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«NOVEL TECHNOLOGIES AND ECONOMIC
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APPAREL INDUSTRY IN MACEDONIA, CONDITIONS AND CHALLENGES

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Around 395 registered companies in Macedonia work with apparel manufacturing. Even though they are spread across the whole country, the largest number of companies – 119 (or 30%) are located in the East region.

This industrial activity employs 31,742 employees or 6.1% of Macedonia's working population. Compared to 2012, a 4.8% decrease is noted. The cumulative manufacturing index for 2014/2015 is 107, and the manufacturing index for 2015 (compared to 2010) is 136. Textile production participates with 11.7% in the total export of the country, and with 6.9% in the import.

The textile industry participates with 15.5% in the total gross domestic product, while in the industrial it participates with 21.8%. The textile industry participates in the total export with 26%, and employees 28% of the total number of employees in the industry. 93% of the apparel production is organized according to the CMT system for the foreign markets, mostly the European countries. The added value is low because 92% of the production is Lon, which brings small profits, even though the companies manufacture for quite famous worldwide brands.

Statistic data shows there is a necessity for changing the manufacturing structure towards products with higher added value, i.e. products for internal use. For this, hiring larger domestic capacities and resources is required.

Key words: textile industry, statistical data processing, Macedonia

INTRODUCTION

Textile and clothing manufacturing has a long tradition in Macedonia. During XIX century, apparel and textile trade were expanding as textile companies traded with modern fabric from Istanbul and Thessaloniki. Locally, modern clothing (for the time) was produced for the rich, urban class, while the population in the rural parts produced apparel from wool, linen and silk, suitable for their everyday needs.

The beginnings of the textile industry date back to the Ottoman Empire when several industrial capacities work on Macedonian territory, sewing uniforms for the Turkish army.

Between the two World Wars there are several capacities, and from the seventies and eighties of the last century apparel factories such as "Astibo", "Oteks" or "Teteks" dominated the former Yugoslavian market with own brands of shirts or products from the "heavy" industry.

With the fall of the Yugoslavian market and the change of the ownership structure, the structure of manufacturing is changed too, and the largest part of textile facilities are struggling for survival with Lon manufacturing, as part of the large orders from the worldwide known and European textile companies.

Aiming to improve the conditions, in 2007 the “Strategy for development of the textile industry in Republic of Macedonia” is created, in which are recommended several activities as access to favorable credits, lowering of the taxes and strengthening the capacities of the employees. As partners in the whole process, alongside the companies, the state institutions and universities are included as well.

In this paper we give we provide a display of the conditions in the apparel manufacturing industry and beside data from the labor market, overall manufacturing, import and export, an analysis of the manufacturing structure for the companies in the east statistical region is done, aiming to get a relevant representation for the conditions in the apparel manufacturing industry. Moreover, an effort to illustrate the activities needed to be done to develop inner and more profitable manufacturing is made.

CONDITIONS

The companies for apparel manufacturing are spread across the whole territory of Republic of Macedonia and their number is around 395. A big portion of them are registered as small businesses. Their concentration is highest in the East statistical region where around 119 of the companies are located, i.e. around 30% of all companies in Republic of Macedonia.

Data shows that the number of employees in this industrial branch is gradually decreasing and from 33,360 in 2012 it is decreased to 31,742 in 2015 (around 5%). On the other side, even though the number of employees decreases, the physical volume of the manufacturing and productivity are increased [2].

Table 1. Indices of number of employees, total volume of industrial production and labor productivity in divisions for production of wearing apparel (2010=100)

Year	Number of employees	Total volume of industrial production	Labor productivity
2014	97	123	127
2015	96	131	137

Although the number of employees in the apparel manufacturing industry decreases, (the number of employees index notes a fall compared to 2010) to 97 for 2014 and 95 for 2015, the index in the physical volume of industrial manufacturing for 2014 is 123, and for 2015 is 131. The employees' efficiency is increased and the labor productivity index grows for 37 in 2015 compared to 2010 [3].

It is interesting to observe the table for import and export in the textile and apparel manufacturing industries. The largest part of the raw materials are imported as textile, and are then exported as wearing apparel (Table 2). Because large amounts of resources are used for importing textile, there is room to aid this

industry branch by lowering the customs fees, which is one of the requirements of the companies.

Table 2. Exports and imports in divisions for production of wearing apparel and Textiles in 000 USD

Products	Exports		Imports	
	2014	2015	2014	2015
Wearing apparel	674 389	527685	75540	69359
Textiles	91299	79621	521460	446031

Many material resources (and human capacities) are hired for small remains, and what is left as added value if very little.

