



Entry and exit barriers and their impact on industry performance -A case study of the mobile phone service industry in Algeria-

Argabi Adil¹, Taleb Amar², Salhaoui Samir³

¹University of Batna 1 (Algeria), adil.argabi@univ-batna.dz

²University of Batna 1 (Algeria), amar.taleb@univ-batna.dz

³University of Batna 1 (Algeria), samir.salhaoui@univ-batna.dz

Abstract:

Through this study, we have tried to shed light on a very important topic, which is the barriers to entry and exit to and from the industry and its impact on its performance, and this is through a case study of a very important industry in Algeria, which is the mobile service industry, using the descriptive approach Analysis through the case study technique, the study found that there are high entry and exit barriers within this industry, whether natural entry barriers, which were represented in both economies of scale Large, capital requirements, technological development, and strategic entry barriers, which were represented in both price limits and access to distribution channels, legal entry barriers, which were represented by the intervention of the Postal and Telecommunications Regulatory Authority through laws that regulate competition within the industry, in addition to exit obstacles, which were the difficulty of recovering large investments and the legal penalty resulting from the assignment of a license to the country. All this has greatly affected the development of the industry's performance, as this industry is considered among the most developed industries in Algeria, whether through the number of subscribers, which reached more than 47 million subscribers in 2018, or through the industry's turnover, which reached its largest value in 2016, estimated at 349 billion Algerian dinars, or through the industry's net profits, which amounted to 104.22 billion Algerian dinars in the year. 2017.

Keywords: entry barriers, exit barriers, industry, industry performance, mobile service.

Introduction:

The dynamic analysis of industries that belongs to the field of research in the field of industrial economics, which is based on the tripartite model represented by the structure-behavior-performance model, believes that industries that are characterized by good and high performance are more attractive to institutions wishing to enter these industries than the lower and weaker performing industries, and this is of course for the desire of new institutions wishing to enter to benefit from the advantages of high-performance industries and to compete with the institutions within these industries for the high profits that characterize these industries. Therefore, in the long run, after the entry of new institutions for these industries, their performance will decrease and the profits shared by the institutions active in them will decrease due to their abundance, and this will eventually make these industries less attractive to institutions wishing to enter.

But often, despite the fact that some industries are characterized by great attractiveness by achieving good and high performance, and the institutions active within them achieve high profits, this is not an incentive for the entry of new institutions to these industries, and this is of course due to the main reason that there are obstacles that prevent institutions from entering these industries, and these obstacles vary from one industry to another, where sometimes these obstacles may be

natural mainly related to the nature of the industries themselves and that Such as industries that are characterized by the large volume of investments in them, and sometimes these obstacles may be legal through laws enacted by some governments in order to protect some local industries from foreign competition in order to encourage them, and sometimes these obstacles may be a strategy contrived by the institutions active within these industries, in order to limit the entry of new institutions to these industries, and it is not only the entry barriers that prevent the entry of new institutions But sometimes exit barriers are the main obstacle for institutions wishing to enter these industries.

According to the same previous analysis, industries that are characterized by the presence of significant obstacles to the entry of new institutions that compete with the institutions active within these industries must be characterized in the long term by good and high performance, due to the lack of competing institutions within these industries and characterized by obstacles, whether natural, legal, strategic or characterized by exit obstacles, which give them time and protection for development and growth in a way that makes them high-performance and achieve high profits compared to industries with low obstacles.

By dropping what has already been proposed to the mobile service industry in Algeria, we see that despite the relatively old industry in Algeria, where this industry was opened to competition in late 2001 by granting a license to the "Jazzy" institution as the first foreign dealer in this industry, and nearly twenty years have passed since the granting of this license, but this industry includes only three institutions, "Mobilis", "Djezzy" and "Ooredoo", competing among themselves for Obtaining the largest market share, which enables it to achieve higher profits than its competitors, and this is the biggest evidence that this industry is characterized by the presence of obstacles, whether high entry or exit, and stood as an obstacle to the entry of new institutions for this industry, and we will try through this study to analyze and know the most important obstacles, whether they are entry obstacles or exit obstacles that stand in the way of not entering new institutions for this industry, and then know the impact of the presence of these obstacles on the performance of the telephone service industry Mobile in Algeria, and based on what was previously raised, the problem of the study was as follows:

- Is there an impact of entry and exit barriers within the mobile industry in Algeria on its performance during the period 2007-2018?

Through the main question posed here and further researching and analyzing it, we will divide it into sub-questions as follows:

- What are the barriers to entering the mobile industry in Algeria?
- What are the barriers to exiting the mobile industry in Algeria?
- Has the mobile industry in Algeria evolved into a high-performance industry during the period 2007-2018?

In order to address the problem of the study, we had to formulate a main hypothesis for the study, which is as follows:

- The presence of entry and exit barriers within the mobile service industry in Algeria has an impact on its performance during the period 2007-2018, as this industry has become a high performance through the large number of subscribers, achieving a huge turnover and high profits.

Here we can also break down this main hypothesis into three sub-hypotheses as follows:

- Barriers to entry into the mobile service industry in Algeria are the impediment of economies of scale, capital requirements, technological development, price limits, access to distribution channels, and legal obstacles.

