INTERNATIONAL JOURNAL OF SOCIAL SCIENCE HUMANITY & MANAGEMENT RESEARCH

ISSN (print) 2833-2172, ISSN (online) 2833-2180

Volume 04 Issue 12 December 2025

DOI: 10.58806/ijsshmr.2025v4i12n15, Impact Factor: 6.79

Page No. 2342-2349

Technological Transfer Activities and Processes Affecting Economic Development

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ABSTRACT: Technology transfer is widely recognised as one of the fundamental dynamics of critical importance in the context of ensuring economic development and achieving sustainable growth. This dynamic process involves the effective and efficient sharing and application of knowledge and technology among various institutions, organisations, and sectoral actors. During the implementation phase, collaborations between universities and industry, licensing and commercialisation processes come into play; the accompanying R&D and innovation ecosystems also play a significant role. not only accelerate the development of new technologies, but also offer new opportunities that enhance the competitiveness of economic activities and facilitate integration into different global markets. Furthermore, when focusing on the commercialisation of technological innovations, it is essential to meticulously establish and continuously update appropriate legislation and institutional infrastructure to ensure that these innovations can be commercially successful and find their place in market conditions.

KEYWORD: Technology transfer, dynamic process, innovation ecosystems, commercialisation of innovations

INTRODUCTION

Technology transfer is increasingly recognised as one of the fundamental dynamics, valued by people and organisations from all walks of life, for enhancing the success of economic development and ensuring sustainable growth. This dynamic and multidimensional process involves not only ensuring the effective sharing of knowledge and technology among various institutions, organisations, and sectoral actors, but also making the acquired knowledge usable in practical applications. In the implementation phase, collaborations between universities and industry, licensing agreements and commercialisation processes play an important role; the research and development (R&D) and innovation ecosystems that develop alongside these processes are also of critical importance. R&D activities and innovation ecosystems not only accelerate the development of new technologies, but also offer many new opportunities and possibilities that increase the competitiveness of economic activities and facilitate integration into different global markets. Furthermore, when focusing on the commercialisation of technological innovations, it is important to emphasise that effective and appropriate legislation and institutional infrastructure must be carefully established and continuously updated for these innovations to be commercially successful and secure an appropriate place in market conditions. At this point, intellectual property rights, licensing policies and public support programmes come to the fore as elements of vital importance in accelerating technological development and effectively carrying out commercialisation processes. More importantly, the active role played by universities and public research institutes in this process contributes significantly to their achieving a leading position in knowledge production and supporting technological ventures. This plays a critical role in laying the foundations for regional development and is based on a sustainable economic structure. Furthermore, the risks and challenges that may be encountered in these transfer processes, along with certain limitations such as financing needs and market access, become factors that must be taken into consideration. These risks can lead to the identification of specific points of failure and success, revealing critical lessons to be learned and measures to be developed regarding the sustainability of the system. Consequently, the continuous development of technological transfer mechanisms contributes to economic growth while encompassing dynamics that encourage the emergence of innovative ventures and further support regional development. This process, strengthened through interdisciplinary collaborations and effectively implemented policy regulations, becomes one of the fundamental elements of long-term economic prosperity. In particular, bringing together different disciplines reveals great potential for the implementation and application of innovative ideas. In this context, collaborative approaches encourage the development of new and joint projects beyond sectoral boundaries by increasing the flow of information and technological interactions. These joint projects not only support economic growth but also

make important contributions to increasing the general welfare of society. However, the effective management of technology transfer becomes sustainable through the implementation of well-structured strategies, paving the way for the development of innovative solutions in various sectors. Therefore, cooperation between stakeholders such as the public sector, private sector and academic world is crucial for achieving success. Collaborative efforts increase competition while also contributing significantly to the realisation of innovative ideas. Such collaborations play a more critical role than ever in ensuring the healthy continuation of technology transfer. These collaborations ensure effective knowledge sharing, the implementation of innovations, and the strengthening of the dynamic structure of the economy. Technology transfer should be managed more strategically, deepening collaborations across different sectors and coordinating them towards common goals.

