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TRENDS AND PROSPECTS OF THE MACEDONIAN MANUFACTURING INDUSTRY IN THE LIGHT OF THE FDI INFLOWS

Abstract

This paper provides an outlook of the economic profiles of the manufacturing sectors in North Macedonia on NACE Rev.2 level, according to their contribution to the GDP, output and net value added, number of employees, share in the Macedonian export and trends of sectors' development. The manufacturing industry experienced significant structural changes in the past decade, largely attributable to the entrance of the FDI in North Macedonia. The FDI driven industries, in particular the automotive one, have created statistical disruption with regard to the traditional Macedonian industries, taking the lead in the total manufacturing output and export. In this perspective, the traditional Macedonian industries tend to look less important, which has also been reinforced with the lack of the active industrial policy and specific instruments for the domestic industries. Based on the available statistical data, this paper identifies the major Macedonian manufacturing sectors, such as metal, textile and food processing industry, as well as prospective industries - production of rubber, plastic and non-metallic mineral products, along with recommendations for tailored policy support of these sectors.

Key words: Manufacturing industry; FDIs; Industrial policy

JEL Classification: L6; L60

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Introduction

Over the last decade, the manufacturing industry in North Macedonia experienced transformation by FDI inflows in the country. This paper aims to provide detailed outlook of the economic profiles of the manufacturing sectors in North Macedonia and FDIs in specific industries, in purpose of identifying the causal link among them. The manufacturing sectors are analysed according to their contribution to the GDP, output and net value added, number of employees, share in the Macedonian export and trends of sectors' development over the period 2010-2021. The preparatory work for the paper indicated that analysis of such scope has not been previously undertaken. During the research, data from the State Statistical Office (SSO) and other relevant sources were used, as well as relevant documents. The methodological approach has been mainly based on classical methods of analysis and synthesis. The restraining element was limited availability of the data, as well inconsistencies among databases that needed sound cross-cutting of the data. The paper aims to contribute to better understanding of the impact of the FDIs on the manufacturing industry in North Macedonia and serve to tailored policy approach for effective support of the traditional Macedonian industries.

1. Economic profiles of the manufacturing sectors in North Macedonia

The State Statistical Office (SSO) of North Macedonia applies NACE Rev.2[1] classification of the economic activities, which incorporates 98 sectors as components of the GDP.[2] The latest available data of GDP components disaggregated per sectors on NACE Rev.2 refer to 2021. The Table 1 shows data of the manufacturing industry, which encompasses 24 sectors. The manufacturing industry has been the second contributing economic activity to the GDP with 13.5%, while wholesale and retail trade comprised 14.9% of the GDP in 2021.[3] The manufacturing industry has been selected to be analyzed due to its relevance for the competitiveness of the national economy, and implicitly, GDP growth. In addition, the manufacturing industry has experienced the most notable changes in the last decade.

Share in GDP. As presented on the Table 1, the share of the total manufacturing industry was 13.5% of GDP in 2021, compared to 9.9% in 2010. The major changes occurred in two sectors – "Manufacture of motor vehicles, trailers and semi trailers", surging from almost non-existing industry in 2010

1 https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/ks-ra-07-015

2 https://makstat.stat.gov.mk/PXWeb/pxweb/mk/MakStat/MakStat__BDP__BDPInvesGodisni__BDPsporedESS2010/375_NacSmA_Mk_09p2a_01ml.px/

3 https://www.stat.gov.mk/PrikaziSoopstenie.aspx?id=32&rbr=14121

up to share of 1.7% of GDP in 2021 (with peak of 1.9% in 2019), followed by “Manufacture of machinery and equipment, n.e.c.” that increased its share in GDP from 0.3% in 2010 to 1.3% in 2015 and down to 0.9% in 2021. This sector consists of machinery and equipment “not elsewhere classified – n.e.c”, which is rather volatile by its description, i.e. depends on classification of other sectors’s output. Apart of these two sectors that have been recently added to the manufacturing scenery in North Macedonia, there are few traditional Macedonian industries that form the core of the value added in manufacturing. These include textile (fabrics and wear apparel), metal industry (basic and fabricated products), food processing and beverages, pharmaceuticals and non-metallic mineral production.

