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The Impact of Artificial Intelligence Integrated Product Trade on International Political Economy

Yapay Zekâ Entegreli Ürün Ticaretinin Uluslararası Politik Ekonomiye Etkisi

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Abstract

We live in a world where it is difficult to keep up with the increasing speed of globalization and the diversity of technological developments. In this process, we are both developing and diversifying. The meanings and scopes of some concepts are different from the old ones. From this point of view, this study not only examines the relationship between artificial intelligence and trade, but also reveals the contribution of commercial goods and services in which artificial intelligence is integrated to trade. In addition, as a result of its contribution to trade, its relationship with political economy is also examined. The aim of the article is to reveal the relationship between artificial intelligence and trade, as well as to examine its political economy in global governance. In the study, it has been determined that various products have emerged in areas where artificial intelligence is integrated and this leads to an increase in productivity. In addition, it has been observed that productivity increases increase trade volumes. Giving various incentives and supports to countries for products in which artificial intelligence is integrated has increased global competition. It has been observed that this situation has a direct or indirect effect on the politics and economy of the countries. During the study, qualitative data were examined and interpretive research method was used.

Keywords: Artificial Intelligence, Commerce, International Political Economy, International Relations

Öz

Küreselleşmenin artan hızına ve teknolojik gelişmelerin çeşitliliğine yetişmekte zorlandığımız bir dünyada yaşamaktayız. Bu süreçte hem gelişmekte hem de çeşitlenmekteyiz. Bazı kavramların anlamları ve

kapsamları eskisinden farklı olmaktadır. Buradan hareketle bu çalışma yapay zekâ ile ticaret arasındaki ilişkiyi incelemesinin yanı sıra yapay zekânın entegre olduğu ticari mal ve hizmetlerin ticarete olan katkısını da ortaya koymaktadır. Ayrıca ticarete olan katkısı neticesinde politik ekonomi ile olan ilişkisi de incelenmektedir. Makalenin amacı yapay zekâ ile ticaret arasında nasıl bir ilişki olduğunu ortaya koymakla beraber küresel yönetişimdeki politik ekonomisini incelemektir. Çalışmada yapay zekânın entegre olduğu alanlarda çeşitli ürünlerin ortaya çıktığı ve bunun da verimlilik artışına neden olduğu tespit edilmiştir. Ayrıca verimlilik artışlarının ticaret hacimlerini arttırdığı görülmüştür. Yapay zekânın entegre olduğu ürünler için ülkelere çeşitli teşvik ve destekler verilmesi, küresel rekabeti artırmıştır. Bu durumun da ülkelerin politikasına ve ekonomisine doğrudan ya da dolaylı yoldan etki ettiği gözlemlenmiştir. Çalışma yapılırken nitel veriler incelenerek yorumlayıcı araştırma yönteminden yararlanılmıştır.

Anahtar Kelimeler: Yapay Zekâ, Ticaret, Uluslararası Politik Ekonomi, Uluslararası İlişkiler

Introduction

When we question the concept of trade retrospectively, we see that it is defined as a transaction made in the form of exchanging the products demanded by human beings with each other. In this definition, the goods subject to barter are expressed as the desire to meet human needs. As time progressed and product varieties increased, the buying and selling of products began to be carried out through some precious metals in order to eliminate the conflict about which product corresponds to which product. In the following process, with the discovery of money, trade became easier. As a result of the increase in mechanization with the industrial revolution, the products were produced quickly and this situation contributed to the emergence of various products. Depending on the increase in the amount of products produced, commercial transactions have also started to be carried out in the international market. International Monetary Fund (IMF), World Bank, and General Agreement on Tariffs and Trade (GATT) institutions were established within the framework of the agreement signed in Bretton Woods, USA in 1944 (Özkaya, 2009, pp. 102-117). With the GATT, policies such as reducing import taxes and removing restrictions on free trade started to be implemented, paving the way for globalization. With globalization, trade volumes between countries have also increased.

With the emergence of artificial intelligence in 1943 and the internet in the 1950s, and their integration into almost every field, a digital transformation was experienced in the world and this process continues to be experienced. When we look at the development adventure of artificial

intelligence and internet in the commercial field, we see that both the automation systems of the products produced and the supply systems of the products have changed with the emergence of new products. These changes are also effective in many areas today. Especially in the light of these developments, more efficient, higher quality and more reliable products or services can be put forward.