The average net salary (Figure 1 and 2) per employee in the period between April 2010 and April 2017 is increased from 9,300 to 30,076 denars and is among the lower pay professions, in the group 2 between 8,000 – 16,000 denars where about 47% of the employees in Republic of Macedonia belong (Figure 2) [4].

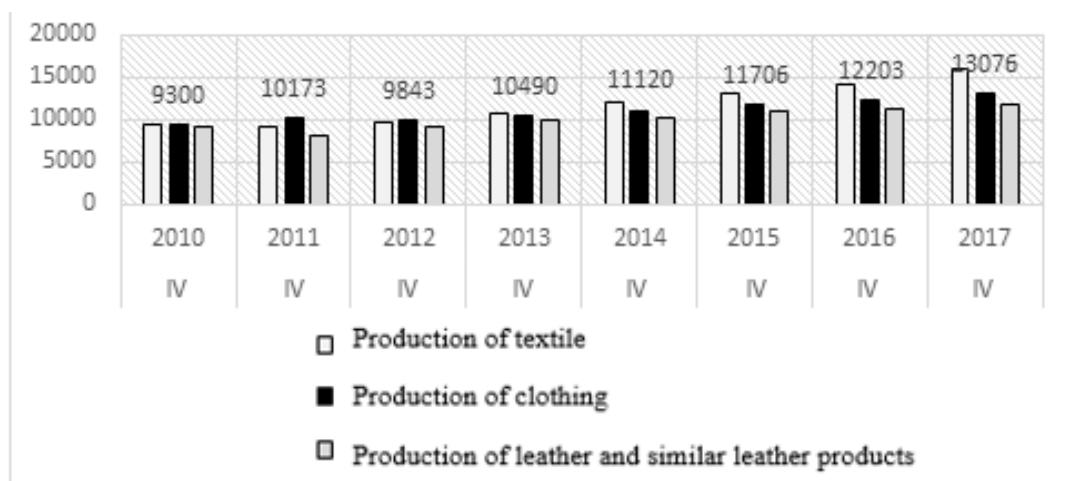


Figure 1. Average monthly net salary per employee (2010-2017)

