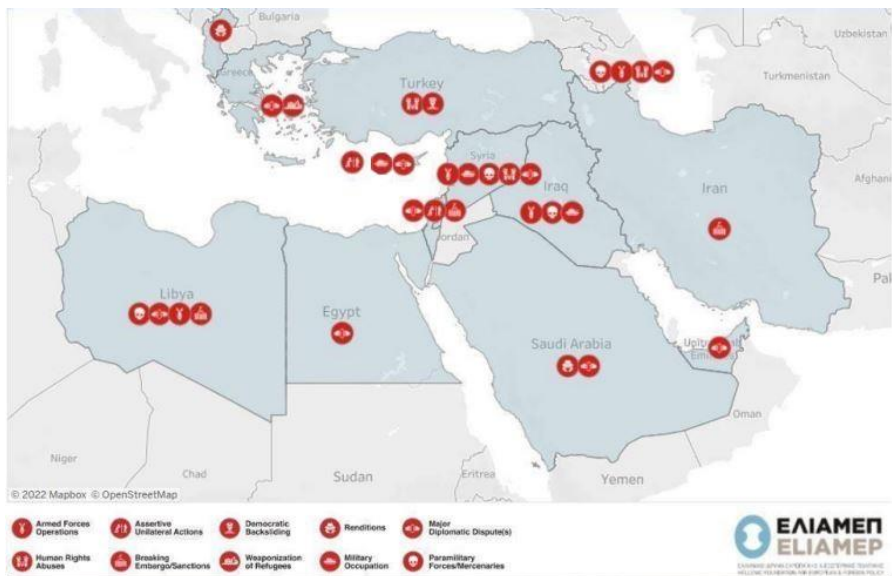
Ethical Considerations

This secondary research’s ethical considerations revolve around conscientiously using sources, ensuring accurate citation and acknowledgement of authors, and meticulously circumventing data misrepresentation and misinterpretation (Jrjens et al. 2022). Long-standing ethical guidelines from secondary scholarship are followed, for maintaining the research’s academic integrity throughout all stages.

4. Data Analysis

Strategic Realignment and Ambitions of Turkey

Turkey, geographically located between Europe and Asia, has started a life-altering adaptation in which it's realigning its strategy that will change its national policy and ambition. This report identifies segments that are vital to composition. Also, cited statistics show how Turkey is transforming. Economically, the country was facing obstacles by having high inflation because the Central Bank had cut interest rates (Santos et al. 2020). From January 2024 Consumer Price Index (CPI) spiked to 6.70% monthly and 64.86% yearly, where it was an economic breakdown. In spite of these obstructions, Turkey was resilient when it achieved an outstanding 5.9% yearly GDP increase in the third quarter of 2023 (Likhitha et al. 2023). While the Industrial Production Index was slight compared to the 0.2% yearly climb in November 2023 the economic constructs are different.



Source- (Gan et al. 2023).

Under the foreign policy category, the EU alignment of Turkey conspicuously stands out of line with the EU's common foreign and security policy. Turkey's EU alignment rate was recorded to be 10% as of August 2023 with an increase from 8% in 2022 as it brings the

spotlight on the unilateral trajectory of Turkey in its foreign policy and increasing tension with some of its Western allies in its declaratory foreign policy instrument (Gan et al. 2023). For additional knowledge of Turkey's profile, its demographic and economic situation is considered. In 2022, 85,279,553 of the population in Turkey shows that this nation has a resilient economic structure faced with challenges (Kopp & Orlovskiy, 2022). Some important statistics such as the 4th Quarter of 2023 with a 6.8% rise in revenue earned from tourism, 2023 with a 0.4% increase in exports up to an 11.0% decrease in imports of December 2023 (TSI 2023).

### Implications of Turkey's Foreign Policy Choices

As per Lo & Medda, (2020), Turkey is slowly starting to realise that it needs to start a couple of changes in its foreign policy. One of the changes is based on its economy, one of the devastating things about Turkey is that part of it was independent but with one exception it was Greece but unfortunately, Greece went under bankruptcy like huge America. Turkey Is back on its Feet one step at a time. As a result of the foreign policy disputes, the finding indicates that Turkey confronts economies of scale ahead if Turkey puts itself in these disputed foreign policies as if it were a country. The number of Turkish immigrants to other countries, and the trade behaviour has also a correlative and supportive result with the foreign policies of the country (Malinova & Park, 2023). Foreign Policy also directly affects emigration flows.