With the integration of artificial intelligence into products and services, it is an inevitable fact that competition has emerged in both national and international trade markets. In the face of this situation, countries provide some incentives and supports to multinational companies in their own countries and to their national companies that will invest abroad, in order to be effective in the markets. This situation has a positive contribution to the economic and political developments between countries. In this context, the relationship between artificial intelligence and trade has been examined in the article and the contribution of this situation to the political economy has been explained in detail. In the first chapter of the article, the concept of commerce is discussed, and then in the second chapter, information about artificial intelligence is given. In the third chapter, the relationship between artificial intelligence and commerce is examined. After examining the relationship between these two, the political economy of artificial intelligence is explained in the fourth chapter.

Commerce

The concept of commerce was initially defined as the exchange of goods within the framework of people's needs. As the relationship between states increased, trade began to expand. With the discovery of the Silk Road in the 4th and 5th centuries AD, trade volumes began to increase. This developing trade network extended from Asian countries to Central Asia and then to Europe (Boulnois, 2004, pp. 33-35). The most important reason behind the name of this trade network as the Silk Road was the silk produced in China. These silks produced were exported to various countries. Another event that was effective in the development of trade in the same period is the Spice Road. Famous for its spices, India has exported spices to various countries. During that period, the biggest importers of these products were the Romans and the Egyptians. There are also factors that will contribute to the development of trade, such as various resting areas, cities, and markets on the routes drawn for the transportation of products to these countries (Atasoy, 2010, pp. 1-10).

With the geographical discovery that took place in the 4th century AD,

the commercial vitality of the Silk Road continued until the geographical discoveries in the 16th century. Through the geographical discoveries that took place in the 16th century, new sea routes and new continents were discovered. In the commercial activities during this period, China was active in many areas such as Southeast Asia, East Africa, the northern part of Australia, and the Pacific coast of North America with its diverse maritime network. In the same period, Arabs and Indians continued their commercial activities in the Indian Ocean. On the European continent, on the other hand, a mixed and bad process was experienced. Many people lost their lives due to the plague that existed in the region. This situation caused a lack of employment and a bad situation in the economy in the European continent (Hanilçe, 2009, pp. 48-70).

Although there are many reasons for geographical discoveries, one of them is trade. Before the geographical discoveries, commercial activities were carried out as we have explained above. Goods from the Far East reached Anatolia and were sold to Europe from here by Genoese and Venetian merchants. In this existing commercial system, many input factors have affected the goods reaching Europe. This situation caused the prices of the goods to be high. From the point of view of traders, the high costs were remarkable. In order to reduce costs, Europeans made geographical discoveries to reach the Far East, which is the main center of products. As a result of these geographical discoveries, Europeans were able to reach the Far East by traveling through the Cape of Good Hope. This success of the Europeans encouraged them to organize expeditions for the discovery of new continents. As a result of this process, the American continent was discovered (Demir, 2020, pp. 118-135).

The year 1760 is considered to be the eve of the Industrial Revolution. With the beginning of this period, many innovations emerged in the fields of agriculture, textile, metal manufacturing, transportation, and economic policy. The development of equipment used in the field of agriculture has also increased its productivity in agriculture. This increased productivity has led to both an increase in direct food supply and an increase in domestic and foreign trade. Technological developments in the field of textiles have brought about a decrease in the need for workers. However, this situation did not have the same effect in the field of coal and mining. Although various technological innovations have been introduced for the extraction and transportation of coal and mines, the need for labor has always continued (Montagna, 2019, pp. 1-9). As a result of the industrial revolution, the foreign trade of England increased. Based on these developments, there have been some changes

in the structural system of England. In addition, England entered the economic development process with the Industrial Revolution (Bilgili, 1998, pp. 35-50).

