

Textile Sector in Türkiye After 2000 in The Context of Structural Tendencies of Capital Accumulation

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Abstract: The textile sector has special significance in terms of industrialisation and capital accumulation for Türkiye. Following the late industrialisation and late capital accumulation process that began in the Ottoman period, textiles became a much more important strategic sector during the Republic of Türkiye's late nation-building process. This study aims to address the transformation of the textile sector in Türkiye in terms of material, along with the periodic and structural conditions of capital accumulation and the general tendencies of capitalism. Our fundamental claim is that the main factors determining the development of the textile sector are structural change and material differentiation within the sector, especially since the 2000s.

Keywords: Capital accumulation; development; forward and backward linkage between industries; textile industry; polyester.

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Sermaye Birikiminin Yapısal Eğilimleri Bağlamında 2000 Sonrası Türkiye'de Tekstil Sektörü

Öz: Tekstil sektörü Türkiye için sanayileşme ve sermaye birikimi açısından özel bir öneme sahiptir. Osmanlı döneminde başlayan geç sanayileşme ve geç sermaye birikimi sürecinin ardından tekstil, Türkiye Cumhuriyeti'nin geç ulus inşa sürecinde çok daha önemli bir stratejik sektör haline gelmiştir. Bu çalışma, Türkiye'de tekstil sektöründe malzemenin dönüşümünü, sermaye birikiminin dönemsel ve yapısal koşulları etrafında kapitalizmin genel eğilimleriyle birlikte ele almayı amaçlamaktadır. Çalışmanın temel iddiası; tekstil sektörünün gelişimini belirleyen başat faktörlerin, özellikle 2000'li yıllardan itibaren, sektördeki yapısal değişim ve malzeme bileşimindeki farklılaşma olduğudur.

Anahtar Kelimeler: sermaye birikimi; kalkınma; sanayiler arası ileri geri bağlantı; tekstil sanayi; polyester.

Introduction

The textile sector is one of the most important sectors in terms of industrialization and capital accumulation process. As capitalist production relations deepen, production relations change and the conditions for creating value also differ. In this context, with the effect of changing competition conditions, factors such as the use of materials that are the output of the chemical industry in production and increasing technology in production tools are transforming all relations for the textile sector. This study aims to examine changes in Türkiye's textile sector through the lens of material phenomena, alongside the periodic and structural conditions of capital accumulation and general capitalist tendencies. The study's central thesis is that the primary driver of the textile sector's development in Türkiye is the sector's own structural changes and material differentiation, particularly since the 2000s. The technology-intensive production of polyester, which dominates the sector's inputs, has fundamentally affected Türkiye's textile and ready-made clothing sector, causing the backward linkage to become import-dependent and pushing the sector into the background.

The study examined the textile sector and the process of capital accumulation in relation to Marxist concepts. During the study, reports prepared by public and private sector organisations were examined, as were the statements of capital representatives. Although the study has a foresight regarding the change in labour processes, the main discussion question does not cover this issue. It will also be important to state that the change in the conditions of creating surplus value due to the differentiation in materials in textile is important not only for

researchers conducting sector-focused studies, but also for researchers conducting studies within the scope of labour studies and social policy.

Historical Background and Theoretical Framework

Labour-intensive areas of production are important both in terms of creating the conditions for capital accumulation specific to capitalism as a mode of production and in terms of forming the first industrialisation steps of nation-states. In this sense, labour-intensive areas of production like textiles are among the basic areas where the break with artisanal production is experienced and labour is organised into workshop/factory type production areas in the form of paid labour. Hence, during the early stages of the capital accumulation process it became a high priority area. This situation is both compatible with the basic tendencies of the capital accumulation process and significant in the sense that nation-states with insufficient capital for the early stages of the industrialisation process organise production by substituting labour.

During the 1950s and 1960s, development theories based on the accumulation process in continental Europe after the industrial revolution claimed that underdeveloped societies could also develop if they went through similar processes. These theories attempted to explain the transformations that the West went through during its industrialisation, the reasons for the underdevelopment of non-Western societies, and the way that new nation states could industrialise in terms of the latter countries' unique dynamics (Ercan, 2012: 85-93). According to these theories, societies where capital is scarce should first develop development strategies based on the labour factor. Then, during the later stages of accumulation, it was crucial for their development that they abandon labour-intensive sectors and focus on capital-intensive sectors (Todaro and Smith, 2014: 119). Particularly in the early stages of accumulation, the preference for labour-intensive sectors stems from both the inadequacy of existing capital equipment and the relative surplus of labour. Given that the capital stock is increased by creating financial resources and developing machinery and material stocks, the early stages of accumulation are not easy for nation states (Nurkse, 1964: 82). Nevertheless, even if there is insufficient capital accumulation, an active state policy can ensure that the labour market expands, thereby increasing one of the factors of production, namely labour. Thus, the preference for labour-intensive production sectors is, in a sense, the first developmental step.

If we look at Türkiye's development and capital accumulation process, we see that textiles was one of the founding industries in a similar way. The goal of using agricultural products as inputs for industry and capital accumulation brought cotton and the textile sector, for which cotton is an input, to the forefront in

Türkiye. Textile production became an important area of production for Türkiye, with its structure dependent on natural fibres, namely agriculture, in terms of inputs, and with its low-tech production structure, in which machinery and labour come together to produce manufactured goods (Tarakçıoğlu, 1987: 56). Türkiye's textile production has historically been based on cotton inputs, and the country's fertile cotton-producing lands provided significant advantages in terms of input and labour matching. In this respect, the yarn and cloth factories established in the early years of the Republic (especially in Kayseri, Ereğli, Nazilli, and Malatya) and the state's founding role in this sector are evidence that textiles were considered an important sector (Yıldız, 2011: 399).

While the 1960s' development literature focused on the causes of underdevelopment, the dependency school, informed by Marxist and structuralist analyses, also made important contributions. Discussions in the writings of economists like Dos Santos, Raul Prebisch, and Celso Furtado and, based on the experience of Latin America, in the reports of the Economic Commission for Latin America (ECLA), a regional United Nations' organisation, explained the causes of underdevelopment in terms of dependent trade relations. These contributors claimed that the argument that free foreign trade would bring positive benefits to all parties involved is false. They emphasised that underdeveloped countries mainly export raw materials, primary goods, and agricultural products, whereas developed countries primarily provide manufactured and industrial goods. In this form of trade, the fact that primary goods are cheaper than manufactured goods is one of the reasons for underdevelopment (Ercan, 2012: 125-128). Prebisch, who was one of the first to approach the problem of development in terms of structural variables, first mentioned the importance of materials through technological change in a few sentences in a report he prepared for the ECLA: "Many primary products are replaced by synthetic or artificial products losing market position. Thus, potassium saltpetre was replaced by synthetic saltpetre and rubber by petroleum products" (Bibi, 2024). However, the main focus is on this situation, which creates unequal conditions of accumulation through the export of primary goods and the import of industrial goods, and which is also fed by technological developments and the development of synthetic products to replace natural products:

"The slow growth of primary exports is an inevitable results of technological progress in the industrial centres. On the one hand, there are direct consequences, since technological progress leads to the increasing substitution of synthetics for natural products; and it is also reflected in one way or another in the smaller raw material content of finished goods. On the other hand, there are indirect consequences, since only a small part of the increased per capita income

generated by technological progress goes into the demand for foodstuffs and other staple consumer goods, as compared to the demand for industrial goods and services which tends to rise rapidly” (UN, 1964: 11).