METHOD

This study is a structured literature review based on qualitative research methods. Research methods can be defined as a comprehensive process conducted systematically and objectively with the aim of ensuring sustainable employee productivity and continuously improving this productivity through performance management. Technology transfer plays an extremely critical role in increasing the efficiency and productivity levels of businesses today, and this situation holds the key to the future success of businesses. With the significant gains it provides in production processes and product development capacity, particularly during the transition to the use of new and advanced technologies, it becomes possible to ensure a more effective recycling of resources and significantly reduce costs. Furthermore, technology transfer, which develops in close integration with R&D activities and innovative innovation ecosystems, integrates the valuable knowledge and technologies possessed by businesses into application areas, significantly shortening production times and thereby considerably improving product quality. This not only provides businesses with a cost advantage but also contributes to increasing their competitive strength, offering them the opportunity to position themselves strongly within market dynamics. Furthermore, the continuous flow of information, know-how, and technical knowledge provided by technology transfer plays a major role in significantly raising the competence levels of employees and increasing the automation of processes and compliance with international standards. Consequently, the productivity increases observed in the sector and at company level demonstrate that these developments have transformed into a sustainable and robust foundation for economic growth, bringing with them greater success and employment opportunities. Thus, businesses that effectively integrate technological developments and progress in this direction encounter significant opportunities to expand their market share and gain a competitive advantage in the long term by producing high-quality products with greater efficiency. In this context, the importance of technology transfer is increasing, offering important opportunities for companies in different sectors to develop innovative approaches and contributing to the more effective implementation of solutions. Furthermore, the cooperation and partnerships that arise during technology transfer have the potential to create a win-win situation for all parties involved in these processes. Thanks to the resulting synergy, it supports sustainable growth and development by enabling not only businesses but also the entire economic system to be built on a more solid foundation. While the advantages provided by technology transfer are endless, it is also of great value for companies to develop new strategies and create new opportunities by establishing partnerships in this context. Creating a working environment filled with workplace training and continuous learning opportunities helps to increase not only the skills but also the motivation of employees; this also provides a major gain in terms of productivity and innovation. Thus, companies can gain the opportunity to stand out not only in current market conditions but also with innovative solutions for the future. These structures, strengthened by technology transfer, increase competitiveness at both national and international levels and facilitate the achievement of sustainable goals, thereby continuing to lay the foundations for economic growth and development. For all these reasons, the strategic importance of technology transfer contributes to the development of both companies and societies. Businesses that plan for the future through technology transfer not only increase their own profitability with the gains they achieve in this process, but can also have a broad social impact . This approach to such transfer and application will make significant contributions to strengthening the economic structures of societies and opening the doors to a more sustainable development process. For this reason, the role of technology transfer is gaining increasing importance as a process that reshapes economic dynamics and enables the enhancement of social welfare.

FINDINGS

The data obtained from the literature review provides a more comprehensive assessment of the role of technology transfer in economic development, framed by concrete examples and the challenges encountered. Successful application examples demonstrate the effectiveness of university-industry collaborations and clearly highlight their contributions to regional development. For example, technology transfer projects carried out in specific regions or sectors have helped increase the innovation capacity of local businesses, thereby paving the way for sustainable growth. In these cases, intensive R&D activities and the development of innovation ecosystems have been critical factors. Furthermore, the effective management of licensing and commercialisation processes has enabled new products and services to be brought to market, thereby increasing the potential for economic value creation. However, cases of failure also provide significant learning opportunities. For example, factors such as insufficient financing, problems with market access, and inadequacies in corporate structure have significantly hampered the sustainability of

