

ROMANIAN AUTOMOTIVE SECTOR AMID COVID-19 PANDEMIC CRISIS: IMPACT ON PRODUCTION AND PRODUCTIVITY

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Abstract: For more than eight months, the global economy has been challenged to cope with an unprecedented health crisis affecting both individuals and businesses. The pandemic generated by the COVID-19 virus has rapidly spread globally and continues to strongly threaten the entire economy. After tourism, the automotive sector suffers the most. The analysis proposed in this paper aims at comparisons between the level of some economic indicators in the Romanian automotive sector (production, average number of directly productive staff, productivity) in 2020 and 2019 to highlight the impact of the state of emergency and then the state of alert established at national level due to the COVID-19 pandemic. The car market has been hit hard by the crisis of this pandemic, and there has been a sharp decline in production and sales. The automotive industry is one of the key components of the global economy, and the downturn has affected and will severely affect society as a whole.

Key words: automotive sector, COVID-19 economic impact, economic indicators.

JEL Classification Codes: D24, G01, M11.

1. INTRODUCTION

The European Commission¹ acknowledges the importance of the car industry for the prosperity of the European Union, for at least three reasons:

- the automotive industry has an important multiplier effect in the economy; It is important for upstream industries such as steel, chemicals, and textiles, as well as downstream industries such as ICT, repair, and mobility services;
- the automotive sector provides direct and indirect jobs to 13.8 million Europeans, representing 6.1% of total EU employment; 2.6 million people work in direct manufacturing of motor vehicles, representing 8.5 % of EU employment in manufacturing;
- the turnover generated by the automotive industry represents over 7 % of EU GDP.

Before the 2008–2009 economic crisis, Central Europe experienced one of the most impressive growth and convergence stories of recent times. In particular, this has been achieved on the back of foreign-owned, capital-intensive manufacturing production in the automotive sector. (Kurekova, 2018)

Already affected by the previous economic and financial crisis, “the Central European automotive sector, which had become strongly integrated into Europe-wide production networks during the preceding decade, could not remain intact” (Domański et al., 2013, p. 163).

¹ https://ec.europa.eu/growth/sectors/automotive_en



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Table 1 presents world motor vehicle production (passenger cars, light commercial vehicles, heavy trucks, buses & coaches) by country or region according to the International Organization of Motor Vehicle Manufacturers, before Covid-19 crisis.

Table no. 1. World motor vehicle production by country / region

Country / region	2018	2019	Variation
China	27,809,196	25,720,665	-7.5%
European Union	18,604,079	17,735,151	-4.7%
United States of America	11,297,911	10,880,019	-3.7%
Japan	9,729,594	9,684,298	-0.5%
South Korea	4,028,834	3,950,617	-1.9%
India	5,142,809	4,516,017	-12.2%
Brazil	2,881,018	2,944,988	2.2%

Source: International Organization of Motor Vehicle Manufacturers , available online at <https://www.oica.net/category/production-statistics/2019-statistics/>, entered on 27.08.2020

A further crisis is affecting the global economy in 2020, that triggered by the Covid-19 virus pandemic. Rapidly spreading globally, it continues to threaten the entire economy, so that, after the tourism sector, the car industry suffers the most.

International Labour Organization (ILO) considers that² the world of work is being profoundly affected by the global virus pandemic. The crisis has already transformed into an economic and labour market shock, impacting all businesses regardless of their size.

The June 2020 OECD report (Economic Outlook) mentions, in its section on Romania, that “the Covid-19 pandemic has entailed a notable contraction of the economy mainly due to lockdown measures and high reliance on trade and investment from Western European countries”. It also points out that the automotive and tourism sectors almost fully stopped operating during the lockdown³.

The expansion of the car industry in Europe, over the last decade, has made it one of the main drivers of increasing competitiveness and consolidating the leading position held by the European Union in the field of car production. However, for more than eight months, the whole world has been trying to cope with an unprecedented crisis, which affects us individually and collectively, both in our personal and professional lives. Global demand in this sector has fallen since the onset of the Covid-19 crisis, so that the fixed cost structure has significantly affected car and component suppliers.