With industrialization, technology and goods spread to many parts of the world, causing the globalization of trade. Although there have been different discussions on globalization, it has been difficult to express a definite opinion on the concept. The reason for this is that globalization is effective on many areas such as social, political and economic. When we examine the concept of globalization in terms of economy and trade, we encounter the necessity of carrying out economic and commercial activities in a worldwide harmony. Trade goes beyond borders, causing investments, increasing production, and increasing employment. This is an element that both directly affects the economic systems of countries and increases competition. As a result of globalization, national economies have been rapidly integrated into the world market (Totonchi and Kakamanshadi, 2011, pp. 270-276). The event that led to the disappearance of the borders in the field of goods and services in the process of globalization was with the agreement signed in the American town of Bretton Woods in 1944. The structure of global trade was created with the GATT, which is among the 3 institutions (IMF, World Bank, GATT) established within the scope of this agreement, which is known as Bretton Woods, and which left their mark on the global system. The most important works put forward by GATT are the abolition of customs tariffs and quotas. After this step, the liberalization process in trade was experienced more effectively (Aydemir and Kaya, 2007, pp. 260-282). The collapse of the Bretton Woods system in the 1970s, the acceleration of capital mobility in the 1980s, the collapse of the USSR in 1991, and the increase in the effectiveness of the European Union caused the ties between globalization and the economy to tighten. Depending on these developments, commercial activities have existed, and continue to exist actively in the global system (Aytekin, 2013, pp. 123-134).

Artificial Intelligence

The concept of Artificial Intelligence is defined as the engineering of creating intelligent machines, especially intelligent computer programs. The purpose of creating this technology is to try to understand human intelligence. Artificial intelligence uses methods that are not observed in humans or that require much more processing than humans can do. When we look at the history of artificial intelligence, it is seen that after the Second World War, a number of scientists started to work on smart

machines. The person who made the first work in this field and made his name in history is Alan Turing. By the end of the 1950s, there was an increase in the number of people working on artificial intelligence. These studies were mainly related to computer programming (McCarthy, 2004, pp. 1-15).

The Turing Test, introduced by Alan Turing, consists of a judge, a man, and a woman. The aim of this game is determined as the judge to be able to reveal which of the players is female. As a matter of fact, in this game, on the one hand, the woman plays the role of a man, and on the other hand, the man plays the role of woman. The judge's job here is to decide which is female and which is not. All versions of the Turing Test are based on a largely anthropocentric view of the nature of intelligence (Ford and Hayes, 1995, pp. 1-6).

The name artificial intelligence emerged after the workshop held as the Dartmouth Summer Research Project on Artificial Intelligence in 1956. The founding name of this workshop was John McCarthy, who works in the field of Mathematics. Its purpose is to share ideas about thinking machines (Digital Transformation Office of the Presidency of Republic of Türkiye, n.d.). After this step, different studies have been carried out in the field of artificial intelligence in various periods of history. These studies range from computer program that can play chess to algorithms developed for logical thinking. In addition, the developed programs are even integrated into various industrial materials. With the widespread use of the internet, many artificial intelligence-based programs have reached large audiences. When we look at the application areas, artificial intelligence appears in almost every field. Artificial intelligence is actively used in many areas such as programs used in research, various weapons and equipment in the military, audio and visual computer applications, health, production areas, design and maintenance (Prim, 2006, pp. 81-93).

While artificial intelligence is beginning to take place so effectively in every aspect of our lives, the ethical reality of artificial intelligence also presents us as a problem. Artificial intelligence has a more objective point of view in its application areas. In addition, it has the potential to display a different behavior from humans in order to ensure continuity in the system and not to repeat the mistakes made. This situation provides fast and important conveniences for some professional fields. However, there are two different views on whether artificial intelligence should or should not have a morally based reasoning mechanism. Within the framework of these views, questions such as "Will humans or machines

be held responsible for the results of creating an ethical artificial intelligence?" are also asked. As a result of all these, while the fact that artificial intelligence will make our lives easier stands on one side, there are also some negative effects that will arise with artificial intelligence on the other. However, despite all this, it is an important necessity to evaluate artificial intelligence as an ethical element and to develop it within the framework of universal ethical rules (Öztürk, 2019, pp. 47-59).

The Impact of Artificial Intelligence on Commerce

The relationship between artificial intelligence and commerce has been one of the most popular topics in recent years. Especially with the rapid technological progress of recent years, the relationship between artificial intelligence and trade has become more and more important. Artificial intelligence is software that imitates and learns human intelligence. For this reason, artificial intelligence systems are used to take actions that humans can do, and to make decisions. For example, artificial intelligence systems can learn customer behaviors and preferences by doing data mining and can give appropriate answers to customer needs by using this information. In the commercial sector, artificial intelligence systems are used in various ways. Examples we can give in this area are the pricing of products, stock management, and management of customer relations. In addition, artificial intelligence is used for purposes such as predicting customer behavior and increasing customer satisfaction. Since the use of artificial intelligence in the trade sector provides various advantages, the relationship between artificial intelligence and trade has become one of the most popular topics in recent years.

