

## CHRONOLOGY OF THE INTERACTION BETWEEN THE INDUSTRIAL REVOLUTION AND MODERN TOURISM FLOWS

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**Abstract**

After the second half of the 18th century, the world has witnessed an important event that affected social life in many ways. Thanks to the industrial revolution, which started a process in which machines replaced brawn, the economic and social life of the society was rearranged. The effects of this new order, in which the production structure began to break away from the traditional line, have survived to the present day, albeit by changing form. In the light of this information, the study aims to determine the effects of the industrial revolution on modern tourism movements from the beginning of the period to the present day. The fact that this study, based on resource scanning and using secondary sources of information, examined the issue with chronological fiction makes the study important for its contribution to the literature. According to the results of the research, it has been seen that industrialization efforts, starting with the industrial revolution, have an important role in shaping modern tourism movements. The industrial revolution has led to the growth of leisure and income, which are the most important resources for tourism activities. In addition, transportation and communication industries, which are important outputs of technology, continue the effects of industry on the development of modern tourism movements.

### 1. INTRODCUTION

Human history, which is quite ancient, has a significant influence on the emergence of the human way of life and its physical structure in modern society. The adventure of Man, based on hunting and gathering, has changed in parallel with the development of his civilization and has passed through various stages to the present day. The biggest defining element of this change in this adventure of humanity has been their needs. Human beings, whose tendency to dominate nature, depending on the qualities of needs, has constantly kept alive, have contributed to the formation of today's society with different inventions and their search for different life styles.

After hunting and gathering, it can be said that society shaped its social life with three major revolutions. These great revolutions gave their name to both the society and the economic model of the period. With the beginning of settled life, agriculture began and the

greatest social change in history occurred. During this period, the society was characterized as an agricultural society, and the economy as an agricultural economy. Society, shaped in the context of agricultural economics, began to change after the Industrial Revolution. The developing industry accelerated the transition of the economy from an agricultural economy to an industrial economy, and this led to the emergence of an industrial society. Thanks to the information and communication technologies that developed after the second half of the 20th century, the society began to be called the Information Society. Economy began to be known by names such as new economy, information economy, digital economy (Şengel, 2019). The development of information and communication technologies and its influence on the world have not destroyed the industry, but on the contrary, it has made it more effective by gaining a different identity. It can be stated that agriculture, industry and information phenomena expressed by different researchers as stages, changes or waves (Toffler, 2008; Çukurçayır & Çelebi, 2009; Aksoy, 2016) display an image that benefits from one another in the modern world and adapts to the modern structure of society.

Although it has a historical background to the point the world has reached today, it can be said that it constituted one of the important touchstones of the industrial revolution that emerged in the 18th century. Especially the mass production affected the production-consumption relationship and modern definitions of disciplines such as production, management, marketing, and economics based on the relationship between the two phenomena began. The new dimension of the relationship between production and consumption has also been the source of the emergence of new consumption patterns. Öcal and Altıntaş (2018) emphasize that the emergence of substitution between labor and machinery as a result of the industrial revolution not only changed the history of humanity but also the socio-economic structure of the society.

In the light of this information, this study aims to discuss the role of the industrial revolution in modern tourism movements as a new consumption type that emerged at the end of the 1800s and as a developing discipline from a chronological perspective. Studies explaining that the industrial revolution had important effects on the emergence of modern tourism movements are frequently discussed in the literature. However, in these studies, the chronological course of the development of industry and its effects on modern tourism movements is ignored. As a matter of fact, since the period when the industry was the subject of revolution, it has shown a dynamic development course contrary to a static image and has affected life in many ways. In this respect, it is thought that this study will make an important contribution to the literature, since the role of industrial developments in shaping modern tourism in the period after the industrial revolution has been handled with a chronological perspective.

## **2. INDUSTRIAL REVOLUTION**

The Industrial Revolution represents a great social change that started in the 18th century in England. Although it is known that this change has a multidimensional identity, the most important effects occurred in production (Saygılı, 2013). It must be admitted that the production structure before the industrial revolution was simpler and more primitive than it had been after the industrial revolution. In this sense, the production before the industrial