According to a recent Deloitte report⁴, “with a temporary decline in profits, HR managers should adjust organizational structures, personnel structures and headcount to control labor costs and avoid unnecessary losses arising from ill-considered streamlining”.

According to the Romanian Automobile Manufacturers Association (ACAROM), the automotive industry generates approximately 14% of GDP, and represents more than a quarter of total exports, as the approximately 600 companies in this sector have over 230,000 employees.

² <https://www.ilo.org/empent/areas/covid-19/lang--en/index.htm>

³ OECD (2020), *OECD Economic Outlook, Volume 2020, Issue 1*, OECD Publishing, Paris, available online at <http://www.oecd.org/economic-outlook/june-2020/>, entered on 12.07.2020

⁴ Deloitte, *Handbook for automotive industry business resumption*, 2020, p. 16, available online at <https://www2.deloitte.com/content/dam/Deloitte/cn/Documents/consumer-business/deloitte-cn-cb-handbook-for-automotive-industry-business-resumption-en-200415.pdf>, entered on 18.07.2020

Romanian industrial production decreased by 38.4% in April 2020 compared to April 2019, and the manufacturing industry decreased by 45%. Romanian industrial production decreased by 38.4% in April 2020 compared to April 2019, and the manufacturing industry decreased by 45%. Moreover, the signals from the euro area – Romania’s main trading partner, and the main destination for Romanian industrial products – are far from encouraging: industrial production fell in April at an annual rate of 28%⁵.

The current Coronavirus pandemic is likely not only to cause many deaths and acute health problems, but also to seriously limit the ability of many people to work and make ends meet (Bartik and Hershbein, 2020). The more the virus spreads, the more economic performance is affected, creating worries concerning financial sustainability, especially for heavily indebted nations.

2. IMPACT OF COVID-19 ON DACIA AUTOMOBILE

The largest Romanian domestic car manufacturer, Automobile Dacia, “*the pearl of the Romanian car industry*”, as the newspaper *Libération* put it in 1998⁶, was hit hard by the Covid-19 crisis, so that on 19 March 2020 it suspended its activity as a preventive measure in the conditions of the Coronavirus pandemic, this being resumed progressively starting with April 21st.

Although the sales figures recorded during 2019 gave high hopes to the Dacia people, the European crisis caused by Coronavirus occurred at an extremely delicate time, as the Romanian manufacturer faced a difficult situation since the beginning of 2020, and sales recorded in some of the most important European car markets decreased significantly in the first two months of the year.

Since the beginning of the Covid-19 crisis, most manufacturers have tried to help improve the situation of the country, which was affected by the pandemic. Thus, the Romanian car industry sought to identify solutions to increase production capacity for textile masks, visors, disinfectant solutions and even parts for fans used in hospitals.

Groupe Renault Romania⁷, the parent company for Automobile Dacia, was also a key support factor, which supported the fight against Coronavirus by sponsoring the Ministry of Health with 150 Dacia and Renault vehicles for the transport of medical and auxiliary staff, in emergency situations.

After more than a month after discontinuing car production, Automobile Dacia completely resumed production activity starting 4 May, and that news captured the attention of workers, as well as other people interested, representing the dose of optimism that we all needed from the company that has a majority contribution in terms of jobs in the automotive industry. The good news was completed by Ford, which at the same time announced the gradual resumption of production in Craiova, the second largest automotive industrial site in Romania.

In order to get a better vision of the situation of Automobile Dacia, we conducted a comparison between March and May 2020, a period that was directly affected by the pandemic, and the same months of the previous year (Table no. 2 and Table no. 3). The analysis focused on vehicle production, the average number of directly productive labour force and the average annual productivity per directly productive personnel.