Textile and wear apparel had combined share of 2% of the GDP in 2021, a decrease compared to 2.5% in 2018. Basic metals’ share of GDP stood at its highest in 2021, registering 1.4%. All other sectors had lower share of 0.5% in the GDP. Among them, a rising trend has been noted in the “Manufacture of computer, electronic and optical products“ and “Manufacture of rubber and plastic products”. The analysis below shall focus on these 12 mentioned sectors, highlighted in the Table 1.

Table 1. Share in GDP of the manufacturing sectors in North Macedonia (in %)

	Sectors	2010	2015	2018	2019	2020	2021
	Manufacturing (total)	9.87	11.76	13.35	13.39	13.30	13.48
1	Manufacture of food products	1.45	1.64	1.71	1.74	1.72	1.66
2	Manufacture of beverages	0.87	0.64	0.76	0.68	0.68	0.67
3	Manufacture of tobacco products	0.53	0.38	0.46	0.52	0.40	0.35
4	Manufacture of textiles	0.11	0.37	0.76	0.73	0.78	0.79
5	Manufacture of wearing apparel	1.61	1.63	1.72	1.61	1.47	1.19
6	Manufacture of leather and related products	0.18	0.22	0.20	0.16	0.12	0.12
7	Manufacture of wood and of products of wood and cork, except furniture....	0.10	0.13	0.15	0.17	0.13	0.17
8	Manufacture of paper and paper products	0.16	0.14	0.13	0.14	0.17	0.15
9	Printing and reproduction of recorded media	0.22	0.34	0.39	0.40	0.30	0.24
10	Manufacture of coke and refined petroleum products	0.11	0.00	0.00	0.00	0.00	0.00
11	Manufacture of chemicals and chemical products	0.14	0.13	0.13	0.14	0.20	0.19
12	Manufacture of basic pharmaceutical products and pharmaceutical preparations	0.57	0.68	0.66	0.70	0.78	0.83
13	Manufacture of rubber and plastic products	0.32	0.35	0.46	0.42	0.44	0.44
14	Manufacture of other non metallic mineral products	0.90	0.76	0.63	0.68	0.80	0.71
15	Manufacture of basic metals	0.97	0.83	0.51	0.63	0.80	1.41
16	Manufacture of fabricated metal products, except machinery and equipment	0.47	0.48	0.59	0.66	0.70	0.75
17	Manufacture of computer, electronic and optical products	0.08	0.11	0.25	0.26	0.29	0.32
18	Manufacture of electrical	0.23	0.33	0.26	0.26	0.31	0.36
19	Manufacture of machinery and equipment n.e.c.	0.23	1.29	1.21	1.00	1.02	0.89
20	Manufacture of motor vehicles, trailers and semi trailers	0.02	0.76	1.81	1.89	1.55	1.73
21	Manufacture of other transport equipment	0.03	0.07	0.07	0.07	0.05	0.01
22	Manufacture of furniture	0.26	0.28	0.27	0.27	0.28	0.29
23	Other manufacturing	0.14	0.08	0.11	0.14	0.16	0.09
24	Repair and installation of machinery	0.15	0.11	0.10	0.12	0.12	0.11

Calculations by author based on MAKSTAT Database, GDP Components per sectors by NACE Rev.2

Output and value added. As indicated on the Table 2,[4] all sectors, apart of the manufacture of wear apparel, have registered an increase of their output over the period 2010-2021. On the other hand, serious increase has been noted in the production of textile fabrics, indicating shift within the textile industry, as the combined output in both textile branches has not significantly decreased. According to the size of the analyzed manufacturing sectors, highest output in 2021 has been registered in machinery and equipment sector, n.e.c. This sector had share of over 30% of the total manufacturing output in 2021 (Graph

4 The data in Table 1 were originally provided in Denars by SSO. The calculation was done by the author, using average conversion rate MKD/EUR over the period 2018-2021.

