Economic Effect of the Coronavirus on the Companies Involved in Car and Automotive Parts Trading, and Manufacture of Tires of Hungary, Including Szabolcs-Szatmár-Bereg County, in Respect of 2020

DR. BERNADETT, MÁRTHA BÉRESNɹ – ESZTER MAKLÁRI²

¹Institute of Accounting and Financial Studies, Faculty of Economics and Business, University of Debrecen, Hungary *(orcid 0000-0003-1149-0642)*

²Institute of Accounting and Financial Studies, Faculty of Economics ¹and Business, University of Debrecen, Hungary, student

¹beresne.martha.bernadett@econ.unideb.hu

²eszter.maklari@gmail.com

In Hungary the wake of the first wave of the Covid-19 epidemic (March 2020), caused a decline in demand for goods and services in most sectors. There were sectors (accommodation services, art, recreation, etc.), which were economically severely burdened by the imposition of restrictive measures, and there were some (financial services, communication), which experienced the change positively. In our research, our goal was to assess the changes caused by the Covid-19 epidemic in the property, financial and profitability situation of the companies involved in car and automotive parts trading, and tire manufacturing, in Hungary, and within the country, in Szabolcs-Szatmár-Bereg county. We established three hypotheses: (1) As a result of the spread of coronavirus epidemic, in Hungary and in Szabolcs-Szatmár-Bereg county as well, the profitability of companies of NAICS codes 441 (car and automotive parts trading) and 4231 (wholesale of road vehicles and parts), decreased. (2) The outbreak of the epidemic had a negative impact on the liquidity of companies established in Hungary, including Szabolcs-Szatmár-Bereg county. (3) As a result of the Covid-19 epidemic, the resource structure of Szabolcs-Szatmár-Bereg county companies, analysed in the framework of research work, transformed. To prove or disprove these, secondary research was used. Finally, we put forward conclusions and proposals for the management of the companies active in this industry.

Keywords: Covid-19, economic impacts, economic analysis, Hungary, Szabolcs-Szatmár-Bereg county, automotive industry

Introduction

The Covid-19 epidemic, which spread in the European Union, including Hungary, in the spring of 2020, brought negative changes into the life of most industries, thus, in particular, both the domestic, and the export-import trading suffered. The development of economic activities of the car and automotive parts

trading and tire manufacturing companies, in the focus of our research, is highly defined by their foreign trade relations, since the companies active in the automotive sector of Hungary, are in a continuous commercial relationship with the world's best known 100 automotive suppliers. [1] In addition, the weakening of the forint exchange rate, further deteriorated the situation of the importers, even further exacerbated by the rising fuel prices and reduced demand for fuel (9,47%). [2] This happened in the analysed industry along with a reported decline of 24%, by the European Automobile Manufacturers Association, of registration of new passenger cars in the EU, in the United Kingdom and in the EFTA countries combined, which is the most significant downturn since 1990. [3] and [4] It also follows from these, that the transport difficulties, caused by the outbreak of Covid-19 epidemic, have created major challenges for the Hungarian vehicle manufacturers, and the companies involved in automotive parts trading, and providing automotive industry services. Whether the companies of the latter group, were able to handle the situation, with sufficient flexibility and innovation, we can learn from the analysis of their reported data for 2020.

The analysis of László Török revealed that the decline in new car sales is more than three times the decline in EU GDP. This also results in the pandemic having a negative impact on the development of the European automotive value chain. [5]

The fact that Wuhan, the city where the coronavirus appeared, has become an important intermediate product supplier for the global automotive industry has also contributed to the latter. Therefore, any major disruption in supply in Wuhan as a result of the pandemic has had a significant impact on companies manufacturing automotive products throughout Europe. [6]

The European automotive industry consists of more than 20 000 enterprises, produces ca. 7% of the EU's GDP, accounts for 8.3% of manufacturing employment, and for 6% of total employment. The car manufacturing has long played an important role in the European Union, as more than 15,000 vehicles were manufactured in the mentioned area already in 2010. And this rate has been steadily increasing. [7] However, the local supply chains located geographically closer to manufacturing companies are less exposed to negative global processes. Therefore, despite the possible higher price, it is worthwhile for manufacturing companies to choose them as a supplier. [8]

According to the statement of the Credit Institution Review, the spread of the coronavirus epidemic, and thus the shortening of global supply chains, results in import substitution solutions becoming more popular. [9]