Although the development of technology has many positive results, especially the increase in the use of artificial intelligence has revealed some negative effects in the labor market. Keynes, who stated that there would be job losses as a result of this technological change, put forward the theory of technological unemployment. However, when we look at the literature, there are opinions that, apart from the negative impact of technological changes on employment, new business areas will emerge with the effect of productivity. In addition, it is stated in the reports prepared by various companies that some business areas will be at risk and this process will take place slowly (Sheikhi, 2022, pp. 102-111).

The use of artificial intelligence in customer service is an important issue. After the products or services requested by the customers through customer services are stored in a data warehouse, various analyzes are made using artificial intelligence. To put it more clearly, data analysis

is performed on many subjects such as the gender, age, and region of the customer, and a report is produced about the relevant product or service. Based on the classification resulting from this report, sales of products or services are planned and commercial income is generated. In addition, as a result of searching the products over the internet, the related products are included in the artificial intelligence algorithm, and we come across products or product groups similar to the product we bought before. Likewise, equivalent products and materials in the algorithm appear as a suggestion. The impact of artificial intelligence on trade is clearly seen both in the changes in business areas and in the emergence of new business areas. By creating online platforms, it is possible to bring employers and workers together. Thanks to such platforms, the worker also has the opportunity to earn additional income by working remotely. It also contributes to the creation of a new labor market for the employer (Sheikhi, 2022).

The integration of artificial intelligence into our lives with Industry 4.0 increases the use of autonomous systems in many sectors. Systems operating in various fields such as self-powered factories, vehicles and robots are used. Industry 4.0 and artificial intelligence duo reveal new business models and new applications. One of the examples that can be given in this field is accounting. It will be possible to integrate artificial intelligence into the field of accounting, to process accounting books according to the legislation of the country, and to prepare reports accordingly. While this situation reduces the employment capacity in the field of accounting, on the other hand, it will allow the risk of error in accounting records to be minimized for commercial enterprises. However, it will contribute to the reduction of penalties for the enterprise and the reduction of the costs of the firm (Gacar, 2019, pp. 389-394).

Another area where artificial intelligence is integrated is the banking system. The banking system has a significant impact on the growth of national economies. Likewise, the banking system is important in terms of effective commercial activities. The use of artificial intelligence in many areas such as fund collection, money allocation, risk management, and credit management in the banking system contributes to the smooth functioning of the banking system. The fact that banks work with artificial intelligence in some of their transactions will enable the bank to make profit and provide the right loans to the right investor who will be engaged in commercial activities, as well as the more efficient use of bank capital. All these will cause an increase in loan repayment rates and will contribute to the growth of commercial activities of banks

(Kandemir, 2021, pp. 59-81).

There are artificial intelligence applications in the field of marketing, which is one of the cornerstones of trade. In this area, brand owners try to attract the attention of customers by developing various applications. With these developed applications, businesses have the potential to find new customers. In addition, by influencing the decision-making process of the customers, the product sales capacity and trade volumes of the enterprises increase. The creation of new generation advertisements and promotions using artificial intelligence applications will contribute to the increase of the visibility of the products of the enterprises (Sarıoğlu and Develi, 2022, pp. 91-124).

When we examine the use of artificial intelligence in the health sector, it is seen that most of the companies have artificial intelligence-equipped tools such as medical imaging devices, medical data, drugs, robot applications. Thanks to these tools, patients can be diagnosed more quickly and the opportunity to intervene emerges. As a result of such developments in the health sector, wastes in health expenditures will also decrease, as well as high value-added commercial activities and earnings can be obtained as a result of the production of related products (Uzun, 2020, pp. 80-92). In addition, the investments made by the countries in this field both contribute to the health tourism of the country and increase the foreign currency inflow to the country.

