An Overview of the Textile and Leather Industry of North Macedonia

Pregled tekstilne i kožarske industrije Sjeverne Makedonije

Professional Paper / Stručni rad

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Abstract

The focus of this paper is to analyze the situation in the textile and leather industry in the last decade and their importance for the national economy of the Republic of North Macedonia. These industries have a significant impact on the total industrial production in the country, employment, participation in total exports, while their contribution to the formation of GDP is less significant. One of the reasons for this is the high share of lohn production, which accounts for about 93% of clothing and footwear production, while only 7% falls on own production. The analyses show that the textile, clothing and leather industries generally record a negative trend in industrial production and employment. These sectors are dominated by female labor, especially in the production of clothing and leather, which underlines their social as well as economic significance. Most workers in the manufacturing sector have secondary education qualifications, while only a small part have university degrees. While wage growth is a positive sign, it is not enough to compensate for the structural weaknesses of these sectors. The decline in the number of enterprises, together with fluctuations in production indices, confirms the general instability and challenges facing the textile and leather industry in North Macedonia.

Keywords: manufacturing of textiles, manufacture of wearing apparel, manufacture of leather, Industrial production, employments

Sažetak

Fokus ovog rada je analiza stanja u tekstilnoj i kožarskoj industriji u posljednjem desetljeću te njihova važnost za nacionalno gospodarstvo Republike Sjeverne Makedonije. Ove industrije imaju značajan utjecaj na ukupnu industrijsku proizvodnju u zemlji, zapošljavanje i udio u ukupnom izvozu, dok je njihov doprinos u stvaranju BDP-a manje izražen. Jedan od razloga za to je visok udio lohn proizvodnje, koja čini oko 93% proizvodnje odjeće i obuće, dok svega 7% otpada na vlastitu proizvodnju. Analize pokazuju da tekstilna, odjevna i kožarska industrija općenito bilježe negativan trend u industrijskoj proizvodnji i zapošljavanju. Ovim sektorima dominira ženska radna snaga, osobito u proizvodnji odjeće i kože, što naglašava njihovu socijalnu, ali i gospodarsku važnost. Većina radnika u prerađivačkom sektoru ima srednju stručnu spremu, dok tek manji dio posjeduje visokoškolske kvalifikacije. Iako je rast plaća pozitivan pokazatelj, on nije dovoljan da nadoknadi strukturne slabosti ovih sektora. Pad broja poduzeća, zajedno s varijacijama u indeksima proizvodnje, potvrđuje opću nestabilnost i izazove s kojima se suočava tekstilna i kožarska industrija u Sjevernoj Makedoniji.

Ključne riječi: proizvodnja tekstila, proizvodnja odjeće, proizvodnja kože, industrijska proizvodnja, zaposlenost

1. Introduction

The textile and leather industries have a long tradition and an important place in the industrial development of the Republic of North Macedonia [1]. The textile sector is one of the oldest in the country, and is a significant segment of the manufacturing industry, with a dominant presence of small and medium sized enterprises. Production is mainly export-oriented to foreign markets, most often through the lohn production system (CMT system), where domestic companies sew products for foreign partners [2, 3].

Although smaller in scale, the leather industry plays a significant role, especially in the production of footwear and leather accessories, with several capacities for leather processing and production of finished products, primarily for export. Together, these industries have a significant impact on the total industrial production in the country, high labor absorption and exports. They are a particularly important source of employment for women in economically weaker regions [4].
Over the past decade, both industries have faced a series of structural and market transformations. Despite their labor intensive nature, these sectors remain among the key export sectors. However, they face significant challenges: low productivity, high share of lohn production, a deficit of qualified workers, as well as strong global competition, technological change, and the long-term effects of the COVID-19 pandemic [5].

At the same time, the process of globalization and integration into the international economy has also opened up new opportunities, especially through the relocation of some production from developed EU countries to regions with lower production costs, which has had a positive impact on demand and lohn arrangements in North Macedonia [6, 7].

Despite the challenges, there is significant potential for the development of these industries through modernization, introduction of new

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technologies, digitalization, creation of own brands and increasing the added value of products. Support from the state and foreign partners will be key for their further transformation and for improving competitiveness [8,9].