In April 2020, the number of newly registered passenger cars in the European Union fell by more than 76% compared to April 2019. [10]

In Hungary, in the second quarter of 2020, compared to the same period of the previous year, the GDP of the manufacturing industry fell by 21.7%%. The decrease in the contribution of the vehicle manufacturing sector to GDP contributed significantly to this. It is the latter sector it accounts for more than a quarter of the manufacturing industry. [1]

1. Material and methodology

At the beginning of our research, we formulated the following hypotheses:

- As a result of the spread of coronavirus epidemic, in Hungary and in Szabolcs-Szatmár-Bereg county as well, the profitability of companies of NAICS codes 441 (car and automotive parts trading) and 4231 (wholesale of road vehicles and parts), decreased.
- The outbreak of the epidemic had a negative impact on the liquidity of companies established in Hungary, including Szabolcs- Szatmár-Bereg county.
- As a result of the Covid-19 epidemic, the resource structure of Szabolcs-Szatmár-Bereg county companies, analysed in the framework of research work, transformed.

To prove or disprove the above hypotheses, secondary research was used. In order to make assets, finances and earnings situation of the companies involved in car and automotive parts trading and tire manufacturing, comparable with the pre-pandemic status, as accurately as possible, we created indicators from the data included in the reports of companies, registered in the EMIS database under NAICS (North American Industrial Classification System) codes of 441 (vehicle and automotive parts trading) and 4231 (wholesale of road vehicles and parts). The EMIS database provides assets, finances and earnings information of companies from 2017 to 2020, thus the indicators can be analysed at national level for this period. In the EMIS database for 2017, there are 1881 Hungarian, and 54 Szabolcs-Szatmár-Bereg county companies, for 2018, there are 1869 Hungarian, and 54 Szabolcs-Szatmár-Bereg county companies, for 2019, there are 1706 Hungarian, and 52 Szabolcs-Szatmár-Bereg county companies, while for 2020 there are 1705 Hungarian, and 38 Szabolcs-Szatmár-Bereg county companies registered, respectively. In order to determine the national industry average, we conducted the review based on the data included in the EMIS database, with the exception of the profitability and liquidity indices. There we discovered significant salient values, therefore these were filtered by calculation of the interquartile range. Thus the numbers greater than calculated by the "Q3+1,5*IQR" formula, and the values lower than calculated by the "Q1-1,5*IQR" formula, were filtered out. In order to carry out the model, the values of the data set were first divided by the determination of the middle value and then the median value was calculated for each of the series received. The value of the lower quartile (Q1) is the median value of the lower value data series, while the value of the higher quartile (Q3) is the median value of the higher value data series. Subsequently we defined the interquartile range, based on the following formula: IQR= Q3-Q1, then we calculated the values of the formulas "Q3+1,5*IQR" and "Q1-1,5*IQR". Finally, the indicator values greater than calculated by the "Q3+1,5*IQR" formula, and the values lower than calculated by the "Q1-1,5*IQR" formula, were filtered out. [11] and [12] For Szabolcs-Szatmár-Bereg county, in addition to the indicators contained in the EMIS database, we performed our own calculations as well. The necessary data was obtained from the annual reports of the companies, from the e-beszamolo.im.gov.hu site. We had the opportunity to perform the county-level company analysis for 4 years, since the national data are only available in the EMIS database for 4 years, and we strived for selecting the same time periods, in order to provide comparability. The indicators defined based on the EMIS database, are the following:

Profitability indicators:

- ROA
- ROE
- ROS

Financial indicators:

- liquidity ratio
- quick ratio
- liquidity/cash index

Indicators defined based on our own calculations:

For the analysis of the financial situation:

- gearing ratio
- equity ratio
- coverage of fixed assets I.
- coverage of fixed assets II.
- growth rate of equity (profit after tax/owner's equity)
- growth rate of equity (profit after tax/registered capital)
- stock turnover rate
- stock turnover rate in days
- receivables turnover rate
- receivables turnover rate in days
- debt ratio
- debt coverage

Profitability indicator:

- profitability in proportion to labor
- 2. Analysis of assets, finances and earnings situation of the companies involved in car and automotive parts trading and tire manufacturing, established in Hungary

2.1. Profitability indicators

First, we examined at country and county level, how the profitability of the companies with the above mentioned NAICS codes, developed. In the EMIS database, there are data available for 1881 Hungarian, and 54 Szabolcs-Szatmár-Bereg county companies, for 2017, 1869 Hungarian, and 54 Szabolcs-Szatmár-

Bereg county companies, for 2018, 1706 Hungarian, and 52 Szabolcs-Szatmár-Bereg county companies, for 2019, while 1705 Hungarian, and 38 Szabolcs-Szatmár-Bereg county companies, for 2020, respectively. When determining the national average of the indicators of companies, operating in Hungary in the above mentioned industries, we employed the method described in the "Material and methodology" part of our study, to filter the salient values.