The United Nations Report on Foreign Trade Relations with Developing Countries argued that it was important to improve the competitive conditions of natural materials through technological processes while also developing synthetic materials (UN, 1964: 46). In support of our argument in this paper, the substitution of synthetic materials by natural materials has led to differences in both the conditions of capital accumulation and the international division of labour. The fact that the production of synthetic fibres has exceeded the production of natural fibres in the textile sector since the mid-1990s has changed the competitive environment in the 2000s and relegated the sector, which had been of fundamental importance since the foundation of Türkiye, to the background.

The accumulation of capital over time has also changed production relations, particularly in the textile sector. The focus of growth on industry rather than agriculture and the aim of increasing the volume of exports, especially after the 1980s, enabled the textile sector in Türkiye, which is fed by agricultural inputs, to expand significantly. Until the 1990s, the sector positively contributed to exports due to the transfer of labour from agriculture to industry and technology-driven productivity increases in cotton textile manufacturing. The shift from cotton to polyester has led to a rapid change in the position of capital in those labour-intensive textile sectors still using cotton as a basic input, such as in Türkiye.

In seeking to explain this differentiation, analyses of industrialisation and the sector tend to ignore dynamics within the sector, emphasising instead preferences and flawed economic policies in the industrialisation process. These studies also tend to emphasise the importance of technological development and efficiency for achieving competitiveness in the textile sector, and the need for policies to control macroeconomic indicators like high interest rates and inflation, and to pave the way for investment in the sector. Hence, technological development in Türkiye’s textile sector in the 1980s has been addressed in terms of obsolete machinery, looms, and spindles.

Boratav and Türkcan (1993), for example, argue that the sector did not remain labour intensive as predicted, making it difficult to say that the early capitalist countries completely abandoned the sector as predicted. In the twentieth century, growth models that placed the textile and garment industry in a relatively labour-intensive category of production made the textile and garment sector the first investment recommendation for developing and late-capitalist countries. In the 1960s and 1970s, it was assumed that these early capitalist countries would

leave the sector entirely to late capitalist countries and produce high-tech, capital-intensive goods themselves. However, according to Boratav and Türkcan, technological progress, new loom designs, and the introduction of electronics into textile machinery made the sector capital intensive. Consequently, the early capitalist countries continued to show interest in the sector until new technologies became widespread (Boratav and Türkcan, 1993: 125-126). As can be seen from this argument, technological progress is only addressed through the development of machine technology and the efficiency-enhancing effect of the machine that replaces the worker in production.

Tarakçıoğlu (1989: 280) adopts a similar approach: “The newly developed textile technologies are extremely capital-intensive and not suitable for Türkiye’s conditions (expensive and scarce money, relatively cheap and abundant labour). However, since it is not possible to produce a significant part of the quality textile products on the world market today with old technology machines, it is out of the question for Türkiye to reject these new technologies. The textile industry in Türkiye should continue to operate on two lines for a while. In other words, both simple and the latest high-tech machines and technologies should be used together within the framework of a well-established balance and division of labour. Meanwhile, the establishment of a Turkish textile machinery industry that will progress and develop from the production of simple machines should be encouraged and supported as a state policy”. That is; in order to maintain its competitive advantage, Türkiye’s textile sector should focus on the production of machinery while capital-intensive production areas should be favoured over labour-intensive ones regarding development and growth strategies.

In response to these fundamental trends that we have identified in the sector, our study makes an original contribution by analysing the textile sector in terms of its internal dynamics and changes of material. Our study addresses the point at which previous studies focus on technology and emphasise the need for development policies aimed at growth, through the necessities of the capital accumulation process and the preferences of individual capitals. That is, one of the important reasons why textiles have remained in the background for Türkiye is that polyester production is a capital-intensive area in terms of material. Therefore, because textile capital in Türkiye cannot realise this production as a net exporter, it makes production dependent on imported inputs, thereby decreasing the volume of profit.

Breaking the link with nature in producing materials is important because it shortens the production period and increases the quantity produced. The change in material from cotton to polyester has important consequences, not only for the sector’s internal dynamics, but also for its interactions with other sectors. These

developments also increase the amount of capital required to start the production process (Marx, 1956: 137-139). Therefore, the fact that materials are becoming more technologically intensive points to an area of conflict regarding the late capitalist countries' integration into new forms of production. In short, the fundamental question regarding the declining position of Türkiye's textile sector, especially since the 2000s, should be: Is textiles an area that industrial capital in Türkiye has abandoned or is it an area where it cannot compete with international capital?

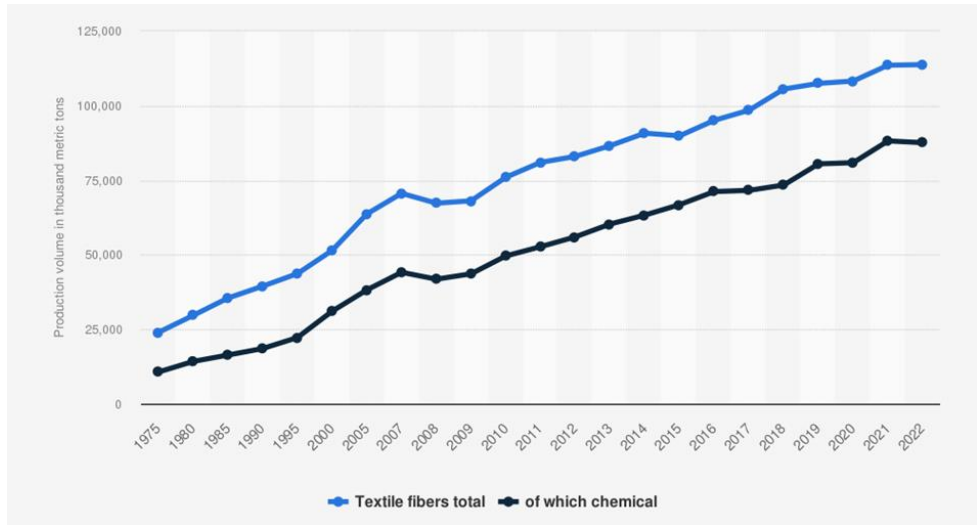
From the Production Time of Nature to the Turnover Time of Capital