- The obstacles to exiting the mobile phone service industry in Algeria are a major obstacle is the large volume of investments, because from the initial view of this industry, we notice that the institutions active within it are characterized by their large size, and this may be difficult for them to recover and sell their investments easily, in addition to the legal penalties that may affect the institution wishing to waive the exploitation license it owns and exit the industry.
- The performance of the mobile service industry in Algeria has evolved significantly, with more than 47 million subscribers, and this has of course reflected positively on its turnover and profits.

Objectives of the study:

Through this study, we seek to achieve a set of objectives that we can limit to the following points:

- Highlighting an important industry such as the mobile service industry in Algeria during the period 2007-2018.
- Identify the most important barriers to entry into the mobile service industry in Algeria.
- Identify the most important barriers to exiting the mobile industry in Algeria.
- Analysis of the performance of the mobile industry in Algeria during the period 2007-2018.
- To determine the evolution of the performance of the mobile service industry in Algeria during the period 2007-2018.

Importance of the study:

This study derives its importance from the fact that it sheds light on one of the most important industries in Algeria, namely the mobile service industry and the extent of its development and the identification of the most important obstacles, whether entry or exit that stand in the way of entering new institutions to this industry on the one hand, and the affiliation of this study to the field of research within the field of industrial economy on the other hand, and the importance of this study lies in the fact that it seeks to clarify the impact that can be exercised by the structure of the industry through the identification of entry barriers And the departure from the performance of the industry as a whole through its determinants, which are represented in the growth of the number of industry subscribers, the number of industry turnover, and the value of the net profits of the industry.

Study Methodology:

In order to answer the problem of the study and test the validity of the hypotheses, we relied here on the descriptive analytical approach based on the case study technique, by describing and extrapolating the theoretical aspect of the study and then applying this to the mobile service industry in Algeria and analyzing it to reach an answer to the problem of the study.

1. Theoretical study:

Through the theoretical study, we will try to shed light on the most important axes related to the two variables of the study, namely entry and exit barriers to and from industry and industry performance, by giving a definition of each of the entry obstacles, exit obstacles and industry performance, and also addressing the most important things that can clarify the most variables of the study.

1.1. Barriers to entry:

Bain defined entry barriers as: "the preference that actual enterprises in an industry have over potential enterers, and that preference is reflected in the extent to which actual enterprises raise their prices above competitive levels without attacking new enterprises to enter the industry" (Hammadi, 2009), as the price set by the existing enterprise cannot be profitable by any potential enterprise (Huynh & Besancenot, 2004). The concept of barriers to entry has been defined by other authors, which we will mention as follows: (Chapelle, 2008)

- For Stigler (1968), the barriers to entry are: "the costs borne by the enterprise wishing to enter the industry, unlike the enterprises in the industry they do not bear these costs";
- For Ferguson (1974), entry barriers are: "all the factors that make the entry of the new enterprise into the industry unprofitable, and allow the enterprises in the industry to set prices below the marginal cost of the enterprises wishing to enter, and earn permanent monopoly returns";
- For Demsetz (1982), these definitions all illustrate barriers to entry that exist between enterprise-seeking institutions and organizations in the industry, but not legal constraints that are only sustainable and effective barriers to entry from Demsetz's point of view;
- For Spulber (2003), the entry barrier is a temporary competitive advantage, particularly in costs, innovation, and transaction cost advantage, acquired by organizations in the industry but not by organizations wishing to enter the industry.

1. 2 Types of entry barriers:

Researchers in industrial economics have classified the different types of entry barriers into three large categories:

1.2.1 Natural (structural) barriers to entry:

Natural entry barriers arise through the economic, geographic and political environment of the enterprise, so that enterprises, whether in the industry or wishing to enter, have no control over these barriers, and these barriers can be limited to capital requirements, advantages of product differentiation, economies of scale, and absolute advantage of the cost of production (Bouafia, 2018).

1.2.2 Strategic Entry Barriers:

Strategic entry barriers are obstacles created by existing enterprises in the industry in order to prevent new enterprises wishing to enter the industry in which they operate. these obstacles are the result of a strategic decision and not just an industry situation, and these obstacles can be limited to excess production capacity, price limit, access to distribution channels, and brand spread (Arqabi, November 8 and 09, 2010).

1.2.3 Legal entry barriers:

The regulation of enterprises in industry can be seen as a type of legal entry barrier, which is more effective than other obstacles, because they are carried out by the state and controlled by it, where the state can restrict entry to the market by granting entry permits, granting patents, granting patent exploitation rights, etc., and geographical barriers are also among the legal entry barriers, so that the country usually imposes restrictions on foreign enterprises when These measures help protect local enterprises active in the industry, through compulsory import licensing, subsidies to local enterprises but not foreign enterprises, and exposing foreign enterprises to tariffs and trade quotas (arquabi, sectoral analysis of the mobile service industry in Algeria by applying the "structure-behavior-performance" model during the period 2004-2014, 2017).