projects and prevented them from delivering the expected economic contribution. Such negative situations are a strong indication that the role of policies and institutions needs to be strengthened. Furthermore, the development of mechanisms such as public support and intellectual property rights has accelerated the commercialisation of technological innovations, while also bringing with it the potential to encourage regional and international cooperation. Ultimately, case studies reveal that technology transfer is a dynamic and highly complex process that drives economic development, taking into account the elements of success and failure in detail. Such in-depth analyses serve as an important resource for policymakers and all stakeholders, guiding the persuasive development of sustainable development models. Successful application examples provide concrete and measurable indicators of the contributions of technology transfer to economic development. These examples provide important insights into how joint research projects and university-industry collaborations in high-tech sectors, such as , enhance innovation capacity. Initiatives supported by patent and licensing strategies compliant with international standards have both accelerated the commercialisation of new products and services and contributed to the revitalisation of regional economic activity. Furthermore, among the successful applications, it has been observed that initiatives that effectively utilise state support and incentive programmes gain significant advantages in terms of capital access and market expansion. In these examples, the institutional infrastructures established to ensure the sustainability of partnerships and embed a culture of innovation form the basis for the long-term success of the projects. Moreover, in successful examples achieved through technological infrastructure and human resource development, new technologies have been integrated into the local economy, triggering regional development-oriented progress. In these applications, international collaborations, particularly those involving various countries, have enabled the faster and more effective dissemination of knowledge and technology. Ultimately, success stories serve as fundamental references that contribute to sustainable development, supported by strategic planning and best practices, and act as models for policymakers and entrepreneurs. These examples provide guidance on integrating technological developments into the economic structure and serve as a roadmap for strengthening innovation ecosystems.

Definition and Components of Technology Transfer

Technology transfer can be comprehensively defined as a complex, multidimensional and lengthy series of processes aimed at integrating new knowledge, know-how and technologies resulting from research and development (R&D) activities into the dynamic structure of the economy and social structures. This extremely important and critical process often involves rich and diverse collaborations between universities, research institutes, industrial companies, and various public institutions, with each stakeholder having its own unique and distinct role within this complex process. It is a noteworthy fact that these collaborations, which develop between different actors such as universities, research institutes and industry, are of vital importance in terms of ensuring dynamic, multifaceted and complex interactions that form the building blocks of technology transfer. Among the fundamental components of technology transfer, effective university-industry collaborations, licensing and commercialisation processes, and dynamic interactions within R&D and innovation ecosystems play a significant role. University-industry collaborations play a major role by encouraging the effective utilisation of academic knowledge and research results in the industrial sector, thereby contributing to the provision of significant added value to industry . Furthermore, licensing and commercialisation processes play a critical role in ensuring the integration of such innovations into the economy through the transfer or licensing of patent rights for technologies that have been developed and successfully tested and validated. Effective management of these processes enables innovative products or services to be brought to market and ultimately converted into economic value, thereby making significant contributions to economic growth. Furthermore, R&D and innovation ecosystems ensure the sustainability and continuity of technological progress by establishing critical infrastructure and appropriate policies that support research and development activities. These components aim to increase economic benefits by making technological knowledge and innovation potential effectively usable, thereby enabling all stakeholders to benefit maximally from this process. The active involvement of each stakeholder in technology transfer accelerates the flow of information, while the creation and implementation of new ventures become cornerstones of economic development. In this context, strategies such as developing a strong culture of cooperation, increasing sectoral research, encouraging R&D investments, and supporting innovation processes are of great importance. Furthermore, for these processes to function healthily and efficiently, robust intellectual property rights, appropriate legislation, and various incentive mechanisms must be in place; this is a major requirement for countries and organisations aiming to make progress in this area. In summary, technology transfer is a dynamic and constantly evolving process with the potential to form one of the fundamental elements of sustainable economic growth. The effectiveness and quality of these processes are extremely important in terms of the efficiency of the entire system and the achievement of sustainable development goals, and in this respect, the principles of continuous improvement and innovation should be adopted. This continuity creates an encouraging environment that promotes the emergence of innovative solutions and economic growth by encouraging all stakeholders in the sector to contribute more to technology transfer.