Indicator	2017	2018	2019	2020			
HUNGARY							
Return on assets (ROA)	4.83	3.78	4.01	5.02			
Return on equity (ROE)	25.47	10.83	19.94	14.37			
Return on sales (ROS)	1.98	2.02	2.18	2.20			
SZABOLCS-SZATMÁR-BEREG COUNTY							
Return on assets (ROA)	5.05	4.70	5.78	4.90			
Return on equity (ROE)	11.05	4.49	12.19	7.32			
Return on sales (ROS)	3.04	3.43	4.32	2.67			
Profitability proportional to labor (pre-tax/headcount)	1894.97	980,21	1937.42	2428.95			

Table 1: Analysis of the revenue status of the companies, operating in the industry Source: Research [13] (Own editing)

2.1.1. At the country level

In Hungary the average **return on assets** (ROA) indicator of the companies of NAICS codes 441 (car and automotive parts trading) and 4231 (wholesale of road vehicles and parts), fluctuated between 2017 and 2020 (*Table 1*). In 2020 the value of the indicator was 25.19% higher, compared to the 2019 value, and 32.80% higher compared to that of 2018. This implies that the profit-generating ability of the assets owned by the companies, increased significantly. However, the increasing tendency of the indicator cab be the result of the examined companies investing less due to the Covid-19 epidemic, compared to previous years. The average value of **return on equity** (ROE) decreased by 57.48% in 2018, then increased by 84.12% in 2019, then declined by 27.93% in 2020, compared to the previous year. It is plain to see that the value of the indicator decreased after the outbreak of the epidemic, which shows a lower efficiency using owners' equity. The value of **indicators proportional to sales** slightly increased every year between 2017 and 2020. The increasing value of the indicator is probably due to the fact that the sales of the companies of the industry, increased to a greater extent in average, than their profit after taxation.

2.1.2. At the county level

At the county level, the value of the **return on assets indicator** decreased by 6.93% in 2018, compared to the value of 2017. In 2019, an increase of 22.98% can be observed, then in 2020 the value of the indicator declined by 15.22%, which means that the income-generation capacity of the assets, owned by the companies, decreased by almost one-sixth of the 2019 value, which nearly doubled, compared to the decrease in 2018. The reason of the decrease in 2020 is that the total assets value in the denominator increased by a greater extent (41.83%), than the profit after tax in the numerator (39.80%). The

accumulated asset value may result from that the companies could not sell their inventory, thus the profit after tax increases to a lower extent, since the inventory in the balance of the companies, will not provide any revenue for them. The value of the return on equity indicator (ROE) decreased in 2018 by 59.37%, compared to 2017, then in 2019 an increase of 171.49% took place, and in 2020 a decline of 39.95% from the previous year, can be observed. Although the decline of 2020, compared to 2018, is of smaller rate, the roughly 40% setback is of great importance, since this indicates that on average, the economy of the examined companies contributed to their own equity by 40% less in 2020. The increase of the indicator results in 33.86% from the increase of profit after tax by 39,80% in the numerator, and in 66.14% from the decrease of their own equity value by 77.73% in the denominator. From this context we can determine, that the decrease of the own equity value in average, is not the result of the shrinking profit after tax, since the latter value increased by almost 40%. Concerning the value of the indicator proportional to sales, while it increased by 12.83% in 2018, compared to 2017, increased by 25.95% in 2019, compared to 2018, then in 2020 the average ROS value only reached 61.81% of that in 2019. The almost 40% decrease can be a result of the downturn caused by the Covid-19 epidemic. Namely the sales of the examined companies increased to a lesser extent in 2020 (+22.60%), than their profit after tax did (+39.80%). This is also underlined by the fact, that in a questionnaire survey of a previous research, 52% of the participating respondents reported a decrease in their marketed products or provided services. Due to a lack of data, the **profitability proportional to labor indicator** could only be defined on a county level. The increase of the county indicator by 25.37%, compared to 2019, is most remarkable. The increase is supported by the increase of profit after tax in the numerator to a greater extent, than the headcount value in the denominator, since the profit after tax, of the examined companies, increased by 39.80% on average, while the headcount increased by 33.06% only. The increase of the profit after tax can also be a result of decreasing wages and the introduction of part-time employment. This is also supported by the fact, that in a questionnaire survey of a previous research, concerning the period between March 11 and June 30, 2020, 1/3 of the managers reported the majority of the employees under their control, worked part-time. Overall, it can therefore be concluded that the profitability of the examined companies at the country level, did not fall back to the extent it might be feared, in fact for certain indicators, there was an increase.