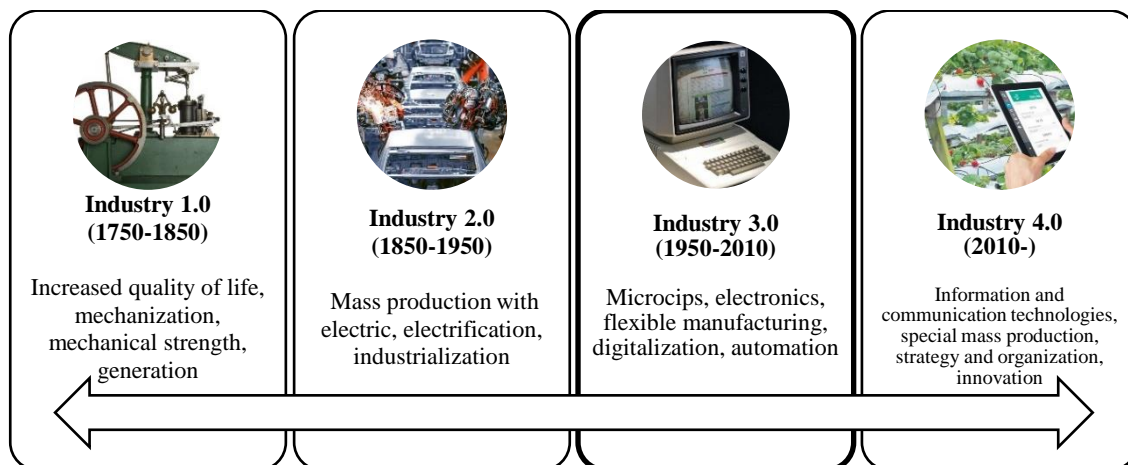
revolution was carried out with simple tools and a non-professional team such as family, usually in workshop environments. The main source of energy was brawn. This production structure based on human and animal labor has undergone a great change with the industrial revolution. The industrial revolution has been the source of a change in the production structure that it has carried from the workshops to the factories, from the brawn to the power of the machines. The invention of machines that rely on steam power led to the further development of this production structure and to a mass production (Günay, 2002).

The industrial revolution and the innovations that emerged after it brought the relations between some phenomena to gain a different dimension. These dual dimensions are given below (Çetin, 2002);

- Production-consumption
- Time-place
- Item-money
- Nature-human
- Capital-labour
- Person-education

Thanks to the revolution that started in the eighteenth century, an increase in labor productivity has been achieved. This situation brought about an exciting process that enabled the transition from piece rate to mass production. This process has moved to a more advanced point in today's information society with the effect of its correct transition (Maillet, 1983). While technological developments have increased mechanization and production capacity in this context, developments in transportation and communication have increased the logistics and communication facilities that facilitate the delivery of production to the consumer. In the period after the industrial revolution, industrial activities continued to exist by developing and changing form.

The industrial revolution started on a certain date and since it does not have a static character, it has been discussed in different dimensions by constantly changing. The process, which started with the 18th century, continued its development in four periods: Industry 1.0, Industry 2.0, Industry 3.0 and Industry 4.0. Therefore, the industrial revolution, which is expressed as industrial transformation, is considered in four different ways with a perspective consisting of different periods (Çevik, 2017).



**Source:** Adapted from (Rojko, 2017)

For these industrial periods, some dates are stated regarding the start and end. However, it may not be possible to specify such an exact date. Because the developments in certain industrial periods were also used in later periods. It does not only express the dominant industrial understanding of that period.

Industry 1.0 is used to describe the first era of the Industrial Revolution. It covers the period between 1760 and 1830. The period when the mechanization efforts in production started to develop is known as the industry 1.0. It triggered two important developments in terms of social economic living conditions. The first of these developments can be found in the textile industry. With the use of steam-powered cotton spinning machines, the production and productivity of a factory has increased significantly. The other development is related to the use of coal. The cost of iron production has decreased due to the use of coal as fuel as a substitute for wood (Kharb, 2018).

Industry 2.0 covers the process starting from the second half of the 1800's and continuing until the end of the second world war. This is a period in which industrial products develop in terms of both volume and variety. Electrical, electronic and mechanical devices and cars have an important place in developing technology and industrial moves. Especially, automobile production started and became widespread in this period. Industry 2.0 products continue to be widely used today. Depending on the dynamics of this period, management theories that involve a process based on shaping production are developing. Demand in the Industry 2.0 process is shaped based on volume and diversity. This demand structure is described as "Stable Market". Especially Henry Ford, one of the innovators of the period, eliminated the lack of supply in terms of product volumes by using mass production assembly lines. Taiichi Ohno, on the other hand, mediated an important stage in product diversity with the system he developed (Yin et al., 2018). Thus, progress was made on issues related to volume and diversification, which were critical for the production system of the period.

