

Article Type / Makale Türü

Derleme Makalesi - Review
Article

Application Date / Başvuru Tarihi

10.02.2024 / 02.10.2024

Admission Date / Yayına Kabul Tarihi

12.29.2024 / 29.12.2024



ZERO-SUM ECONOMY PERCEPTION AND DYNAMICS OF THIS PERCEPTION IN EUROPEAN ECONOMIC HISTORY

AVRUPA İKTİSAT TARİHİNDE SIFIR TOPLAM EKONOMİ ALGISI VE BU ALGININ DİNAMİKLERİ

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ABSTRACT: This article has been written to analyze the perception of zero-sum economy that has existed in the history of European economic thought and the transformation dynamics of this perception that transformed with the 18th century. The main question of the study can be formulated as the perception of zero-sum economy that existed in the world of thought of European people until the 18th century and the dynamics of the transformation of this perception. The claim of the article is that the perception of zero-sum economy is based on historical economic conditions rather than religious and moral values and that this perception also transformed with the change of these conditions. In order to achieve the aforementioned purpose and to solve the stated question, the perception of zero-sum economy and the historical and belief dynamics in the origin and transformation of this perception will be analyzed. The expected result of the article is that historical periodic conditions are dominant in the formation of the perception of zero-sum economy in European societies and that the conditions are supported by religious and ethical values.

Keywords: Zero-sum economy, productivity, macro growth, production output, self-interest, social harm.

ÖZ: Bu makale Avrupa'nın iktisadi düşünce tarihinde varlık bulmuş sıfır toplam ekonomi algısının ve XVIII. yüzyıl ile birlikte dönüşüm geçiren bu algının dönüşüm dinamiklerinin neler olduğunu çözümlenmek amacıyla kaleme alınmıştır. Çalışmanın ana sorusu, XVIII. yüzyıla kadar Avrupa insanının düşünce dünyasında var olan sıfır toplam ekonomi algısının ve bu algının dönüşümünün dinamikleri nelerdir şeklinde formüle edilebilir. Makalenin iddiası, sıfır toplam ekonomi algısının temelinde dini ve ahlaki değerlerden daha çok tarihsel ekonomik koşulların baskın olduğu ve bu koşulların değişmesi ile bu algının da dönüşüm geçirdiğidir. Söz konusu amaca ulaşmak ve belirtilen soruyu çözümlenmek için sıfır toplam ekonomi algısının ne olduğu ile bu algının kökeninde ve dönüşümündeki tarihsel ve inanç dinamiklerinin neler olduğu çözümlenecektir. Makaleden elde edilmesi umulan sonuç, Avrupa toplumlarında sıfır toplam ekonomi algısının oluşmasında tarihsel-dönemsel koşulların baskın olduğu ancak bu koşulların dini ve etik değerler tarafından desteklendiğidir.

Anahtar Kelimeler : Sıfır toplam ekonomi, verimlilik, makro büyüme, üretimin çıktısı, kişisel çıkar, toplumsal zarar.

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GENİŞLETİLMİŞ ÖZET

Çalışmanın Amacı

Bu çalışmanın temel amacını iktisadi düşünce tarihindeki sıfır toplam ekonomi algısının ne olduğunu, bu algının dinamiklerini ve sanayi devrimine gelindiğinde bu algının neden değiştiğinin tartışılması oluşturmaktadır. Nitekim ziraat devriminden sanayi devrimine kadar geçen sürede ekonomik verimlilik ve nüfus artışı küçük dalgalanmalar dışında artış göstermeden ilerlemiştir. Ziraat devrimi ile sıçrama yapan üretim artışı ve nüfus, sanayi devrimine kadar bir sıçrama daha yapmadan gelmiştir. Bu durum toplumların zihin dünyalarında üretim çıktısının artırılmayacağı ve zenginliğin sabit bir büyüklük olduğu inancının yerleşmesine ve ekonomik politikalarını bu inanca göre şekillendirmesine neden olmuştur. Teoride sıfır toplam oyun olarak ifade edilen sıfır toplam ekonomi algısı, bir birey ya da devletin zenginleşmesi için bir başkasının zarar görmesi gerektiğini ifade etmektedir. Bir başka deyişle iki kişi arasındaki ekonomik faaliyetlerde toplam fayda ve zararın sıfır olduğuna vurgu yapmaktaydı. Orta Çağ Avrupa düşüncesinde, merkantilist iktisadi düşüncede ve Osmanlı Devleti'nin ekonomik politikalarında sıfır toplam ekonomi algısının izlerini görmek mümkündür. Özellikle Avrupa tarihinde bu algının oluşmasının dönemin dikte ettiği objektif koşulların ötesinde inanç bağlamında da dinamikleri bulunmaktaydı. Tarımın, endüstrinin, teknolojinin, coğrafyanın ve iklimin, ticaretin ve finansın o zamanlara ilişkin koşulları bu algının oluşmasının temel dinamiğini oluşturmaktaydı. Sanayi devrimine gelindiğinde objektif koşullar ve inanç dünyasındaki değişimler ile üretim çıktısının artırılacağı ve bu artışın sürekli olacağı tecrübe edildi. Artık bir ülkenin milli gelirinin artırılmasının mümkün olduğu düşüncesi o tarihten bugüne makroekonomik büyüme olarak literatüre girdi. Artışın süreklilik kazandığı tek unsur milli gelir olmamış, nüfusun da kesintisiz bir biçimde artabileceği düşüncesi sıfır toplam ekonomi düşüncesi ile yer değiştirmiştir. Hatta bu algının değişim izleri iktisat teorisindeki düşünsel gelişmelere de yansımıştır. Klasik iktisatçılar ile üretimin artırılacağı, ticaret yoluyla tarafların zengin olabileceği ve zenginliğin tek kaynağının üretim olduğu düşüncesi iktisat bilimine yansımıştır.