The presence of artificial intelligence in the defense industry and the trade of defense industry products equipped with high technology are also frequently encountered today. Artificial intelligence is used for various purposes in the defense industry. For example, it can help predict the performance of products during design and make products more effective and efficient. In addition, artificial intelligence systems can be used during the maintenance and repair of products produced for defense and security. In other words, artificial intelligence systems can help to detect malfunctions of products and contribute to faster elimination of malfunctions. Artificial intelligence systems are used to perform defense and security tasks, monitor air and maritime traffic, and help detect malicious activities by using the information obtained. In the trade of defense industry products integrated with artificial intelligence, it enables the design, production, and sale of defense and security products. These products include products such as security systems and defense technology, as well as military hardware and devices. Commercial activities within this scope are generally managed

by governments, and defense materials are traded between countries (Araya and King, 2022, pp. 1-20). As a result, the relationship between artificial intelligence and defense industry trade helps to make defense products more effective and efficient by using artificial intelligence technology during the design, production, and maintenance. Due to the expenditures of the countries on the defense industry, the trade volume is increasing.

Another sector where we see the application of artificial intelligence in the field of commercial activities is the logistics sector. The logistics sector is one of the main pillars of commercial activities. A problem or delay in this area will cause the products not to reach the customers on time, the reliability of the companies to be questioned, and the commercial activities to decrease. Today, companies try to strengthen the infrastructure of their commercial activities by using a number of products or services integrated with artificial intelligence to avoid such problems. In the complex global supply network, the system called Logistics 4.0 is preferred for the efficient continuation of material and information flow. Thanks to the uninterrupted data flow between the stakeholders using the Logistics 4.0 system, the margins of error in the transportation and storage processes are minimized (Domanski, Pawlowski, Szlapka, and Wojciechowski, 2019, pp. 1734-1742).

Today, with the development of E-Commerce, many companies are making investments to make fast delivery. The aim is to increase the interest and dependence of the customers on the company with fast and safe delivery, and in parallel, to improve their business volumes. With the increasing popularity of computing technologies such as artificial intelligence and cloud, many modern logistics companies are investing in system optimizations. As a result of these radical changes and investments, applications such as unmanned aerial vehicles and unmanned sorting centers emerge. Although the country where these processes are intensely experienced is China today, such activities will be used extensively in many countries around the world in the near future (Zhang, 2019, pp. 1-4). The purchase of vehicles or systems equipped with artificial intelligence will contribute to the trade of the companies that set up this system at the same rate. In every sector where artificial intelligence is involved, the manufacturer gains an income in the domestic market with the commercial activity of these products, while providing access to foreign markets by taking part in a globalized trade network. The increase in the commercial activities of companies towards foreign markets can also contribute to the economic growth of countries as one

of the most important results of international trade. Especially as a result of the increasing use of e-commerce as explained above, various small businesses will have an important opportunity to go global. In addition, various digital commercial platforms such as eBay also offer translation services to better serve their global customers (Meltezer, 2018, p. 1).

With the development of artificial intelligence and its integration into digital platforms, manufacturers and consumers in many parts of the world can communicate with each other and access the products and services they have requested more easily, quickly and reliably. The development of language options added to digital platforms will contribute to the increase of commercial activities in the international arena. In addition, as the development of search engines increases, as new data is added, its use by users will increase and the producer and consumer will find each other more easily on digital platforms (Tay, 2021, pp. 1-15). As a result, products and services with integrated artificial intelligence will inevitably appear in almost every field from the business world to private lives in the near future. While this increases average incomes, it can distort the labor market, increase inequalities, and trigger non-inclusive growth.

The Political Economy of Artificial Intelligence

While artificial intelligence and related technologies continue to revolutionize many areas of economic activities, it also has a profound effect on economic growth with its contribution to domestic and foreign trade. In addition, the production of such technological products causes creative burning, and provides commercial companies or public institutions operating in the strategic field to establish commercial superiority over other countries. With this commercial advantage, the possibility of taking place in the relevant country's market and influencing the policies of that country increases (Trajtanber, pp. 175-186).

The few institutions and companies that are active in integrating artificial intelligence into products and services also contribute to the creation of a competitive environment in the international market. In addition, these companies and institutions that exist as a result of this situation are also carrying out their activities more strictly in order to create global rentiers. Institutions and companies operating within the framework of all these developments are trying to gather both economic and political power in their hands. The important point at this point is to prevent the increase of monopolies and to impose some legal restrictions against the increasing power of companies operating in this field. It can be foreseen that this situation will contribute to the political stance of the

countries both in the national and international arena (Dieuwertje and Wiebke, 2021, pp. 1-25).