Industry 3.0 started in the second half of the 20th century and continued until the 2000s. Today, its effects and use continue. The shaping of the industry 3.0 period is based on developments such as computer hardware and software, rapid development and integration of network and digital technologies. This process is extremely important as it constitutes the first stages of the transition to the information society. Thanks to Industry 3.0, a new process has been started where value chains are integrated with each other with the help of cyber physical systems, information technologies, automation and dynamic data processing. The economic structure at the regional level, which determines the current conjuncture and future of the world, has gained an international character thanks to information technologies and modern production tools. Through cyber systems and the internet, data in different formats are analyzed, new perspectives are gained, and it becomes possible to produce higher quality at lower costs (Özsoylu, 2017). These developments are also an indicator that supply exceeds demand in production. Because producing better quality products with lower costs indicates a consumer group that has adopted the options and preferred the product with higher marginal benefit.

The starting point of the Industry 4.0 concept is Germany. The concept was introduced by a project created by Germany with the aim of advanced technology. It was first pronounced in 2011 at the Hannover Fair. The ultimate goal in the project is to transform production and production systems into a computer-based approach. The emergence of the

project is no accident. This project, which was inspired by the three industrial revolutions that emerged with the industrial revolution before, has an important role in being considered as industry 4.0 (Banger, 2016). This chronological and tracking system 4 clearly demonstrates that four different industrial processes are affected by each other. Therefore, although there are certain starting and ending dates, it is possible to see the effects out of these dates.

Industry 4.0 has emerged as a promising technology framework used to integrate and expand production processes at both intra-organizational and inter-agency levels, starting with the 2010s. The emergence of Industry 4.0 has taken place through developments in information and communication technologies. Developments and technological advances in Industry 4.0 provide solutions suitable for the increasing knowledge needs of manufacturing industries. This applicability is evidenced by the fact that a growing number of businesses around the world are exploring the benefits of digitizing the horizontal and vertical chains of businesses in the process of becoming leading digital enterprises in tomorrow's complex industrial ecosystems and adopting Industry 4.0 (Xu, et al., 2018).

The development of the term Industry 4.0 is increasing day by day. On the one hand, the conditions experienced, on the other hand, the gradually changing social, economic and political changes that trigger this development show that this development will increasingly continue. It is estimated that the development in the Industry 4.0 process will become more evident with the following elements (Lasi et al., 2014);

- **Short Development Periods:** Development or innovation periods are getting shorter. High innovation capability becomes an important success factor for many businesses.
- **Individualization on demand:** The transition from a seller's market to the buyer's market has become apparent in recent years, which means buyers can define the terms of the trade. This trend leads to increased customization of products and, in some cases, individualized products.
- **Flexibility:** Due to new producer and consumer requirements, higher flexibility is emerging in product development, especially in production.
- **Decentralization:** Faster decision-making procedures are required to deal with the stated conditions. For this, organizational hierarchies need to be reduced. The current conjuncture prepares a suitable environment for this.
- **Resource efficiency:** In the context of increasing scarcity and the resulting increase in resource prices and ecological aspects, social change requires a more intense focus on sustainability in industrial contexts. A system can be established that adopts an economic and ecological increase in efficiency as a principle and can be achieved.

The conceptual use of the Industry 4.0 phenomenon takes its meaning from the theoretical handling of the phenomenon. Industry 4.0 is used theoretically in the article published by Kagerman et al. (2013) for the first time. This scientific study is the symbol of the transition of the world to a new era. This new era is described as Industry 4.0 and it has its own dynamics that shape this process. Then, in 2013, the theoretical structure related to the concept gained an official framework with the report published by the German National Academy of Science and Engineering (Soylu, 2018). Thus, the concept of industry 4.0 has been placed on the world's agenda in many respects and has been used as a tool to increase productivity in many areas.

### 3. THE ROLE OF THE INDUSTRIAL REVOLUTION IN THE CONSTRUCTION OF MODERN TOURISM MOVEMENTS

#### 3.1. *Tourism and Industry 1.0*

Tourism movements, which showed significant developments until the industrial revolution, further accelerated its development with the Industrial Revolution. Along with the industrial revolution, two elements accelerated the development of Tourism movements. The first of these is the understanding of freedom and democracy that started in Europe and spread all over the world. This new social order led by the French Revolution of 1789 brought along a bourgeois and rich social stratum. In this new social structure, people wanted to get means of transportation, to visit distant places and to experience differences, and this understanding mediated the development of tourism. The second is the emergence of steam powered machines. Thanks to this development, significant improvements were made in transportation, and tourism movements reached a massive dimension with the discovery of steam ships and locomotives and the development of the automobile industry (Usta, 2014). Zengin et al. (2017) discusses the effects of the Industrial Revolution that prepared the ground for the mass level of tourism as follows;

- Invention of steam powered engines and their use in the transportation industry,
- The increase in income due to the mass production of production,
- The development of rail transport with the development of rail systems and the invention of locomotive trains,
- Decrease in working hours as a result of mechanization,
- The emergence and increase of leisure time in which the working class can do activities that will enable their personal renewal
- Increase in paid or unpaid vacation rights,
- Protection of workers' personal rights with the increase in union activities,
- Increasing urbanization phenomenon.