2. The Economic Role of the Textile and Leather Industry

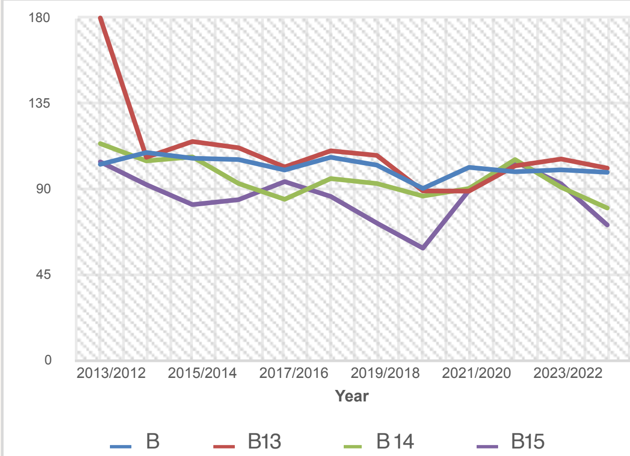
The textile and leather industries in North Macedonia are traditional industrial sectors, characterized by a specific labor intensive character, long standing tradition and expertise, and play a significant role in the country's economy [8]. Table 1 provides an overview of all manufacturing activities that, according to the National classification of activities (NACE), are part of the textile, clothing and leather industry [10]. The term textile industry is often used to refer to both manufacture of textile and manufacturing of wearing apparel.

Table 1. National classification of activities – NACE Rev. 2.1 [10]

Code	Activity
13	**MANUFACTURE OF TEXTILES**
13.1	Preparation and spinning of textile fibres
13.2	Weaving of textiles
13.3	Finishing of textiles
13.9	Manufacture of other textiles
13.91	Manufacture of knitted and crocheted fabrics
13.92	Manufacture of household textiles and ready-made household articles
13.93	Manufacture of carpets and rugs
13.94	Manufacture of cordage, ropes, braids, and nets
13.95	Manufacture of non-wovens and non-woven products
13.96	Manufacture of other technical and industrial textiles
13.99	Manufacture of other textiles, n.e.c. (not elsewhere classified)
14	**MANUFACTURE OF WEARING APPAREL**
14.1	Manufacture of knitted and crocheted apparel
14.2	Manufacture of other apparel and accessories
14.21	Manufacture of outerwear
14.22	Manufacture of underwear
14.23	Manufacture of workwear
14.24	Manufacture of leather apparel and fur products
14.29	Manufacture of other apparel and accessories, n.e.c.
15	**MANUFACTURE OF LEATHER AND RELATED PRODUCTS**
15.1	Tanning, dressing, finishing of leather and fur; manufacture of luggage, handbags, saddlery and harness products
15.11	Tanning, dressing and dyeing of leather and fur
15.12	Manufacture of luggage, handbags, saddlery and harness products of any material
15.2	Manufacture of footwear

These industries today have a significant impact on the total industrial production in the country, employment, participation in total exports, and its contribution to the formation of GDP is less significant [11]. One of the reasons for this is the high share of lonh production, which accounts for around 93% of clothing and footwear production, while only 7% falls to own production [4].

Figure 1 shows the industrial production volume indices for the manufacturing, textile, clothing and leather industries in the period 2013-2024 [12]. Data analysis (Figure 1) shows that these industries have faced noticeable fluctuations and a generally negative trend, in contrast to the manufacturing sector and total industrial production, which have been recording stable positive growth for several years.



B – Manufacture, B13 -Manufacture of textiles, B14 - Manufacture of wearing apparel, B15 - Manufacture of leather and related products

Source: State Statistical Office of the Republic of North Macedonia

Figure 1. Industrial production volume index (2013-2024) [12]

The diagram clearly shows that textile production recorded a significant increase in 2013, with production increasing by 79.8%. This increase is an exception in the analyzed period and is most likely the result of specific factors such as increased foreign orders or changes in the production base. The following years are also characterized by lower growth: +6.5% (2014), +14.8% (2015), +11.5% (2016), +1.4% (2017), +9.9% (2018) and +7.5% (2019). However, in 2020, production recorded a decline of 11.2% due to the COVID-19 crisis. In 2022 and 2023, moderate growth of (+2.0% and +5.6% respectively) was recorded, while in 2024, insignificant growth of 0.8% was recorded.