1.3 Exit obstacles:

Exit barriers are the costs incurred or the profits that the institution loses by leaving the industry in which it operates, for example, the compensation that an institution must pay to its employees in the event of its exit from the industry, and there is no doubt that the knowledge of any potential institution of the existence of obstacles to exit the industry may make it hesitate to enter it (Abeerat and hassab, 2008), and the most important exit obstacles can be limited to both large investments in assets, high fixed costs of exit, emotional attachment to the industry Specifically, economic dependence on industry, the need to keep a set of precious assets at or above the minimum in order to participate effectively in the industry (Sayhi, Hani, and Ben Saghir, 2020).

1.4 Industry Performance:

Industry performance can be defined as the extent to which industry is able to contribute to achieving major economic balances within the national economy, but it must be emphasized in this regard that there is no causal relationship between the good performance of enterprises and the good performance of the industry in which these enterprises operate, meaning that the individual goals of enterprises do not necessarily correspond to the objectives of the industry as well as the goals of the economy as a whole (Angelier, 1993). For enterprises, the well-performing industry is generally represented by the industry with high profits and high growth rate, and for economic operators who risk their money in a particular sector (banks, investors, ...) in addition to profitability and growth, there is the risk criterion (Moati, 2000)..

1.5 Barriers to entry, exit and industry performance:

In 1956, Bain tried to determine the extent to which there is a relationship that can link barriers to entry to industry performance, through his book "Barriers to new competition", and in addition to his premise that we discussed earlier, which is a positive relationship between industry concentration and performance, Bain also relied on the hypothesis that the existence of effective entry barriers within the industry leads to raising the performance of this industry, and based on his study he reached "Bain" indicates that there is a positive relationship between the severity of entry barriers and concentration within the industry, in addition to the combined impact of both on the performance of the industry, which is a positive effect, that is, both would contribute to raising the performance of the industry, and that the role of entry barriers in this effect is greater than the role of industry concentration, Bain added that the relationship between the previous variables cannot be just a simple linear relationship, but rather a complex relationship (Bosena, 2016).

Mann also addressed entry barriers in the process of analyzing the relationship between industry concentration and profitability, where he divided industries with a high level of concentration into three categories according to the severity of entry barriers and found through his study that industries characterized by high entry barriers recorded high rates of profitability, while the second categories with medium entry barriers, and the third with low entry barriers recorded rates of profitability lower than the first category, and therefore his findings Mann was very similar to Bain's results in terms of the role of entry barriers in determining the relationship between industry concentration and profitability (Mann, 1966).

2. Applied Study:

The mobile service industry in Algeria is among the most developed industries, and it is also among the most important industries contributing to the economic growth of the state, as it has known significant growth in recent years and has become on the path of the same industries in neighboring countries that were pioneers in this field compared to Algeria, but Algeria knew how to develop this industry, although during the nineties there was no industry in Algeria called the mobile service industry, and we will try Here we first identify the barriers to entry and exit to and from the mobile service industry in Algeria, then we will analyze the performance of this industry during the study period 2007-2018, and then finally we will try to determine the impact of entry and exit barriers on the performance of the mobile service industry in Algeria.

2.1 Barriers to entry into the mobile service industry in Algeria:

Through this theme, we will try to shed light on the most important entry barriers that characterize the mobile phone service industry in Algeria, according to their types, as discussed in the theoretical aspect of this study.

2.1.1 Barriers to natural entry into the mobile service industry in Algeria:

Natural entry barriers are a set of obstacles that stand in front of the ability to enter new institutions wishing to enter the industry as an obstacle or barrier that prevents them from entering, but these obstacles are considered as a feature of this industry and are not contrived by the institutions in the industry, and we will try in this axis to identify the most important of these obstacles within the mobile service industry in Algeria.

2.1.1.1 Economies of scale as an obstacle to entry into the mobile service industry in Algeria:

The mobile industry in Algeria has been characterized by a great development during a relatively long period of almost 19 years of development, as this industry was opened to compete through the granting of the first license to exploit the second generation services on July 30, 2001 to the institution " Djezzy " (www.djezzy.dz) After that, a new competitor was entered, represented by the "Mobilis" corporation, by granting it a license to exploit the second generation services in 2002 and its entry into force in January 2003 (Mobilis Al-Jarida, 2006), and then, as a final stage, a third license was granted to the "Ooredoo" Foundation on December 02, 2003 (Shalali, 2015/2016), and since 2003, the three institutions have competed among themselves to achieve the largest share of the Subscribers within mobile phone services, and this competition led to the development of the number of subscribers for each of the three institutions, as the number of subscribers of the institution "Djezzy" increased from 3418367 subscribers in 2004 (the Regulatory Authority for Posts and Telecommunications, 2007) until 14707625 subscribers in 2019 (Postal and Electronic Communications Regulatory Authority, 2019), while the "Mobilis" institution increased the number of subscribers from 1176,485 subscribers in 2004 (Postal and Telecommunications Regulatory Authority, 2007) until 18633371 subscribers in 2019 (Postal and Electronic Communications Regulatory Authority, 2019), and the number of subscribers of the "Ooredoo" Corporation also increased from 287562 subscribers in 2004 (Postal and Telecommunications Regulatory Authority, 2007) to 12084537 subscribers in 2019 (Postal and Electronic Communications Regulatory Authority, 2019) B210>, this tremendous development of the number of subscribers as well as the development of technologies used within the mobile service industry in Algeria from the second generation until the introduction of fourth-generation technologies, all this enabled the three institutions active within this industry to exploit these economies of scale and the impact of experience represented in the length of their activity in Algeria as well as the experience of these institutions in the global market, especially the "Djezzy" and "Ooredoo" They are considered subsidiary institutions of global institutions that are active in many countries, and all this has led institutions to develop, especially in the field of costs, where they have become offering low-priced products significantly compared to the early years in which they started their activity, to the point that they offer their chips for free or provide free call credits, and this stands as an obstacle for new institutions that want to enter this industry, so that they must provide products that have the same quality as the products provided by the institutions This is an obstacle that can only be overcome by institutions with expertise and experience in other industries in other countries.