Araştırma Soruları

Çalışmanın temel sorusunu XVIII. yüzyıla kadar varlık gösteren sıfır toplam ekonomi algısı ve dinamikleri nedir ve bu algının dönüşmesi nasıl gerçekleşmiştir şeklinde ifade edilmektedir. Söz konusu amaca ulaşmak ve belirtilen soruyu çözümlmek için önce sıfır toplam ekonomi algısının ne olduğu, bu algının kökeninde hangi tarihsel koşulların ve inançların yer aldığı çözümlenecektir. Sonrasında sıfır toplam ekonomi algısının değişim süreci, bu değişimin tarihsel ve inanç temelli koşullarının neler olduğu analiz edilecektir.

Yöntem

Bu çalışmada öncelikle mevcut konu ile ilgili literatür taranmış sonrasında çalışmanın sorusuna uygun olarak kaleme alınmış çalışmalar karşılaştırılarak tarihsel bir bütünlük içerisinde inceleyeme tutularak çalışmanın sorusu cevaplandırılmaya çalışılmıştır.

Literatür Araştırması

Çalışmanın ele aldığı sorular doğrultusunda öncelikle verimlilik ve sıfır toplam ekonomi algısı tarihsel süreçte açıklanmaya çalışılmış ve incelenmiştir. Sonrasında belirtilen soruların cevaplanması için sıfır toplam ekonomi algısında meydana gelen dönüşüm incelemeye alınmıştır. Bu doğrultuda Avrupa'da yaşanan bu dönüşümü hem tarihsel süreç içerisinde hem de din açısından ele alan literatürdeki kaynaklar incelenmiştir.

Sonuç ve Değerlendirme

Bu makalenin en önemli sonucu, literatüre dayanarak, insanların ve devletlerin genel olarak dünyada ve özel olarak Avrupa ekonomisi tarihinde neden sıfır toplam ekonomi algısına sahip olduklarını ve bu algının dinamiklerinin ne olduğunu açıklamak ve tartışmaktır. Bu ana sonuç, sıfır toplam ekonomi algısındaki değişimin ana unsurlarının belirlenmesiyle de desteklenmektedir.

1. INTRODUCTION

There have been two important revolutions in world history that stand out with their economic effects. The first is the agricultural revolution in 10,000 BC, and the other is the industrial revolution that started in England in 1700-1850 AD and spread first to continental Europe and then to the rest of the world. In the agricultural revolution, people transitioned from nomadic and hunter-gatherer to settled agriculture, and in the industrial revolution, thanks to the development of technological knowledge, they adapted the machines invented for production. With the agricultural revolution, people came together in clans and settled down, and they put into practice the primitive forms of division of labor, property, state form, trade, slavery, surplus production and specialization. With this revolution, commercial activity in the form of barter began, and the primitive form of the process of obtaining surplus products that were not needed came into existence (Güran, 2009: 11-14). With the industrial revolution, agricultural and industrial production increased, world trade volume expanded, factory production developed, land and sea transportation became more efficient, costs decreased and the process of laborization began (Hobsbawm, 2003: 163-322).

Both revolutions had some effects on the economic history of humanity, but their common and distinct economic effects were the increase in population and production (productivity). Although the first revolution made a leap in the direction of national income and population growth, this leap could not be sustained and the production and population levels reached remained constant for approximately 11,700 years until the industrial revolution with minor changes in the following periods.

In this long period, the inability to increase production due to various dynamics led to the development of the perception of a zero-sum economy, which suggests that it is not possible to increase capital and wealth through increased production. In fact, although people living in those times did not conceptually define themselves as being in a zero-sum economy, it is understood that they were aware of such an economic structure in their practices.

The perception in question can also be described as a zero-sum game. The development of this perception, which emerged in the historical process, and its examination became more evident with the theories developed in mathematics and economics in the 20th century. The first important theorem in this field was the saddle point theorem developed by Neumann for two-person zero-sum games in 1928, which is accepted as the first theorem there. Later, it gained momentum with the studies of J. Von Neumann and O. Morgenstein named Game Theory and Economic Behavior in 1944 (Neumann and Morgenstein, 1944: 34). After these developments, it has started to attract attention especially in recent years and the development has been achieved in the last fifty years as a result of the successes achieved in this field. Especially the studies of J. F. Nash in the 1950s accelerated the development process of

this technique, gave it another direction and made it heard by a wider audience (Bozdağ and Duman, 2004: 44).