2.2. Financial indicators

Designation	2017	2018	2019	2020			
HUNGARY							
Liquidity ratio	1.38	1.42	1.46	1.47			
Quick Ratio	0.59	0.63	0.61	0.66			
Liquidity/cash index	0.11	0.14	0.14	0.19			
SZABOLCS-SZATMÁR-BEREG COUNTY							
Liquidity ratio	6.37	5.65	5.48	3.44			
Quick Ratio	3.34	2.32	2.04	1.90			
Liquidity/cash index	2.49	1.39	1.29	1.06			

Table 2: Analysis of the financial status of the companies, operating in the industry Source: Research [13] (Own editing)

2.2.1. At the country and county level

At the country level, the general **liquidity rate** values (Table 2) of the companies of the industry exceeded the minimum value defined in the literature in all four examined years, but the liquidity quick ratio and the cash index has not reached it in any year. From this we can conclude that the companies of the industry generally have a high level of inventory, which worsens the short-term solvency of the companies analysed. At the county level, all three liquidity indicators of the examined companies exceeded the minimum value defined in literature, in all examined periods. This implies that on average the examined companies had sufficient funds to offset their liabilities. [14] The latter indicates a safe operation, which can be a benefit for potential investors. We can observe, that in 2020 all three liquidity indicators decreased, in particular the liquidity rate decreased to the greatest extent (-37%), which leads us to conclude, that the inventory and receivables of the examined companies, increased only slightly in 2020, compared to the previous year. The latter is justified by the inventory turnover rate increasing from 2019 to 2020, which gives rise to the presumption, that the average inventory of the examined companies, decreased (see below). The decrease of the inventory can result from the lack of material caused by the coronavirus epidemic. The setback of the receivables value can be a result of loss of turnover, caused by the Covid-19 epidemic. This is confirmed by the results of a questionnaire survey, conducted during a previous research, that during the first wave of the epidemic, the number of orders of the company for marketed products / provided services, decreased by 53%. It can be stated, that on a country level, from a liquidity point of view, the companies were not worse off, than in the years preceding the epidemic, although the value of their indicators are lower, than that of the county companies. Despite the companies experienced a decline of liquidity, they still performed above the country average across all indicators.

2.3. Indicators based on own calculations

2.3.1. At the county level

The indicators defined based on Szabolcs-Szatmár-Bereg county companies of NAICS codes 441 (car and automotive parts trading) and 4231 (wholesale of road vehicles and parts) company data obtained from their 2020 reports, can be seen in *Table 3*. The average of **gearing ratios** increased in almost every year, reflecting that liabilities in average make up a greater share of the resources of the examined companies. The examined companies, on average, have a greater share of external capital than their own capital. The latter can come from the increase of loans and debts value, but also from the increase of payables. The high value of the gearing ratio for 2020, can be a result of the downturn, caused by the Covid-19 epidemic. Indeed, the latter could force the companies to take credit or loan capital. Concerning **equity ratio**, the examined companies have not reached the 60-65% value, considered as the indication of stable financial situation, but the average value exceeded the critical threshold of 30%. In 2018 and 2019, the county industry average was 49%, while from 2018 to 2019, an increase of 5 percent, can be observed, then the average value of the indicator decreased by 6 percent to 2020. The high value of the indicator refers to the safe operation of the examined companies. The decrease of equity ratio from 2019 to 2020, of the examined companies, is a result of their own equity decreasing by 77.73%. Based on the

analysis of the gearing ratio and equity ratio it can be stated, that in 2020, compared to 2019, the liability side of the examined companies included a higher share of liabilities than their own capital.