In nation-state-supported industrial capital accumulation, production takes place in a process. The production process begins by bringing together labour, raw materials (materials), machines and inorganic energy (formal transformation). We define the production process as the process of value creation (real transformation). Here, material transformation is important in both formal and real transformation. The deepening and intensification of capital accumulation over time is important for real transformation, i.e. value creation. Undoubtedly, changes in the production process can be considered in terms of technological change. However, material change needs to be addressed specifically and studied within technological change in this sense. This is even more important in the textile sector. We would like to point out that material change has important effects, not only in terms of formal change (realisation process) and real change (production process), but also in terms of the distribution of the value created in the production process (second formal change) to the capitals and the nation-states in which the capitals are located. The fundamental motivation for capitalist production is precisely the value released in the process of real change. In the textile sector, as in all other areas of production, not only is a final product released, but also surplus value (added value) is created along with the product. Material change in this sense includes two important changes, the differentiation of the product (formal change) and the increase in the surplus value created by the product (value differentiation). Material change affects the whole process and the variables involved in the process in different ways. On the other hand, capital, depending on its accumulation, initially focuses on the working time of labour in the production process (through labour-intensive production). Over time, it tends to increase the efficiency of labour and capital, which are considered as factors of production. Investment in areas with high added value or relative surplus value production causes many changes among both capitals and nation-states. While the increase in absolute surplus value is limited to the scale of labour reproduction and

physiological limits, the relative production of surplus value is generally related to the level of capital accumulation. As this increases in the capitalist mode of production, capital-intensive production, together with the possibilities of technology, is a situation necessitated by the conditions of competition. The technological differentiation experienced by a sector in terms of the organisation of production within itself can be both mechanical and material. The development of the means of production is important in discussing technology. In accordance with the general tendencies of capitalism, the reduction of the unit cost of textiles production is achieved through the use of more intensive technology. That is, the combination of labour and capital is always motivated by the need to reduce costs and increase output, which is one of the main contradictions of capitalism: while it seeks to increase labour power indefinitely to produce surplus value, it cannot give up keeping the amount of labour under control in order to reduce unit costs. "It is therefore equally a tendency of capital to increase the labouring population, as well as constantly to posit a part of it as surplus population – population which is useless until such time as capital can utilize it" (Marx, 1973: 398). In parallel with the historical development of the means of production in capitalism, inputs have also differentiated and diversified together with the chemical industry. This is of course a critical issue, especially for large capital groups facing increasing competition and highly integrated into global markets. Therefore, with the development of machine technology, the use of artificial-synthetic fibres produced by the chemical industry, which are detached from nature's production process and can shorten the production process, is critical in the textile sector. Hence, we can speak of an important separation in the production of cotton and polyester in terms of the turnover time of capital. Marx (1956: 151) defined the turnover time of capital as the sum of the production time and the circulation time. Production time is the time required for the production of the commodity, while circulation time is the time when the value in the form of the commodity enters the market and turns back into capital in the form of money. However, the part of production time that includes labour power is called working time, which actually constitutes a part of production time. Hence, planting or harvesting cotton is working time that includes labour. However, the production time of cotton also includes the time that nature requires to grow mature harvestable cotton plants. This difference between production time and working time is quite different for cotton and polyester. In agriculture, chemicals are used to intervene in this natural production time and reduce the capital turnover rate. In polyester production, however, the conversion of petroleum into material relies on intense pressure and heat technology. In other words, the amount of production (output) depends on the availability of petrol in nature and capital-intensive machinery in production. Thus,

the change in the basic input used in textiles from cotton to polyester is very important in terms of increasing the turnover rate of capital due to the change in the organic composition of capital (Erbek, 2023: 88-89).

Figure 1. Production Volume of Chemical and Textile Fibers Worldwide from 1975 to 2022 (in 1,000 Metric Tons). Source: Statista, 2023a.



After the 1990s, chemical fibre production overtook natural fibre production. The increasingly intensive use of synthetic fibres in the textile sector signals the shift from the production time of nature to the turnover time of capital. The changing role of cotton and polyester in production also shows that the backward linkage of the textile sector has changed from agriculture to the chemical industry. This change in materials also shows that the sector has moved, in terms of materials, from a labour-intensive position in the integrated material composition with the chemical industry to a capital-intensive industrial composition.

The Position of Cotton in the Context of the Material Change

As the textile sector has become more material and capital intensive, cotton, which has been used as an agricultural product in textiles for thousands of years, has also

been affected. We will try to explain this change in Türkiye in terms of cotton production and consumption figures, and in terms of changes in the area under cotton. The aim is to show the changing role of cotton production in textiles and to highlight the use of productivity enhancing methods in cotton production. That is, cotton production has also been subject to interventions aimed at accelerating the turnover of capital.

Both during and following the first period of capital accumulation, cotton production and the production of cotton products were important for Türkiye, which tried to integrate into global capitalist relations through agricultural production. In Türkiye, production is mainly focused on cotton-based garments, which account for 80 percent of exported textile products while about 65 percent of all cotton goods produced are exported (Republic of Türkiye, Ministry of Customs and Trade, General Directorate of Tradesmen, Craftsmen and Cooperatives, 2020). The fact that cotton consumption has exceeded production since the 2000s suggests that capital-intensive sectors are being prioritised, which is, of course, generally linked to capital accumulation.

Table 1. Fiber Cotton Production and Consumption Status in Türkiye (in 1,000 Tonnes)

Season	Production (Unginned)	Production (Fiber)	Consumption (Fiber)	Difference (Fiber)	Production To Consumption Ratio
2015/2016	2050	738	1500	-762	0,49
2016/2017	2100	756	1455	-699	0,52
2017/2018	2450	882	1481	-599	0,59
2018/2019	2570	976	1555	-579	0,63
2019/2020	2200	814	1633	-819	0,49
2020/2021	1774	656	1670	-1014	0,39
2021/2022	2250	833	1890	-1057	0,44
2022/2023	2750	887	1700	-813	0,52
Average	2268	818	1610	-793	0,50

Source: Republic of Türkiye Ministry of Customs and Trade, 2020: 7., National Cotton Council, 2023: 5.

Based on the data combination of Ministry of Trade and National Cotton Council for 2015-2023, it is difficult to say that Türkiye is currently a net exporter of cotton. Cotton also has an import-dependent structure. Meanwhile, the area

under cotton cultivation has decreased both globally and in Türkiye, which can be explained by the expansion of urban areas due to the impact of industrialisation and population growth.

Table 2. Cotton Planting Areas in Türkiye by Region (in 1,000 Acres)

Year	Southeastern Anatolia	Aegean	Cukurova Region	Antalya	Total
1995/1996	206	267	254	30	757
2000/2001	317	208	116	13	654
2005/2006	295	144	103	5	547
2010/2011	288	84	105	4	481
2015/2016	265	92	71	6	434
2020/2021	190	101	63	5	359
2022/2023	359	121	88	5	573
1995-2023 Difference (%)	74%	-55%	-65%	-83%	-24%

Source: Tarımsal Ekonomi ve Politika Geliştirme Enstitüsü, 2023: 25.