Source- (Creta and Tenca, 2021)

When the Turkish Statistical Institute (TUIK) moved to Germany several returned to Germany, and this explains most of the outflow of Turks. Its outflow may be challenging Turkey's human capital inside Turkey and the eligible labour force, and its upset can disturb Turkey's business life.

Creta & Tenca, (2021) stated that Turkey's foreign policy choices intersect the concerns of regional security. Because the Kurdish problem remains one of Southeast Turkey's most controversial questions, state security, and military operations against the Kurdistan Workers' Party's (PKK) terrorist attacks constitute most of them (Kampakis, 2018). Balancing the imperatives of security against principles of human rights has become a central impasse. The fallout from Turkey's foreign policy rift with the European Union (EU) Common Foreign and Security Policy (CFSP) should see a re-alignment from its current 10% convergence rate recorded as of August 2023 (EEAS 2023). It has implications for regional peace and stability together with cooperation that can be seen beyond the conventional means that will be the last



part of the analysis as the potential impact of Tokenomics and blockchain on TURKEY's economic landscape (Lamberty et al. 2020). These two technological aspects are not fully related to foreign policy there is some illuminating to be gained from these aspects as some of these key areas complicate understanding Turkey.

#### Turkey-EU Relations and Broader Geopolitical Impact

The Turkey-EU relationship is a complicated mix of history, economics and geopolitics. This analysis unpacks the consequences of Turkey's foreign policy choices for its EU ties, highlighting trends and challenges with the support of statistical facts across three vantage points of paramount importance (Cong et al. 2021). Turkey is an accession candidate, an economic partner and a strategic actor. The study also evaluates recent foreign policy principles, regional flashpoints and the presidential system impact.

#### Economic Consequences:

As per Marin et al. (2023), the economic consequences of Turkey's foreign policy choices emerge explicitly in two core segments which are trade and diplomacy. Numbers show that Turkey's adaptation to EU foreign policy has a substantial effect on the issues of trade and the EU represents 42% of total trade volume (European Parliament 2022). The EU-Turkey Customs Union, which has been a fundamental element since 1995, has already liberalised trade by excluding tariffs on industrial goods, contemporary of the Customs Union project is debated. Also, fluctuations in Foreign Direct Investment (FDI) inflow from the EU show how Turkey's economic balance was shaken according to foreign policy affairs. The FDI rate from the EU which was 54.4% has already dropped day by day and reached 38.6% (Nas, 2023).

#### Security and Regional Dynamics:

The analysis of Turkish foreign policy actions exhibits their strong confluence with regional security concerns. According to Barreiro-Gomez and Tembine, (2019), the Eastern Mediterranean has been seen as a prominent theatre for debates on maritime boundaries and energy resources where the Turkish-EU relations roots have been highly transformed by these disputes. Turkey's extensive exercise in the region has affected EU energy security and also collapsed regional stability (Lo & Medda, 2020). Engagements in Syrian and Libyan conflicts go beyond the grounds of national interests. The single spark might set fire to a very large field across transnational economic, political, and institutional boundaries with the EU cautiously watching and playing strong hands for a diplomatic resolution.

#### Tokenomics and Blockchain Implications:

While not directly tied to foreign relations, understanding Tokenomics and blockchain models offers contextual illumination. The statistics highlight the tech-savvy Turkish population engaging in blockchain technology, demonstrated by the growth of start-ups and investments (Kampakis, 2018). Moreover, Turkey's top rank in cryptocurrency adoption, despite legal challenges, speaks to the dynamic economic landscape with the regional framework.

