Particularities of Cost-Based Decisions in the Clothing Industry in Romania

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Abstract

The purpose of this scientific research is to highlight and analyze the particularities of cost-based decisions in the clothing industry in Romania.

In order to achieve this goal we have presented the importance of information and decision in modern management methods. Making good decisions in all areas that have an impact on organization resources and costs means managing resources and costs by getting the best balance between spending and the utility it creates, not just by reducing them. Knowledge of costs is a decisive factor in making decisions or planning future activities.

The paper presents types of decisions depending on the level of management they are taking, as well as some examples of types of decisions that can be taken in a clothing industry organization on the decision-making process, based on the use of information on the costs. This document concludes with the main cost-based decisions based on this examples.

Key words: information, decisions, cost-based decisions, clothing industry
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1. Introduction

The Romanian national economy, mainly the light industry, through its three main components (textile, clothing and leather and footwear), is an important segment due to its considerable share of GDP, to exports and to the large number of employees (Girneata, A. and Potcovaru, M., 2015, p. 109). Despite this, the socio-economic and political changes that have taken place in Romania over the past two decades have affected this sector, triggering its constant re-adaptation to changes and to the competitive and permanent dynamism of the market (Girneata *et al*., 2015, p. 4).

The Romanian clothing market is a crowded market with many strong competitors, especially the Asian companies with cheap and low-quality products. To survive on this market, the Romanian clothing companies have tried to provide products adjusted to well-defined customer segments throughout the years.

In order to survive and to carry out a profitable activity under the conditions of market-specific competition, clothing companies must be responsive to the signals and requirements of the external environment, have a high adaptability to change, flexibility in the operational mechanism. Actually all of their work needs to be conceived and deployed in a new vision where costs and cost calculating methods should play an essential role.

2. Theoretical background

The calculation methods and the cost analysis used by the organizations in the garment industry allow knowledge of costs by products, by phases, by compartments, by the functions of the organization. Under the conditions of the economy globalization, new cost management methods are required, especially directed to the strategic analysis, which allow the determination of the costs of different links of the "chain of value". This concept is an instrument of operational and strategic

analysis and highlights the activities that contribute to the realization of a product, i.e. to the creation of value. Among these activities, some are perceived by the client as value-creating, in the sense of providing some features or performing some services for which he/she is willing to pay a certain price. Therefore, calculation and cost analysis should provide information related to these activities, which can be used to substantiate the company's operational and strategic decisions.

The upgrading and diversification of cost methods determine managers in the garment industry to be highly responsible in tracking and controlling costs, getting operative information about the production process, and making decisions as efficient as possible for each production process and for the company as a whole. Besides efficiency and responsibility, planning should is also to be taken into account as much as possible in order to reduce the amount of work needed to obtain information on production costs and their cost. Thus, reducing workload in obtaining information, has the advantage of releasing specialized staff dealing with simple routine records, thereby creating the possibility of focusing more on analyzing information in order to make full use of its interpretation in due time to make decisions.

Information and decision play a decisive role in the modern management methods, which involve the uncountable and various problems emerging from the social reality and especially from the economic one (Pop, 2007, p. 7). Information is the raw material of a manager. In order to work with optimal results, a company must design and refine the information system so that it provides the most appropriate information. To be effective, managers need to have communication skills both inside and outside their business in order to make the most appropriate decisions in achieving their goals. The way managers achieve these goals, their work technology designates the management methods and techniques. *"To manage a business well is to manage its future; and to manage the future is to manage the information*. (Harper, 1961, p. 1)

Cost information is important for managers for at least three reasons (Kaplan, 1998, p. 222) in (Diaconu et al., 2003, p. 223):

- based on the cost, it is decided the manufacture or abandon of a product or it is influenced the nature of customer relationships;
- costs can be a basis for price setting;
- cost analysis identifies the needs for product, design or production process improvement.

Decisions on management intervene at three levels (Sgardea, 2009, pp. 13-14):

- at the ***strategic level*** (long-term). At this level decisions are made by the general manager of the organization, by the general assembly or by the partners directly involved in the work of the organization.

For example: the decision to contract a new customer, to create a new brand, to restrict certain unprofitable activities or to close certain work places, etc.;

- at the ***tactical level*** (or current). Usually at this level, tactical decisions are taken by inferior hierarchical levels, such as heads of compartments.