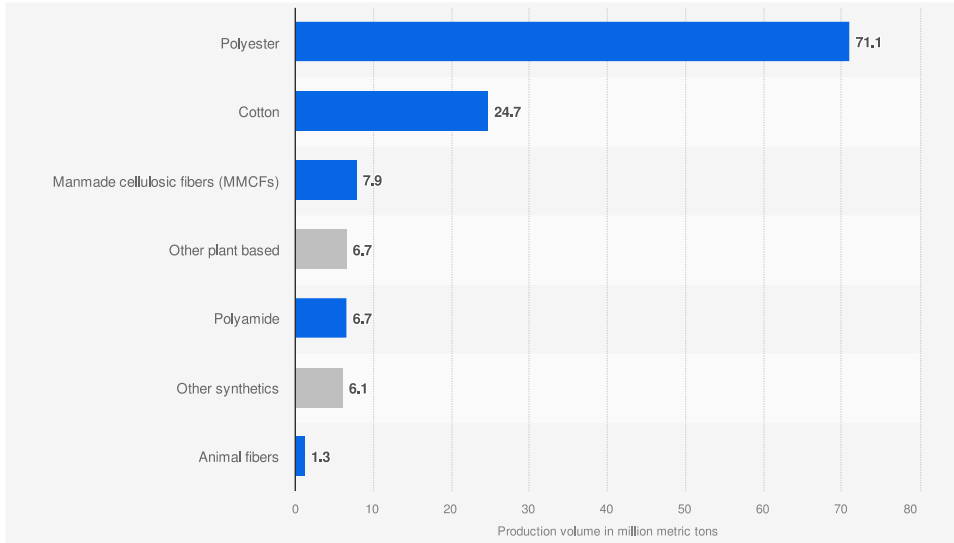
The area under cotton cultivation in Türkiye has also declined (Tarımsal Ekonomi ve Politika Geliştirme Enstitüsü, 2023: 25). Although this can be read as an indicator of the material change in textiles, it can also, and more importantly, be interpreted as reflecting a general policy change regarding agricultural production. It may also reflect improved productivity in cotton production. First productivity has been improved by the use of machinery and, in recent years, the use of chemicals to shorten nature's production time. Cotton was one of the first crops subjected to commercial transgenic applications, with a large part of current cotton production now relying on these interventions. Hence, the area under cultivation of genetically modified organisms (GMOs), which began production in 1996, has increased from 1.7 million hectares to 200 million hectares in general (Arvas and Kocaçalışkan, 2020: 202). Transgenic technology is widely used for cultivating new drought-, salt-, and cold-resistant varieties. Transgenic cotton has many important environmental, social, and economic impacts, such as reducing the use of pesticides, indirectly increasing yields, minimising environmental pollution, and reducing labour and costs (Kuduğ, 2019: 8). Thus, modern cotton is also different from traditional cotton, particularly regarding its shortened production time.

The Intersection of Labour Intensive-Capital Intensive Production Stages

The argument we have developed on the change of material in production has changed our understanding of change in general, as well as the composition of the working class. We should say that the change in material has also changed the composition of the labour force at different stages of production. The textile sector illustrates our basic argument more clearly. If we consider the textile and ready-made clothing sectors together, from the production of raw materials to the final product reaching the consumer, we can say that, unlike textiles, ready-made clothing production has retained its labour-intensive structure. Until the early 1970s, the technologies used by the ready-made clothing industry barely changed. Since then, it has changed somewhat, although not as much as in textiles. Technological innovations are mostly found in the pre- and post- sewing stages of material classification, cutting, ironing, packaging, warehousing, and distribution (Dicken, 2015: 457). These changes are mainly focused on reducing production time and automating production. According to Dicken (2015: 546), two forms of technological changes are particularly important. The first are “those that increase the speed with which a particular process can be carried out” and the second are “those that replace manual with mechanized and automated operation”. This indicates that technological innovations that both shorten the production process and automate production in the ready-made clothing sector have not changed the sector’s labour-intensive structure.

The textile sector, namely the production of fiber, yarn, and fabric, has changed both in terms of the structure of production tools and machines and the diversity of the materials used. For the present study, the relevant factor is the change in materials and the fact that this has given the sector a capital-intensive structure. One of the fundamental tendencies of nation-state-supported industry-based capital accumulation is the abandonment of labour-intensive production areas specific to capital and the nation state and the transition to capital-intensive production areas in the later stages of accumulation. This transition is of course related to the scale of capital. Thus, the transition from cotton to polyester production shows that the textile sector has shifted to a capital-intensive area in terms of materials, which is compatible with capitalist development.

Figure 2. Production Volume of Textile Fibers Worldwide in 2023, by Type (in Million Metric Tons). Source: Statista, 2023b.



In Türkiye's case, the process has been similar, regarding both the conditions of creating capital accumulation and the formation processes of large individual capital groups. These large capital groups such as Sabancı, Zorlu, and Sanko, which are still active today, initially accumulated capital as major producers in the textile sector before diversifying their activities in later periods of accumulation. Hence, the textile sector has been the key sector in Türkiye's transition from agriculture to industry and has created unique examples of the transition from commercial to industrial capital. In particular, the state made the sector a subject of public production in the early stages of Türkiye's development process and intensively supported capital initiatives.

In addition to the product transferred, the creation of value through capital accumulation always occurs through state interventions, which vary in periods when absolute and relative surplus-value creation are relatively decisive. Since the producer of absolute surplus value is the human being, working hours, labour regimes organised by the nation-state, and trade union powers impose restrictions. Here, the production of relative surplus value is a form of value creation that has intensified with technological development, especially in the latest century of capitalism, in the advanced stages of accumulation. Hence, we read the transition from cotton to polyester as a transition from absolute surplus value to relative

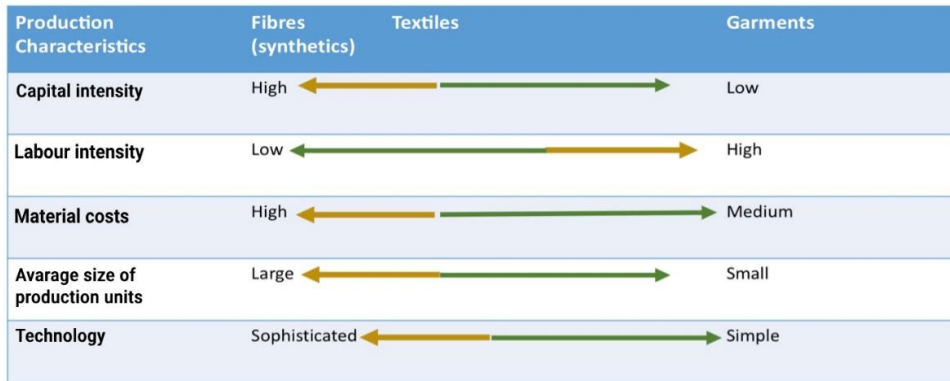
surplus value. Individual capitals and the states in which capitals flourish and develop show differences within themselves with economic policies suitable for this transformation. We believe that the pain experienced by the textile sector in Türkiye is related to this change, but especially to materials.