⁵ Ziarul Financiar / 20.06.2020, available online at <https://www.zf.ro/eveniment/industria-romaneasca-este-in-genunchi-scadere-de-38-in-aprilie-cea-19284155>, entered on 21.06.2020

⁶ <https://www.gruprenault.ro/media/2017/renault-si-dacia-de-15-ani-impune>, entered on 08.06.2020

⁷ <https://www.gruprenault.ro/media/2020/inca-50-de-vehicule-renault-mobilizate-lupta-impotriva-covid-19>, entered on 08.06.2020

Table no. 2. The 2019/2020 comparative analysis of production, average number of directly productive personnel and productivity of directly productive personnel at Automobile Dacia S.A.

Indicator	2019			2020		
	March	April	May	March	April	May
Production (units)	32,403	28,083	35,184	17,484*	964***	20,295
Average number of directly productive staff	14,723	14,261	14,318	14,112**	250****	14,092
Productivity of directly productive personnel (units)	2.201	1.969	2.457	1.239	3.856	1.440

Source: authors' processing based on data taken from <http://www.acarom.ro>

* 17,484 vehicles produced until the moment of stopping production (19.03.2020);

** 14,112 directly productive employees until the moment of stopping production (19.03.2020);

*** 964 vehicles produced in April since the resumption of production (21.04.2020);

**** according to estimates from the economic press, only 250 employees worked from 21.04.2020

Table no. 3. Production dynamics, average number of direct productive personnel and productivity of direct productive personnel at Automobile Dacia S.A.

Indicator	Δ	Δ(%)	Δ	Δ(%)	Δ	Δ(%)
	March		April		May	
Production (units)	-14,919	-46.04	-27,119	-96.57	-14,889	-42.32
Average number of directly productive staff	-611	-4.15	-14,011	-98.25	-226	-1.58
Productivity of directly productive personnel (units)	-0.96	-43.71	1.89	95.81	-1.02	-41.39

Source: the calculations were done based on the data in Table no. 2

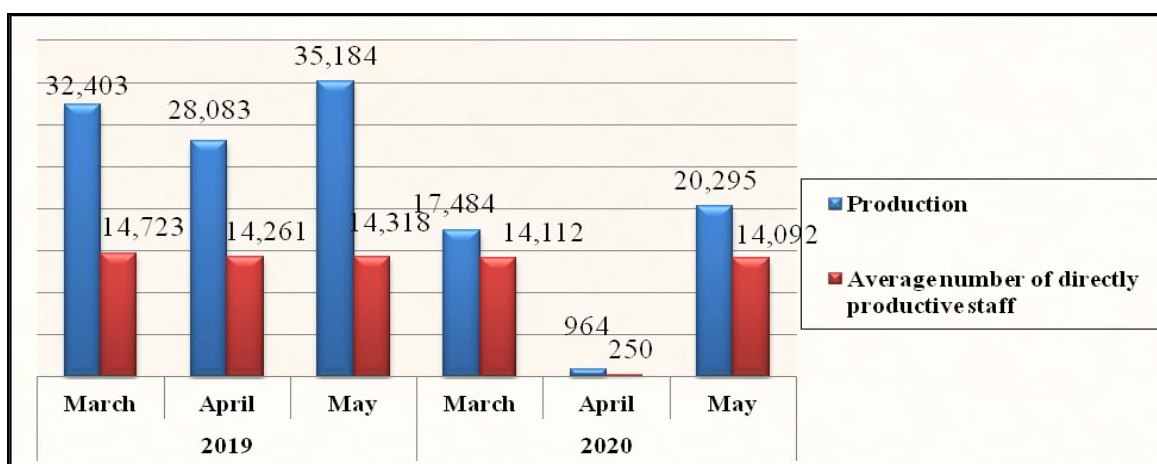


Figure no. 1. Dynamics of production and average number of personnel in 2019 compared to 2020 for the period March-May at S.C. Automobile Dacia S.A.