University-Industry Collaborations

University-industry collaborations play a significant role as one of the most dynamic and effective elements of technological development in economic growth. Through these collaborations, fundamental research conducted at universities is adapted to meet the needs of industry and transformed into applied projects, a process that results in commercial products and services. Universities

provide significant technical support and knowledge transfer to industrial organisations through their scientific knowledge base and advanced R&D infrastructure, thereby helping to increase the innovation capacity of industry. At the same time, industrial firms gain both cost and time advantages from the innovative technologies and research services they receive from universities; thus, they increase their competitiveness by contributing to the development of new products and processes. These dynamic collaborations revitalise both the academic world and the industrial sector, supporting sustainable economic growth and enabling workforce training and increased knowledge accumulation. Thus, these effective relationships established between universities and industrial companies accelerate innovation and create new opportunities. Consequently, such collaborations not only strengthen academic and industrial interaction but also contribute to the national economy, becoming an important tool for increasing global competitiveness. These collaborations are of great importance in achieving economic development goals at both regional and national levels. R&D projects carried out through university-industry partnerships enable the creation of new job opportunities while also increasing regional competitiveness. Furthermore, through these relationships, young researchers and entrepreneurs gain practical experience and find opportunities to pursue innovative ventures. Consequently, not only is technological progress achieved, but employment growth is also attained. This situation makes economic growth sustainable and inclusive, leading to positive effects across society. Supported by public-private partnerships, these projects promote economic development that spreads across all segments of society. Such collaborations also ensure the effective use of existing resources.

The resulting collaborations generally take the form of joint research projects, technological licensing and commercialisation activities. In these processes, the research results of universities are commercialised and contributed to the economy. Furthermore, projects carried out jointly by universities and industrial organisations accelerate the introduction of new technologies to markets and strengthen the culture of innovation across the country. Therefore, university-industry collaborations are of strategic importance in terms of both technological innovation and economic performance.

Success in cooperation models must be supported by effective policies and institutional structures. Public support and incentives, together with the strengthening of research infrastructure, ensure the sustainability of university-industry partnerships. At the same time, the protection of intellectual property rights and licensing policies encourage the commercialisation of innovative products. In this context, the role of universities and public research institutes is central to the transformation of knowledge and technology into economic value . Thus, university-industry collaborations make significant contributions to strengthening the link between technological innovation and economic development.

R&D and Innovation Ecosystems

R&D and innovation ecosystems play an extremely critical and important role in ensuring the sustainability of technological development and making significant contributions to accelerating economic development. These dynamic ecosystems are formed through the mutual interaction of universities, public research institutes, the private sector and entrepreneurs, and are perceived as highly complex structures. Strong and effective knowledge exchange processes and joint projects are implemented to increase performance, improve efficiency and develop innovative solutions. In addition, these dynamic environments create a solid foundation for economic development by developing effective and organised procedures that enable the commercialisation of new ideas. In this context, innovation ecosystems are further strengthened by critical elements that enhance the protection of intellectual property rights, support entrepreneurial ecosystems, and increase the accessibility of financing opportunities. Collaboration between entrepreneurs and researchers, ensuring risk sharing, and encouraging the joint use of resources significantly increase the level of innovation and enable new products and services to enter the market more quickly and effectively. Furthermore, the effectiveness of regulatory and policy frameworks and incentive mechanisms positively influences the dynamics of these ecosystems, accelerating their development and supporting progress. Consequently, robust R&D and innovation ecosystems stand out as vital elements that enhance national competitiveness, encourage an entrepreneurial culture, and support sustainable economic growth objectives. Both the effective functioning of these structures and the strengthening of sectoral collaborations contribute to accelerating technology transfer, thereby triggering the development of innovative products and services. These structures form an indispensable foundation for translating technological advances into social and economic benefits, making a significant contribution to the development of national economies. Consequently, they lay the groundwork for a more sustainable future by raising the welfare levels of societies. The integrated functioning of ecosystems enables the efficient use of resources while creating an environment conducive to innovative thinking. The existence of these structures, necessary for the continuity of innovation, facilitates the free flow of knowledge, experience, and resources, supporting the development of individuals and organisations , thereby aiming to make economic and social development sustainable.