Multinational companies seek commercial advantages in order to increase their commercial activities and make a profit. In order to gain such advantages, sometimes bargains are made with state officials, and sometimes bargains are made with factors that will affect the country's administration. In this way, the policy makers of the country, which is the center of multinational companies, will have an opportunity to influence the policies of the invested countries. Multinational companies that produce technological products with artificial intelligence or the core countries that are their supporters are trying to be effective in global governance and cause a change on power dynamics (Dauvergne, 2022, pp. 696-718). In the light of all information, we can express artificial intelligence as a force that basically pushes multinational companies to global inequalities and the exploitation of countries' natural resources.

Supply security of some resources is also important for the sustainability of commercial activities that contribute to the economy of countries. For continuity in production, it is necessary to ensure the continuity of resources such as raw material and energy, which are the basic inputs. In this process, while some states prefer to engage in hot conflict by prioritizing options such as military operations, some states can display their technological defense or attack tools as a show of strength without engaging in a hot conflict.

Countries with developing defense industry, on the one hand, protect their national independence, on the other hand, they care about self-sufficiency by wanting to secure some critical resources such as energy. In addition, R&D expenditures for the development of the defense industry also contribute to the establishment of economically strategic industries, as well as causing new technological defense tools to be released (Sezgin and Sezgin, 2018, pp. 1-19). Military products with artificial intelligence, which emerged thanks to these strategic industries, also contribute to the establishment of commercial relations of countries in the international arena. The most important example that can be given on this subject is the exclusive economic zone established between Turkey and Libya. Based on this agreement, the extraction of energy resources under the seabed in the relevant region has been legally established (Yaycı, 2020, p. 1). Artificial intelligence integrated defense tools, which are used as a deterrent force, make a significant contribution to the protection of both states' independence and the continuity of these commercial activities.

Conclusion

With the increase in the diversity of products with the industrial revolution and the removal of restrictions as a result of globalization, there has been an increase in the trade volumes between countries within the scope of products and services. It is seen that with the development of technology, the increase in artificial intelligence studies and its integration into commercial products, production tools and service sector is a factor that facilitates human life. The transition from classical production tools to autonomous production tools has benefits in many areas such as reducing the margin of error in the products produced, shortening the production times, increasing productivity and even introducing special quality products. Parallel to these, it is clearly seen that some costs incurred in the production process have decreased. Commercial enterprises, on the other hand, have had the opportunity to be effective both in their domestic commercial activities and in their foreign commercial activities. Especially as a result of a number of commercial platforms with artificial intelligence, advantages such as easier access to customers and perceiving customer demands are obtained. In addition, digital platforms have enabled small businesses to operate effectively in international markets. While digital platforms have increased the tendency of many individuals to trade, they have also increased entrepreneurship and commercial activities. As a result of all these, individuals have increased their budgets with additional income on the one hand, and small businesses and companies have increased their profitability on the other. In addition, with the taxes these elements provide within the framework of their debts and obligations to the state, the states also increase their incomes, and provide more services and contribute to the support of commercial sectors. While these supports sometimes appear as lowering the interest rates on loans, sometimes they also allow some taxes to be deleted.

Apart from the digital platforms that contribute to the increase in the international trade volume, the high-tech products produced by the countries also contribute to the increase in the export rate. This will make countries more effective in global governance. In addition, the fact that countries have or produce artificial intelligence integrated products in their defense industries also makes a significant contribution. As the defense capacities of the countries increase, the possibility of having a say in the international arena and implementing independent policies will also increase, which will cause the balance of power in global governance to shift.

With the integration of artificial intelligence in every field such as service, production, trade, health, transportation, and security, this concept takes an important place in human life. However, although it has positive contributions to human life, there are also some negative consequences. It is predicted that the most important effect of the negative result of artificial intelligence will be on employment. The existence of production tools equipped with artificial intelligence will reduce the need for manpower and increase unemployment rates. As a result of unemployment, there will be decreases in total consumption expenditures, which is predicted to have a negative impact on economic growth. Based on this situation, countries that are not efficient in production will turn to foreign markets and increase their demand for imported goods. With imports getting ahead of exports, a deficit will emerge in the foreign trade balance. This will also affect the roles played by countries in the international arena.