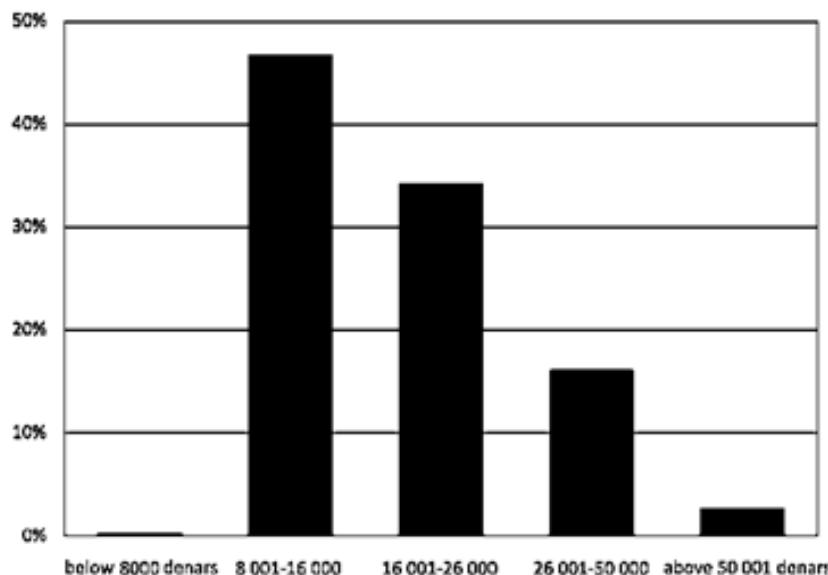


Figure 2. Structure of employees according to the wage amount, total, 2015

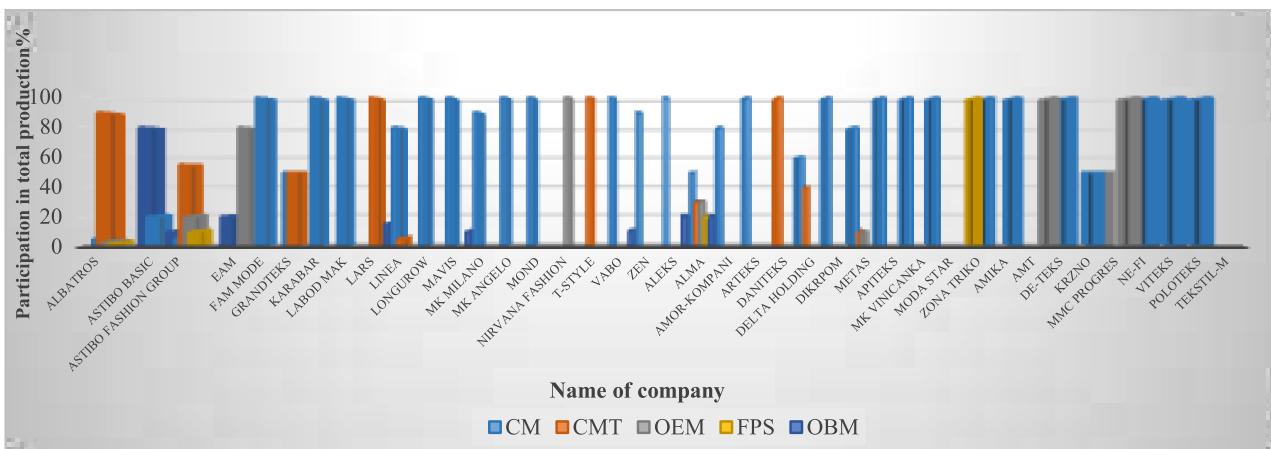
Manufacturing structure of the companies in the East statistical region

The textile industry sparsely covers the whole territory of Republic of Macedonia with significant concentration in the east region (more than 30%). In Shtip, there are more than 70 textile and apparel companies which employ around 6,000 people, followed by Kocani with more than 50 companies, and Delcevo with about 30 companies (table 3) [5].

Table 3. Number of textile and apparel companies per city [5]

City	No. of companies	City	No. of companies
EAST REGION		VARDAR REGION	
Shtip	77	Veles	9
Kocani	53	Kavadarci	9
Vinica	22	Sveti Nikole	7
Probishtip	8	Negotino	7
Delchevo	31	SKOPJE REGION	
Berovo	6	Skopje	56
Makedonska Kamenica	7	PELAGONIA REGION	
Zrnovci	5	Prilep	25
SOUTH EAST REGION		Bitola	18
Radovish	13	SOUTH WEST REGION	
Strumica	22	Ohrid	17
Gevgelija	21	Struga	9
NORTH EAST REGION		POLOG REGION	
Kumanovo	15	Tetovo	15
Kratovo	6		

The manufacturing structure in the apparel companies in the East region does not stand out significantly compared to the manufacturing in other regions and that is why an analysis of the manufacturing structure is done here, where the representations of these companies is the greatest. Most of the apparel companies are organized as small and medium companies (with total number of employees ranging between 30 and 500) which allows for flexibility in the companies regarding changes in the products pallets, the size of the series and the final products' delivery period. The analyzed data regarding manufacturing type of the apparel companies in the east region (Shtip, Kocani, Vinica, Delchevo, Berovo, Makedonska Kamenica, Probishtip) who are members of the Trading textile association are included in the graph 1[5].



* Cut and make (CM)

** Cut, Make and Trim (CMT)

*** Original Equipment Manufacturing (OEM)

****Full package supplier (private label- FPS)

*****Original Brand Manufacturer (OBM)

Figure 3. Manufacturing structure in the East region

Data clearly indicates that apparel manufacturing is mainly oriented towards export (CM и CMT) and companies in this industry manufacture for a large number of famous worldwide brands including: Italy (Massimo Rebecchi, Versace, Nanette, Diesel, Gucci, Cinque, Pinko, MaxMara, Vestebene, Cris conf. S.P.A, Veste Bene), Germany (Marc Cain, Steilman, Gerry Weber, Apanage, Wahler, Betty Barclay, Escada, Zommermann, A&R Quindici Rabe, Elite Moden, Franken Waelder, Marc Aurel, Mode Institut), Австрија (Jones), Netherlands (Barnett & Barnett, La Salle), Belgium (Ahlers, L&V), Denmark (Bruns Bazaar, Bertoni, Samsoe&Samsoe), Czech Republic (Opro CZ) etc.