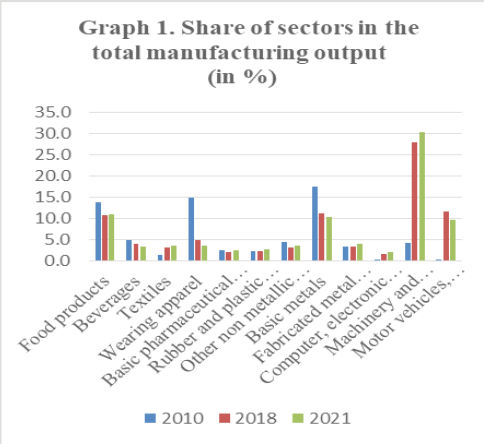
1). The traditional Macedonian industries - food products, basic metals and textile had combined share in the total manufacturing output of 28.4% in 2021, compared to 47.5% in 2010 (Graph 1). In addition, the manufacture of motor vehicles, trailers and semitrailers had share of 9.8% in the total manufacturing output in 2021. It has been the leading one with regards to the share in GDP (Table 1), due to its high value added rate (Graph 2).

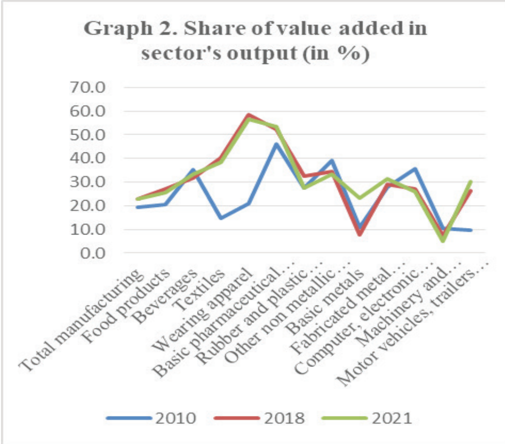
Table 2. Selected manufacturing sectors - output and value added (in MKD millions)

	(Sub)sectors	2010		2015		2018		2019		2020		2021	
		Output	Value added	Output	Value added	Output	Value added	Output	Value added	Output	Value added	Output	Value added
	Manufacturing industry (total)	222755	43142	274217	65735	387468	88210	401490	92779	362432	88996	428315	98353
1	Food products	30858	6323	37792	9158	41758	11286	45626	12068	43248	11543	47246	12115
2	Beverages	10842	3820	12114	3590	15745	4997	15136	4733	13215	4542	14544	4869
3	Textile	3170	470	5643	2045	12546	5047	12288	5083	12578	5198	15145	5798
4	Wear apparel	33483	7019	17082	9124	19462	11357	19029	11157	16355	9854	15339	8696
5	Basic pharmaceutical products and preparations	5398	2482	6907	3795	8399	4385	9668	4881	10243	5253	11255	6031
6	Rubber and plastic products	5062	1394	7981	1962	9365	3036	9408	2901	9334	2974	11611	3186
7	Other non-metallic mineral products	10081	3951	11049	4264	12117	4156	12868	4728	13142	5341	15570	5216
8	Basic metals	39083	4239	31261	4648	43425	3354	33550	4393	27415	5373	44380	10301
9	Fabricated metal products, except machinery and equipment	7367	2060	9468	2683	13327	3877	14013	4557	13221	4672	17369	5465
10	Computer, electronic and optical products	979	349	2814	626	6056	1635	6794	1775	7145	1972	9291	2305
11	Machinery and equipment n.e.c.	9611	1012	76140	7233	108138	7999	119713	6928	107904	6856	129830	6517
12	Motor vehicles, trailers and semi trailers	8399	4385	14839	4245	45330	11968	48365	13101	38246	10354	41902	12592

Source: MAKSTAT Database, GDP Components per sectors and subsectors by NACE Rev.2

As noted on Graph 1, the share of the sectors in the total manufacturing output has been changing over the period 2010-2021, influenced by the growth of two sectors – manufacture of machinery and equipment, n.e.c. and manufacture of motor vehicles, trailers and semi-trailers. These two sectors rose by 1350% and 500% over the period, respectively. The total manufacturing industry grew by 192% over the period 2010-2021, mainly owing to these two sectors, although, there has been an upward trend in all manufacturing sectors. Despite decrease of the relative share of the traditional Macedonian industries in the total manufacturing output over 2010-2021, it could be argued that the food processing, metal and textile industry managed to keep their position in the national economy. On the other hand, the rapid increase of the two abovementioned sectors, indicates that shift of the industrial outlook of the country is possible within short period of time. The change, particularly in the sector of motor vehicles has been induced as a result of the FDIs inflows, as discussed below.