2.1.1.2. Capital requirements as an impediment to entry into the mobile service industry in Algeria:

The mobile industry in Algeria is among the industries that require huge capital in order to invest in it, for example, the "Djezzy" Foundation benefited from the license to exploit the second generation services through a tender for an amount of 737 million US dollars, and this institution belongs to the "VEON" group "It is the fifth international telecommunications group with a presence in 12 markets around the world and serving more than 200 million customers (Touati, 2006), while

Mobilis has an estimated capital according to Executive Decree N. 17-108 of 8 Jumada II 1438 corresponding to 7 March, 2017 at 25 billion Algerian dinars (Republic of Algeria, 2017), and Ooredoo has also benefited from the license to exploit the second generation services. For the amount of 421 million US dollars, this institution is a branch of Qatar Telecommunications Park "QTEL" and this complex is active in many countries of the Middle East as well as North African countries (Shalali, 2015/2016), and these huge investment amounts are one of the obstacles to entry for new institutions wishing to enter this industry, which must provide a huge capital comparable to the capital of existing institutions within the industry in order to enter this industry, and this is very difficult, especially for new enterprises that do not have experience in this field, this obstacle can only be overcome by institutions active in other markets in other countries only.

2.1.1.3 Technological development as an obstacle to entering the mobile service industry in Algeria:

The mobile service industry in Algeria has been characterized by a tremendous development, especially with regard to the technological technologies used in this industry, as this industry has developed by passing from the stage of relying on second-generation technologies for a relatively long time, and then moved towards the use of third generation technologies, and that was only in 2014, to enter this industry after that an important technological stage using fourth generation technologies. Fourth, in order to keep pace with the developments that have occurred in mobile phones and the programs that require these technologies, and this happened during the year 2016, and this development from the second generation to the fourth generation and the accompanying acquisition of devices and equipment in order to keep pace with this technological development, knowing that these equipment requires huge investments, and this may stand as an obstacle to the entry of new institutions for this industry, because the new institutions To be interested in entering, it must be able to keep pace with these developments in the technological technologies that have touched this industry so that it can compete with the institutions in the industry and its ability to provide products similar to the products provided by competing institutions within the industry, and this can be a major obstacle, especially for institutions that do not have experience and experience in this industry, and this obstacle can only be overcome by institutions active within the same industry but in another country if I did not want to enter the mobile service industry in Algeria.

2.1.2 Strategic entry barriers to the mobile service industry in Algeria:

Strategic entry barriers are artificial barriers or barriers by institutions active within a particular industry in order to limit the entry of other institutions to this industry in order to protect their market shares from competition, and we will try in this axis to address the various strategic obstacles within the mobile service industry in Algeria.

2.1.2.1 Price limit as an obstacle to entry into the mobile service industry in Algeria:

The prices offered by the three enterprises active in the mobile service industry in Algeria have been characterized by a remarkable development towards a significant decline if the prices of these institutions are currently compared to their prices at the beginning of their activity within this industry, and this industry is characterized by price supervision by the regulatory authority on the basis of Ordinance N. 03-03 of July 13, 2003 relating to the fair competition between enterprises active in the industry, in particular articles 06 and 07 of the decree herein, as this order prohibits all acts and agreements, express or implicit, aimed at impeding freedom of competition (Official Journal of the Algerian Republic, 2003), whereby the Postal and Telecommunications Regulatory Authority accordingly sets the prices of calls, by setting a lower price not less than the prices of calls. All this led to the absence of price wars between competing institutions in the industry, but

the development of mobile service technologies from the second generation to the fourth generation led to the decline in call rates for all institutions active within the mobile service industry in Algeria to their lowest levels, and we will compare the prices of calls between the three institutions active within this industry in the following table.