On the other hand, the clothing industry in the period between 2013 and 2015, recorded continuous growth (+13.7%, +4.6% and +6.7% respectively). However, from 2016 onwards, the sector has recorded a continuous decrease in production: -7.3% (2016), -15.6% (2017), -4.7% (2018) and -7.3% (2019). The COVID-19 crisis in 2020 contributed to an additional decrease of -13.9%, followed by -9.9% in 2021. In 2022, a short-term increase in production of +5.3% was recorded, but in the following period there is again a significant decrease in production by -9.3% in 2023 and a dramatic drop of -20.2% in 2024.
The leather industry is characterized by the sharpest negative dynamics. Data show that in 2013 production recorded a growth of +4.1%, but the following years were followed by a continuous decrease in production of -7.9% (2014), -18.4% (2015), -15.8% (2016), -6.3% (2017), -14.1% (2018) and -28.1% (2019) respectively. The pandemic in 2020 caused a dramatic decline of – 41.3% and -29.1% in 2021. In 2022 it is noticed a positive growth of +4,3, but after this year it again experienced negative outcomes with -7.5% in 2023 and a serious decline of -29.1% in 2024, compared to 2023.

Figure 2 shows the total number of enterprises, newly established and closed enterprises in these industries for the period 2013–2023 [13]. Data analysis shows a downward trend, which coincides with the negative dynamics observed in industrial production.
The total number of enterprises in the textile industry decreased from 1,288 in 2013 to 968 in 2023, while the number of newly established

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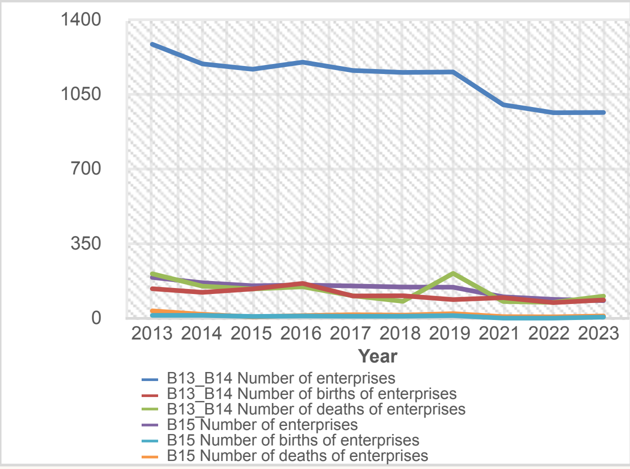
enterprises is unstable, reaching a peak of 166 in 2016, but significantly decreased to 76 in 2022.
The number of closed enterprises in 2019 is 213, which indicates market instability and a higher risk of liquidation. In recent years, a stabilization trend has been observed with a reduced number of closures, but in 2023 a large number of closed enterprises (106) was again registered.
A similar negative trend is observed in the leather industry, where data clearly shows that in the period 2013-2023, we have an almost continuous decline in the total number of enterprises, from 194 in 2013 to 85 enterprises in 2023. Also, in all years except 2015, the number of closed enterprises exceeded the number of newly established enterprises.

These trends are in line with the industrial production indices for the manufacturing sector and total industrial production, which show fluctuations and a generally negative trend, while other industrial sectors show more pronounced growth. The decrease in the number of newly established enterprises and the decrease in the total number of enterprises indicate difficulties in expanding businesses, similarly reflected in the production indices, which show stagnation or decline in certain periods.



Source: State Statistical Office of the Republic of North Macedonia

Figure 2. Active enterprises and enterprise births by legal form and activity sector, by NKD REV 2, by year [13]

Specifically, in the textile, clothing and leather industries, this trend is primarily due to the limited capacity for innovation and the low educational level of employees. Although the stabilization of the number of closed enterprises in recent years indicates an adjustment of companies to economic conditions, the overall picture shows that the sector faces slow growth and limited potential for new investments, which is also reflected by the industrial production indices.

In conclusion, the decrease in the number of enterprises, together with the fluctuations in the production indices, confirms the general instability and challenges faced by the industrial sectors in North Macedonia, especially those traditionally important, such as textile and leather industry.

All three industries are highly dependent on exports, with 93% of production being realized through the CMT system of production for foreign markets, mostly in Western European countries. Although they produce for well known global brands profits remain modest, and only a few enterprises have full-cycle production (OEM) due to the high technological, financial and human needs. This dependence greatly increases their sensitivity to global crises, such as the economic recession of 2009 and the COVID-19 pandemic, which significantly reduced the volume of production.