Source:MAKSTAT Database, GDP per components

Another relevant indicator for the sectors' importance is the value added in sector's output (Graph 2). In most of the sectors, the value added rate in 2018 has increased compared to 2010, while 2021 shows lower value added rates in most of the industries, due to the increased costs of the inputs, particularly energy and labour. Also, Graph 2 indicates which industries have higher volatility triggered by the changes on the global markets, such as basic metal industry. Textile sector stands on top with regards to the share of its value added in the sector's output in 2021. The food processing industry has least favorable ratio of costs and output in 2021, implying lower value added rate. However, this sector shows less volatility compared to the basic metals and textile. The high value added in the textile sector, particularly wear apparel (56.7% in 2021) has been largely attributable to the low wages. The average gross salary in the manufacture of the wear apparel corresponded to 62.5% of the average gross salary on the national level in 2021.[5] The corresponding indicator with regards to the average gross salary on the level of manufacturing industry was 58% in 2021.[6] Both indicators referring to the manufacture of food products were 78.5% and 72.8%, respectively. The trend of increase of the minimum wage in North Macedonia over 2021-2024 are likely to negatively affect the value added rate of labour intense industries.

The two rapidly growing sectors in North Macedonia have very diverse value added rates of 30% (motor vehicles) and 5% (machinery and equipment, n.e.c). That explains the difference in their share in the GDP (Table 1), but, also

5 https://www.stat.gov.mk/pdf/2022/4.1.22.17_mk.pdf
6 Ibidem

indicates that even sectors with higher input costs could be interesting for the investors (domestic or foreign). Furthermore, matching the data presented on Table 1 and Graph 2 shows that the fabricated metal products and other non-metallic mineral products have favorable share in the manufacturing industry, while each sector had value added rate of over 30% in 2021. On the other hand, the basic metals sector has significant share in the GDP, while the value added rate is subject of market volatility.

Employees by sectors. The analyzed sectors vary a lot with regards to the number of employees (Table 3). The large sectors are textile with combined share of both subsectors of 4.9% in the total national employment; manufacture of food products with share of 3.5% and manufacture of motor vehicles, trailers and semitrailers with share of 3.1%. In terms of the share in the total number of employees in the manufacturing industry, these three sectors absorbed 56.5% of the workers in 2021. In addition, metal industry – basic metals and fabricated metal products absorbed additional 8% and 6.1% of the employees in the manufacturing industry, respectively. These indicates that other manufacturing sectors are rather small in terms of engaged labour. It must be pointed out that certain inconsistency was noted with regards to statistical data of the employees in the manufacture of machinery and equipment, n.e.c. This sector has very small number of registered workers, which hardly corresponds to its largest output (Table 1) among the manufacturing sectors. This would have been realistic for technologically outstanding industries that minimally relay on labour input, which is unlikely the case. It could be argued that imprecise classification of the products from other sectors reflects in such data inconsistency, as they are statistically allocated as n.e.c.

. Number of employees by manufacturing sectors over period 2016-				
tors	2016	2018	2019	2020
al emloyees (country)	731107	771 806	807 362	789 552
nufacturing industry	137351	147240	155160	161007
nufacture of food products	22008	27 077	27 474	23 936
erages	4650	2 720	3 437	1 897
nufacture of textile	5252	6 708	5 600	7 391
nufacture of wear apparel	34543	35 672	34 457	36 543
ic pharmaceutical products pharmaceutical preparations	/	/	1891	2252
nufacture of rubber and tic products	4768	6 575	3 746	3 855
nufacture of other non- allic mineral products	4805	3 819	2 191	3 527
ic metals	7933	6770	8844	8577
nufacture of fabricated metal ducts, except machinery and ipment	7019	9 751	10 374	10 324
nputer, electronic and optical ducts	/	1864	2987	3232
chinery and equipment n.e.c.	1836	/	/	2318
tor vehicles, trailers and ii trailers	7373	23904	30677	27964

MAKSTAT Database/Labour market

Labour dynamics shows that the motor vehicles' production registered significant growth over the period 2016-2021, along with fabricated metal products and textile (fabrics). The sector of wear apparel shrank in terms of number of employees, as the fabrics' production took the lead. Employees in food processing industry have been rather stable over the analyzed period, with certain downsizing in 2020 due to COVID-19, reflected also in decline of the output (Table 1). Both, the output and number of employees were revived in 2021.