Today, the main fields of research and development and technological activity in the textile sector are fibre and yarn production. These research activities have led to the development of non-piling, antibacterial yarns, known as smart and technical textiles, and the production of non-woven, climatic and colour-changing smart fabrics. According to the basic logic of capital accumulation, value creation processes in which the use of dead labour in the production process is greater than the use of living labour are essential for the continuity of accumulation. This differentiation between the value-preserving and value-creating function of labour indicates that, as the proportion of dead labour or constant capital increases, the social time required for production decreases and the value created decreases. However, the value transfer found in the objects of labour that function as constant capital increases. Therefore, the increasing use of polyester, technical textiles, and smart fabrics in the textile sector makes it easier to argue that the value created in the textile sector decreases whereas the value transfer from the production areas that feed the sector, to which it is backward, increases. That is, the textile sector has acquired a labour-intensive content, which creates value in the production of ready-made garments, and a capital-intensive content, which transfers value in the production of fibres, yarns, and fabrics. This differentiation in the variable/constant capital ratio can be seen as both a means of breaking the dependence on living labour, i.e., direct workers, in the actual labour process (i.e., as a means of reducing costs) and a form of shortening the turnover of capital. When the production activity becomes technology-intensive, i.e., when the capital intensity used in the production process exceeds the labour intensity, this production area acquires a capital-intensive structure³. Thus, due to the textile

³ “Let us assume, that some invention enables the spinner to spin as much cotton in 6 hours as he was able to spin before in 36 hours. His labour is now six times as effective as it was, for the purposes of useful production. The product of 6 hours’ work has increased six-fold, from 6 lbs. to 36 lbs. But now the 36 lbs. of cotton absorb only the same amount of labour as formerly did the 6 lbs. One-sixth as much new labour is absorbed by each pound of cotton, and consequently, the value added by the labour to each pound is only one-sixth of what it formerly was. On the other hand, in the product, in the 36 lbs. of yarn, the value transferred from the cotton is six times as great as before. By the 6 hours’ spinning, the value of the raw material preserved and transferred to the product is six times as great as before, although the new value added by the labour of the spinner to each pound of the very same raw material is one-sixth what it was formerly. This shows that the

sector's intensive use of polyester, which is the focus of this paper, and changes in cotton production processes, the textile sector can no longer be considered labour-intensive, especially in terms of materials.

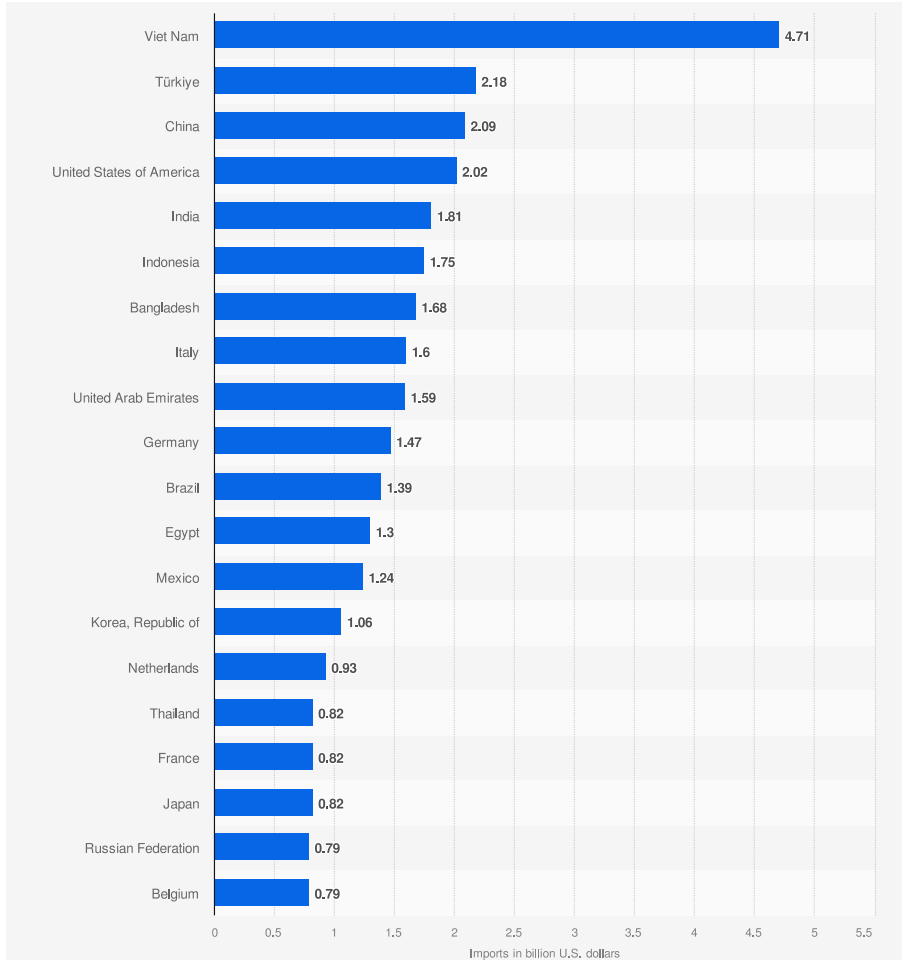
Figure 3. Variations in Production Characteristics Between Major Segments of the Textiles-Clothing Production Circuit. Source: Dicken, 2015: 456.



As synthetic fibres, including polyester, have become the textile sector's basic input, the capital required for their production has increased with each cycle. Hence, the factors that made the sector profitable in the early stages of capital accumulation or in traditional textile production, such as cheap labour, traditional spinning and weaving skills, and logistical proximity to markets, have receded into the background. Apart from these factors, the position of textiles in each nation-state's industrial activities will be determined by the ability to produce the intermediate goods and materials that have now become capital-intensive. Therefore, for those capital groups or nation-states that withdrew from the textile sector in the later stages of capital accumulation, the textile sector, which has become a high value-added area of production because of its material content, may become an important sector again.