Zero-sum games can be broadly defined as economic activities in which the gains of the winners are equal to the losses of the losers. There are many examples of these games, but they are most clearly seen in the efforts of trading countries to achieve export surpluses (Rutherford, 2002: 613). For this reason, zero-sum games have found application in scientific fields such as political science, economics, and international relations. Mathematically, a zero-sum game is a game in which the sum of all the gains and losses of all players must be zero. This is the familiar idea that one man's loss is another man's gain. For example, poker is a classic zero-sum game. At the end of the night, the total amount of money involved in the game is the same as the amount at the beginning of the game. Therefore, any money one player wins must come at the expense of others (Nielsen, 2005: 6).

When it comes to world economic history, there has been a perception of zero-sum economy, and this perception was not only present in continental Europe and England, but also in pre-industrial states in the rest of the world, and even in the Ottoman Empire. For example, the Ottoman Empire kept capital under control due to this perception, determined profit margins, set price, and did not look favorably on the accumulation of wealth in certain hands within the system. Mehmet Genç explains this situation as follows: *“The economic perception of the Ottomans during the period when they created their system was of the type they call zero-sum. Mercantilist policy is also based on such an idea in terms of international relations. The strengthening of one country is at the expense of the other. Of course, such relations still exist today. The change in the zero-sum understanding began in the West in the 18th century on an intellectual level. It did not exist before. However, it was possible for some people to gain wealth and save despite this understanding in the Western world before. With its very different conditions and factors. The Ottoman system did not allow this. If one is going to become rich in society, it is the state that becomes rich. Apart from that, they thought that a system that would grant everyone the right to life should be built”* (Genç, 2007: 530; Tabakoğlu, 2005: 4; Özel, 2000: 21).

In the establishment of this perception, agricultural and manufacturing production, trade and finance, technological level, geographical and climatic conditions and religious beliefs, sociological structure and political management styles played a role. This perception also formed the intellectual root of the continuation of the existing order. In the presence of many external factors that could disrupt the existing social and economic order, preserving the existing order was based on the logic of maintaining balance and livelihood once established. The perception of zero-sum economy was open to the idea that new wealth to be created in society would impose new imbalances that would disrupt this balance.

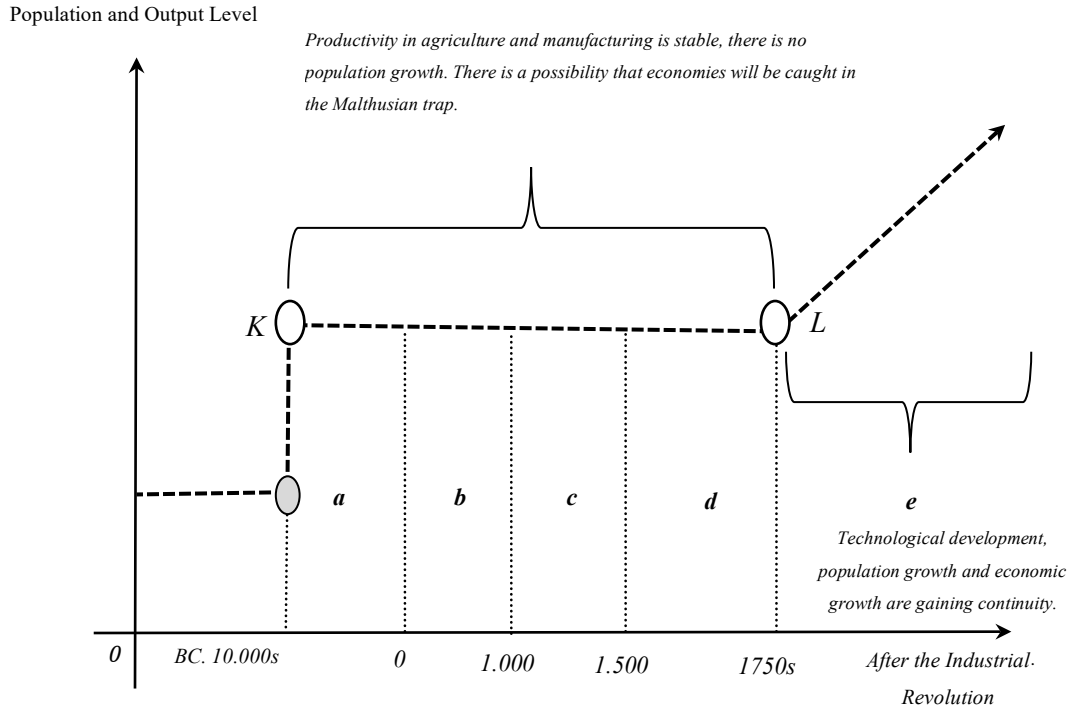
In the history of European thought, the perception of zero-sum economy had also created subcategories within itself. For example, in ancient Greek city-states, this perception was discussed more in terms of the unity of the city (cite) and justice, but later Christianity was included in the

discussion and this perception was supported by postponing the search for economic wealth. When it came to the mercantilist period, it was especially practiced in Europe to strive to become rich, but the perception that the gain of one person or state could be at the expense of another did not disappear. Moreover, the discussion included whether it was a sin for a person to follow his own interest and whether thinking about his own interest would serve the social economic interest, that is, macro growth.