Export by manufacturing sectors. The Table 4 provides data on the export of the analysed manufacturing sectors over the period 2015-2021. The data source is the MAKSTAT database,[7] which served as a basis for necessary calculations. The presented figures refer to the export of specific Macedonian manufacturing sectors, while the total export of the products that are classified in specific activity could be much higher, as such products could be produced and exported by other sectors, too. For instance, the Macedonian sector "Manufacture of furniture" (not presented in the Table 4) is rather small, with share of 0.5% in the total export in 2021, while the export of furniture from the Republic of North Macedonia is much higher (3.3% in total export in 2021), as the automotive seats produced by the sector "Manufacture of motor vehicles, trailers and semitrailers" are classified as furniture at their export.

7 External Trade by economic activity (NACE REV 2), and products by activity, CPA https://makstat.stat.gov.mk/PXWeb/pxweb/mk/MakStat/MakStat__NadvoresnaTrgovija__StokovnaRazmenaBizPretprijatija/325_NTrg_Tab6_ml.px/TS.aspx?nvpm=1%7c807%7c%7c%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c2%7c2%7c1%7c1%7c1%7c1%7c1

Table 4. Exports by manufacturing sectors (in '000 EUR) and share in total export in 2021 (in %)

	Sectors	2010	2015	2018	2019	2020	2021	Share in total export in 2021 (in %)
1	Manufacture of food products	106970	153044	170456	200992	255520	213212	3.0
2	Beverages	47141	42442	53537	62461	56165	54548	0.8
3	Manufacture of textile	34238	53932	100639	100042	128921	143395	2.1
4	Manufacture of wear apparel	299658	336424	306628	289094	239485	237442	3.4
5	Basic pharmaceutical products and pharmaceutical preparations	57982	63956	88617	94000	109171	110545	1.6
6	Manufacture of rubber and plastic products	20591	42335	46228	52192	57062	77606	1.1
7	Manufacture of other non-metallic mineral products	39003	30495	56044	61345	68761	64976	0.9
8	Basic metals	539177	537793	396947	540806	522196	757667	10.9
9	Manufacture of fabricated metal products, except machinery and equipment	33166	45843	63897	59370	59209	68129	1.0
10	Computer, electronic and optical products	9948	29824	38562	51211	52432	54149	0.8
11	Machinery and equipment n.e.c.	/	/	672525	795762	748564	857928	12.3
12	Motor vehicles, trailers and semi trailers	19786	305764	741071	803475	658124	592791	8.5

Source: MAKSTAT Database/Exports by NACE Rev 2, by economic actvity and products

The export data are used to provide more comprehensive outlook of the sectors. Given the small size of the Macedonian market, the growth of the economy largely depends on the export orientation of the sectors. The combined share in the total Macedonian export of all analysed sectors on Table 4 has been 44.8% in 2021. Almost half (20.8%) has been done by the two sectors– manufacture of machinery and equipment, n.e.c and manufacture of motor vehicles, trailers and semitrailers. The latter one had registered an export increase by 3000% over the period 2010-2021, while there are no available data for 2010 and 2015 to calculate the export surge of the first one. The sector of motor vehicles, trailers and semitrailers has experienced downward trend in 2021 and 2022, due to the turmoil in the global automotive industry. On the other hand, the sector with highest export – machinery and equipment, n.e.c. has been continuously rising since 2018. Implicitly to the trends, its export is part of the automotive industry. Among the traditional Macedonian industries, basic metals keep the primate over the period. Despite high volatility to the global market movements, the sector remains the core of the Macedonian economy. The food processing industry output has doubled over 2010-2021, while the relative share in the total export remained around 3%.