Exports of the textile and leather industry decreased during the economic crisis and stabilized at around 563 million US dollars in 2020 and 518.5 million US dollars in 2024, representing 6.15% of the country's total exports. The main export destinations are: Germany, the Netherlands, Austria, the United Kingdom, Italy and the Czech Republic [10].
Imports of textiles and raw materials have increased significantly and in 2024 amounted to 805 million US dollars, mainly from Germany, Greece, Italy, the Netherlands, China and Turkey, providing input raw materials for further exports, but also creating competition in the domestic market [10].
Although these sectors play an important role in the country's industrial production and exports, they remain extremely sensitive to external economic shocks due to their strong dependence on foreign orders and the dominance of the Iohn production system. Additionally, they face challenges related to limited resources, technological development, and global competition.

3. Employment Trends and Challenges

One of the key factors for the development of the textile and leather industry is the availability and quality of human resources. The majority of enterprises in the textile sector in the Republic of North Macedonia are organized as small and medium sized enterprises, usually employing between 30 and 500 workers. This organizational structure allows for a greater degree of flexibility in adjusting the product range, producing smaller batches and ensuring shorter delivery times for final products. These advantages are an important factor in establishing and maintaining successful cooperation with foreign partners [5].

To better understand the importance of the textile and leather industry in generating jobs in the country, the number of employees in this sector for the period 2013–2023 was analyzed [13]. It is important to take into account the presence of the informal sector, which remains significant. According to estimates by the competent institutions, the number of undeclared workers is approximately 10% of the total number of formally employed workers in enterprises.

The textile and leather industry in the Republic of North Macedonia plays a significant role in the national economy, employing around 28.387 workers in 2023, representing approximately 21.6% of all employees in the manufacturing sector and around 5% of the total number of employed persons in the country (Table 30) [13].

Within this group, employment is highest in the clothing industry, while the number of workers in the leather industry is significantly lower, but still significant. Together, the textile (B13), clothing (B14) and leather (B15) industries form one of the largest segments of employment in manufacturing industry. Over the past decade, the total number of employees in the manufacturing industry has increased moderately, from 104.214 workers in 2013 to 131.134 in 2023 (Figure 3).

In the textile industry (B13), the number of employees in 2013 was 2.737 workers and reached a peak of 10.073 in 2019, before recording a significant decline of 33.6% in 2023 (6.683).
The clothing manufacturing sector (B14), the largest employer among the three, had 32.611 workers in 2013. The data clearly show that during the analyzed period the sector experienced a continuous decline, with employment falling to 20,067 workers in 2023, which represents a decrease of 38.5%.

The largest decline of around 67% was registered in the leather industry (B15) from 4.956 employees in 2013 to only 1.637 in 2023. The number of workers from 2022 to 2023 decreased by around 19.6% (from 2.036 to 1,637 employees). In the last decade, all three industries have faced significant job losses, especially in the period after 2019, due to the economic crisis caused by the spread of the COVID-19 virus.

In terms of gender structure, women make up the majority of workers in the textile and leather industry. In the clothing manufacturing sector (B14), they account for 86.5% of the total number of employees (17.362 out of 20.067 employees), while in the clothing manufacturing sector (B13), women represent 62.2% (4.155 out of 6.683 employees). A similar trend is observed in the leather industry, where 78.2% (1.280 out of 1.637)of employees are women, confirming the overall female dominance in these sectors, with the largest share in the clothing industry.

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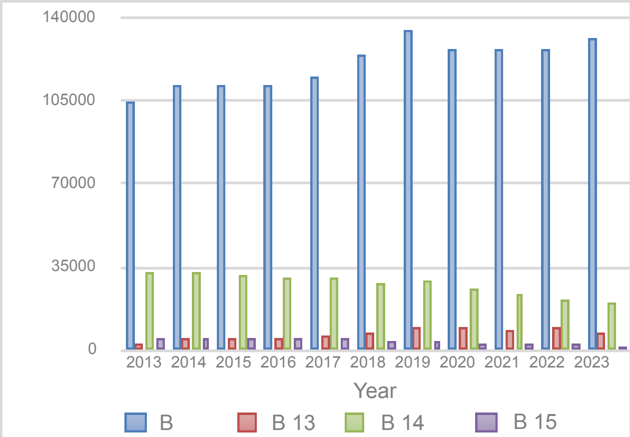
Table 3. Employees in Republic of North Macedonia by NKD Rev.2, by sex, annual [13]