For example: the decision on the establishment of the employees' direct payroll package, the choice of suppliers for the purchase of auxiliary materials, consumables, the negotiation of certain service contracts (utilities, banks, equipment) etc.

- at the ***execution level***. Execution decisions are usually delegated to heads of departments, of teams, of offices.

For example: the decision to set the model and number of pieces of a product per work unit for the next week to quickly acquire some of the auxiliary materials or supplies that miss from the stock and are needed in the production process or in the current business of the company, etc.

3. Methodology

Operational decisions are decisions taken on the short term. Unlike strategic decisions that focus on the general directions of the organizations (for instance what products to produce/services to provide and on which market), operational decisions refer to the current allocation of resources and managerial responsiblity (Prowle, M. and Lucas, M., 2016, p. 104).

In these short-term decisions, it is necessary to separate the costs into fixed and variable, as the cost behavior of each cost will be different in relation to the variations in production. Fixed costs will usually be borne in full, regardless of the level of production, and therefore cannot be avoided

as far as decision-making alternatives are concerned. These fixed costs are irrelevant in choosing an alternative when considering short-term decisions. Therefore, operational decisions will be influenced by the costs that change due to a chosen mode of action, by those relevant costs.

One of the most difficult lessons that managers have to assimilate is the distinction between relevant and irrelevant costs. Decisions cannot be studied beyond the relevant costs because the relevant information should be based on them.

The separation of relevant and irrelevant costs is important and desirable from two points of view, namely:

- the first one is that very seldom there will be enough information to develop an analytical account of the profits of an activity. *For example*, a manager has to decide on raw materials under one operation, but in several departments. Under these circumstances, he is unable to prepare the situation for that activity. Only the ability of the manager to recognize what the relevant costs are and not in the data set will help in making the decision.
- the second point of view takes into account that the use of irrelevant and related costs will create confusion, and there is a danger that attention will focus on them, and the decision-making will be influenced.

Strategic decisions focus on the long-term direction, achieving and maintaining competitive advantage, identifying the scope and boundaries of the organization, and linking the organization's activities to the environment. These decisions also aim at procuring resources and skills to create new opportunities to take advantage of these opportunities and to manage change within the organization (Collier, 2003, p. 18).

The goal of an organization's strategy "is to achieve long-term profit" (Grant, 1998, p. 34). The strategy is related to performance by setting performance targets for the entire organization and then measuring performance in relation to these goals.

The need to make a decision occurs when a "problem" appears in the activity. The emergence of "problems" is determined by a series of internal and external factors.

The group of *internal factors* includes: clarity of objectives and performance standards; the difficulty of tasks to accomplish; knowledge and abilities of managers and subordinates; staff motivation; information deficiencies; human resources; inadequate or insufficient resources; working conditions.

The *external factors* that may lead to the need for decision-making are: the level, the meaning, the pace of branch changing or field of activity; information on the environment and on the action of some factors that may cause disturbances, functional or structural legislative restrictions, etc.

4. Findings

Here are two examples of types of decisions that can be taken in an economic entity in the garment industry for decision-making, depending on the management levels encountered, based on the use of cost information.

a) Maintaining a machine or replacing it with a new one

Most often, irrelevant costs affect decision-making in the interpretation of asset values.

We have the following data on the purchase or not of a Flexipen plotter in the clothing department of a garment industry company listed in table no. 1.

The decision to be made is to keep the old machine in operation or not. Some managers would opt to continue the exploitation of the old plotter, because a possible assignment would lead to a loss of 7.750 lei.

Old Plotter Flexipen

Remaining amount ..... 12.400 lei
Value at which it could be sold today ..... 4.650 lei
Loss from cession of the machine ..... 7.750 lei

Table no. 1. Elements of calculation

Old Plotter Flexipen		New Plotter Flexipen	
Historical cost	15.500 lei	New price	18.600 lei
Remaining amount	12.400 lei		
The remaining time	6 years	Expected usage time	6 years
Value at which it could be sold today	4.650 lei	The replacement value in 6 years	0 lei
Annual variable operating costs	31.000 lei	Annual variable operating costs	24.000 lei
Annual sales income	76.500 lei	Annual sales income	76.500 lei

Source: Author's processing

Such logic, combined with the fact that an investment must be exploited until the profits obtained can cover the invested capital, may lead to the erroneous decision to keep the old plotter in operation. The manager will think the same way even if the new machine is obviously more efficient.

