

# The Economic Importance and Characteristics of Cost Calculation in the Clothing Industry in Romania

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## Abstract

*By this paper, the author aim to highlight the importance of cost calculation in the clothing industry in Romania. In order to achieve this goal, we have reviewed the literature in this field.*

*Based on a literature review on cost calculation and on clothing industry we realised that in the this field, the traditional method laying at the base of cost calculation for a product is order-based method, and in certain cases the standard-cost method can also be applied. As a modern cost calculation method which can be applied in this industry we may mention the ABC method.*

*The paper ends with the author conclusions regarding the implementation of a cost calculation method in the clothing industry as well as the main actions to be taken by clothing companies to have competitive and innovative products and to cope with fierce competition.*

**Key words:** cost calculation, managerial accounting, the clothing industry, economic importance, cost calculation methods

**J.E.L. Classification:** D24, M41

## 1. Introduction

The present work falls within the field of management accounting, more precisely it will emphasize the cost calculation optimization possibilities and the tracing of clothing industry manufacture.

The challenge laying at the basis of the present scientific initiative was that of highlighting the necessity to improve management accounting in a very important field of Romanian economy. We consider the approach of this problematics in the actual context of globalization and alignment of the economic entities activating in this sector to the European requirements to be opportune.

There have been other researches on this subject, but exactly after the 1990 crisis, which was characterized by the disappearance of many clothing factories, which had entered insolvency procedure, but the greatest stress was on the acquiring of new technologies, and far being from finding and implementing modern methods of cost calculation. To survive on the market during that period, the acquiring of new technologies was the most ardent requirement, due to the fact that the competitiveness of clothings manufactured in the country was inferior to the similar products manufactured in competing countries, and the internal demand had also drastically took a dive.

The Romanian clothing industry plays an important role in the Romanian economy, it being the most representative branch of light industry. Light industry covers a wide range of products, from highly engineered synthetic threads to fashion articles. By its three main components (textiles, clothing, and respectively skin dressing and footwear), light industry represents an important sector of national economy, by its lengthy tradition in exportation, as well being the main employer in the industry.

To be able to survive, as well as to perform a profitable activity under the conditions of the market economy-specific conditions, the companies in the clothing industry must be receptive to the signals and requirements of the external environment, to be highly adaptive to change and to be very flexible in what their functioning mechanism is concerned. Practically, their entire activity

must be conceived and performed from an entirely new point of view, where cost calculation and cost calculation methods must play an essential role.

## **2. Research Goal and Method**

The research's fundamental goal is defined by the study of the specialized literature on cost calculation system and the demonstration of the importance of cost in production (one of the most important indicators of economic activity) in the activity and in the decision which are made at the level of entities in the clothing industry.

It's a known fact that, in market industry, the production cost is a key factor when managers fund and adopt their decision to assign resources, to increase and shape production, as well as to control economic activity. It is considered that this cost can be known and anticipated only by using the appropriate method to calculate costs and by using solutions to enhance the efficiency of economic entities' activity in general, and of those in clothing industries in particular, which would provide anytime details, real-time reporting and complete information regarding each factor which influences costs.

The use of certain research methods and tools which are meant only to facilitate the scientific research process (Mustata, 2008, p. 84) is rather compulsory for a scientific initiative. The quality of a research is determined by the methods and procedures used, when they have been established according to the specificity of the set goals.

Currently, specialty papers define the scientific ingression and text composition methods as a road or a path to be followed in the research activity, for the fulfillment of the goals, namely for information and formation. The procedures, techniques and tools used during the scientific ingression are the components of the said method, regarded as support elements or as concrete means to capitalize it.

The specialty literature study has been performed by structuring scientific articles with the purpose of describing and analyzing the most important subjects which must be known when we make reference to management accounting, cost calculation and clothing industry in Romania, themes which are also supported by relevant works in the field.

## **3. Literature review**

We consider that the study of specialty literature is a departure point in every research, the knowledge of the history, of the research stage and the interpretation of results obtained by other researchers by their studies in the interest area is necessary, thusly allowing us to highlight the opinions, contradictions and lacunae of existing researches. By studying the specialty literature, we have envisaged the creation of a new perspective over the theme and the identification of the possibilities to make our own contribution to create added value to the foregoing researches.