Only a small number of apparel companies have complete production (from obtaining raw materials through creating the final product – OEM): Shtip (ALBATROS – 3%, Astibo Fashion Group – 20%, EAM – 80% and Nirvana Fashion – 100%); Kochani (ALMA – 20% and METAS – 10%); Probishtip (DETEKS – 100%); Delchevo (MMG PROGRES – 50% and NE-FI – 10%) and production of a complete product for another brand (private label): Shtip (ALBATROS – 1%, ASTIBO FASHION GROUP – 10%); Kochani (ALMA – 20%) and Vinica (ZONA TRIKO – 100%). The number of companies which have developed their own private fashion brand (OBM) is also insignificant: Shtip (ASTIBO BASIC – 80%, ASTIBO FASHION GROUP – 20%, EAM – 20%, LINEA – 15%, MK MILANO DOO – 10%, ZEN – 10% and Kochani (AMOR COMPANY – 20% and ALMA – 20%).

Based on the manufacturing structure data it can be concluded that the apparel companies in the East region (the situation is the same for the apparel companies in other regions as well) manufacture mostly foreign brands. The reasons for this are many because creating and maintaining your own fashion brand is a long and hard process which requires certain capacities, such as technological-technical, human and financial resources.

In addition to state institutions, companies and associations (in accordance to the Strategy for development of textile industry in Republic of Macedonia), the higher

education institutions should be included in the process of overcoming these conditions as well, educating professionals in the area of textile technology, design and management, because the process of branding itself is a multi-disciplinary process [1, 6, 7].

Today, in the education section the conditions are changing and the high education institutions are gradually adapting the study programs according to the market needs. The Technological-technical faculty in the University "Goce Delchev" in Ship currently has the following study programs: Design of textile and clothing and Technology of textile and clothing. These programs are interdisciplinary and contain subjects from the areas of textile technology, design and management. So far, 102 students have graduated from the technological-technical faculty, and these textile engineers have certain knowledge in the areas necessary for following the world trends [8]. Also, the Faculty of Technology and Metallurgy in the University "Cyril and Methodius" in Skopje has the program Design and Engineering of clothing and the number of graduated textile engineers is significantly higher, considering the longer period of the faculty's existence.

The needed professionals that can contribute towards changing the manufacturing structure and i.e. production and maintaining of own brands and with that increasing the added value of the products and the profits are already available on the labor market.

CONCLUSION

The conditions in the apparel industry are changing slowly and even though the productivity increases, the manufacturing structure remains the same. In the education section, study programs where design and management subjects are more included are open, and the graduated professionals are available in the labor market. Large funds are used for importing textile raw materials, which are then exported as clothing and lowering the customs duties would significantly improve the conditions in this industry branch. These measures along with access the access to favorable capital are measures which the state needs to implement and without additional involvement by the state, large changes in the conditions of this industry branch are impossible.

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IZVOD

ODEVNA INDUSTRIJA U MAKEDONIJI, USLOVI I IZAZOVI

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Broj registrovanih kompanija u Makedoniji koje se bave proizvodnjom odeće iznosi 395. Iako se nalaze na cijeloj teritoriji države, najveći broj kompanija - 119 (ili 30%) nalazi se u istočnom regionu.

Ova industrijska aktivnost zapošljava 31742 radnika ili 6,1 % makedonske radne populacije. U poređenju sa 2012. godinom zabeležen je pad od 4,8 %. Kumulativni proizvodni indeks za 2014/2015. godinu iznosi 107, a indeks proizvodnje u 2015. godini (u poređenju sa 2010. godinom) iznosi 136. Tekstilni proizvodi učestvuju sa 11,7 % u ukupnom izvozu zemlje, a 6,9 % u uvozu.

Tekstilna industrija učestvuje sa 15,5 % u ukupnom bruto prihodu, dok u industriji učestvuje sa 21,8 %. Tekstilna industrija učestvuje u ukupnom izvozu sa 26 %, a zaposleni 28 % od ukupnog broja zaposlenih u industriji. 93 % proizvodnje odeće je organizovano prema CMT sistemu za inostrana tržišta, uglavnom u evropskim zemljama. Dodata vrednost je niska, jer je 92 % proizvodnje Lon, što donosi mali profit, iako kompanije proizvode za sasvim poznate svetske brendove.

Statistički podaci pokazuju da postoji potreba za promenom proizvodne strukture prema proizvodima sa većom dodanom vrednošću, tj. proizvodima za interno korišćenje. Za to je neophodno zapošljavanje većih domaćih kapaciteta i resursa.

Ključne reči: tekstilna industrija, statistička obrada podataka, Makedonija