The Macedonian export has been significantly alternated with the entrance of FDIs, particularly in the automotive industry. In 2021, the share of the most exported product from this industry (Reaction initiators, reaction accelerators and catalytic preparations, n.e.c) accounted for 23% of the total export; electrical machinery and equipment and parts thereof participated with 14.8%, while iron and steel had share of 9.1%.[8] These three products have solely accounted for 47% of the total Macedonian export in 2021. Implicitly, all manufacturing sectors presented on Graph 3 should be considered as relevant among the exporting industries.

8 https://www.trademap.org/Product_SelCountry_

Table 5. Sectors' output and export in 2021 (in '000 EUR)

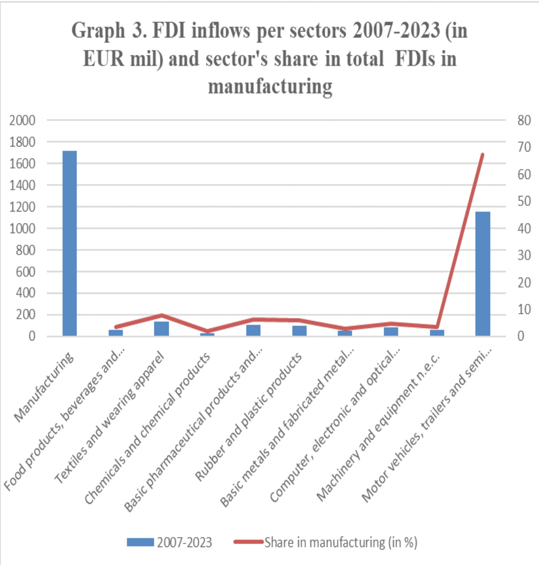
	Sectors	Output	Export	Export/ Output (in %)
1	Food products	768230	213212	27.8
2	Beverages	236487	54548	23.1
3	Textile	246259	143395	58.2
4	Wear apparel	249419	237442	95.2
5	Basic pharmaceuticals products and pharmaceutical preparations	183001	110545	60.4
6	Rubber and plastic products	188797	77506	41.1
7	Other non-metallic mineral products	253167	64976	25.7
8	Basic metals	721628	757667	105.0
9	Fabricated metal products, except machinery and equipment	282427	68129	24.1
10	Computer, electronic and optical products	151081	54149	35.8
11	Manufacture of machinery and equipment n.e.c.	2111058	857928	40.6
12	Manufacture of motor vehicles, trailers and semi trailers	681341	592792	87.0

Source: MAKSTAT Database, GDP per components and exports on NACE Rev.2

Output and export. Another indicator worth to be explored is the ratio between sectors' exports and sectors' output (Table 5). This ratio has been ranging from 23.1% (beverages) to 95.2% (wear apparel) in 2021. The ratio of basic metals sector is over 100%, which could be explained with export of stock from previous year(s) in 2021 or discrepancies between output costs and export prices due to global market changes. The Table 5 offers valuable findings that all manufacturing sectors apply export orientation, despite of their size. Metals, textile, basic pharmaceuticals, rubber and plastic products lead in terms of their share of the exported output, while food products and beverages place majority of their production on the domestic market. This is rather expected, as the domestic demand for these products prevails compared to the absorption capacity of the domestic market for other (sub)sectors. The sectors of non-metallic mineral products and fabricated metal products also place ¾ of their production on the domestic market, which is largely attributable to their role as suppliers to the construction sector in North Macedonia. The data show that sector of machinery and equipment, n.e.c, which is leading in terms of absolute export value, exports only 40% of the production (output), which could imply to its role as a supplier to the other Macedonian industries or FDIs, or, its export could be done via some of the other related sectors. Regrettably, the available statistical data does not enable further analysis in this field.