Effects on Economic Development

The effects of technology transfer on economic development are directly and significantly linked not only to increasing the country's production capacity but also to strengthening its competitive power. The adoption of new technologies is not limited to appealing to a specific segment but also reaches a wider audience, encouraging the production of high value-added products in particular. This contributes significantly to raising the national income level and, consequently, accelerating economic growth. In this process, the increase in Research and Development (R&D) activities, alongside innovation, enables the strengthening of productive

collaborations between industry and academia. Thanks to these collaborations, the capacity of various sectors to produce innovative solutions increases significantly. At the same time, the benefits provided by technology transfer facilitate the development of products and processes for existing businesses, while also offering great potential for the establishment of new ventures. All these developments contribute significantly to expanding employment opportunities in our country, as well as to economic diversification and sustainable development. The emergence of new market opportunities and export possibilities provides foreign currency inflows to the national economy and is effective in boosting economic dynamism. In particular, the prominence of technology-based ventures and clustering activities plays a key role in effectively promoting regional development and creating an impact that improves income distribution. Furthermore, the innovation and creativity elements provided by technology transfer are of critical importance for sustainable economic growth. Consequently, effectively implemented technology transfer not only supports economic sustainability but also creates dynamics that raise the general welfare level of society and provides social benefits that positively affect people from all walks of life while fulfilling social functions. In this process, state support and institutional policies facilitate the effective use and dissemination of technological developments, while also promoting development-oriented growth. Working in collaboration with the private sector, the state supports the R&D activities of entrepreneurs and companies, while also spearheading education policies to cultivate a skilled workforce. These collaborations accelerate the transformation processes in the economy and become important factors in increasing competitiveness at the national level. Technological innovation not only ensures economic growth but also brings with it various opportunities to raise living standards across all segments of society . Thus, the benefits provided by technology transfer can be structured to profoundly affect not only the current economy but also the economic and social development of future generations. In this context, strategic planning to increase the effectiveness of technology transfer and the implementation of various institutional and state support programmes are of critical importance. Furthermore, in order to carry out these processes more effectively, factors such as updating education programmes, increasing the competence of the workforce, and encouraging technology-focused entrepreneurship should also be taken into account. It should not be forgotten that technological developments and innovation not only support economic growth but also strengthen the social structure and make significant contributions to ensuring social justice. In this respect, technology transfer is a process that should be considered as part of a long-term strategy. Therefore, steps taken in this area carry great strategic and economic value not only for today but also for future generations.