B MANUFACTURING INDUSTRY			
Year	**Men**	**Women**	**Total**
2013	52997	51217	104214
2014	56134	55 425	111559
2015	55436	55 772	111208
2016	56708	54694	111402
2017	56934	58680	115614
2018	61460	62 899	124359
2019	66667	68 196	134863
2020	63274	63495	126769
2021	64733	62066	126799
2022	64286	61906	126192
2023	67095	64039	131134
B13 Manufacture of textiles			
Year	**Men**	**Women**	**Total**
2013	1009	1 728	2737
2014	1982	2946	4928
2015	2035	3100	5135
2016	2155	3131	5286
2017	3029	2998	6027
2018	3049	4 470	7519
2019	4188	5 885	10073
2020	3937	5 618	9 555
2021	3582	5 150	8 732
2022	3681	5 342	9 023
2023	2528	4 155	6 683
B14 Manufacture of wearing apparel			
Year	**Men**	**Women**	**Total**
2013	4603	28008	32611
2014	4972	27941	32913
2015	4753	26989	31742
2016	4687	26232	30919
2017	4265	25978	30243
2018	3947	24285	28232
2019	4025	25087	29112
2020	3604	22259	25863
2021	3188	20012	23200
2022	2887	18156	21043
2023	2705	17362	20067
B15 Manufacture of leather and related products			
Year	**Men**	**Women**	**Total**
2013	1230	3726	4956
2014	1086	3747	4833
2015	1307	3911	5218
2016	966	3 471	4 437
2017	993	3 342	4 335
2018	940	2 978	3 918
2019	805	2 738	3 543
2020	625	2 187	2 812
2021	522	1 818	2 340
2022	438	1 598	2 036
2023	357	1 280	1 637



B – Manufacture, B13 -Manufacture of textiles, B14 - Manufacture of wearing apparel, B15 - Manufacture of leather and related products

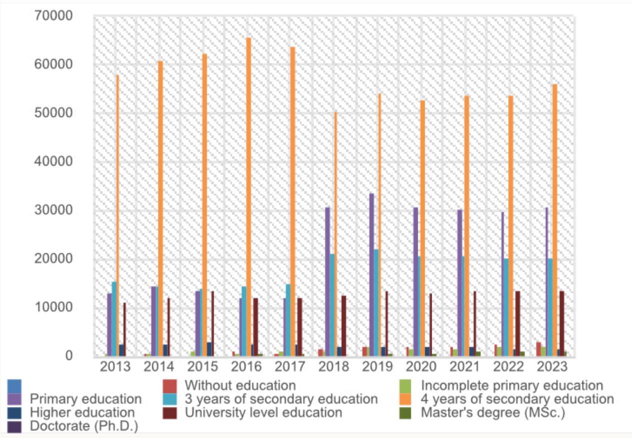
Source: State Statistical Office of the Republic of North Macedonia

Figure 3. Total number of employees in Republic of North Macedonia by sectors B, B13, B14, and B15 [13]

Historically, between 21% and 39% of all employees in the manufacturing industry in North Macedonia were engaged in the textile and leather industry, which highlights their particular importance for the country's economy. However, the past decade, especially in the period after 2019, has seen a steady decline in the number of employees, with the largest decline in the textile manufacturing sector.

The COVID-19 pandemic has further accelerated this trend, as the textile industry, both in North Macedonia and globally, has been among the most affected sectors. Due to the spread of the virus and the restrictive measures introduced by governments around the world, many textile and leather production enterprises have been forced to completely stop or significantly reduce their production. This has led to reduced revenues, postponement or complete cancellation of new and ongoing projects, a decline in consumer demand, and difficulties in meeting financial obligations.

Regarding the educational structure of employees in the manufacturing industry in North Macedonia, the data provided in Figure 4 show several interesting trends in the period between 2013 and 2023 [12]. The analysis of the data shows that around 60–70% of the total workforce in the manufacturing industry has completed secondary education, with the majority having a four-year secondary education. This shows that this sector is dominated by workers with technical and practical skills.



Source: State Statistical Office of the Republic of North Macedonia

Figure 4. Employees by educational attainment, by NKD Rev.2, annual [13]

Around 10–25% of employees have completed only primary education. This percentage varies between 12.793 and 33.670 people over the years, with significant fluctuations. It is important to note that, although employees with primary education make up a significant part of the workforce in the manufacturing industry, their share has been gradually decreasing over the years.