This article study, focusing on Europe, was written as an introductory study to analyze the dynamics of the formation of the zero-sum economy perception in the thought world of European people and how these dynamics changed with the industrial revolution. The basic claim of the article is that ethical and religious values, as well as the objective conditions of the ages in which we live, are effective in the formation of the zero-sum economy perception and that this perception changes as these change. In other words, the change in practice and objective conditions causes a change in the world of thought and transforms the zero-sum economy perception into a win-win game where mutual gain is achieved. The expected result of this article study supports the basic claim of the article.

2. PRODUCTIVITY THAT CANNOT BE INCREASED AND ZERO-SUM ECONOMY

In European economic history, productivity and population had shown an unchanging development for ten thousand years since the agricultural revolution. These long years can be examined by dividing them into four basic periods indicated by a, b, c and d in the context of the development of the perception of zero-sum economy as shown in Graph 1. As we approached the year 0 from 10000 BC, the discussion was mostly discussed in the axis of justice, equality, social order and continuity of society in Ancient Greek philosophy. In this context, for example, Aristotle emphasized that wealth and fortune have a limit, while he argued that the goods exchanged in the market should be equal and stated that the purpose of a production process was not to earn money but to meet human needs in line with the purpose of that good. He negated trade by considering it as an unnatural crematistic (the art of earning money outside of home economy). (Aristoteles, 1982: 23-25; Aristoteles, 2015: 106-107).



Graph 1. The Process of Zero-Sum Economy Perception in European

According to Aristotle, there were three types of justice that needed to be provided in a society. These were distribution justice, correction justice and exchange justice. The first suggested that material wealth and abstract things such as honor should be distributed according to the status of the individuals in the society. The second suggested that if there was a problem in this distribution, it should be corrected, and the last suggested that this distribution should be continued so that the social order would not be disrupted, that is, it should not be disrupted through shopping. (Lowry, 1969: 46-47). It was clear that the logic behind Aristotle's classification was that it was impossible to increase the wealth of all individuals in society by increasing wealth.

Plato criticized poverty and wealth equally in his potter's dialogue (Platon, 2010: 115-117). In this interpretation of Plato, there was the idea that wealth caused a deterioration in human nature and pushed people towards virtuous feelings, while poverty prevented people from engaging in economic activity. The main concerns of these writers were to ensure the continuity of the city-state, to prevent the current social order from being disrupted, and to establish justice, which was considered a virtue. To this had to be added the impossibility of increasing social wealth.

The second period in European economic history was the period 0-1750, which was divided into sub-segments as b, c and d. In the b and c periods, the suggestions of Christianity were added to the objective conditions of practice, and these suggestions, beyond the practical conditions, in the context

of religious principles, placed a religious obstacle to the growth of the economy by restricting people's trade, profit, accumulation of wealth, living with the love of money, interest and thinking of their own interests in the context of faith. The prohibitions in the Bible and its interpretation were not based on a zero-sum economy perception, but the suggestions and prohibitions it brought were also blocking the efforts to increase productivity, which could not be increased anyway (Galatians 5: 19-23; Timoties 6: 8, 10; Hebrews 13: 5; Luka 10: 7; Deuteronomy 25: 13-16; Ezekiel 22: 12; Matta 5: 1-12; 6: 19-24-31-34; 19: 16-26).

While the foundations of Christianity were being formed, certain principles were determined. The disregard for the love of money and property, the sinful nature of man, the list of virtues and sins being determined in the Bible, the doctrine of the nearness of the end of the world, the rejection of interest, monopoly and differentiation for the purpose of establishing justice, all stood out as beliefs that obstructed the increase in wealth (Küçükkalay, 2019c: 33-36).

The d time period, which shows the period 1500-1750, corresponded to mercantilist thought. Mercantilist thought, which was implemented as an economic policy for two hundred years in states such as England, France, Spain, Italy and Germany, included the process of revealing the perception of zero-sum economy and determining the economic policies of national states accordingly. This doctrine assumed that world wealth was fixed, that a state would be rich when it had a lot of money, just like a person, and that money was made of gold and silver, and that a state's wealth would only be at the expense of other states (Haney, 1962: 118-119). Because according to this idea, the elements that constituted the wealth in the world were gold and silver, and their amount was fixed. For this reason, the wealth of a country could only be realized through the impoverishment of another country. For this reason, the main condition of the wealth of countries was that they had as much gold and silver as possible (Küçükkalay, 2021a: 66-68).