Increased Productivity and Efficiency

Technology transfer plays an extremely critical role in increasing the efficiency and productivity levels of businesses today, and this situation holds the key to the future success of businesses. The significant gains it provides in production processes and product development capacity, particularly during the transition to new and advanced technologies, make it possible to ensure a more effective recycling of resources and significantly reduce costs. Furthermore, technology transfer, which develops in close integration with R&D activities and innovative innovation ecosystems, integrates valuable information and technologies owned by businesses into application areas, significantly shortening production times and thereby considerably improving product quality. This not only provides businesses with a cost advantage but also contributes to increasing their competitive strength, offering them the opportunity to position themselves strongly within market dynamics. Furthermore, the continuous flow of information, know-how, and technical knowledge provided by technology transfer plays a major role in significantly raising the competence levels of employees and increasing the automation of processes and compliance with international standards. Consequently, the productivity increases observed in the sector and at company level demonstrate that these developments have transformed into a sustainable and robust foundation for economic growth, bringing with them greater success and employment opportunities. Thus, businesses that effectively integrate technological developments and progress in this direction encounter significant opportunities to expand their market share and gain a competitive advantage in the long term by producing high-quality products with greater efficiency. In this context, the importance of technology transfer is increasing, offering important opportunities for companies in different sectors to develop innovative approaches and contributing to the more effective implementation of solutions. Furthermore, the cooperation and partnerships that arise during technology transfer have the potential to create a win-win situation for all parties involved in these processes. Thanks to the resulting synergy, it supports sustainable growth and development by enabling not only businesses but also the entire economic system to be built on a more solid foundation. While the advantages provided by technology transfer are endless, it is also of great value for companies to develop new strategies and create new opportunities by establishing partnerships in this context. Creating a working environment filled with workplace training and continuous learning opportunities helps to increase not only the skills but also the motivation of employees; this also provides a major gain in terms of productivity and innovation. Thus, companies can gain the opportunity to stand out not only in current market conditions but also with innovative solutions for the future. These structures, strengthened by technology transfer, increase competitiveness at both national and international levels and facilitate the achievement of sustainable goals, thereby continuing to lay the foundations for economic growth and development. For all these reasons, the strategic importance of technology transfer contributes to the development of both companies and societies. Businesses that plan for the future through technology transfer not only increase their own profitability with the gains they achieve in this process, but can also have a broad social impact. This approach to such transfer and application will make significant contributions to strengthening the economic structures of societies and opening the doors to a more sustainable development process.

For this reason, the role of technology transfer is becoming increasingly important as a process that reshapes economic dynamics and enables the enhancement of social welfare.

Global and Regional Dimensions

The importance of global and regional dimensions plays a vital role in the effectiveness and sustainability of technology transfer in today's world. At this point, strengthening cooperation around the world has become a greater necessity than ever before. In this context, developing international cooperation not only accelerates the flow of knowledge and technology but also requires careful examination of the current development levels of different countries and regions. For developing countries in particular, technological transformation and international partnerships offer significant and innovative opportunities. However, these opportunities carry the risk of creating economic imbalances and regional inequalities by causing an uneven distribution of technology transfer in regional development in various situations. Therefore, it is important as a global goal that strategies implemented at the regional level ensure the fair and balanced distribution of technology. International research consortia and collaborations play a significant role not only in accelerating the transfer of knowledge but also in promoting the development of technologies tailored to local needs. Local authorities, and regional development agencies in particular, have a responsibility to actively participate in this process by supporting projects aimed at enhancing regional sustainability and competitiveness. Such collaborations enable the support of sustainable development by offering appropriate solutions that respond to the needs of the local population. Global and regional collaborations contribute to the rapid dissemination of technological developments while also carrying the hope of being an effective mechanism that supports the elimination of regional disparities. However, differing levels of regional development and disparities in infrastructure can constrain the effective use of technologies and thus occasionally hinder regional development processes. Therefore, supporting international and regional collaborations with inclusive, sustainable, and holistic policies enables technological transformation to yield much more positive outcomes at both the global and local levels. In this regard, the synergy achieved through cooperation creates significant potential for advancing regional development and effectively capitalising on the various opportunities offered for a sustainable future. Furthermore, this cooperation brings together the experience and knowledge of experts from different disciplines, paving the way for the development of innovative and creative solutions. These steps not only encourage technological innovation but also contribute to the more widespread understanding of equality and equal opportunities by ensuring that social and economic gains reach broader audiences. Consequently, while continuous efforts to reduce regional inequalities continue, the development of innovative solutions that truly meet local needs is of vital importance. Thus, not only will the limitations specific to certain regions be overcome, but a significant contribution will also be made to creating a more sustainable and inclusive growth model through general economic development. This desired outcome can be achieved through the combined efforts of all these initiatives at . In summary, local and international collaborations form a solid foundation for social and economic development, as well as technology transfer.