Source: Data in the Table no. 2

From the data presented in tables no. 2 and 3, represented graphically in Figure no. 1, the downward dynamics of production can be seen, as well as the average number of directly productive can be seen, for both indicators, the weakest month being April, when production decreased from 28,083 vehicles in 2019 to only 964 vehicles that were produced in 2020, which represents a 96.57% percentage decrease.

In March and May of 2020 Automobile Dacia also recorded decreases in vehicle production compared to the previous year, as production decreased by 14,919 vehicles in March and 14,889 vehicles in May.

The average number of personnel also varies, but not very obviously, except in April, when the company decided to make redundant the employees technically unemployed due to the COVID-19 pandemic, and firefighters, guards and maintenance people were the only people present on the Dacia platform.⁸ On 21 April 2020, the company partially resumed operations, starting with a total number of 250 employees on a voluntary basis, in a single team, and the decrease in the number of direct productive platform compared to the same month previous year was 98, 25%.

The productivity of the directly productive analyzed reflects the production obtained on average by an employee, and, in the case of the company analyzed, this indicator shows variations from one month to another, depending on the dynamics of production and the average number of the staff analyzed.



Figure no. 2. The productivity dynamics of the directly productive staff analyzed in 2019 compared to 2020 at Automobile Dacia S.A.

Source: Data in the Table no. 2

From Figure no. 2, through the strict analysis of the current year (2020), it can be seen that April reaches its maximum point, recording a productivity of approximately 4 vehicles / employee. It should be mentioned that in April there were only 250 directly productive people, who managed to complete and obtain an average production of 964 vehicles, from the time of partial resumption of production, i.e. from 21 April 2020 until the end of the month. However, this does not mean that the high level of productivity in April was encouraging, as it was determined exclusively by the small number of directly productive personnel who were actually at work in April 2020.

⁸ <https://www.bursa.ro/suplimentul-auto-dacia-nu-s-a-putut-feri-din-fata-crizei-covid-19-04883935>, entered on 08.06.2020

Both the productivity recorded in March, and that recorded in May 2020 are lower than the one recorded in the same months of 2019, because of the lower production, with 14,919 vehicles (46.04%) less in March 2020 than in 2019, respectively with 14,889 (42.32%) fewer vehicles in May 2020 than in 2019.

For a better visibility of the contribution that Automobile Dacia had to the Romanian automotive sector, based on the data provided by ACAROM monthly, we emphasized the number of vehicles that came out of the gates of the Mioveni plant monthly, both in 2018 and 2019, as well as and the monthly weights in the annual total (Table no. 4, Figures no. 3 and no. 4).

Table no. 4 The level of vehicle production in the period 2018-2019, as well as the share of each month in the total production of Automobile Dacia S.A.

Month	2018	2019	2018	2019
	Car production / month		Share of monthly production from total production	
January	28,702	32,807	8.56%	9.39%
February	27,964	32,021	8.34%	9.16%
March	28,699	32,403	8.56%	9.27%
April	26,171	28,083	7.81%	8.03%
May	33,679	35,184	10.05%	10.07%
June	30,777	31,278	9.18%	8.95%
July	29,974	30,312	8.94%	8.67%
August	5,996	6,092	1.79%	1.74%
September	30,663	29,569	9.15%	8.46%
October	38,348	38,268	11.44%	10.95%
November	30,449	30,574	9.08%	8.75%
December	23,840	22,937	7.11%	6.56%
Total	335,262	349,528	100%	100%

Source: authors' own processing based on data taken from ACAROM, <http://www.acarom.ro>