Table (01): Comparison of call and SMS rates for mobile operators in Algeria

Institution	DJeezy	Mobilis	Ooredoo
display	Millenium 3450	Win 4G 4000	One 4000
Calls to the same customer	0DZD/min	0DZD/30s	1 DZD /30s
Calls to another customer	4.99 DZD /min	2.5 DZD /30s	2 DZD /30s
SMS to the same customer	0 DZD	0 DZD	2 DZD
SMS to another customer	4.99 DZD	3 DZD	2 DZD
SMS Abroad	14 DZD	10 DZD	14 DZD

Source: Prepared by the researcher based on the location: <http://webstar-electro.com/forfaits>

Through the previous table, we note that the call prices for all institutions active within the mobile service industry in Algeria are very competitive prices and a new institution wishing to enter cannot provide prices that can compete with these prices within a short period, and these prices are not considered attractive for these institutions, and this is what stands as an entry obstacle for institutions wishing to enter this industry, and this obstacle can only be overcome by other active institutions. Within the same industry but in another country.

2.1.2.2 Access to distribution channels as an obstacle to entry into the mobile service industry in Algeria:

Distribution channels are among the most important factors that should be focused on by institutions active within the mobile service industry in Algeria in order to get closer to subscribers and provide them with the best and best services and easier, as the "Djezzy" Foundation has sales agencies in all the states across the country, i.e. more than 107 commercial agencies (www.djezzy.dz) These agencies aim to provide the best reception, provide advice and guidance to subscribers, sell the products of the institution, whether related to chips or recharge cards, as well as pay post-payment bills, while the "Mobilis" Foundation owns more than 120 commercial agencies and more than 60 thousand indirect points of sale (www.mobilis.dz), and this institution seeks through these agencies to get closer to subscribers by providing all its services from SIM cards, recharge cards and payment of postpaid bills, Ooredoo also owns 107 Ooredoo spaces, 3 VIP shops, 74 city stores, 9 stores within marketing stores and 345 service stores (www.ooredoo.dz), where these stores provide all the services provided by the "Ooredoo" institution, including the sale of chips, recharge cards and payment of postpaid bills. The three companies active in the mobile service industry in Algeria have such a large number of distribution channels. It is considered an obstacle for new institutions wishing to enter this industry, as in order to enter and compete with existing institutions within the industry, they must seek to get closer to customers by providing the same distribution channels, and this seems difficult to achieve because of the experience in the field and costs that the new institution may not be able to bear.

2.1.3 Legal Entry Barriers to the Mobile Service Industry:

The legal obstacles to entry are represented in the Postal and Telecommunications Regulatory Authority, as it is the only body authorized to intervene in the industry, as it is solely responsible for opening a tender and international arbitration to obtain an exploitation license and enter the mobile service industry in Algeria, after opening a field for the entry of a new operator for this industry, and this condition of obtaining an exploitation license is not exclusive to Algeria and On the other hand, the regulatory authority allows each customer to benefit from the absence of any potential competitor until three years have passed from the beginning of his activity, and this stands as an obstacle to the entry of new institutions for industry, as they can only enter through a decision of the Postal and Telecommunications Regulatory Authority, after conducting studies of the industry and its needs, and then this authority then announces a tender for the industry. These conditions are defined in Law N. 03-2000 of August 05, 2000 (Official Journal of the Algerian Republic, 2000), and the choice between the institutions submitting the bids based on the proportion of the administrative documents of these institutions and the conditions for obtaining the license and the term sheet, then the granting of the license granted shall be for a period predetermined in the term book, and the license shall be renewed in the event of its expiry and shall be granted in a personal capacity and shall not be waived except after the approval of the postal and transport control authorities. All these legal obstacles determine the number of competitors within the mobile industry in Algeria and the timing of their entry, and they control their movements within the industry in a way that ensures legitimate competition, and this is what stands as a major obstacle to the desire for entry by new enterprises.

2.2. Barriers to exiting the mobile industry in Algeria:

Exit obstacles are very important in addition to the entry barriers that we have discussed earlier, and they are generally related to them, and they are represented in the obstacles that stand in the way of the movement of institutions active within the mobile service industry and the difficulty of exiting this industry by divesting their investments, because they are considered huge investments that are difficult to recover or sell easily, in addition to the fact that the assignment of investments entails legal penalties as stipulated in Article 33 of Law N. 03-2000 of August 05 2000, which stipulates that the license is granted in a personal capacity and the rights resulting from the license may not be waived except after the approval of the awarding body, by preparing a new license to be granted in favor of the assignee (Official Journal of the Algerian Republic, 2000), however, Orascom has been able to bypass this law and exit this industry and replace it with a new owner, the VEON Group. With the same customer remaining "Djezzy", that is, a new customer has entered and another exit has been bypassed the legal obstacles imposed to prevent the sale or assignment of exploitation licenses to any institution that owns this license, and this exit may be difficult or costly for another dealer within this industry, and therefore all this can stand as an obstacle to the desire of any new institution to enter this industry.

2.3 Impact of entry and exit barriers on the performance of the mobile service industry in Algeria:

Here in this theme, we will try to shed light on the impact of entry and exit barriers on the performance of the mobile service industry in Algeria, by presenting the development of the most important performance indicators of this industry, represented in the number of subscribers, the turnover of the industry, and the net profits of the industry.