Two methods were considered in the analysis of specialty literature (Jesson, 2011, p. 56): the traditional method and the systematic method.

The traditional method supposes: the use of a critical point of view, which can assess asserted theories and hypotheses by examining the methods used and the obtained results; the creation of a conceptual framework by synthesizing several studies and sketching the most relevant aspects; a simple review of the specialty literature; last minute review, by which the author aims to inform the reader about the most representative studies for the researched theme.

The systematic method of reviewing specialty literature is a useful tool for those who desire to promote the research results by applying them practically. This method provides the possibility to remain uninvolved, due to the usage of technical procedures with the help of which research's objectivity and transparency are proven to the reader.

The approach used in the performance of the present research is traditional and focused on the synthesizing of most relevant studies and highlighting the most important aspects, respectively the creation of a conceptual framework.

The companies need methods which would ensure an efficient calculation of manufacturing costs, as well as a consistent control for them, so they are able to compete and to survive on the competitive and ever-shifting market. Generally, medium to large-sized companies in the industry

usually have cost calculation programs, as well as properly trained personnel who efficiently use the manufacturing cost calculation methods within the existent organizational structures (Utkun, E. & Ozdemir, S., 2015, p. 209).

According to a survey performed by Rendal *et al.* (1999, p. 31) with the purpose of researching the cost management in textile companies, it was proven that the organizations use the traditional cost calculation methods and that they do not have the possibility to implement modern methods, so that in these companies the improvement of the cost calculation system is attempted by practical experiments.

The modernization and diversification of cost calculation methods renders the managers of the economic entities in clothing industry responsible regarding the tracking and surveillance of costs, to obtain operative information regarding the manufacture process, as well as to help them make the most efficient decisions for each manufacture process as well as for the company, in its entirety.

On top of efficacy and responsibility, the forecasting must also be taken into account as much as possible, to reduce the workload necessary to obtain information regarding the manufacturing expenses and their cost. Therefore, the decrease of the workload necessary to obtain information has the advantage to relieve specialty personnel, who is charged with simple and routine registrations, thusly creating the opportunity for them to focus more on analyzing that information, with the purpose of completely use its interpretation while making decisions.

The fact of taking all these requirements into account, which are imposed by the tendency to modernize and diversify the cost calculation methods may lead to a management accounting which would fulfill the requirements of an efficient management (Trifan, 2014, p. 102).

In the clothing sector, production can be dispersed in several locations inside or outside the country. In developed countries, this is associated with outsourcing production to developing countries, and in the case of the latter, production moves to other places and in search for cheaper labor. Transnational corporations can move their capital across borders in order to reduce production costs, but small businesses and individual workers do not have this mobility, being forced to work in a fierce competition market (Girneata, A. & Mascu, M., 2014, p. 436).

The companies must realize that in this sector, the competitive advantage lays in innovation, not in a reduced cost of workforce. Also, the capacity to supply products on a wide variety of markets facilitates the attraction of a greater number of consumers, thusly removing the dependence from a limited number of contractors. In our opinion, a source of competitive advantage in the activity of garment manufacturing companies is given by innovation. Nonetheless, they should not only rely entirely on innovative ideas, with an absolute novelty effect, but they would also should, in the mean time, identify new cost calculation methods which would render their economic activity more efficient (Binskauskas, G. & Diska, V., 2011, p. 29).

In what the innovation and creativity process is concerned, the authors Mitra, C.S. and Borza A. consider that the improvement of the features of an existing article of clothing may provide superior benefits as compared to creating an entirely new product; the authors highlight the fact that innovation and creativity are two different concepts: creativity entails the release of new ideas, while innovation is an act of improvement of ideas (products, processes) which already exist (Mitra, C.S. & Borza, A., 2011, p. 344).