CONCLUSİON

The positive contributions of technology transfer to economic development go far beyond being a process directly related to the fundamental dynamics of sustainable growth; it represents a dynamic and complex structure shaped by various positive factors working in perfect harmony. In this multifaceted process, technology transfer itself signifies much more than just a phenomenon; it also emerges as a highly complex mechanism with decisive and continuous effects on economic development. The economic development process in question is not limited to positive increases in efficiency and productivity, but also extends to a wide range of areas, including the discovery of new business ideas, the implementation of strategic innovations, and creative ways to increase competitiveness. Thus, countries are able to achieve a stronger, more competitive and sustainable position in international markets, which contributes to their more effective participation in the global economy. The qualitative and quantitative development of innovation finds its place in this process as a dynamic process of change and transformation, highlighting the importance of the constant search for innovation and technological breakthroughs. However, perhaps the most important point to consider here is that the effectiveness of technology transfer depends on various factors and that measuring this effectiveness can sometimes be seriously challenging. Input-output analyses and comparative studies, in particular, stand out as important, effective and results-oriented tools for evaluating policy effectiveness. However, in addition to conducting objective and comprehensive assessments, there is always a need for more data and concrete evidence; this situation makes research processes more complex. Furthermore, regional disparities and access inequalities are among the major obstacles to the equitable distribution of technological development, negatively affecting development in many countries and hindering the efficient use of resources. In this context, the development of policies that are compatible and integrated with sustainable development goals is of paramount importance; this enables a significant step towards achieving long-term economic growth targets, providing benefits for all segments of society. Thus, the aim is to encourage the equitable sharing of technology between cities and rural areas, reduce existing inequalities, and increase social benefits. Consequently, the impact of technology transfer on economic development is highly multidimensional and complex, and implementing structured, sustainable, inclusive, and target-oriented policies to maximise this impact has become one of the most essential requirements under current conditions. In this context, through continuous monitoring and evaluation efforts, policymakers should be enabled to develop effective strategies that are responsive to new and rapidly changing needs, thereby ensuring that the

economic and social benefits of technological progress reach broad audiences and all segments of society. Such an approach has the potential to increase social welfare and support the more efficient use of resources; therefore, it plays a major role in the sustainable development environment. At the same time, it encourages the development of determined and effective strategies by creating a fundamental infrastructure for the full realisation of the potential of technology transfer; thus, it makes important contributions to increasing social benefit by supporting construction and development in various sectors. As this process continues, the advantages provided by technology transfer will be felt and experienced by all segments of society.

LIMITATIONS

This study has some limitations. Firstly, as the research was conducted using qualitative literature review methods, the general validity of the findings is limited and is particularly important for long-term results. Detailed research has shown that these mechanisms also play a vital role in ensuring transparency in communication processes.

Notification

Review: Reviewed by internal and external advisors.

Conflict of Interest: The authors have not declared any conflicts of interest related to this article.

Financial Support: The authors have not reported any financial support related to this article.