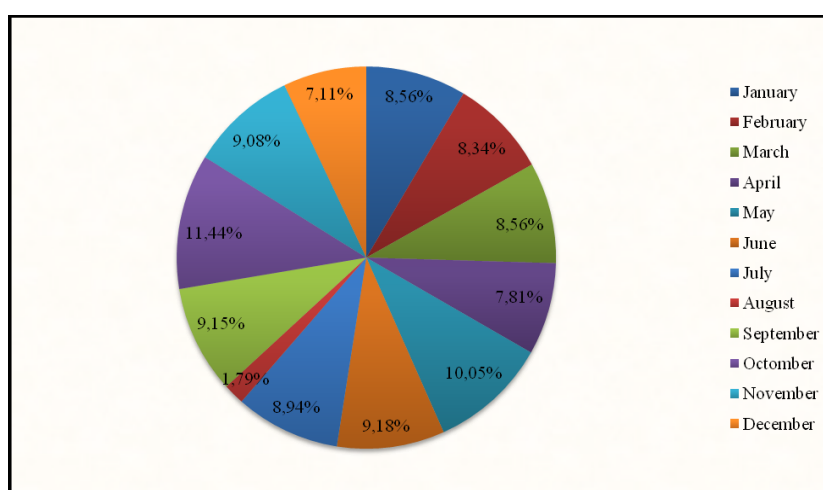


Figure no. 3 The share of vehicle production of each month of 2018 in the total production of Automobile Dacia S.A.

Source: Data in the table no. 4

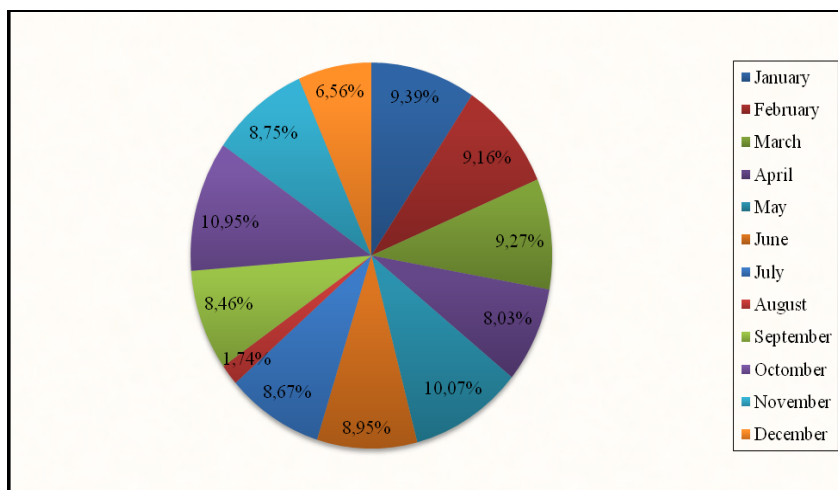


Figure no. 4 The share of vehicle production of each month of 2019 in the total production of Automobile Dacia S.A.

Source: Data in the table no. 4

One can notice that the months of March to May 2019 had a slightly higher share than in 2018, but certainly due to the Covid-19 pandemic at the end of 2020, we will find that these are the weakest months in this regard precisely because of the activity interruption, in part or in full.

The data provided by the Romanian Automobile Manufacturers' Association, available at the time when the drafting of this paper was under way, show a re-launch of production, with over 30,000 vehicles per month in June, July and August 2020.

3. CONCLUSIONS

The automotive sector, being an essential component of the economy, has been hit hard by the crisis of the Coronavirus pandemic, so that the reduction in activity has affected and will seriously affect the economy and society as a whole.

Over the last 15 years, Automobile Dacia has left its mark on the Romanian car market and beyond, because they knew how to develop and adapt to the needs of users, remaining true to its values: an offer of simple, modern, reliable and robust cars, at a right price.

However, due to the pandemic, the Renault group has officially announced the suspension of planned capacity growth projects in Morocco and Romania, and is threatening to send about 1,000 employees into technical unemployment due to the developments in demand in the European car market.

Our analysis showed that production and productivity were directly affected in the first 3 months of the 2020 crisis caused by the Covid-19 pandemic.

Falling demand, though viewed as a global shock, remains a major challenge for the automotive sector, a context in which both manufacturers and suppliers in this industry will have to adapt to a rapidly changing environment.

Future research could investigate the dynamic of the automotive sector by production and productivity in the years after 2020 crisis .

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