## 5. Findings

Revealed by the findings of this inquiry is an expansive knowledge of Turkish foreign policy

terrain. A deliberate reconceptualization that illustrated Turkey's endeavour for increased global confidence and consolidating alliances, in terms of desire and strategic accommodation, is exposed by this article (Tönnissen et al. 2020). The astonishing effect of Turkey's foreign policy is illustrated by this investigation, corroborating that strategic decisions were intertwined and that the eventuality of these decisions was irrevocable (Kim & Chung, 2018). On taking a look at Turkey's engagement with the EU, it can be seen the creation of a web of collective experiences, historical inheritances and economic realities. Whilst these linkages may render considerable prospects for steadying the area and challenging unsubstantial grand geopolitical designs, the expense strategies of endorsed responses outweigh the freedoms (Malinova & Park, 2023). In addition, the weight of the economic-pronged dimension of the Turkey-EU association has once again been placed on tenterhooks, highlighting the ethereal divide existing between economic necessity and diplomatic indiscretions.

The report finds that Turkey is exemplifying clever navigation of international relations and self-interest by playing its political balancing act as an ace card. Through this self-regulating system of checks and balances, the paper defines Turkey's standpoint in international relations, evaluating Turkey's dealing with non-conventional global events (Kim & Chung, 2018). Consequently, it demonstrates how tangled the task of Turkey's external management is and highlights the formation of Turkey's strategy, the amalgamation of choices and the intertwinement of the EU concerning Turkey's dynamics (Barreiro-Gomez & Tembine, 2019). The findings of the analysis consequently bring forth a deepened understanding of Turkey's global rank and Turkey's diverse diplomatic responsibilities.

## 6. Conclusion and Recommendations

### Conclusion:

The conclusion of the study consolidates the important findings from the research on Turkey's foreign policy. It is a recapitulation, focusing on the usefulness of the research in understanding several issues, namely, Turkey's strategic realignment, hidden ambitions, and the extensive effect of their diplomatic decisions. The conclusion provides an overall appraisal, synthesising the data achieved throughout the study and highlighting the importance of understanding Turkish policy in the international arena.

### Recommendations:

The findings from the research comprise targeted recommendations for policymakers and relevant stakeholders. They put forth the importance of transparent and collaborative diplomatic mechanisms, the economic consequences of foreign policy choices and careful geopolitical balancing. These recommendations aim to guide strategic decisions, create a stable setting and advance Turkey's diplomacy in a manner that is positive-sum benefiting from mutual gains and regional harmony.

To further investigate studies of Tokenomics and Economic Models within Blockchain, research should extend to in-depth case studies of blockchain projects. Evaluating successes and potential limitations, we gain practical knowledge of the efficacy of different Tokenomics models. Moreover, exploring the regulatory environment with which blockchain and cryptocurrencies are governed increases insights in the creation of anti-fragile economic

*Nanotechnology Perceptions* Vol. 20 No. S15 (2024)



models. Working alongside professionals from the industry and practitioners increases the research's enactment in the business world, permitting a linkage to form between the theoretical frameworks and practicable implications. In addition, by incorporating the advances of the revolutionizing blockchain technology, perpetually being current and making comparisons with present models, the research remains up to date with the ever-changing environment. Lastly, by exploring the socio-economic impacts of blockchain technologies, the research is broadened which indicates how the invention of blockchains affects the classical economic structures and societal paradigms.

### Future Research

The part discussing the future investigation suggests various domains to advance for drawing on the implications of the study. Turkish foreign policy from an economic perspective and Turkey's relationship with the EU in all its dimensions are the 2 topics which require further investigation, especially the findings so far. Finally, studying Turkish foreign policy for the new world era offers UNESCO, IGO, and the Turkish Foreign Affairs Ministry a deep strategy for securing a new Turkey diplomacy and it deserves a book as it would throw new light on the shift and change in Turkey's global geopolitical position. Beyond all, the suggestions and contributions to Turkish foreign policy will remain limited because of financial problems.