This idea was also on the agenda in the philosophical and literary works of the period. For example, M. de Montaigne expressed this idea in his Essays as follows: “*The Athenian Demades condemned a fellow countryman who sold the necessary things for funeral ceremonies because he expected to make a lot of money from this business, and this money could only come from the deaths of many people. This cannot be called a just judgment, because no profit can be made without harming others, and therefore every kind of profit must be condemned. The merchant profits from the dissoluteness of the youth, the farmer from the increase in the price of wheat, the architect from the collapse of houses, the lawyer from the lawsuits of men, and even the fame, honor and duties of the clergy depend on our death and our evil deeds. The Greek poet Philemon used to say that no physician enjoys the health of his friends, and no soldier enjoys the peace in his country. Worse still, if anyone examines his inner self, he will see that many of our secret wishes are born and nourished at the expense of others*” (Montaigne, 2011: 152).

This approach was supported by the understanding of natural theology, that is, the idea that God created the regions of the world with different riches, that therefore trade would only be provided by the outflow of surpluses, and that equality should prevail in the exchange of these surpluses (Hengstmengel, 2023: 100-101). If there was no equality in exchange, then some countries would become richer while others would become poorer. In other words, it did not seem possible for two countries to become rich at the same time because the wealth in the world was fixed.

These ideas expressed were also supported by the objective conditions (dynamics) of the eras of European societies. These conditions can be grouped under seven main headings: (1) agriculture, (2) trade, finance and money, (3) technology, (4) manufacturing production, (5) geography and climate (6) religion, sociology, politics and (7) population. With the effects of each of these conditions in different proportions, the perception of a zero-sum economy was supported until the industrial revolution and the impossibility of increasing wealth and ensuring continuity in this increase was accepted.

The agricultural sector had some characteristics that it carried until the industrial revolution. Land had an overwhelming weight in the production of national income among the production factors (along with labor, capital and entrepreneurs). While 95% of the total national output was obtained from the agricultural sector, 90% of the total employment was working in agricultural production (Gimpel, 1997: 29). This meant that 90 people in a society could produce and provide food for themselves and only ten other people. Therefore, it was impossible for agriculture to be commercialized, to produce surplus that would allow other sectors to develop and to be offered to the market.

According to Simon Kuznets, the development of agricultural production in economic history constitutes one of the conditions for the industrial development of a country. The agricultural sector supports growth and development by providing products, markets, factors, raw materials and foreign exchange (Kuznets, 1963: 39-82; Hisarlı, 1989: 241-242). The overwhelming feature was subsistence production, which meant that surpluses rarely occurred and that the economy generally produced at a level sufficient to meet needs.

The distribution of land ownership was unequal, the tools used in production were primitive and the productivity was 1 to 5. This level could only reach 1 to 8 in fertile lands, and today this ratio has reached 1 to 25 (Küçükkalay, 2021b: 151). The small volume surplus product in the agricultural sector was also used to meet the needs of armies, cities and administrative centers. For example, in the ancient Greek city-states, the Roman Empire, the Ottoman Empire and feudal Europe, there was always a critical level of food products to meet the needs. The Greeks tried to overcome this by colonization, the Romans by imperialist policies, the medieval people by the continuation of the class-based social structure and regional economies, and the Ottomans by taking agricultural lands into state ownership and controlling the markets (Martin, 2014: 108-114). In other words, the sole concern of the administrators was to ensure

the sustainability of meeting the needs of the people and the state without any disruption due to the inability to increase productivity and national income.

For this reason, it did not seem possible for markets to support and assist each other as outputs. The commercial goods offered to the market were limited, international trade was non-existent and was carried out on specific goods. Because the trade routes were broken, insecure and risky, and the means of transportation were primitive. For this reason, transportation costs could reach several times the amount of goods carried. Long-distance trade consisted of goods such as spices and fabrics, which were light in weight but high in price, and these goods were consumed by the nobles of that period (Somçağ, 1994: 30)

In addition to these, the use of money was limited. The economy was beyond the essence of the barter economy. Profit rates were low, there was no capital accumulation. Therefore, there were no banks and financial institutions. Investing was not rational and it was impossible to find funds. Although credit and money transactions were not eliminated, they had problems. Large investments could only be realized with the help of the kingdoms (Pirenne, 2010: 137-140). For this reason, it did not seem possible to increase trade and capital. The failure to achieve monetary union and the incompatibility of money and market volume with each other further deepened this situation.

Until the industrial revolution, technology could not solve the energy problem. Fossil fuels had not yet been found to replace the energy obtained from water, wind, animals, wood and charcoal. Equipment, tool skills and fuel were inadequate (Heaton, 1985: 127). Production was mostly based on simple manufacturing done by hand and techniques carried out on traditional experiences. For this reason, the mechanization of production could not be achieved. Moreover, there was no interest and orientation in research and development that would provide these developments. Fields such as medical techniques, construction, architectural tools, mining, road and bridge construction were carried out with traditional knowledge and tools (Gimpel, 1997: 1-28). In terms of technological efficiency, the workshops were inefficient. Materials were mostly made of wood, and some cathedrals took a very long time to build (Epstein, 2014: 216-228).