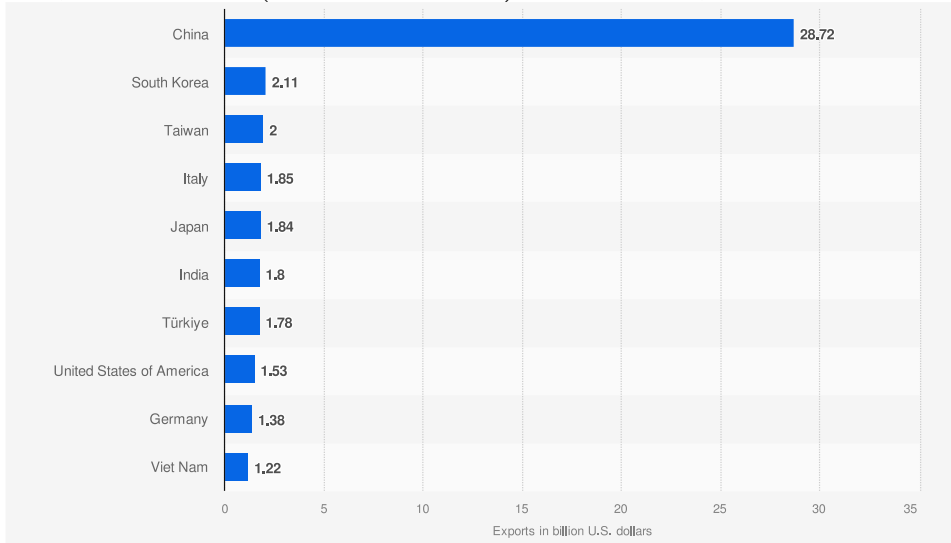
two properties of labour, by virtue of which it is enabled in one case to preserve value, and in the other to create value, are essentially different. On the one hand, the longer the time necessary to spin a given weight of cotton into yarn, the greater is the new value added to the material; on the other hand, the greater the weight of the cotton spun in a given time, the greater is the value preserved, by being transferred from it to the product" (Marx, 1887: 143).

Figure 4. Leading Countries Importing Chemical Filament Fibers Worldwide in 2023, Based on Value (in billion U.S. dollars). Source: Statista, 2023c.



According to global fibre import and export data for 2023, Türkiye is the second country that imports the most synthetic fibre, which clearly demonstrates that Türkiye cannot supply its textile production in terms of materials, especially synthetic fibres. Türkiye is a net importer of synthetic fibres.

Figure 5. Leading Countries Exporting Chemical Filament Fibers Worldwide in 2023, Based on Value (in billion U.S. dollars). Source: Statista, 2023d.



Similarly, regarding synthetic fibre exporters, China leads the sector by a very large margin in 2023. This change in the textile sector has a clear counterpart in the global division of labour. Industry representatives in Türkiye note that domestic production costs have risen sharply so that, in terms of price, the country can no longer compete globally for basic products. Prices in Türkiye for basic products remain higher than in countries like China, India, and Uzbekistan. As Hüseyin Öztürk, President of Türkiye's Fashion and Ready-to-Wear Federation, puts it: "Labour costs, which are between 75 and 200 dollars in competing countries, are around 1,000 dollars for us. We no longer have a chance to compete with these products. We will either move production to other countries or switch to value-added products. Otherwise, there is no chance of survival" (Ekonomim, April 3, 2024a). Consequently, textile and clothing companies have relocated from Türkiye to Egypt, especially in recent years (Ekonometre, April 24, 2023). The same phenomenon occurred during the 2001 crisis and is being repeated today (bbc.uk, March 31, 2005) alongside discussions as to whether the production of high value-added products should be considered as a new area instead of basic products. In this change in competitive conditions, the cost of production caused by the change in materials is as important as the effect of labour costs.

Naturally, the competition created by the conditions of integration of the textile sector into the global division of labour has a negative impact on the

working conditions, wages and social rights of workers in the textile and ready-made garment sector. Looking at the labour studies carried out in the sector, low wages, poor working conditions, long working hours and the usurpation of the right to organise are found throughout the textile and ready-made garment sector. In particular, the loss of rights following the COVID-19 pandemic has led to an increase in workplace-based struggles in 2022. 14 percent of this increase in workplace action took place in the textile and ready-made garments sector, surpassing even the metal sector, which has historically been particularly important in terms of workers' struggles (Emek Çalışmaları Topluluğu, 2024: 6).

In the sector, where informal production and subcontracting relationships are intense, women, children and migrant labour are found to be intensively used as cheap labour (Mutlu et al., 2018: 76). Textiles and ready-made garments have become one of the leading sectors, especially regarding the wave of migration caused by the Syrian civil war that started in 2011 and the integration of refugees with temporary protection status into the labour market. Although they can legally obtain work permits, the fact that this process does not work in practice is one of the reasons why Syrian refugees are involved in informal labour relations. In this sense, the textile sector, where informal relations can be easily established, is one of the sectors where Syrians have been most employed in recent years (Mutlu et al., 2018: 71). Just as Egypt became an alternative in the spatial organisation of production due to labour costs in the 2001 economic crisis, representatives of the Turkish textile and retail sector today see the return that began with the calming of the war environment in Syria and the collapse of the regime as an opportunity for restructuring in Syria in the face of rising costs and labour shortages in Turkey (Textilegence, December 28, 2024).

As we have emphasised throughout the study, it is worth reiterating that the capital-intensive content of the material has an important place in the labour process. In particular, since the change in the material will increase the need for a constant rate of capital and skilled labour in textile production, it will require alternatives to the labour-intensive stages of textile and clothing production with the logic of accumulation, together with the cost pressure created by capital accumulation and competitive conditions.

Centralisation of Capital

The textile sector has been one of the most important sectors of manufacturing production in Türkiye since the Ottoman Empire and the early Republican period. In the Ottoman Empire, priority was given to producing cotton, cloth, and finished textile products to meet the needs of the palace and the military; in the early Republican period, it was to meet the needs of the people. Textiles

maintained its prominence through different stages of capital accumulation in Türkiye. After 1980, for example, the textile sector created significant production and employment areas under the export-oriented industrialisation strategy. Currently, according to 2021 data, ready-made garments and textiles account for 6.2 percent of Türkiye's economy while the sector employs 2 million people, of whom 41.5 percent are women, across 65,000 companies. The sector exports 65 percent of its production, representing 14 percent of Türkiye's total exports (Republic of Türkiye Ministry of Trade, 2022: 2). These official figures also underestimate the textile sector's economic impact in that there are high levels of unregistered production through subcontracting networks.