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In addition, there is a group of employees with incomplete primary education or no formal education (below 5%), which indicates that there is still a demand for workers with low education in certain parts of the industry.

The data show that around 12% of employees have completed university or higher education. During the analyzed period, the number of employees with higher education has been relatively stable, with only a small increase, while the number of PhD is minimal (19-23) employees.
The analysis of the data shows that the manufacturing industry in North Macedonia generally relies mostly on workers with secondary and primary education, with a relatively small share of highly educated employees. However, this trend may change in the future, as the development of new technologies is expected to increase the demand for highly qualified labor in the sector.
During the analyzed period (2013 - 2024) the manufacturing industry recorded a continuous increase in net and gross wages (Table 5), [13].

Table 5. Annual average, gross and net wage by sections and divisions of activity, by NACE Rev.2, annual [13]

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
B MANUFACTURING INDUSTRY												
Net salary	15.747	16.177	16.594	17.096	18.112	20.073	21.146	22.946	24.258	27.811	32.186	36.349
Gross salary	23.007	23.574	24.237	24.906	26.439	29.351	31.242	34.100	36.084	41.471	48.195	54.575
B13 Manufacture of textiles												
Net salary	11.067	12.662	14.107	15.435	17.949	19.767	21.129	22.045	22.957	26.303	33.085	37.355
Gross salary	16.352	18.587	20.731	22.714	26.473	28.964	31.219	32.779	34.146	39.245	49.456	55.963
B14 Manufacture of wearing apparel												
Net salary	10.831	11.442	12.113	12.641	13.795	15.421	16.199	17.561	18.168	21.765	24.931	27.482
Gross salary	15.879	16.670	17.613	18.315	19.944	22.291	23.638	25.857	26.803	32.246	37.092	40.987
B15 Manufacture of leather and related products												
Net salary	10.163	10.521	11.096	11.625	12.803	14.268	14.833	15.752	17.387	20.771	23.410	26.724
Gross salary	14.920	15.460	16.260	16.935	18.583	20.659	21.616	23.185	25.628	30.749	34.792	39.834

Source: State Statistical Office of the Republic of North Macedonia

The average net wage in the industry increased from 15.747 denars in 2013 to 36.349 denars in 2024, while the gross wage increased from 23.007 denars to 54.575 denars. Despite this positive trend, the textile sectors (B13 and B14) and the leather sector (B15) continue to lag behind the average of the manufacturing industry.

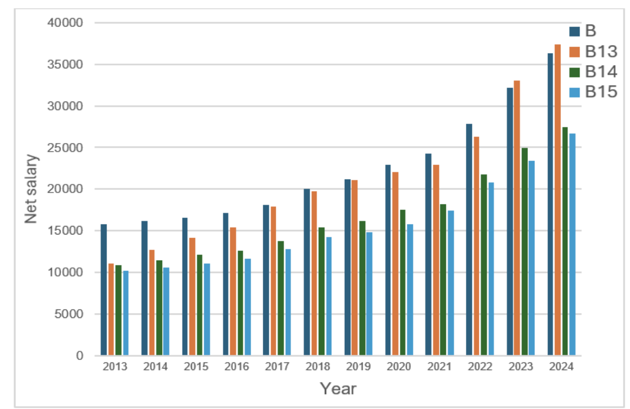
In the leather industry (B15), wages remained the lowest throughout the entire observed period. The net wage increased by more than 2.5 times, from 10.163 denars in 2013 to 26.724 denars in 2024.

In the clothing manufacturing sector (B14), the net salary increased by about 110%. from 13.056 denars in 2013 to 27.482 denars in 2024.

The largest increase in salaries was recorded in the textile manufacturing sector (B13), where the net salary increased by 238%, from 11,067 denars to 37.355 denars.

On the other hand, although significant salary growth was recorded in all three sectors, earnings levels remain below the average for the manufacturing industry. In 2013, wages in the textile and leather industry were around 65-70% of the average in the manufacturing industry, and by 2024 this gap had narrowed, indicating a slow approach to the the average wage.

However, due to the labor intensive nature of these activities, the share of contributions and taxes in the gross wage structure is significant and higher compared to most countries in the region.