2. FDI inflows and prospects of manufacturing sectors in North Macedonia

FDI inflows. The FDI policy in North Macedonia has been pursued since 1990s and primarily, it was related to the privatization of the state owned companies. Over the period 1994-2006, the highest FDI of over EUR 400 mil. was recorded in 2001, following the sale of 51% of the Macedonian telecommunication company. More articulated efforts to attract FDIs in the manufacturing sector were noted after 2006. The intense FDI campaign over the period 2008-2012 included specified instruments, such as road-shows, economic promotion programmes, etc., as well subsidies to the foreign investors, particularly in the automotive industry. The state aid included covering of substantial amount of the employment costs of the FDI, tax alleviations and other privileges, putting the domestic investors into unfavorable position.



The manufacturing ector absorbed 29% in the total FDIs over the period 2007-2023.9 Out of them, over 67% have been allocated in the manufacture of motor vehicles, trailers and semitrailers (Graph 3). Other industries received limited amount of investment - around 8% went to the textile industry and 17% (combined) in basic pharmaceuticals; rubber and plastic products and computer, electronic and optical products. More detailed overview of the FDIs is provided on Table 6.

Source: NBRM, https:/nbstat.nbrm.mk

The data shows that only the manufacture of motor vehicles, trailers and semitrailers had continuous FDIs flows over the period 2007-2023, with only exception of 2008 and 2021, attributable to the return of investment due to financial and Covid crisis, respectively. Apart of this sector, notable FDI dynamics was registered in the metal and textile industry, as well as food processing industry, beverages and tobacco products (no separate data on the subsectors were available). Implicitly, it could be concluded that all industries

9 National Bank statistics on foreign investments flows (https://nbstat.nbrm.mk)

discussed above have been subject of certain interest of the foreign investors. At start, their interest has been in the traditional Macedonian industries, and later switched to the greenfield FDIs in automotive industry. This change was induced with country's promotion as a promising hub of this industry, based on substantial subsidies.

Table 6. FDI flows in manufacturing industry in North Macedonia 2007-2023 (in EUR millions)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
TOTAL FDI flows	506	400	145	160	344	111	252	205	217	338	182	614	399	201	471	745	617
Manufacturing	22	0	48	85	209	49	85	58	59	197	65	342	125	4	53	232	83
Food products, beverages and tobacco products	7	0	34	14	49	-17	-6	-2	23	3	-19	-11	18	-23	-8	7	-9
Textiles and wearing apparel	9	0	5	6	26	24	17	8	-14	45	12	-35	4	7	4	17	1
Chemicals and chemical products	27	0	2	1	4	-1	-2	0	-1	1	-3	0	0	4	0	0	0
Basic pharmaceutical products and pharmaceutical preparations	87	0	5	-4	-2	0	-1	-1	0	0	0	-2	12	5	3	0	3
Rubber and plastic products	1	0	1	1	1	-1	1	4	2	4	3	4	11	7	12	20	29
Basic metals and fabricated metal products	2	0	-49	-12	35	-3	-43	-13	-36	36	-19	41	37	4	30	18	21
Computer, electronic and optical products	0	0	0	0	4	15	-1	0	5	6	5	9	1	2	12	20	3
Machinery and equipment n.e.c.	0	0	2	0	1	0	0	0	3	8	-1	15	12	0	7	16	-1
Motor vehicles, trailers and semitrailers	127	-15	53	66	87	23	97	88	76	86	88	316	2	15	-44	60	31

Source: NBRM, https://nbstat.nbrm.mk

Cross-cutting of the economic profiles of the manufacturing sectors and FDI inflows show that articulated FDI in a specific sector could rapidly transform the outlook of the manufacturing industry. In one decade, the manufacturing of motor vehicles, trailers and semitrailers overtook the lead from the traditional Macedonian industries. This transformation increased the volatility of the manufacturing industry in general, as increase of the output, value added and export per sectors have started to depend on the FDI's operations and their decision to remain in the country. Paradoxically, the manufacture of machinery and equipment, n.e.c, statistically has not been among the outstanding recipients of the FDIs. This imply that it could be primarily a domestic sector, or related to FDIs as a supplier, although none of the assumptions could be supported by evidence/data. High output of this sector, low value added rate, small number of employees and high share in total export (according to the data provided by SSO) provoke scepticism how reliable are SSO data, if the largest manufacturing sector has not been properly presented. Such shortcomings largely affect the industrial policy-making. On the other hand, the policy-makers have responsibility to note statistical discrepancies and to ensure their overcoming.