Among the studies regarding the usage of cost calculation methods in the clothing industry we can list the following:

-The bases of management accounting organization and cost calculation using the ABC method in clothing industry (Capusneanu, 2006, pp. 89-95);

-The use of order-based method to determine unit cost of textiles manufactured by small to medium-sized companies (Utkun, E. & Ozdemir, S., 2015, pp. 209-217);

-The use of standard-cost method in the variant of unique standard-cost with monthly reimbursement of expenses per cost centers (Trifan, 2014, pp. 101-106).

All the studies follow the implementation steps of aforementioned calculation methods, the advantages and disadvantages of their usage in the activity of organizations, as well as the premises which laid at the basis of choosing the respective cost calculation method. Therefore, in the clothing industry, the traditional method laying at the base of cost calculation for a product is order-based method, and in certain cases the standard-cost method can also be applied. As a modern cost calculation method which can be applied in this industry we may mention the ABC

method. Their application in the clothing industry will be the subject of a future thesis, where their stages will be detailed, and comparisons will be made between the modern and the traditional cost calculation methods.

#### 4. Case study on the economic importance of the clothing industry

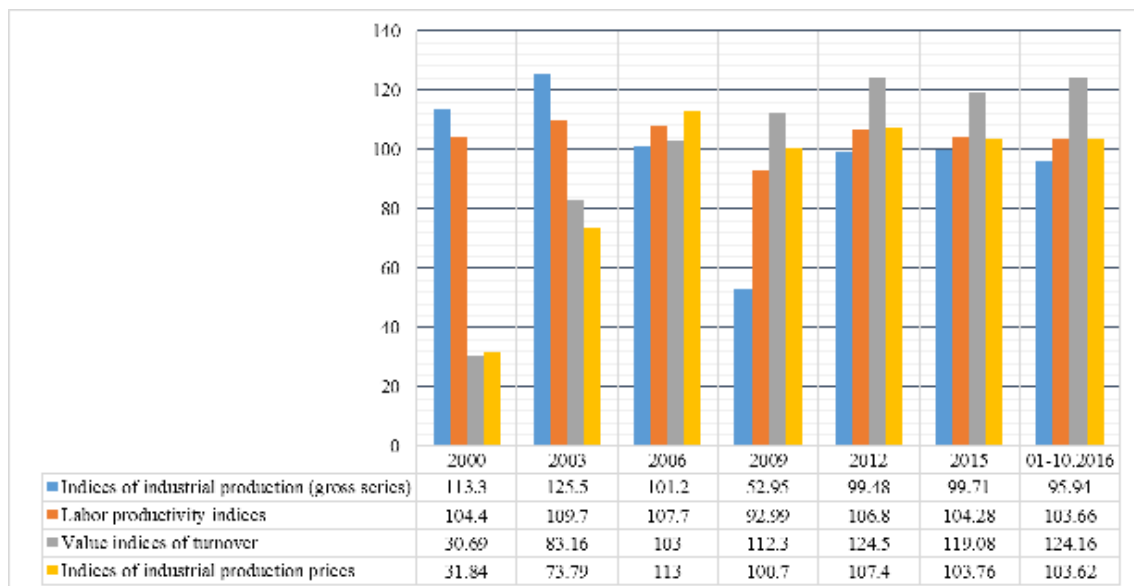
The importance of this study drifts from the fact that the textile and clothing industry (T & C - Textile Clothing) represents an important segment of the European manufacturing industry, as well as a vital sector of the Romanian economy, offering jobs in the country for more than 200,000 People in 2012 (Girneata, 2013, p. 84). Moreover, the apparel industry is a branch of significant tradition, ranking in 2012 as the third place in Romania's exports and fourth place in EU clothing exports (Popescu, 2013, p. 47).

In the Romanian national economy, light industry, through its three main components (textile, clothing and leather and footwear) is an important segment due to its considerable weight in gross domestic product, exports and the large number of employees. However, the socio-economic and political changes that have taken place in Romania over the last two decades have affected this sector, which has been forced to constantly adapt to change and to the competitive and permanent market (Girneata et al., 2015, p. 109).

We note that the Romanian clothing market is a crowded market with many strong competitors, especially Asian companies with cheap and low-quality products. To survive on this market, Romanian clothing companies have sought to provide tailored products tailored to well-defined customer segments over time.

In order to synthesize Romania's transition through the crisis and decline period, we present the evolution of the main indices for the period 2000 - October 2016.