Source: State Statistical Office of the Republic of North Macedonia

Figure 5. Average net wage by sections and divisions of activity, by NACE Rev.2, annual [13]

4. Conclusions

The textile and leather industries in North Macedonia are sectors with a long tradition and experience. Analysis of statistical data shows that these industries are very important for the Macedonian economy, in terms of employment, exports and positive contribution to the country's gross domestic product.

In recent years, these industries have faced structural challenges, including low productivity, limited access to finance, a lack of skilled labor, and strong import competition. The COVID-19 pandemic caused a temporary decline in production and employment, but the industry has gradually stabilized through production adjustments and wage increases. The textile, clothing and leather industries remain structurally vulnerable, as confirmed by negative trends in production and the decline in the number of enterprises, in contrast to other industrial sectors where more stable growth has been recorded. Although significant wage growth has been recorded in all three sectors, earnings levels in theclothing and leather industry remain behind the average for the manufacturing industry.

Textile and leather industries play an important role in the development of rural and economically less developed regions, and it is necessary to create favorable macroeconomic conditions and systemic measures to stimulate these sectors, in order to maintain the positive trend of wage growth and improve their competitiveness.

The reduced foreign demand was particularly critical for these sectors, resulting in a significant decline in employment. The expiration of fixed term contracts remained the dominant reason for termination of employment in the textile and leather industry, both before and during the crisis.

In 2023, the number of workers in the textile industry decreased by 26% compared to 2022 (from 9.023 to 6.683 employees). The garment industry also saw a decline of around 980 workers (from 21.043 to

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20.067), while the leather industry lost around 400 employees (from 2.036 to 1.637).

These negative employment trends are largely a result of the ongoing economic challenges and structural changes in the industry. If current conditions continue, further declines in employment can be expected in all three sectors in the coming years.

Structural reforms and government support are essential for stabilizing and developing the textile and leather industry in North Macedonia. The first step is a transition from lohn production to own production, including direct import of raw materials and the elimination of customs duties. Second, government support is needed for automation and modernization of production to increase productivity and competitiveness compared to neighboring countries. Third, investment in intellectual capital to increase quality and productivity, especially for women and young workers, to ensure a skilled workforce for the future.

References

[1] Ministry of Economy: Strategy for Development of the Textile Industry in Republic of Macedonia, Skopje, June 2007

[2] The history of the Macedonian textile industry with a focus on Shtip. Occasional Paper No. 8, Skopje, 2005

[3] Textile Industry in North Macedonia, SouthEast European Industrial Market, Issue 1/2019

[4] Economic Chamber of Macedonia: Textile and Leather Industry Association, Skopje, 2019

[5] Zhezhova, S., Janevski, A., Jordeva, S., Golomeova, S.: Важноста на текстилната индустрија за економијата на Република Северна Македонија, Годишен зборник, Економски факултет 21 (2020), pp. 63-71, ISSN 1857-7628

[6] Fibre2Fashion: Macedonia - A New Land of Opportunities, Available at: https://www.fibre2fashion.com/industry-article/7599/macedonia-a-new-land-of-opportunities; Accessed: 2025-08-19

[7] Veselinova, E., Milevski, G.: Местото и значењето на текстилната индустрија во националната економија на Република Македонија: учество во БДП, извозот и вработеноста, Годишен зборник 15 (10), 2018

[8] Zhezhova, S., Jordeva, S., Golomeova, S., & Janevski, A.: Textile industry in North Macedonia, Tekstilna industrija 3 (2020), pp. 44–51, ISSN 0040-2389

[9] Gruevski, I.: The influence of the economic crisis to the textile industrial production in the Republic of Macedonia, Economic Development, 2010, ISSN 1409-7893

[10] State Statistical Office of the Republic of North Macedonia: National Classification of Activities – NKD Rev. 2.1, Official Gazette of the Republic of North Macedonia, Issue 35. Available at:https://www.stat.gov.mk/KlasifikaciiNomenklaturi/NACE%20Rev2_1_14_12v2.pdf, Accessed: 2024-08-11

[11] Textile Trade Association,Textile Cluster. Available at: https://tta.org.mk/mk/; Accessed: 2025-08-19

[12] State Statistical Office of the Republic of North Macedonia, MakStat Database. Industrial production volume indices. Available at: http://www.stat.gov.mk/Default_en.aspx; Last Access: 2025-08-14

[13] State Statistical Office of the Republic of North Macedonia, MakStat Database. Available at: http://www.stat.gov.mk/Default_en.aspx; Last Access: 2025-08-11

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