Prospects of the manufacturing industry. The major policy document related to the manufacturing sector is the Industrial Strategy of North Macedonia 2018-2027, accompanied with an Action plan.[10] The Strategy took into consideration the EU Industrial Policy Framework 2017, which outlines several dimensions: Innovation; Investment; Circular and low carbon economy; Digitalization, as well as International dimension (supply chains) and Resilience of the single market.[11] Nevertheless, the Macedonian industrial strategy is rather horizontal, without tailored measures related to the specific sectors. There is lack of in-depth sectoral approach in identification of the issues, which results into horizontal policy measures and non-specified sector outcomes.

The analysis above clearly indicates that the national manufacturing sectors in North Macedonia (textile, metals and food processing) managed to rise over the analyzed period 2010-2021, although their growth could be hardly compared to the FDIs supported sectors. As noted on the Table 6, traditional industries were also recipients of the FDIs, which, at certain degree, contributed to their stability and growth. However, the sector of motor vehicles, trailers and semitrailers experienced immense boost with FDIs entrance, showing that targeted financial support by the state could completely transform the manufacturing industry. Unfortunately, such support was not available for the domestic companies, leaving them alone to cope with the challenges on the national and global markets. As of 2018, the Plan for the enhanced economic growth,[12] has also enabled domestic companies to apply for the state support available to FDIs. However, the cross-cutting of both documents – the Plan and the Industrial Strategy, shows that state measures are likely to be ad-hoc and content driven by the companies, instead of setting coherent and comprehensive measures oriented towards sound performances.

The analysis above indicates rising trends in GDP share, output and export of the sectors "Manufacture of computer, electronic and optical products" and "Manufacture of rubber and plastic products", while, at the same time, these sectors appear to be FDI recipients. This leads to the conclusion that any positive development in the manufacturing industry over the last decade has been somewhat related to FDIs flows in the country. Being a small country, it is common for the Republic of North Macedonia to turn towards foreign

10 Industrial Strategy of North Macedonia 2018-2027, Ministry of Economy, 2018, https://www.economy.gov.mk/mk-MK/news/strategii-2581.nspx

11 https://eur-lex.europa.eu/resource.html?uri=cellar:c8b9aac5-9861-11e7-b92d-01aa75ed71a1.0001.02/DOC_1&format=PDF

12 https://vlada.mk/PlanEkonomskiRast

capital and to look for support of its growth. However, the policy makers must not neglect the domestic companies and domestic potential for investment. Regrettably, the latter happened, as shown in the evidence.

Further development of the sectors should be in line with the latest trends in the global economy. Environmental concerns are growing with regard to all industries, and, they should be tackled promptly, if the Macedonian manufacturing sectors would aim to ensure place in the global supply chains.[13] Also, digitalization and green technological development are already ongoing processes on the global level, that will likely speed-up, provided the overall labour shortages. These general, and some industry specific trends,[14] need to be taken into account in formulating the policy-measures for both – domestic and foreign investments, in purpose of the effectively use of the state funds for industrial support. In addition, the FDI policy has not provided any significant outcomes related to inclusion of the domestic companies in FDIs supply chains, which should be another aspect to look upon in the Macedonian policy efforts to ensure preconditions for further growth of the manufacturing industry.

Conclusion

In the last decade, the FDI inflows have caused transformation of the manufacturing industry in North Macedonia, with automotive related sectors taking the lead in the total manufacturing output, share in GDP and export. The traditional Macedonian industries (metals, textile, food-processing) also managed to grow over the period, although quite modestly compared to the FDIs supported sectors, mostly owing to the lack of the sector specific instruments of industrial policy. Prospects of the Macedonian manufacturing industry are closely related to the tailored support to the traditional and rising industrial sectors, that could have spill-over effects to the whole economy. To reinforce the effects, the modernization of the private sector should follow the new trends towards sustainable development.

13 WTO Report 2023: Re-globalisation for a secure, inclusive and sustainable future

14 World Bank, Seizing a Brighter Future for All: North Macedonia, 2018

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