Manufacture production was related to technological problems. First of all, manufacture production showed dependence on agricultural output in addition to this technological inadequacy. It was a hand-made production that aimed to meet domestic and regional needs, without specialization and laborization processes. There was a unity, not a division and specialization, between raw material resources, production process, producer, production tools and markets. Manufacture producers were under the control and pressure of the guild structure, and there was no development of market economy and competition in this structure.

These internal dynamics were supported by three external dynamics. The first was the geographical structure and climate conditions, the second was the sociological structure, political governance and religious structure of the European society. The geography of Europe supported the formation of a zero-sum economy perception at some points. It was surrounded by seas on three sides and it was not possible to go beyond these seas until the end of the Middle Ages. The continent's land connection was blocked by the Ottoman Empire until the 1900s. Previously, this blockage was made by the Umayyads from the Iberian Peninsula. The northern regions of the continent were not suitable for dry farming and the European continent was poor in minerals, especially gold and silver. The continent's climate was mostly humid and consisted of forests and swamps. This was accompanied by climate fluctuations, years of famine and crop failure due to agricultural diseases (Blij and Müller, 2000: 43-55).

The second external dynamic consisted of the religion, sociological structure and political system trio. Until the Western Christian world was divided by Protestantism and a second sect in the 1500s, the Catholic sect was dominant. The essence of the sect was based on the sinful man's efforts for salvation in this world, where he was sent as an exile, and his support of this effort with his actions. For this, the Pope, who received his authority from Jesus through the Apostle Peter, and the representatives of the church organization he was the head of, were required to obey. The world was not the natural habitat of man, but a place where he was temporarily exiled. Therefore, there was no need to produce much in this world, to work for profit and wealth, and to produce much, because this was not the main purpose of man (Gündüz, 2007). Wealth, individualism, accumulation of wealth, searching for wealth in this finite and sinful world and having selfish feelings were considered sinful. This belief broke people's desire to increase wealth and made it unnecessary to be rich and increase production.

This religious belief supported each other with the sociological structure and political system. The sociological structure of European society was based on a class-based social structure. Nobles were at the top of society, and merchants, artisans and farmers were at the bottom (Huberman, 1995: 11-26). The three main needs of society, namely national defense, production and administration, depended on everyone fulfilling their duties in this class structure. The continuity of society could only be possible if everyone fulfilled their duties. In other words, it was not possible to rely on the spontaneous price or central planning within the market mechanism to solve the questions of what to produce, how much to produce, how to produce and for whom to produce, which constitute the field of economics. The answers to these questions were answered by social class and everyone fulfilling a duty. For this reason, until the industrial revolution, class differentiation was rigid and transitions were not allowed. Communalism was at the forefront and individualism was a despised behavior. Urbanization and living conditions were poor. There was no hygiene. There was no sewage system, water network or roads to provide intra-city transportation (Stannard, 2000: 135-145; Kemmerich, 2023: 33-39).

Political administration was shaped as either feudalism, monarchy or constitutional monarchy until democracy came into effect. The burden of political administrations and the problems they had to deal with did not only consist of fulfilling the administrative task. It was also necessary to ensure national security, collect taxes, finance a large army, establish a monetary system and ensure social continuity. These were extremely costly activities and it was not rational to establish a central administration to fulfill these tasks from the center. Because collecting taxes was costly and the main thing was to collect taxes with the least cost or to withdraw from the state and relate tax revenues to state expenditures. For this reason, kings preferred to govern their countries in small regions and spread the cost throughout the country (Poggi, 2016: 33-34). Thus, regional economic units were harmonized with the logic of the political method. The small size of the production units prevented large-scale industrial production and caused the regional units of the country to consist of self-sufficient economic units.

Another external dynamic of the areas a, b, c and d shown in the graph was that the population continued in a fixed line without increasing. The population increase was not too much, but the failure to increase efficiency in production caused economies to be caught in the Malthusian trap. According to Malthus, population increase (geometric) and food products increase (arithmetic). This meant that the population increased more than food products, although the increase tendency was low (Malthus, 1834; Malthus, 2017). This meant that societies were caught in a trap called the Malthusian trap. This trap explained the reasons why societies were falling into poverty and the sources of poverty. The most basic reason for this was that the population prevented the increase in food goods due to the inability to increase production, that is, food goods.

During the period in question, there was an increase in population and food products, but the former increased more than the latter. There were some reasons why population growth was not cyclical and did not become continuous. Medical techniques were primitive, the average survival period was short, deaths during birth and infant mortality were common. There was no treatment for diseases such as plague, syphilis, malaria, and leprosy, and epidemics followed each other at certain intervals (Nikiforuk, 2020). For example, in the great plague of 1347, 1/3 of the European population lost their lives. Malnutrition and poor living conditions triggered this situation. Urbanization was only on the scale of small towns with a population of 5 to 10 thousand, cities such as London and Paris had a population of around 100,000 and the majority of the population lived in the countryside. The population density was concentrated along some rivers, around old Roman cities, in areas close to raw material sources and in production areas, and the cities did not have a structurally finished design (Benevolo, 2006: 30-78; Bacci, 2000).