Figure no. 1. Evolution of the main indices of the clothing industry



Source: Results calculated according to the data published on [www.insse.ro](http://www.insse.ro) by the National Institute of Statistics, accessed on 20.02.2017

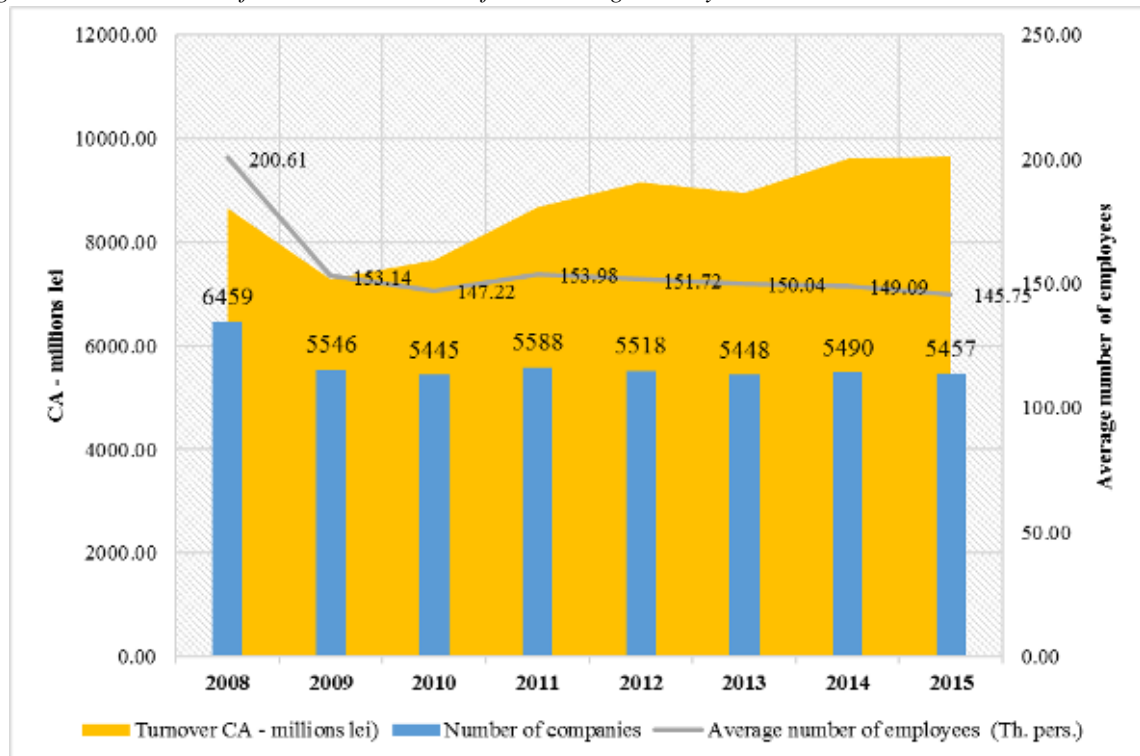
As a result of consulting the data published on the website of the National Institute of Statistics, we systematized the data obtained from industrial production indices, labor productivity, turnover and industrial production prices. It can be noticed that the indices of industrial production increased very little in 2015 compared to 2012, but compared to 2000 (reference year presented by the Institute of Statistics) decreased by 13.59%, having a decreasing trend in October 2016.

Comparing the year 2015 to 2000, we can observe that the labor productivity in the clothing sector stagnated for the most part, having only a slight decrease, and the turnover indices show an increase of 88.39%, keeping the same increasing trend for 2016. Although production price indices

increased by 71.92% in 2015, however, 2006 and 2012 are the years when these indices are at levels above 2015. We also point out that the best period for production was the year 2003, and 2009 was marked by the worst clothing production in Romania.

In the following, in Figure no. 2 we present the evolution of the number of companies in this industry, the average number of employees and the turnover during 2008 - 2015.