### References

1. Barreiro-Gomez, J. & Tembine, H., (2019). Blockchain token economics: A mean-field-type game perspective. *IEEE Access*, 7, pp.64603-64613. <https://ieeexplore.ieee.org/iel7/6287639/8600701/08717636.pdf>
2. Canidio, A., Danos, V., Marcassa, S. & Prat, J., (2021). Tokens and ICOs: A Review of Economic Literature. *Principles of Blockchain Systems*, pp.191-210. [https://hal.science/hal-03678409v1/file/overview\\_ICO\\_v10.pdf](https://hal.science/hal-03678409v1/file/overview_ICO_v10.pdf)
3. Cong, L.W., Li, Y. & Wang, N., (2021). Tokenomics: Dynamic adoption and valuation. *The Review of Financial Studies*, 34(3), pp.1105-1155. [https://www.nber.org/system/files/working\\_papers/w27222/w27222.pdf](https://www.nber.org/system/files/working_papers/w27222/w27222.pdf)
4. Cong, L.W., Li, Y. & Wang, N., (2022). Token-based platform finance. *Journal of Financial Economics*, 144(3), pp.972-991. [https://www0.gsb.columbia.edu/faculty/nwang/papers/Cong\\_Li\\_Wang\\_JFE\\_2022.pdf](https://www0.gsb.columbia.edu/faculty/nwang/papers/Cong_Li_Wang_JFE_2022.pdf)
5. Creta, F. & Tenca, F., (2021). Tokenomics: A new opportunity in the Real Estate business? A qualitative approach to crowdfunding and blockchain interaction. *First Monday*. <https://firstmonday.org/ojs/index.php/fm/article/download/10699/11179>
6. Dimitri, N., (2023). The Economic Value of Dual-Token Blockchains. *Mathematics*, 11(17), p.3757. <https://www.mdpi.com/2227-7390/11/17/3757>
7. EEAS (2023). Key findings of the 2023 Report on Türkiye, [https://www.eeas.europa.eu/delegations/t%C3%BCrkiye/key-findings-2023-report-t%C3%BCrkiye\\_en?s=230](https://www.eeas.europa.eu/delegations/t%C3%BCrkiye/key-findings-2023-report-t%C3%BCrkiye_en?s=230).
8. European Parliament (2022). Turkey's foreign policy and its consequences for the EU. [https://www.europarl.europa.eu/RegData/etudes/IDAN/2022/653662/EXPO\\_IDA%282022%29653662\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/IDAN/2022/653662/EXPO_IDA%282022%29653662_EN.pdf)
9. Freni, P., Ferro, E. & Moncada, R., (2022). Tokenomics and blockchain tokens: A design-oriented morphological framework. *Blockchain: Research and Applications*, 3(1), p.100069. <https://www.sciencedirect.com/science/article/pii/S2096720922000094>
10. Gan, J., Tsoukalas, G. & Netessine, S., (2023). Decentralized platforms: Governance, Tokenomics, and ICO design. *Management Science*, 69(11), pp.6667-6683. [https://www.researchgate.net/profile/Gerry-Tsoukalas/publication/370745192\\_Decentralized\\_Platforms\\_Governance\\_Tokenomics\\_and\\_ICO\\_Design/links/645fa84f434e26474fe4a521/Decentralized-Platforms-Governance-Tokenomics-and-ICO-](https://www.researchgate.net/profile/Gerry-Tsoukalas/publication/370745192_Decentralized_Platforms_Governance_Tokenomics_and_ICO_Design/links/645fa84f434e26474fe4a521/Decentralized-Platforms-Governance-Tokenomics-and-ICO-)