2.3.1 The impact of entry and exit barriers on the evolution of the number of subscribers of the mobile service industry in Algeria:

It is necessary to follow the development of the mobile service industry in Algeria to note that this industry has been characterized by rapid growth, especially in recent years, through the development of the number of subscribers within mobile services in Algeria as a whole, where the year 2018 amounted to 47 154 264 subscribers, and this is a very large number (Postal and Electronic Communications Regulatory Authority, 2019), and this industry was characterized by the launch of new services represented in the third generation and fourth generation technologies, and this is what made it grow in a way Especially after the introduction of these new technologies, and therefore we will try to clarify the development of this industry through the indicator of the evolution of the number of subscribers of this industry through the following table.

Table 02: Evolution of the number of mobile subscribers during the period 2007-2018

Sunnah	Number of subscribers	growth rate
2007	27 562 721	31%
2008	27 031 472	-2%
2009	32 729 824	21%
2010	32 780 165	0.15%
2011	35 615 926	8.6%
2012	37 527 703	5.3%
2013	39 517 045	5.3%
2014	43 298 174	9.56%
2015	43 227 643	-0.16%
2016	45 817 846	6%
2017	45 845 665	0.06%
2018	47 154 264	2.85%

Source: Prepared by the researcher based on the location: <https://www.arpt.dz>

Through the previous table, we can notice that if we rely on the number of subscribers of the mobile service industry in Algeria, we can say that this industry has been characterized by continuous growth, considering that the number of subscribers is still on the rise despite its decline in some years such as 2008 and 2015, but in general this industry was characterized by an increase in the number of subscribers, as the increase from 2007 to 2018 amounted to approximately more than 19 million. However, if we rely on the growth rate in this industry, we can also consider it to be in continuous growth at high rates, such as in 2007 the growth rate was estimated at 31% and in 2009 it was estimated at 21% as the two largest rates during the study period, and the growth rate in 2014 was also estimated at 9.56% This is also a high growth rate, and this is if we exclude both 2008 and 2015, where these two years were characterized by a negative decline in the growth rate of the number of subscribers, but if we estimate the growth rate of the industry in terms of the number of subscribers from 2007 to 2018, we will find that this industry grew at a rate of 71%, and this is a high growth rate, and this is through which we can conclude that the high entry and exit barriers within this industry, which were identified within The previous axis contributed significantly to making this industry considered a high-performance and highly competitive industry through the number of subscribers index.

2.3.2. The impact of entry and exit barriers on the development of the turnover of the mobile service industry in Algeria:

The mobile phone service industry in Algeria was also characterized by a great development in terms of its turnover, as the turnover of this industry in 2018 amounted to 294.2 billion Algerian dinars (Postal and Electronic Communications Regulatory Authority, 2019), and this is a large

amount for an industry that is considered newly established, as it has been almost 17 years since its emergence as an industry in Algeria, and we will try here to track the stages of development of the turnover of this industry during the study period and determine the growth rate of its turnover through the table Loyah.

Table 03: Evolution of the turnover of the mobile service industry in Algeria during the period 2007-2018

Sunnah	Turnover (billion Algerian dinars)	growth rate
2007	191.7	19.44%
2008	214.83	12.06%
2009	222.1	3.4%
2010	222.58	0.21%
2011	246.066	10.5%
2012	274.54	11.5%
2013	299.8	9.2%
2014	324.3	8.1%
2015	340	4.8%
2016	349	2.6%
2017	331.2	-5.1%
2018	294.2	-11.17%

Source: Prepared by the researcher based on the location: <https://www.arpt.dz>

Through Table (03), we can note that the growth rate of the mobile phone industry in Algeria was high at first, reaching 19.44% in 2007, which is considered the largest growth rate during the study period, and then began to decline until 2010 and then returned to rise in both 2011 and 2012, to decline again from 2013 until 2018, as if we adopted On the absolute turnover of the industry, we will note that this industry was characterized by continuous growth during the period from 2007 to 2016, but at varying growth rates from year to year, then the number of industry turnover declined during the years 2017 and 2018, due to the fact that this industry has reached the last stage of the industry life cycle, and if we compare the turnover of the industry in 2007 with the year 2016, which is the largest value in the turnover of the industry during the study period, we will find that the turnover of the industry has increased by 157.3 billion Algerian dinars, and this is a very large growth if compared to some other industries in Algeria, and we can say here that this industry, despite reaching the stage of decline within the stages of the life cycle of the industry, but the turnover of this industry is still large and this is due to the special character that characterizes this industry, which differs from the rest of the industries, in the sense that this industry is from Among the few industries that depend in their development on modern technologies that appear with the development and movement of dealers within this industry from one generation to another with regard to the generations of mobile technologies and the accompanying emergence of new features and characteristics that may contribute to the revival of the growth of this industry again, and we can conclude here that the entry and exit obstacles that characterize this industry, which we identified in the previous axis, have contributed significantly to the development of the performance of this industry and that Through the turnover index.