REFERENCES

1) Atakli, Arica (2010) The effect of technological development on economic growth: panel data analysis
2) Başar, E. (2010), Introduction to Demography, Gazi Publishing House, Ankara
3) Çalışır M, Gülmez A (2010) "Economic Development within the Framework of Technology Policies: A Comparison between Turkey and South Korea" Journal of Academic Studies Volume: 5 Issue: 1 2010: 25
4) Çetin (2010) Empirical analysis of Kaldor's growth law: Turkey and EU countries (1981-2007) Afyon Kocatepe University, Faculty of Economics and Administrative Sciences Journal (Vol. X I, No. I, 2009)Datta, Agarwal 2004 Applied Economics Telecommunications and economic growth: a panel data approach, 2004, vol. 36, issue 15, pages 1649-1654
5) Davidson, R., Mackinnon, J. G. (1993). "Estimation and Inference in Econometrics". Oxford: Oxford University Press.
6) Dickey, D., Fuller, W. (1981). Likelihood Ratio Statistics for Autoregressive Time Series with a Unit Root. Econometrica: Journal of the Econometric Society, 49(4), 1057–72
7) Dilek, Serkan (2016), Industrial Economics with Game Theory, Seçkin Yayıncılık, 1st Edition.
8) Falk, Martin (2007), "R&D spending in the high-tech sector and economic growth", Research in Economics, 61 (2007), pp.140–147
9) Freire-Serén, Mª Jesús (1999), "Aggregate R&D Expenditure and Endogenous Economic Growth", UFAE and IAE Working Papers, No.WP 436.99
10) Griliches, Z. (1998), "Introduction to "R&D and Productivity: The Econometric Evidence"," NBER Chapters, in: R&D and Productivity: The Econometric Evidence, pages 1-14 National Bureau of Economic Research
11) Guellec, D. and B. van Pottelsberghe de la Potterie (2004), "From R&D to Productivity Growth: Do the
12) Institutional Settings and the Source of Funds of R&D Matter?", Oxford Bulletin of Economics and Statistics,
13) 66, 3 (2004), pp. 0305-9049
14) Jones, C. I. and Williams, J. C. (2000). Too Much of a Good Thing? The Economics of Investment in R&D,
15) Journal of Economic Growth, 5 (1), 65-85
16) Jalil, Abdul and Syed Mahmud (2009), "Environment Kuznets curve for CO2 emissions: A cointegration analysis for China", Energy Policy, 37, 5167–5172.
17) Kadılar, Şimşek (2010) Causality Analysis of the Relationship between Human Capital, Exports and Economic Growth in Turkey C.Ü. Journal of Economics and Administrative Sciences, Volume 11, Issue 1, 2010
18) Kaya V. Yalçınkay Ö. (2014). "Can Population Be a Source of Economic Growth? A Historical Perspective on the Three-Child Policy", Atatürk University Journal of Economics and Administrative Sciences, Volume: 28, Issue: 1, 2014.
19) Kesgingöz, Hayrettin and Karataş, Ali Rauf (2016), "The Relationship Between Foreign Capital Investments and the Current Account Deficit and Policy Recommendations for the Current Account Deficit", Journal of Human and Social Sciences Research, 3, 597-610.
20) Korkmaz (2010) Analysis of the Relationship between R&D Investments and Economic Growth in Turkey Using the VAR Model Journal of Yasar University 2010 20(5) 3320-3330
21) Lichtenberg 1993 "R&D and Productivity Growth at the Industry Level: Is There Still a Relationship?", in
22) Griliches, Z. ed., R&D, Patents and Productivity, University of Chicago Press, Chicago, 1984.
23) Miroslav, V., Boris, M. and Mitja, C. (2009). R&D and Economic Growth in Slovenia: A Dynamic General Equilibrium Approach with Endogenous Growth, Munich Personal RePEc Archive, 17819.

24) Nelson, C. R., Plosser, C. R. (1982). Trends and Random Walks in Macroeconomic Time Series, Journal of Monetary Economics, 10(2), 139–162. http://doi.org/10.1016/0304-3932(82)90012-5
25) Phillips, P. C. B., Perron, P. (1988). Testing for a Unit Root in Time Series Regression. Biometrika, 75(2), 335–346
26) Samimi, A.J. and S.M. Alerasoul (2009), "R&D and Economic Growth: New Evidence from Some Developing Countries", Australian Journal of Basic and Applied Sciences, 3(4), ISSN 1991-8178, pp.3464-3469.
27) Samimi, Babanejad (2010) ICT and Economic Growth: New Evidence from Some Developing Countries Australian Journal of Basic and Applied Sciences, 4(8): 3086-3091, 2010 ISSN 1991-8178