- Design.pdf
11. Jürjens, J., Scheider, S., Yildirim, F. & Henke, M., (2022). Tokenomics: decentralised incentivization in the context of data spaces. *Designing data spaces*, p.91. <https://library.oapen.org/bitstream/handle/20.500.12657/57901/1/978-3-030-93975-5.pdf#page=102>
12. Kampakis, S., (2018). Three case studies in tokenomics. *The Journal of The British Blockchain Association*, 1(2). <https://jbba.scholasticahq.com/article/6325.pdf>
13. Kim, M.S. & Chung, J.Y., (2018). Sustainable growth and token economy design: The case of Steemit. *Sustainability*, 11(1), p.167. <https://www.mdpi.com/2071-1050/11/1/167/pdf>
14. Kopp, A. & Orlovskiy, D., (2022). Towards the Tokenization of Business Process Models using the Blockchain Technology and Smart Contracts. *CMIS*, 3137, pp.274-287. <http://ceur-ws.org/Vol-3137/paper23.pdf>
15. Lamberty, R., de Waard, D. & Poddey, A., (2020). Leading digital socio-economy to efficiency—A primer on tokenomics. *arXiv preprint arXiv:2008.02538*. <https://ask.qcloudimg.com/draft/7611843/j406r0hjgu.pdf>
16. Letichevsky, O., Peschanenko, V., Poltoratskiy, M. & Tarasich, Y., (2022). How to Build Self-Sustaining Tokenomics. Edited by Sergey Y. Yurish, p.89. <https://epubl.ktu.edu/object/elaba:150713843/150713843.pdf#page=89>
17. Likhitha, B.B., Raj, C.A. & Islam, M.S.U., (2023). Unveiling Ethereum's Future: LSTM-Based Price Prediction and a Systematic Blockchain Analysis. In *E3S Web of Conferences* (Vol. 453, p. 01043). EDP Sciences. [https://www.e3s-conferences.org/articles/e3sconf/pdf/2023/90/e3sconf\\_icsdg2023\\_01043.pdf](https://www.e3s-conferences.org/articles/e3sconf/pdf/2023/90/e3sconf_icsdg2023_01043.pdf)
18. Lo, Y.C. & Medda, F., (2020). Assets on the blockchain: An empirical study of Tokenomics. *Information Economics and Policy*, 53, p.100881. [https://discovery.ucl.ac.uk/id/eprint/10109987/1/tokenizationD3V10\\_sb2020jun24.pdf](https://discovery.ucl.ac.uk/id/eprint/10109987/1/tokenizationD3V10_sb2020jun24.pdf)
19. Malinova, K. & Park, A., (2023). Tokenomics: when tokens beat equity. *Management Science*, 69(11), pp.6568-6583. <https://www.bundesbank.de/resource/blob/843690/25ccabdd3a28112d694a35358d306b3c/mL/2020-09-10-online-malinova-data.pdf>
20. Marin, O., Cioara, T., Todorean, L., Mitrea, D. & Anghel, I., (2023). Review of Blockchain Tokens Creation and Valuation. *Future Internet*, 15(12), p.382. <https://www.mdpi.com/1999-5903/15/12/382>
21. Nas, Ç (2023). "Transformation and Challenges in Turkey-EU Relations: A Case of Foreign Policy with Domestic Implications," in *Springer eBooks*, pp. 185–207, [https://doi.org/10.1007/978-3-031-25799-5\\_12](https://doi.org/10.1007/978-3-031-25799-5_12).
22. Sadykhov, R., Goodell, G., De Montigny, D., Schoernig, M. & Treleaven, P., (2023). Decentralised token economy theory (DeTEcT): token pricing, stability and governance for token economies. *Frontiers in Blockchain*, 6. <https://discovery.ucl.ac.uk/id/eprint/10184209/1/fbloc-06-1298330.pdf>
23. Santos, D.R.D., Sanfins, M.A., Nascimento, A. & Nacif, P.L.D.S., (2020). The Token Economy: Assets for the Blockchain Era. *Global Media Journal*, 18, p.36. [https://www.researchgate.net/profile/Daiane-Santos-5/publication/348964119\\_the-token-economy-assets-for-the-blockchain-era\\_global\\_2020/links/6019466145851517ef324d56/the-token-economy-assets-for-the-blockchain-era-global-2020.pdf](https://www.researchgate.net/profile/Daiane-Santos-5/publication/348964119_the-token-economy-assets-for-the-blockchain-era_global_2020/links/6019466145851517ef324d56/the-token-economy-assets-for-the-blockchain-era-global-2020.pdf)
24. Tönnissen, S., Beinke, J.H. & Teuteberg, F., (2020). Understanding token-based ecosystems—a taxonomy of blockchain-based business models of start-ups. *Electronic Markets*, 30, pp.307-323. <https://link.springer.com/article/10.1007/s12525-020-00396-6>
25. TSI (2023). New Official statistics 2023. <https://www.tuik.gov.tr/Home/Index>
26. Zheng, K., Zhang, J.Z. & Le, T., (2023). Blockchain Tokens for Enterprise Knowledge Sharing: Characteristics, Economic Ecology, and Implications. *Journal of Organisational and End User Computing (JOEUC)*, 35(1), pp.1-20. <https://www.igi-global.com/gateway/article/full-text-pdf/329235&riu=true>