2.3.3 The impact of entry and exit barriers on the development of the net profits of the mobile service industry in Algeria:

It is not possible to know the extent of the development of the mobile service industry in Algeria accurately through the number of subscribers and turnover only, but we must know the evolution of the level of profits of this industry in order to judge the extent to which this industry has achieved good performance, and by tracking the development of profits of this industry, it achieved net profits in 2017 estimated at 104.22 billion Algerian dinars (www.arpt.dz), and this figure indicates that this industry is performing well, but in order to know the exact evolution of this performance during the study period as a whole, we will review the evolution of net profits and their growth rate in the following table.

Table 04: Evolution of net profits of the mobile industry in Algeria during the period 2010-2017

Years	Net profit (DZD billion)	growth rate
2010	35.541	-----
2011	51.932	46.11%
2012	67.731	30.42%
2013	80.79	19.28%
2014	53.829	- 33.37%
2015	82.15	52.61%
2016	72.78	- 11.4%
2017	104.22	43.19%

Source: Prepared by the researcher based on the location: <https://www.arpt.dz>

Through the previous table, we can accurately determine the extent to which the mobile service industry in Algeria has achieved good performance through the development of net profits, which gives a clearer picture of the level of performance of this industry compared to the number of subscribers and turnover, and therefore through the previous table it is clear to us that this industry was characterized by good performance through the continuous increase in profits despite the decline in these profits in 2014 by 26.961 billion Algerian dinar This is considered a significant decline, but this decline in net profits is caused by the increase in investments related to 3G services, and the decline in net profits also in 2016 by 9.37 billion Algerian dinars, and this decline is also caused by the increase in investments related to 4G services, and then net profits returned to rise significantly in 2017 and this is a result of the high revenues derived from the fourth generation services, and we can also note that the significant development of net profits is more accurately reflected through the high growth rates, which in some years amounted to more than 40%, for example, the growth rate of net profits in 2015 was estimated at 52.61% and in 2016 it reached 43.19 % This is evidence that the high entry and exit barriers that characterize this industry have contributed significantly to making this industry a high-performing industry through the net profit index as the most important performance indicator.

Conclusion:

Through this study, we have tried to shed light on one of the most important topics belonging to the field of industrial economy, namely the barriers to entry and exit to and from industry and their impact on the development of industry performance, by first addressing the theoretical aspect of this study by presenting the most important axes related to the study, and then projecting the study on an industry that is among the most important industries in Algeria, namely the mobile service industry in Algeria, y. In addition to the obstacles to exit, which were the difficulty of recovering huge investments and the legal penalty resulting from the waiver of the exploitation license granted to the

institution, all of this greatly affected the development of the industry's performance, as this industry is considered among the most developed industries in performance in Algeria, whether through the number of subscribers, which reached more than 47 million subscribers in 2018, or through the industry's turnover, which reached its largest value in 2016, estimated at 349 billion Algerian dinars, or through the net profits of the industry, which amounted to 104.22 billion Algerian dinars in 2017, and this proves the validity of the main hypothesis and is an answer to the problem of the study.

• **Results of the study and discussion of sub-hypotheses:**

- The mobile phone industry in Algeria has been characterized by entry obstacles, including the obstacle of economies of scale, through the tremendous development of the number of subscribers, which amounted to more than 47 million subscribers and the magnitude of the three institutions active within the industry, and this enabled the three institutions active within this industry to exploit the economies of large size and the impact of experience represented in the length of their activity in Algeria, as well as the experience of these institutions in the global market, especially both the institution "Djezzy" and "Ooredoo", which are considered Subsidiaries of international institutions active in many countries, the obstacle of capital requirements, which appears through the huge investments made by the three institutions active within the industry to benefit from exploitation licenses at the beginning of their activity, and the obstacle of technological development, which appears through the transition of institutions active within the industry from the use of communication technologies for the second generation to the use of communication technologies for the 4 generation, the obstacle of the price limit, which is evident through the significant decline in the prices of offers provided by institutions active within the industry compared to their prices at the beginning of their activity, so that they provide offers characterized by free calls, balances and messages, and the obstacle to access to distribution channels through the possession of the three institutions active within the industry of agencies and points of sale in all states of the country, in addition to the most important obstacle to the entry of new institutions to the industry, which is the legal obstacle, which appears through the power of intervention that characterizes it The power to regulate the post and telecommunications through the laws through which it intervenes to maintain fair competition within the industry, and all this is evidence of the validity of the first hypothesis.
- The mobile phone industry in Algeria has been characterized by exit obstacles, mainly represented in the difficulty of institutions active within the industry to withdraw their investments, because they are considered huge investments that are difficult to recover or sell easily, in addition to the fact that the assignment of investments entails legal penalties, as stipulated in Article 33 of Law N. 03-2000, which stipulates that the license is granted in a personal capacity and the rights resulting from the license may not be waived except after the approval of the awarding body, which is a regulatory authority. Mail and telecommunications, all of which prove the validity of the second hypothesis.
- The performance of the mobile service industry in Algeria has evolved during the study period from 2007 to 2018, whether through the number of subscribers, which in 2007 reached more than 27 million subscribers, rising by more than 20 million to reach more than 47 million subscribers in 2018, or through the industry's turnover, which in 2007 amounted to 191 billion Algerian dinars and then began to rise and develop to reach its highest value. It was estimated at 349 billion Algerian dinars in 2016 and then decreased, as it was estimated in 2018 at 294 billion Algerian dinars, or through the net profits of the industry, which amounted in 2010 to 35.541 billion Algerian dinars

and then began to rise continuously and did not decrease until the years 2014 and 2016, due to the high investments related to 3G and 4G services. and then rose again to reach its highest value in 2017, estimated at 104.22 billion Algerian dinars, and this clearly shows that the performance of the mobile service industry in Algeria has developed significantly, whether through the number of subscribers, turnover or net profits, and this proves the validity of the third hypothesis.