Name of the indicator	2017	2018	2019	2020
Gearing ratio	2.18	2.91	2.41	3.00
Equity ratio (%)	49.47	49.36	54.87	48.26
Debt ratio (%)	31.41	20.03	21.19	19.89
Debt coverage (%)	5583.09	2320.41	2055.11	80.11
Coverage of fixed assets I. (%)	1556.81	1063.65	2480.86	3253.90
Coverage of fixed assets II. (%)	23564.56	1158.32	3437.91	4153.93
Growth rate of equity (profit after tax/owner's equity) (%)	43.86	4.47	11.63	7.32
Growth rate of equity (profit after tax/registered capital) (%)	997.21	272.17	297.76	396.97
Inventory turnover rate	12.22	12.28	8.71	10.31
Inventory turnover rate in days	98.88	91.53	100.44	108.55
Receivables turnover rate	68.47	104.03	108.97	67.90
Receivables turnover rate in days	84.41	137.03	49.68	109.44

Table 3: Indicators for the analysis the assets situation of the examined companies Source: Research [13] (Own editing)

The value of the **debt ratio** is almost unchanged since 2018 (about 20%), but there was a decrease of 1.3 percent in 2020. From this we can conclude that in 2020 the short-term liabilities accounted for a higher proportion of the resources of companies, than in the previous years, which can be a result of the increase in short-term credits and debts, and payables to vendors, as a consequence of the outbreak of the Covid-19 epidemic. The value of the debt coverage indicator decreased significantly in 2020, compared to the previous three years. Since the debt ratio is unchanged, the debt coverage, similarly to the gearing and equity ratios, confirms the decrease of the own equity. The values of coverage of fixed assets I. and coverage of fixed assets II. indicators far exceeded the 100% threshold, thus the principle of matching prevails. The company was able to cover the assets with its fixed assets, while the assets available to the company for a period of less than one year are covered by short-term liabilities. The average value of indicators increased continuously from 2018, in 2020 the own equity covered the noncurrent assets of the companies, more than three times. The latter is favorable from a financing perspective, but the high value of the indicators can also result from the majority of analysed companies decreased their investments, following the outbreak of the Covid-19 epidemic, and the high value of the coverage of fixed assets II. indicator can be attributable to the increase of the value of long-term liabilities, which in turn can result from the increase of the long-term loans, taken by the companies to eliminate the financing issues caused by the epidemic. The **growth rate of equity** indicators show the current year increase of assets, realized from own equity, and subscribed capital, respectively. The value of the profit after tax/owner's equity indicator decreased in average 37 percent from 2019 to 2020, while the value of the profit after tax/registered capital indicator increased by 33 percent. From the value of these indicators, we can deduce that in the referred period, the profit after tax per unit of registered capital, increased by a higher rate, than the profit after tax per unit of own equity did. The

average value of the **inventory turnover rate** indicator increased from 2019 to 2020, but despite the increase, the value of the parameter never reached the values of 2018 or 2017. The increase of the inventory turnover rate shows that the inventory of the examined companies turned more times in the net sales of the given company, compared to the previous year. The value of the indicator is generally favorable, when it is as high as possible, since the increasing value can result from the increase of sales, that the inventory of the examined companies has been sold quickly, thus soon becomes a turnover. In addition, the increasing value of the indicator can also show to the analyst, that the inventory of the examined companies is lower than in the previous years, which can also cause missing stocking possibilities, and the latter can result in decreasing sales. In this case the low inventory value can be a result of the transport and supply difficulties, and in turn, the resulting material shortage. From 2018, the inventory turnover rate changed in a negative direction, a **stocking time** increased, which indicates that the examined companies needed more time to sell their inventory. The latter is unfavourable, since it results in a trade receivable later, and in turn results in a revenue realized later. The receivables turnover rate followed an increasing trend between 2017 and 2019, but the 2020 value of the indicator, compared to 2019, decreased by 38 percent, which suggests that the company in average can collect their receivables later than in the previous years, and thus can realize the proceeds later as a revenue. The decreasing value of the indicator is most likely attributable to the reduction of customer revenue, caused by the Covid-19 epidemic, and the resulting liquidity problems. The average receivables turnover time indicator of the examined companies fluctuated significantly in the period between 2017 and 2020. The reason for the increase in 2020 is the above mentioned growth of the number of late payments by customers, but it is an interesting fact, that the high 2020 value of the indicator does not reach the calculated 2018 value of the parameter. The decreasing value of the liquidity indicators (Table 2) can be associated with the stocking and collecting times calculated during the analysis of the assets situation of the companies of the industry. The value of the last two indicators increased in 2020, compared to the previous year, thus the examined companies in 2020, on average, obtained the turnover derived from the sale of their stock later, which had a negative impact on the short-term solvency of the examined companies.