With the industrial revolution, living shifted from agricultural (rural) regions to cities where industry is concentrated. In the early stages of the industrialization process, although the working hours of people were high, this situation changed over time and working hours started to decrease gradually. Thus, the leisure time of the workers, which belongs to them and mediates their rest, has started to increase. Travel and tourism are among the most important activities in which these leisure times are spent (Weaver & Oppermann, 2000).

During this period, the first organized travel was organized by Thomas Cook and this organization was accepted as the beginning of modern tourism. Cook brought a group of 570 people to the "Antialcoholism Congress" to be held in Loughborough in 1841 by train for a fixed fee per person. The success of the first organized travel encouraged Cook and in 1845 he organized a 350-person tour to the city of Glasgow. Participants on the tour were welcomed by the municipal band in Glasgow with cannon balls. These travels brought along processes such as the establishment of the first tourism (travel) business by Thomas Cook, the first World tour in 1872 and the development of voucher systems for individual travel (Öztaş & Karabulut, 2006). In particular, the issuance of agency tickets prepared by Thoomas Cook,

the introduction of a coupon system instead of payment to hotels, the initiation of installment payments, encouraging young people to participate in travels, and organizing suitable trips in terms of cost and time for business innovations make him the person who started modern tourism movements (Gürdal, 1990). In addition, there are the most distinctive features that make the travel by Thomas Cook the beginning of modern tourism movements. These are given below (Cook, et al., 2016);

- It is the first tour produced, sold and escorted,
- Marketing, finance and business skills were used for the tour,
- The cumulative group power was used for the tour and discounts were provided in the prices of the tour as a result of negotiations,
- Collective and organized action was taken at meals, especially lunch,
- Producers and consumers came together through the intermediary. Thus, the producer gained the opportunity to make savings while producing and the consumer while consuming.

### **3.2. Tourism and Industry 2.0**

Industrial Revolution-II. During the period between World War II, supply and demand side developments related to tourism were experienced in the world. According to the 1854 Royal hotel guide, there are around 8 thousand hotels in England. While approximately 998 thousand people traveled from Europe to America in 1904, this statistic increased to 1 million 690 thousand in 1914. While around 177 thousand people traveled from America to Europe in 1906, this number increased to 286 thousand in 1914. Imperial Airways, which was established in England in 1924, carried 11 thousand passengers in 1925. This number increased to 24 thousand passengers in 1930 and 200 thousand in 1935. In 1935, 2,000 passengers traveled on a single ship (Queen Mary) (Göksan, 1978).

With the Industrial Revolution II. in the period between World War II, important developments were experienced in the field of hotel management. Ellsworth M. Statler was the first successful entrepreneur of the chain hotel concept, starting in the early 1900s, by establishing hotels in several different locations. It opened its first hotel in 1901 and increased rapidly to over 10 hotels. Statler, which brings the hotels under a single management, states that this application will include some economic and financial advantages. Despite this optimistic effort, chain hotels II. It has reached the desired level in the period after World War II (Batman, 2018).

In the 1920s, the economic aspect of tourism made itself felt very much. Thus, tourism has gone beyond being an ordinary and daily event in these years and has taken an important place in the economies of countries due to its foreign currency generating feature. In this respect, tourism has started to be considered as a science that has a predominant economic aspect. Until the great economic depression of 1929, especially towards the end of the 1920s, the tourism industry reached its highest level of development. However, the great economic crisis at the beginning of the 1930s, which affected the whole world, and the II. World War has slowed the rapid development in tourism significantly (Zengin, 1999).

### **3.3. Tourism and Industry 3.0**

The 2nd World War had negative effects on the whole world in many aspects including economic, social and psychological. While the wounds of World War I have not healed yet, in a short time, II. As a result of the World War, the negative effects have become more evident. After the war, the world again sought renewal and rehabilitation and positive developments were experienced in certain areas. Tourism is one of the areas where the most positive developments that took place after the end of the Second World War were clearly felt. Because the aircrafts produced for war came to nothing after the war and these planes started to be used in civil aviation. Besides, Erdoğan (1995) II. He states that as a reason for the development of tourism movements after World War II, the aids and grants made by the USA to European countries have an important share. Thanks to these aids, Europe experienced an economic recovery and prosperity increase in a short time and became the most determining region of international travel movements in terms of both supply and demand.