As a result, in this article, we examine the link between artificial intelligence and trade, while the development of artificial intelligence contributes to the trade sector, it also affects the political processes of the countries in parallel with the increase in their economies. In addition, it is a common view that artificial intelligence will increase unemployment with its negative effect on employment. As a matter of fact, this unemployment is expected to cause a decrease in production capacities for some countries and a direct contraction in international trade volumes. From this point of view, it is clearly seen that there will be inevitable changes in the structure of both national and international trade with artificial intelligence.

Declaration

In all processes of the article, TESAM's research and publication ethics principles were followed.

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References

Araya, Ş. and King, M., (2022). The impact of Artificial Intelligence on military defence and security. *Centre for International Governance Innovation*, *263*, 1-20. Retreived from https://www.cigionline.org/static/documents/Araya_AI-for-Defence_SpecialReport_Q4fjNfp.pdf.

Atasoy, F. (2010). Küreselleşme çağında yeniden ipek yolu. *Bir Kültür Koridoru Olarak İpek Yolu Sempozyumu*, 1-10. Retreived from https://www.academia.edu/3855353/K%C3%BCreselle%C5%9Fme_%C3%87a%C4%9F%C4%B1nda_Yeniden_%C4%B0pek_Yolu.

Aydemir, C. ve Kaya, M. (2007). Küreselleşme kavramı ve ekonomik yönü. *Elektronik Sosyal Bilimler Dergisi*, *6*(20), 260-282. Retreived from https://dergipark.org.tr/tr/pub/esosder/issue/6134/82270.

Aytekin, İ. (2013). Küreselleşme ve ekonomik küreselleşme. *Bitlis Eren* Üniversitesi *Sosyal Bilimler Dergisi*, *1*(2), 123-134. Retreived from https://dergipark.org.tr/tr/pub/bitlissos/issue/3711/49107.

Bilgili, E. (1998). Dış ticaret, ekonomik kalkınma ve sanayi devrimi. *Erciyes Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, 13*, 35-50. Retreived from https://dergipark.org.tr/tr/pub/erciyesiibd/issue/38180/445950.

Boulnois, L. (2004). *Silk road: Monks, warriors & merchants on the silk road*. New York: WW Norton & Co. Inc.

Dauvergne, P. (2022). Is Artificial Intelligence greening global supply chains? Exposing the political economy of environmental costs. *Review of International Political Economy*, *29*(3), 696-718. DOI:10.1080/09692290.2020.1814381.

Demir, K. A. (2020). Coğrafi keşiflerin ekonomi ve kamu yönetimi sistemine katkıları: Merkantilizm ve Kameralizm. *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, *29*(1), 118-135. DOI: 10.35379/cusosbil.570806.

Dieuwertje, L. and Wiebke, D. (2021). The great transformer: Examining the role of large language models in the political economy of AI. *Big Data and Society*, 1-25.

Domanski, R., Pawlowski, G., Szlapka, J. and Wojciechowski, H. (2019). Logistics 4.0 maturity levels assessed based on GDM (Grey Decision Model) and Artificial Intelligence in Logistics 4.0 -trends and future perspective. *Procedia Manufacturing*, 1734-1742. Retreived from https://www.researchgate.net/publication/339495390_Logistics_40_Maturity_

Levels_Assessed_Based_on_GDM_Grey_Decision_Model_and_Artificial_Intelligence_in_Logistics_40_-Trends_and_Future_Perspective.

Ford, K. and Hayes, P. (1995). Turing test considered harmful. 1-6. Retreived from https://www.researchgate.net/publication/220813820_Turing_Test_Considered_Harmful.

Gacar, A. (2019). Yapay zekâ ve yapay zekânın muhasebe mesleğine olan etkileri: Türkiye'ye yönelik fırsat ve tehditler. *Balkan Sosyal Bilimler Dergisi*, *8*(19), 389-394. Retreived from https://dergipark.org.tr/en/download/article-file/905187.

Hanilçe, M. (2009). Coğrafi keşiflerin nedenlerine yeniden bakmak. *Tarih Okulu Dergisi*, *2010*(7), 48-70. Retreived from https://dergipark.org.tr/tr/pub/usakjhs/issue/13544/164013.

Kandemir, Ş. (2021). Bankacılık ve finansın denetiminde denetim teknolojisi (SupTech) ve Yapay Zekâ. *Çağ Üniversitesi Sosyal Bilimler Dergisi*, *18*(1), 59-81. Retreived from https://dergipark.org.tr/tr/pub/cagsbd/issue/63182/959751.