3. Findings

3.1. Material and methodology

According to the **first hypothesis**, formulated in the "Material and methodology" part of our study, as a result of the spread of coronavirus epidemic, in Hungary and in Szabolcs-Szatmár-Bereg county as well, the profitability of companies of NAICS codes 441 (car and automotive parts trading) and 4231 (wholesale of road vehicles and parts), decreased. Based on the findings identified during our research, the return on equity indicator of the companies in the examined industry decreased on average on a national level, which indicates that in 2020 the owners' equity was used less efficiently, than in the previous years. Contrary to the country-wide profitability indicators, the industry companies registered in Szabolcs-Szatmár-Bereg county on average, there is a decline concerning the return on assets, return on equity and return on sales indicators. This implies that in response to the outbreak of the Covid-19 epidemic, the income-generation capacity, the return on owners' investments and the revenue per unit

of turnover, of the examined county companies decreased. Overall, our first hypothesis was only partially justified.

3.2. Financial indicators

Our **second hypothesis** assumed that the outbreak of the epidemic had a negative impact on the liquidity of companies established in Hungary, including Szabolcs- Szatmár-Bereg county. The statement concerning the liquidity situation of the companies, registered in the country, active in the examined industry, is refuted, since based on the data in EMIS database it can be stated, that in 2020, at country level, the short-term solvency of the industry companies has not decreased, compared to the previous four years. Conversely, the average values of liquidity indicators of the companies registered in Szabolcs-Szatmár-Bereg county, and of NAICS codes 441 (car and automotive parts trading) and 4231 (wholesale of road vehicles and parts), declined significantly in 2020, compared to the years preceding the coronavirus epidemic. The general liquidity rate decreased to the greatest degree (37%), which may indicate that the average stock of the examined companies decreased. The part of our hypothesis, stating that the outbreak of the epidemic had a negative impact on the liquidity situation of the companies registered in Szabolcs-Szatmár-Bereg county, proved to be true.

3.3. Indicators based on own calculations

In respect of our **third hypothesis**, as a result of the Covid-19 epidemic, the resource structure of Szabolcs-Szatmár-Bereg county companies, analysed in the framework of research work, transformed. Based on the analysis of the gearing ratio, equity ratio and debt coverage, it can be stated, that in 2020, compared to 2019, the liability side of the examined companies included a higher share of liabilities than their own capital. In Szabolcs-Szatmár-Bereg county, the value of own equity of companies of NAICS codes 441 (car and automotive parts trading) and 4231 (wholesale of road vehicles and parts), decreased by 77.73% on average. As a result, like it is indicated by the gearing ratio, in 2020 the resources side of the examined companies included a higher share of liabilities, which could have been supplemented by the fact, that because of the Covid-19 epidemic, it is likely that the willingness of the industry companies to borrow, increased. This is also supported by in-depth interviews conducted during our previous research.

Conclusions and proposals

Due to the worldwide spread of the coronavirus, in 2020 every sector of the economy – including the companies involved in car and automotive parts trading and tire manufacturing, in the focus of our research – had to stand under conditions never experienced before. Under the new, unprecedented economic and healthcare conditions, both managers and subordinates had to adapt flexibly, acquire new work equipment, acquire new work methods. In Szabolcs-Szatmár-Bereg county the first wave of the Covid-19 epidemic heavily complicated the daily life of the examined companies, and their employees. Thanks to the expertise of the managers (and other employees) the profit after tax of the examined companies registered in Szabolcs-Szatmár-Bereg county, involved in the examined industry, increased

by 39.80% on average in 2020, compared to 2019. This is also a result of the managers and other employees being able to flexibly adapt to the situation. At present, digitization is undergoing tremendous development. In an epidemiological situation, every company has to keep pace for their survival. The epidemic also made the companies involved in the automotive industry, vehicle trading realize that progress can only be made with the appropriate infrastructure background, the existence of modern computing devices and continuous improvement of employees' IT skills. We recommend to the managers of the companies involved in this industry, to be sure to bear these factors - becoming a basic need in the future – in their mind in their day-to-day management. The consequence is that in the future, employees of companies will need to acquire new skills which will enable them to use digital technology tools in their everyday activities. We believe that the development of IT will entail the transformation of the employment structure of companies, resulting in fewer administrative activities, physical assembly and traditional sales staff will be needed. On the contrary, inter alia, artificial intelligence experts, business developers, data analysts, robotics engineers, database and network experts will be highly sought among companies dealing with car trading. In addition to employing these professionals, companies operating in the sector also need to invest significant amounts in IT, since companies operating in this sector also need to use new technologies. In addition, we recommend to the managers of the companies involved in this industry, that, in addition to mastering flexible thinking and a high degree of adaptability, a significant amount is invested to develop IT knowledge, foreign language and communication skills of employees under their control and to acquire modern digital tools. We also advise them to keep in mind the need to fill in the list of jobs that are essential in the future when designing new work forces.