Several factors can explain the prominent position of textiles compared to other industries: the cotton used as a raw material can be produced in Türkiye; there is sufficient and cheap labour for producing ready-made garments and clothing; Türkiye has a historical and socially established weaving knowledge; and it is close to its markets for logistics purposes (Tarakçıoğlu, 1987). In addition, as discussed earlier, textiles are a suitable production area for the first stages of industrialisation. On closer examination, however, we can say that this structure, which is specific to the position of the textile sector within Türkiye's manufacturing industry, has undergone some changes since the 2000s. With the Customs Union Agreement, the importance of the textile and clothing industry in Türkiye's exports has decreased, while the share of industrial goods such as automobiles, machinery and equipment, and electrical household appliances in exports has increased (Hasanov, 2015: 27). This change is particularly shaped by Türkiye's industrialisation policy and the general tendencies of capitalism. It embodies a transition from the production of low to high value-added products. This change, which is in line with the general tendencies of capitalism, finds its counterpart in the necessity of technology-intensive production together with the increasing competition of capital. This tendency can be seen as the preference of capital-intensive areas of production for individual capitals with a certain level of capital accumulation. In particular, two new factors have emerged: first, the increasing use of synthetic fibre production in textiles as a capital-intensive field of production; second, the fact that textiles are no longer only a labour-intensive field but also capital-intensive, especially in terms of inputs. That is, the conditions of competition have changed in the sector, which has acquired a capital-intensive structure in terms of inputs. Therefore, it is easy to predict that the tendency towards centralisation in the sector, which in Türkiye generally comprises small enterprises, will increase.

In recent years, Türkiye's textile sector has tended towards crisis, exemplified in the increasingly competitive conditions of technology-intensive

synthetic fibre production as well as in the increasing number of bankruptcies and job losses. The material-centred pain of this transformation in terms of the production of form and value is often expressed in the sector's internal discussions and demands. According to Fikret Kileci, Chairman of the Board of Directors of TIM Textile and Raw Materials Sector, one of the sector's representatives, 646 companies will cease activities by 2023, while 87,000 people will lose their jobs in material and raw materials production. Considering the textile and ready-made clothing sector as a whole, around 200,000 people will leave the sector annually (Bloomberg, April 22, 2024). As we have emphasized throughout this paper, the sector's acquisition of a capital-intensive material/input content has differentiated the amount of capital that can remain in the sector. That is, while capital groups with the ability to produce polyester and other synthetic fibres, or to impose competitive conditions by importing inputs, continue to receive their share of accumulation, others lacking this ability have begun to leave the sector. Historically, the textile sector has been one of the main fields of activity for the formation of big capital groups in Türkiye, such as Sabancı, Sanko, and Zorlu. These groups have diversified or changed their production activities in the later stages of capital accumulation, leaving labour-intensive areas and investing in high value-added production areas. Sabancı's withdrawal from textiles and Koç's withdrawal from retailing are examples of this. However, their focus on areas like energy, finance, consumer durables, and automobiles also exemplifies the functioning of capital accumulation.

In addition to the increase in technology-intensive inputs in material production, there is also a structure of external dependence for the machines used in the textile and ready-made garment production in Türkiye in that half are imported from European and Far Eastern countries (Duran & Dinç, 2016, 508). In support of our basic argument, the structure of imported inputs (polyester) and imported machines feeds the centralisation trend of Türkiye's textile sector. The list of Türkiye's top 500 companies in 2022 includes 44 textile and ready-made clothing companies, of which the top five are Sasa Polyester Sanayi A.Ş., AKSA Akrilik Kimya Sanayii A.Ş., Kipaş Mensucat İşletmeleri A.Ş., Gülsan Sentetik Dokuma San. ve Tic. A.Ş., Sanko Tekstil İşletmeleri San. ve Tic. A.Ş. (Istanbul Chamber of Industry, 2022).

Furthermore, the top three textile and ready-made clothing enterprises are man-made fibre producers. These large enterprises, organised as holding companies, have been active in the textile sector for many years as well as in non-textile sectors like energy, construction, real estate, and information technology. Due to the relatively high investment costs required for synthetic fibre production and the tendency for capital to become centralised, large capital groups have

increased their fixed capital by producing in this sector. That is, in parallel with the transformation of materials in the textile sector, they switched to the production of synthetic fibres to produce high value-added inputs for their own activities or to participate in international competition in the form of direct exports.

It is argued that the presence or absence of state policies has an impact on how national capital is integrated into global value chains and global production networks (Neilson, 2014, 3). In this sense, the state may have policy instruments that can support national capital and strengthen global interaction. However, despite active state policies, it is not expected that all groups of capital will be included in the global value chain and global production network with the same intensity. Of course, this production leap has not been possible for every level of capital. Since polyester replaced cotton in international textile production after the 2000s, the share of textiles in Türkiye's manufacturing production has decreased. Thus, the material transformation of the sector has not been fully realised in Türkiye. The failure to switch to capital-intensive polyester on the scale of cotton production has increased the sector's external dependence and need for foreign exchange. In line with the conditions of accumulation, Türkiye's industrialisation policy has abandoned labour-intensive production sectors like textiles and turned to production sectors like energy and construction, coinciding with the turn of big textile capital to these sectors. However, the material transformation of the sector also coincided with a similar period. Therefore, this change is not only related to state policies or the conditions of accumulation of Turkish capital. The fact that the general tendencies of capitalism require a technology-intensive material is a very important factor here.

Conclusion

The textile sector's traditional dependence for its material production on agriculture and nature's production time limits the turnover of capital and thus suppresses profit rates. Consequently, given the general tendencies of accumulation based on nation-state-supported industry, capital, and therefore states, have been driven to search for technology-intensive materials. This drive is largely inherent in the current tendencies of capital. Thus, the textile sector's backward linkage has changed from agriculture (cotton production) to the chemical industry (polyester production). As shown in the latest studies, synthetic fibre production has accounted for a steadily increasing proportion of total fibre production, especially since the 1990s.

The textile sector has shifted in material inputs from labour-intensive cotton production to technology-intensive polyester production. I argued that cotton production is a labour-intensive area because of the traditional method of

production. Although the use of machinery and chemicals has increased significantly, production is still be achieved through the combination of labour and agricultural land. In addition, hand picking is still required to obtain the cleanest cotton fibre. In contrast to cotton's labour intensity, polyester production requires production equipment capable of applying high heat and pressure, making it a relatively capital-intensive production area. Thus, changes in the material inputs of the textile sector exemplify the transition from absolute to relative surplus value production.

In addition to the diversification of textile inputs through technological development and the chemical industry, cotton production has also benefited from this development. Today, although the area under cotton production has decreased, the quantity of cotton produced has remained the same due to new biotechnological and chemical applications.

Because the textile sector has become more capital-intensive in terms of materials and inputs, it should no longer be considered a capital-intensive as well as labour-intensive production area. Indeed, it has become a hybrid in terms of labour/capital intensity. Therefore, it can be predicted that this sector will regain its attractiveness for early capitalist countries and large textile producers in the global division of labour.