Manuel, T. (2019), Artificial Intelligence as the next GPT: A political-economy. Agraval, A., Gans, J. ve Goldfarb, A. (Eds.), *The Economics of Artificial Intelligence: An Agenda* in (pp. 175 – 186). Cambridge: NBER.

McCarthy, J. (2004). What is Artifical Intelligence? Date of Access: 10 November 2022, http://www-formal.stanford.edu/jmc/whatisai.pdf.

Meltzer, P. J. (2018). The impact of artificial intelligence on international trade. *Center for Technology Innovation at Brookings*, Date of Access: 12 December 2022, https://www.brookings.edu/research/the-impact-of-artificial-intelligence-on-international-trade/.

Montagna, Joseph A. (2019). The industrial revolution. *Yale-New Haven Teachers Institute*, 1-9. Retreived from https://teachersinstitute.yale.edu/curriculum/units/1981/2/81.02.06.x.html.

Özkaya, M. H. (2009). IMF'nin değişen rolü: Bretton Woods'tan günümüze. *Uşak Üniversitesi Sosyal Bilimler Dergisi*, *2*(2), 102-117. Retreived from https://dergipark.org.tr/tr/pub/usaksosbil/issue/21652/232785.

Öztürk, D. G. (2019). Yapay zekanın etik gerçekliği. *Ankara Uluslararası Sosyal Bilimler Dergisi*, *2*(4), 47-59. Retreived from https://dergipark.org.tr/tr/pub/usdad/issue/51335/642184.

Pirim, A. G. H. (2006). Yapay Zeka. *Yaşar Üniversitesi E-Dergisi, 1*(1), 81-93. Retreived from https://dergipark.org.tr/tr/pub/jyasar/issue/19113/202842.

Sarıoğlu, B. and Develi, E. İ. (2022). Pazarlamada kampanya yönetimi ve Yapay Zeka kullanımı. *Uluslararası Halkla İlişkiler ve Reklam Çalışmaları Dergisi, 5*(2), 91-124. Retreived from https://dergipark.org.tr/en/pub/hire/issue/73002/1119840.

Sezgin, Ş. ve Sezgin, S. (2018). Dünya'da ve Türkiye'de savunma sanayi: genel bir bakış. *Avrasya Sosyal ve Ekonomi Araştırmaları Dergisi*, *5*(12), 1-19, Retreived from https://dergipark.org.tr/tr/pub/asead/issue/41905/505227.

Sheikhi, M. (2022). Yapay Zeka kullanımının iş piyasasına etkisi. *Journal of Economics and Political Sciences, 2*(1), 102-111. Retreived from https://dergipark.org.tr/en/pub/jep/issue/72918/1187581.

Tay, C. (2021). The impact of Artificial Intelligence on international trade: Evidence from google neural machine translation. *Journal of Technological Advancements*, *1*(1), 1-15. doi:10.4018/JTA.20210101.oa6.

Totonchi, J. and Kakamanshadi, G. (2011). Globalization and E-Commerce. *2nd International Conference on Networking and Information Technology, IPCSIT*, 17, 270-276. Retreived from https://www.academia.edu/67901412/Globalization_and_E_Commerce.

Türkiye Cumhuriyeti Cumhurbaşkanlığı Dijital Dönüşüm Tarihi. (n.d.). Yapay Zeka. Date of Access: 10.12.2022, https://cbddo.gov.tr/sss/yapay-zeka/.

Uzun, T. (2020). Yapay Zeka ve sağlık uygulamaları. *İzmir Katip Çelebi Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, *3*(1), 80-92. Retreived from https://dergipark.org.tr/tr/pub/ikacuiibfd/issue/54124/710604.

Yaycı, C. (2020). Türkiye-Libya arasında imzalanan Münhasır Ekonomik Bölge Adlaşmasının sonuç ve etkileri. *Kriter Dergisi*, *4*(42), 1. Retreived from https://kriterdergi.com/dosya/turkiye-ve-libya-arasindaki-anlasmanin-sonuc-ve-etkileri.

Zhang, Y. (2019). The application of artificial intelligence in logistics and express delivery. *Journal of Physics: Conference Series*, *1325*(012085), 1-4. doi:10.1088/1742-6596/1325/1/012085.