References

- [1] Cserháti, I. Keresztély, T. Takács, T. (2021): Competitiveness and employment in the automotive industry. KÖZ-GAZDASÁG 1/2021. 11 p.
- [2] Morais A. Ivanov A. Hristova B. Ninov G. Yanakieva N. Slavcheva N. Sanyal R. Mladenov S. Wu X. (2020): Retail bloom and gloom. Foresight 2021, ISI Emerging Markets Group.
- [3] Fabók, B. (2021): European car sales fell by record amounts last year G7 EKONOMI. January 19, 2021, downloaded on: March 22, 2021. https://g7.hu/adat/20210119/rekordmertekben-estektavaly-az-europai-autoeladasok/
- [4] Tamás Mészáros R. (2021): Tech sector would gulp down, but at least tap the automotive industry. G7 EKONOMI. February 22, 2021, downloaded on: March 20, 2021 https://g7.hu/vilag/20210222/a-techszektor-maga-ala-gyurne-de-minimum-megcsapolna-az-autoipart/
- [5] Török L. (2020): The Link Between Car Sales and the Economic Crisis in the European Union at the Time of the Covid-19 Epidemic. International Journal of Economics and Business Administration. Vol. 8. No. 4., pp. 1033-1042. ISSN: 2241-4754
- [6] Pelle A. Tabajdi G. (2021): Covid-19 and transformational megatrends in the European automotive industry: Evidence from business decisions with a Central and Eastern European

- focus. Entrepreneurial Business and Economics Review. Vol. 9. No. 4., pp. 19-33. DOI: https://doi.org/10.15678/EBER.2021.090402
- [7] Török L. (2022). The contribution of the Visegrad four automotive industry to economic growth. Journal of International Studies, Vol. 15. No. 1., pp. 90-103. DOI: 10.14254/2071-8330
- [8] Péli L. Peredy Z. Vörös M. (2022): Az autóipari direkt és indirekt beszállítói tevékenységek összehasonlítása egy Komárom-Esztergom megyei kis-és középvállalat szemszögéből. Studia Mundi Economica. Vol. 9. No. 1., pp. 78-90.
- [9] DOI: https://doi.org/10.18531/Studia.Mundi.2022.09.01.78-90
- [10] Hausmann R. (2020): A globális ellátási láncok átalakulása a feldolgozóiparban a koronavírusjárvány következtében. Hitelintézeti Szemle, 19. évf. 3. sz. pp. 130–153. DOI: : http://doi.org/10.25201/HSZ.19.3.130153
- [11] ACEA Driving Mobility for Europe (2021): Passenger car registrations: -21.7% first two months of 2021; -19.3% in February.
- [12] https://www.acea.auto/pc-registrations/passenger-car-registrations-21-7-first-two-months-of-2021-19-3-in-february/
- [13] Balogh, P. Csipkés, M. Huzsvai, L. Nagy, L. Pocsai, K. (2012): Statistics for economic analysts. Seneca Books, Debrecen, 168 p. ISBN: 978-963-08-5016-2
- [14] Domán, Cs. Szilágyi, R. Varga, B. (2007): Fundamentals of statistical analysis Foundation for the Development of Economic and Methodological Training, Miskolc, 209 p. ISBN: 978-963-06-3135-8
- [15] Elektronikus Beszámoló Portál (2022): https://e-beszamolo.im.gov.hu/oldal/kezdolap
- [16] Adorján, Cs. Lukács, J. Róth, J. Veit, J. (2011): Accounting and analysis Vol. II. Hungarian Chamber of Auditors, Budapest, 210 p. ISBN: 978-963-892-234-2
- [17] EMIS (2021): Download time: 2021. 08. 18.
- [18] https://www.emis.com/php/companies/screener