For late capitalist countries like Türkiye, the articulation process based on cheap labour, logistic advantage, and domestic cotton production has reached its limits. Hence, the competition between Türkiye's big capital groups and small textile producers will become more restrictive, thereby increasing the small producers' dependence on large producers, borrowing mechanisms, and centralisation of capital. As a result of the increase in the organic composition of capital in the textile sector, technology-intensive material production in Türkiye may continue to be an area of investment for large capital groups operating in different areas. Together, the textile sector's import-dependent material structure and exchange rate risks have created a fragile environment with crisis tendencies in Türkiye's textile and ready-made clothing sector, which is dominated by contract manufacturing relationships.

Genişletilmiş Türkçe Özet

Tekstil sektörü endüstrileşme ve sermaye birikiminin gerçekleştiği İngiltere'de olduğu gibi Türkiye için de özel öneme sahiptir. Osmanlı döneminden başlayan geç-endüstrileşme (late industrialization) ve geç sermaye birikim süreci sonradan kurulan Türkiye Cumhuriyeti'nin geç-ulus inşa sürecinde önemli bir sektör olmaya devam etmiştir. Tekstil sektörünün Türkiye'de endüstri ve sermaye birikiminde önemli olmasının doğrudan sektörün sahip olduğu

özelliklerden kaynaklandığı birçok çalışmada açıkça belirtilmiştir. Diğer yandan tekstil sektöründe önemli değişimler yaşanmaktadır. Çalışmamızın odağı bu değişimin temel belirleyenlerinden biri üzerine yoğunlaşmaktadır; malzeme değişikliği. Tekstil sektörü üzerine yapılan analizlerde malzeme konusu eksik bırakılmıştır. Analizler yoğunlu olarak tekstil sektörünün ekonomiye katkısı, emek çalışmaları ve kalkınmacı devlet analizi üzerinden ilerlemiştir.

Osmanlı İmparatorluğu'ndan günümüze değişen tekstil sektörü endüstri, sermaye birikimi ve ulus devlet oluşum sürecinin ilk evrelerinde emek yoğun (labour intensive) ve temel girdisi pamuk olması nedeniyle sanayileşme ve sermaye birikim sürecine uyumlu bir gelişim göstermiştir. Sektörün zaman içinde sermaye yoğun bir sektöre dönüşümü (teknoloji ve buna bağlı olarak malzeme kullanımında değişimler) bir dizi farklılaşmaya yol açmıştır. Biraz daha açacak olursak gerek pamuk üretimi gerekse mamul mal üretimiyle özellikle 1980'li yıllardan sonra Türkiye'nin ihtiyaç duyduğu döviz sağlama, sektörü daha önemli kılmıştır. Dönemin ihracat odaklı stratejilerine uyumlu gelişim gösteren sektör, 2000'li yıllardan sonra hem siyasal iktidarların uygulamaya çalıştığı iktisat politikalarında hem de sermayenin yatırım tercihlerinde geri planda kalmıştır. Türkiye'de tekstilin günümüzde lokomotif özelliğini kaybetmesine yönelik farklı argümanlar bulunmaktadır. Tekstil sektörünün genel tespiti ve sektörde yaşanan değişim, genellikle bütüncülleştirilmiş (aggregative) veri seti üzerinden yapılan ve yanlış iktisat politikaları merkeze koyan ampirik çerçeveler üzerinden tartışılmaktadır. Çalışmamızda bu argümanlarda eksik ve önemli bulduğumuz *malzeme* boyutunu öne çıkaracağız. Sektörü endüstrinin genel işleyişi ve sermaye birikim süreci üzerinden analiz ettiğimizde, bütüncülleştirilmiş veri seti ve dahası malzeme konusunu da içeren teknolojik gelişmenin bir neden değil, endüstriler ve sermaye birikimi arasındaki ilişkilerinin çoklu belirlemelerinin sonucu olduğunu söyleyebiliriz. Malzeme konusunun anlaşılması için bir belirleme daha yapılması gerekiyor; tekstil sektörünün dünya ölçeğinde işleyen bir sürecin belirlemelerine dahil olduğunu söylemeliyiz. Özellikle Türkiye gibi endüstrileşme ve sermaye birikim sürecine geç dahil olan ülkelerde *devlet* diğer sektörler gibi fakat daha yoğun biçimde tekstil sektörünün gelişmesi için çeşitli müdahalelerde bulunmuştur. Türkiye'de tekstil sektöründe gözlemlenen değişimi malzeme üzerinden analiz ederken endüstri ve sermayenin ulusal ve uluslararası düzeydeki durumu ve uygulanan iktisat politikalarının önemli olduğunu belirtmemiz gerekir. Bu anlamıyla çalışmamız; Türkiye'de tekstil sektörünün farklılaşan konumunu, sektör içi bileşenler ve bileşenlerin zaman içinde değişimi üzerinden açıklamayı amaçlamaktadır. Bu değişimin temel belirleyeni ise kapitalizmin genel eğilimleri ile uyumlu biçimde sektörün özellikle *malzeme* açısından farklılaşan, teknoloji

yoğun yapısıdır. Malzeme bağlamında yoğun biçimde kimya sanayinin üretimi olan sentetik, yapay elyafları kullanması sonucu tekstil sektörü artık yalnızca emek yoğun (labour intensive) bir sektör olarak değerlendirilemez. Tarihsel olarak ucuz emek gücü, lojistik avantajlar ve malzeme anlamında pamuk üretimi üzerinden küresel tekstil ve hazır giyim üretimine eklenen Türkiye'deki tekstile yönelik sermayeler için uluslararası eklenmenin nasıl gerçekleşeceği meselesinde, sektör içi dönüşüm belirleyici bir yerde durmaktadır. Bu anlamıyla sektöre girdi olan malzemenin teknoloji yoğun yapısı önemli bir değişken olarak karşımıza çıkmaktadır. Teknoloji yoğun yapıya yol açan yeni malzeme ve bu malzemenin tedariki de yine sermaye birikiminin ulaştığı aşamaya bağlı olacaktır. Dolayısıyla bu süreç sermaye birikiminin farklı aşamalarındaki tekil sermayeler için değişen eklenme biçimlerini karşımıza çıkaracaktır.

Bu çalışma Türkiye'de tekstil sektöründeki değişimi malzeme olgusu üzerinden, sermaye birikiminin dönemsel ve yapısal koşullarıyla birlikte kapitalizmin genel eğilimleri etrafında ele alma amacındadır. Bu anlamıyla çalışmanın temel iddiası; Türkiye'de tekstil sektörünün gelişimini belirleyen temel faktörün, özellikle 2000'li yıllardan sonra sektör içi yapısal değişim ve malzeme farklılaşması olduğu yönündedir. Girdi bağlamında teknoloji yoğun polyester üretimiyle beslenen sektör, Türkiye'de tekstil ve hazır giyim sektörünü temelden etkilemiş, sektörün geri bağlantısının ithalat bağımlı bir yapıya kavuşmasına yol açmış ve sektörün geri planda kalmasına zemin hazırlamıştır.

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The authors have equal contributions.

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Conflict of Interest

The authors declare that there are no conflicts of interest.

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