For the six main reasons stated, there seemed to be no logic in increasing production, increasing efficiency and increasing welfare within an economic structure. These characteristics, which continued for many years, must have dictated to people the idea that these characteristics would not change.

Therefore, it was pointless to wait for the logic that the economy could grow. The common belief was that the economy was at a subsistence level, that what was important was to maintain this level and that, let alone growth, it was important to prevent it from falling below this level. This meant that the perception of a zero-sum economy had taken root in the minds of European statesmen and people. This perception would slowly begin to change in the 1500s and after the 1750s, the perception of a zero-sum economy would be destroyed and replaced by the idea that growth was possible and sustainable.

3. TRANSFORMATION IN THE PERCEPTION OF ZERO-SUM ECONOMY

By the 1700s, due to the developments that had been taking place for several hundred years, the belief that productivity, and therefore the output of production, could be increased had slowly begun to take hold in the minds of European people. For this reason, mercantilist economic thought would be criticized by A. Smith, who is considered the founding father of economics, and at the very beginning of his book, Smith stated that the wealth of a nation could be measured by the production of that nation during a year (Smith, 2020: 331-361, 23, 49). According to Smith, the wealth of an economy did not depend on increasing agricultural production, as the physiocrats said, nor on accumulating gold and silver, as the mercantilists said, but on increasing the country's production.

In fact, Smith was on the optimistic side of classical economics, stating that in the long run, the economy would grow continuously due to division of labor and growth in scale (Smith, 2020: 33). J. B. Say was also optimistic about the future and thought that the economy would grow. He even put forward Say's law, which states that it is good to produce continuously and that everything produced will be consumed and the economy will grow (Savaş, 2000: 298; Kunt and Lautzenheiser, 2011: 212-214). When Say said, "*every supply creates its own demand*", he was actually indirectly suggesting that production was the main source of a country's wealth, and therefore countries should produce as much as they could.

A. Smith also developed the theory of absolute advantages, and D. Ricardo developed it a little more with the theory of comparative advantages, emphasizing that both countries would gain by opening up to foreign trade, that is, countries that trade mutually without protection (Küçükkalay, 2019a: 298-302). According to the authors, it would be possible to increase production and increase the wealth of trading countries through trade, in other words, contrary to the perception of a zero-sum economy, to increase wealth without creating poverty. Savings in the economy would be invested, causing the economy, that is, the national income, to grow. Therefore, saving was an important virtue. These ideas would be developed and advanced throughout the 19th century.

The ability to increase efficiency in the economy triggered another debate in the background. This debate was whether the pursuit of one's own interests and wealth would serve society. In the Middle Ages, this activity was considered a sin and was forbidden. In the 17th century, some, such as B. Mandeville, stated that this activity was sinful but served society (Sayar, 1975: 97-122), while a group,

including D. Hume and A. Smith, argued that these activities were not sinful, that if they were considered in this way, God would be made a party to evil, and that on the contrary, these activities were both legitimate and had beneficial consequences for society (Küçükkalay, 2019b: 152-171). Thus, the idea that the interest of one person or state could be realized at the expense of another, based on the perception of a zero-sum economy, was replaced by the conclusion that the interest of one person or state could also be positive for the interest of another person or state. In that case, if everyone and every state pursued their own interests, this would have positive consequences for humanity.

In the transformation of the perception of zero-sum economy, not only developments at the level of thought but also developments in theological, technological and political fields had an impact in the period of 1500-1750. The most important of these effects came from the Reformation movement, which was a theological transformation. With this movement, the belief barriers that prevented the European people from producing and becoming rich were removed, and people were made to turn their faces to this world. While the personal and institutional practices of the church institution and the clergy that hindered society were removed from the religious, economic and political fields, this movement, symbolized by M. Luther, prepared the ground for the European people to turn their faces to the world. Now, holiness, mysteries, sinful people, sociality, people thinking about their own interests and the social and political importance of the clergy were removed from the agenda (Birken, 2003: 17-33). In fact, this situation has been stated by M. Weber that these new developments, namely Protestantism, gave spirit to Christianity (Collins, 2017: 68-74; Kaya, 1999: 40-54).

These developments were further strengthened by the intellectual developments called Enlightenment, which began in the 16th century. Enlightenment was accepted as the turning of man to himself, freeing himself from external pressures such as religion and tradition, and sanctifying his mind. The basic principle in Enlightenment was that man dared to use his mind (Goldmann, 1999: 15-16). There were three basic principles of enlightenment. The first principle was the destruction of all myths, superstitions, religious beliefs and traditions that existed and took away people's freedom. Therefore, all the principles that prevented people's behavior and turning their face to the world before this century were destroyed. Secondly, there is the founding, which is based on liberalism, rationalism, progress and science. In other words, there is an effort to create a new society and economic order, and this order is brought under the dominance of reason (Çiğdem, 1993: 13-14). The third element showed itself in the fields of philosophy of knowledge, existential philosophy and morality. According to this, there was no definitive source of knowledge and knowledge could only be obtained through reason. According to existential philosophy, there was only matter. In the field of morality, there was no universal moral understanding (Cevizci, 2008: 23-36). Accordingly, elements such as science, reason, progress, freedom and individualism came to the fore.