Bibliography:

- Angelier, J.P. (1993). *Industrial Economy: Elements of method*. Algeria: University Publications Office.
- H. Michel Mann. (Aug, 1966). Seller Concentration, Barriers to Entry, and Rates of Return in Thirty Industries 1950-1960. *The Review of Economics and Statistics*, 48(03), pp. 296-307.
- Huynh, K., & Besancenot, D. (2004). *Industrial Economy: Benchmarks, Courses, Applications* (ed. 2nd edition). France: Amphi Economy.
- Karine Chapelle. (2008). *Industrial economy*. France: Vuibert bookstore.
- Moati, P. (2000). evaluate the performance of a sector of activity. Paris: research center for the study and observation of living conditions.
- Roxana, b., & Ulgen, f. (2012). *Industrial organization "market dynamics and firm strategies"*. Brussels, Belgic: De boeck.
- Official Gazette of the Republic of Algeria. (July 13, 2003). Ordinance N. 03-03. *Issue 43* . Algeria.
- Official Gazette of the Republic of Algeria. (August 6, 2000). Law 2000-03 laying down the general rules on posts and telecommunications. *Issue 48* . Algeria.
- Official Gazette of the Republic of Algeria. (August 6, 2000). Article 33, Law 2000-03. *Issue 48* . Algeria.
- Republic of Algeria. (March 15, 2017). Official Gazette. (*N 17*), 06. Algeria.
- The fifth is Sayhi, Nawal Hani, and Fatima Zahra Ben Saghir. (December, 2020). The impact of entry barriers on the performance of Mobilis mobile industry in Algeria. *Al-Manhal Economic Journal*, 03(02), pp. 07-24.
- Regulatory authority for posts and telecommunications. (2007). *Mobile Market Observatory in Algeria*. Algeria.
- Postal and electronic communications control authority. (2019). *Observatory on the mobile phone market in Algeria in 2019*. Retrieved 29 11, 2020, from www.arpce.dz: <https://www.arpce.dz/ar/pub/raa/>
- The authority to control posts and electronic communications. (2019). *Annual Report 2019. Postal and Electronic Communications Regulatory Authority*, 15. Algeria: Postal and Electronic Communications Regulatory Authority.
- The authority to control posts and electronic communications. (2019). *Observatory on the mobile phone market in Algeria in 2019*. Algeria.
- Adel Bouafia. (June, 2018). Entry and exit barriers in the mobile service sector in Algeria. *MELAV Journal of Research and Studies*, 04(01), pp. 319-339.
- Adel Arqabi. (2017). Sectoral analysis of the mobile service industry in Algeria by applying the "structure-behavior-performance" model during the period 2004-2014. *Unpublished PhD thesis*, 28. Biskra, Faculty of Economic Sciences: Mohamed Khider University.
- Adel Arqabi. (November 8 and 09, 2010). Determinants of the structure of the pharmaceutical industry in Algeria. *Fourth International Forum on: Competition and Competitive Strategies for Industrial Enterprises Outside the Hydrocarbon Sector in the Arab Countries* (page 11). Chlef: Hassiba Ben Bouali University.

Abdelalim Touati. (2006). Mobile market study in Algeria during the period from 2000 to 2005. *Unpublished Master's Note*, 91. Ouargla, Faculty of Law and Economic Sciences: Kasdi Merbah University.

Omar Mohammed Hammadi. (2009). *Monopoly and unfair competition*. Egypt: Dar Al-Nahda Al-Arabiya.

Muhammad al-Bashir Shalali. (2015/2016). The reality and challenges of the mobile services market in Algeria. *Unpublished Master's Note*, 166. Tlemcen, Faculty of Economic Sciences: Abou Bakr Belkaid University.

Muhammad Reza Bousna. (2016). Analysis of the relationship between industry structure and performance: a case study of the banking industry in Algeria during the period (2004/2014). *Unpublished PhD thesis*, 129-130. Biskra, Faculty of Economic, Commercial and Management Sciences: Mohamed Khider University.

Moghaddam Abeerat, and Mohammed Al-Amin Hassab. (2008). Strategies for placing entry barriers to a potential competitor threat. *Journal of North African Economics*, 04(05), pp. 299-318.

Mobilis newspaper. (2006). *Issue 01*. Algeria.

Retrieved 13 12, 2020, from www.djezzy.dz.

Retrieved 13 12, 2020, from www.mobilis.dz.

Retrieved date 13 12, 2020, from www.ooredoo.dz.

Retrieved date 10 12, 2020, from www.arpt.dz.