In 1952, the first Charter flight was made and with the invention of the jet engine, tourism travels began with these planes. Roney (2011) provides information that supports this situation. As a result of the developments in the aviation industry in the 1950s, in 1958, Boeing 707 type jet planes belonging to Pan American Airlines started daily flights on the American and European routes. In the 1970s, developments in each of the scheduled flights, national air companies and other modes of transport played a major role in the transformation of tourism into a massive activity.

After 1950, tourism movements have experienced such a development process that they started to develop faster than the world's GNP. As a matter of fact, it has become the world's largest industry and one of the most important business areas as of 1992 (Bahar & Kozak, 2012).

One of the most prominent factors that improved tourism activities in the post-war period is the developments in information and communication technologies (ICT). The effects of ICTs on the tourism industry can be handled in three stages. The first stage is the Computerized Reservation System in the 1960s, the second is the Global Distribution Systems in the 1980s, and the third is the internet technology that started in the 1990s (Akyol & İbiş, 2017). The beginning of these is the developments in central distribution systems. In the 1960s, developments in this field started to occur. In 1960, American airlines established the Computerized Reservation System (CRS), a unique computer system for reservation and ticket processing. When this system provides financial advantages, it has been developed and updated as Sabre since the mid-1970s to include other travel businesses. In the 1980s, Central reservation systems emerged and became available all over the world. These distribution systems, known as the Global Distribution System (GDS), are still in use today and there are four different systems, such as Sabre, Worldspan Galileo and Amadeus (Reece, 2010).

### **3.4. Tourism and Industry 4.0**

The history of the Internet is based on the networks established in the communication of US Defense Ministry personnel in projects in the 1960s. Getting good results in this regard has increased the importance of the internet and over time, WEB1 technology WWW (World



Wide Web) has entered human life in the 1990s (Şengel, 2014). Thanks to this technology, corporate web sites have started to form and information has spread rapidly. However, in the early 2000s, there was a development that increased the speed of information spreading much higher. WEB 1.0 technology has been replaced by WEB 2.0 technology, which enables social networks and fast communication facilities. Even today, this technology constitutes the most defining characteristics of mobile devices. In this way, every internet user has become an internet producer at the same time. In short, every individual has reached the point to create content on the internet.

These developments in the internet world have played an important role in the tourism movements to reach their present point. Because, with the destinations and businesses, to deliver their information to consumers through social networks, consumers and producers come together in social networks. Therefore, developments in web and mobile technologies may affect touristic product preferences. In addition to this optimistic point of view, tourists' becoming a user in the internet environment also involves some risks for the tourism industry. For example, products that are not available to people on the internet can be sold fraudulent. In addition, it can be said that there may be inaccurate negative comments about the touristic product due to competition.

#### **4. CONCLUSION AND DISCUSSION**

Contrary to popular belief, the industrial revolution is not a simple process and a single event that started at a certain date. It is true that the invention of steam-powered machines in the 18th century triggered the great revolution. However, the industry has continued to exist as a process that started with this discovery and continues until today. The industrialization process has existed in four stages until today (Topsakal, et al., 2018; Loureiro, 2018; Atar, 2020; Armoo et al., 2020). Although certain dates are stated for the beginning and end of these four periods, it can be said that the periods existed before and after them.

It can be said that unfair competition, over-capitalization, and some negative social and economic consequences, in which the difference between the rich and the poor became more evident in the beginning and other stages of the industrial revolution. However, it can be said that it has some important benefits at the point of total development of humanity. In terms of tourism, it can be said that the industrial revolution and industrial periods provided some important advantages that will contribute to the development of the tourism industry. First of all, the development of industry has paved the way for the increase of phenomena such as disposable income and leisure time. These results are in line with the results of the study conducted by Gierczak (2011). These two elements constitute the two most important parameters of participation in tourism movements. Subsequently, the phenomenon of urbanization developing due to industrialization has also positively influenced the development of tourism.

During the industrial revolution, with the construction of transportation vehicles that can be used in different transportation systems, and with the recent developments in information and communication technologies, international arrivals have increased to a size that corresponds to almost 25% of the world population on a yearly basis. Developments in

recent years have led to a period where individualized touristic products are produced. It is difficult to make predictions about the development of industry transformation. Hospers (2010) makes similar evaluations on the subject. Because developments and changes have reached unimaginable dimensions. However, it is possible to predict the consequences of these developments in the industrial revolution and their reflections on tourism. As a matter of fact, problems such as sustainability, commercialization of culture, carrying capacity and excessive tourism in modern tourism have started to be discussed frequently.

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