The developments experienced in the 16th century were not only experienced in the dimension of thought. At the same time, the developments in the practice of European societies played important roles in the transformation of their perception of zero-sum economy. The geographical discoveries that gained momentum towards the end of the 15th century paved the way for European people to meet new riches and to see that there were other worlds and riches geographically. With the beginning of the dissolution of the feudal political system, the establishment of new organizations was realized thanks to the strengthening of national states. With the enclosure movement, the way for private property in land was opened and the efforts to increase productivity triggered by individual property gained speed. These were accompanied by new investments, developments in money, banking and insurance. New technologies were developed in transportation and for the first time, the relationship between technological knowledge and economic production was realized.

From that date until modern times, macro growth became the basic economic goal of societies and was sanctified. The transformations in this 250-year preparation process actually coincided with the reasons necessary for the industrial revolution to occur. Developments in agriculture, industry, technology and mechanization of production, population, urbanization, transportation and the level of thought had an impact as practical developments to destroy this perception (Allen, 2011: 27-40; Rider, 1995: 179-235; Berg, 2010: 569-587).

The economic developments experienced in practice and reflected in the indicators also had an impact on the change in the perception of zero-sum economy. Thanks to this, the idea that productivity could be increased and that this could be sustained began to replace the perception of zero-sum economy. In the period 1800-1950, there was an increase in the populations of European countries, the USA, Asia and Africa. While the world population was 906 million in 1800, this figure reached 2.4 billion in 1950 (Cameron and Neal, 1997: 198). This increase in population was also seen in the increase in the population density of the continents and the increase in cities in Europe (Fontana, 2006: 156).

The increase was not only in the population. There was an increase in the amount of iron, cotton and coal production and the length of railways in all of Europe. In 1800, iron production in all of Europe was 0.6 tons, cotton production was 0.04 tons and coal production was 12.9 tons. Railways were almost non-existent. In 1913, these figures were 45.9; 2.79; 646.8 tons respectively, while the length of railways reached 362,200 kilometers (Fontana, 2006: 178; Parasız, 2014: 156). There were also significant increases in the production of industrial goods in some European countries (McKay, 2000: 760). These increases were also accompanied by increases in the volume of world trade and transportation. For example, while the volume of world trade was £997 million in 1851, this figure had reached £10 billion in 1913 (Hamitoğulları, 1986: 197). There was also an increase in the tonnage of European steamships between 1850 and 1910 (Heaton, 1985: 159).

4. CONCLUSION

The most important result of this article is to explain and discuss, based on the literature, why people and states have a zero-sum economy perception in the world in general and in European economic history in particular, and what the dynamics of this perception are. This result is also supported by the identification of the main elements of the change in the perception of zero-sum economy. World economic history has been a linear process progressing in the interaction of economic practices and economic thoughts. This process has been a kind of cyclical progress process in which some thoughts are affected by practice and some practices by thought.

The perception of zero-sum economy, which existed for a long time in European history, originated from the practices and beliefs of European societies and economic policies were determined in accordance with this perception. This perception was maintained throughout the Middle Ages and during the Mercantilist thought period. In fact, traces of this perception can be found even in states such as the Ottoman Empire. It was based on the idea that the negative effects of hundreds of factors that would disrupt the established social and economic balance could be eliminated, but the balance that had been achieved could be maintained. For this reason, increasing productivity and getting rich did not seem possible. Societies perceived the world passively and did not have a belief in economic enrichment. Indeed, the perception of zero-sum economy also had theological, cultural and moral dimensions. Especially when the dominance of Christianity in the Middle Ages is taken into consideration, the pacifist human approach brought by this religion to wealth, fortune, world perception, money and similar issues also dictated the futility of efforts to increase productivity and production output in European societies.

However, with the industrial revolution, the relationship between wealth and production was established, and the idea that countries could grow economically by increasing production in some way (productivity, technological development, development in scientific knowledge, etc.) came into being. From the industrial revolution to the present, macroeconomic growth has been associated with the welfare of societies and blessed. In this context, discussions have begun as to whether economic growth is a good development or not. However, these discussions remain aside as the subject of another study.

YAZARLARIN BEYANI

Katkı Oranı Beyanı: Yazar, çalışmanın tümüne tek başına katkı sağlamıştır.

Destek ve Teşekkür Beyanı: Çalışmada herhangi bir kurum ya da kuruluştan destek alınmamıştır.

Çatışma Beyanı: Çalışmada herhangi bir potansiyel çıkar çatışması söz konusu değildir.

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