Figure no. 2. Evolution of the main indicators of the clothing industry between 2008 and 2015



Source: Processing based on data published on <http://www.mfinante.gov.ro> by Ministry of Public Finance accessed on 22.02.2017

It is noticed that the turnover values in 2015 compared to 2014 did not change very much, it was a percentage increase of only 0.60%, while the average number of employees and the number of companies decreased, but also in a very low weight. It can be seen from Figure no. 2 that both the number of companies in the clothing industry and the average number of employees have a decreasing trend since 2011.

## 5. Conclusions

In order to have competitive and innovative products, and in order to keep up the pace with competition, the managers in the clothing industry must continuously track the improvement of the company's management by the efficient organization of manufacturing process and of the work process, the organization of creation process for new products and the creation of differentiated ranges of products, focusing on and seizing of new markets, the differentiation of the range of products from that of the competitors, as well as the improvement of quality control activity. All these continuous improvement activities must use modern and flexible manufacturing processes organization systems, like modern cost calculation methods, which can track production in real time, and to be aware of the product's cost during each separate manufacturing stage (from tailoring, processing, ironing, and until packaging and distribution). Modern production management and tracking systems have appeared as an alternative to mass production and, in time, have proven their superiority as compared to traditional ones. As modern manufacturing management systems used in clothing industry we can list (Bota, 2010): MRP-ERP-type systems (Material Resource Planning and Enterprise Resource Planning), flexible manufacturing systems

(flexibility in usage, adaptability, access, redundancy, structural alteration, stocking, programming in manufacturing procedures), as well as the JIT systems (Just in Time – represents the production according to the customer's requirement, by eliminating stock from one period to another).

To adapt to new technologies is therefore a must, so that they can be applied at industry level (cost levels, rapidity and properly made decisions), to which the computerization and the permanent processes' control are added. Such products will be based on top of the line knowledge and will have final use as a straightforward goal, orientating on attractive segments of market and niche-markets, being therefore freed from the cutthroat competition in the field of commodities.

## 6. References

- Binskauskas, G. & Diska, V., 2011. The Leader and Innovation Processes in the Time of Change. *Managerial Challenges of the Contemporary Society*, pp. 28-36.
- Bota, M., 2010. *Doctoral thesis - Contributions for improvement of management in enterprises of clothing industry*, Cluj-Napoca: Babeş-Bolyai University.
- Capusneanu, S., 2006. Basis of Accounting Management and Costing by ABC (Activity-Based Costing) in the Textile Industry in Romania. *Theoretical and Applied Economics*, pp. 89-95.
- Girneata, A., Giurgiu, A., Dobrin, C., O., Popa, I., Popescu, D. I., Cuc, S., Voicu, L., 2015. Performance management practices in romanian textile and clothing companies. *Textile Industry*, 66(2), pp. 108-113.
- Girneata, A. & Mascu, M., 2014. *Development discrepancies between western and eastern EU countries, a statistical analysis of textile and apparel clusters*. Bucureşti, Proceedings of the 8th International Management Conference, pp. 434-442.
- Girneata, A., 2013. The importance of clusters in the development of the textile and clothing industry. *Network Intelligence*, 1(2), pp. 83-89.
- Jesson, J. M. L. L. F. M., 2011. *Doing your literature review: traditional and systematic techniques*. London: Sage.
- Mitra, C.S. & Borza, A., 2011. Innovation and entrepreneurship. *Managerial changes of the contemporary society*, pp. 342-345.
- Mustata, R. V., 2008. *Systems for measuring balance and accounting diversity - between necessity and spontaneity*. Cluj-Napoca: House of Science Book.
- Popescu, I. D., 2013. Green fashion – a new possible lifestyle for Romanians. *Textile Industry*, 64(1), pp. 46-54.
- Rendall, C. H. H. C. A. Z. G., 1999. Product cost management practices in textiles. *The Journal of The Textile Institute*, 90(1), pp. 27-37.
- Trifan, A., 2014. Directions for improving management accounting in the textile industry enterprises. *Textile Industry*, 65(2), pp. 101 - 106.
- Utkun, E. & Ozdemir, S., 2015. Calculation method for the determination of the unit costs of fabrics woven in semi-automatic looms in small-sized enterprises. *Industria Textilă*, 66(4), pp. 209-217.