The investment made in the old plotter is an inevitable cost already produced and the investment part that remains in the company's 12.400 lei account should not be taken into account in the decision to purchase a new plotter. This assertion is supported by the analysis presented in table 2.

Table no. 2. Analysis plotter maintenance or replacement for a period of six years

Indicators	Total costs and income for 6 years (lei)		
	Keeping old plotter	Buying a new plotter	Differential costs
Sales	459.000	459.000	
Variable costs	(186.000)	(144.000)	42.000
The cost of depreciating the new plotter	0	(18.600)	(18.600)
Depreciation of the old plotter - the remaining value	(12.400)	(12.400)	0
Value at which it could be sold today	0	4.650	4.650
Net income after 6 years	260.600	288.650	28.050

Source: Author's processing

This analysis shows that the positive effects of the acquisition of the new plotter can be observed over time.

In all six years, the acquisition of a new plotter would bring benefits superior to those brought by the maintenance of the old plotter. Thus, the company in six years will register a net income increase of 28.050 lei if it acquires a new plotter.

However, it is noticed that the remaining value of 12.400 lei does not affect the decision making process, because this value is a cost already produced, which must be absorbed, regardless of whether the plotter is kept in operation or a new one is purchased.

The previous analysis was based on the preparation of a profit and loss account for a period of six years. This is not always possible, especially as it is necessary to produce information as quickly as possible

In these cases it is necessary to focus only on the relevant costs, assuming the following steps:

- elimination of the inevitable costs from the analysis: 12.400 lei;
- removal of the items that do not differ in the future:

- Annual Sales Income: 76.500 lei / year;
- Variable annual costs: 24.000 lei / year.

Only the remaining elements will form the basis of the decision. In conclusion, the remaining costs for substantiating the decision will be based on the following data:

Reduced variable costs = 42.000 lei (7.000 annually x 6 years)

The cost of the new plotter = (18.600) lei

Receipts from plotter sale = 4.650 lei

Net benefit from the acquisition of the new plotter = **28.050 lei**

Consequently, focusing on the relevant elements allows for both correct and timely decisions. The previous analysis reveals that taking into account irrelevant costs could lead to wrong decisions but also to a waste of time. Normally, the calculation of the full cost implies the inclusion of depreciation costs (depreciation), which we have seen are largely costs that have already

occurred, and therefore irrelevant in the decision-making process. The idea that any kind of depreciation is irrelevant is certainly wrong. However, it remains valid for the investments that have already been made (note that in the previous case, the depreciation of the old plotter was considered an irrelevant cost, whereas the depreciation of the plotter to be purchased was considered relevant information).

If we design this analysis for each of the six years, it may be noticed that after only two years the company will already have net income from the acquisition of the new plotter, as can be seen in the information below:

Reduced variable expenses = 14,000 lei (7,000 annually x 2 years)

The cost of the new plotter = (18,600) lei

Receipts from plotter sale = 4,650 lei

Net benefit from the acquisition of the new plotter = **50 lei**

Thus, the company's decision to purchase a new plotter for the tailoring section is advantageous for the company, as it would have a net advantage over the maintenance of the old plotter from the second year of operation.

b) The decision to make or buy (make or buy decision)

A clothing company currently produces the lace accessories used to get a dress for one of its customers. This customer requires the creation of 20,000 dresses with these accessories. The main information on the production of these accessories is shown in Table no. 3.

The company receives an offer from a Turkish supplier to deliver 20.000 of such lace accessories at a price of 32 lei/piece. What decision should the management of this company make?

Table no. 3. Elements of calculation

Indicators	Pe bucată (lei)	20.000 bucăți
Raw materials and direct materials	16	320.000
Direct labor	6	120.000
Variable overhead expenses	7	140.000
Depreciation of special equipment	7	140.000
Allocated overheads	5	100.000
TOTAL COST	41	**820.000**

Source: Author's processing

In order to make a decision, the manager of the company must use the relevant (differential) cost analysis. Thus, through the decision-making process, permanent unavoidable costs (eg those with special equipment depreciation (especially when there is no purchase offer for it)), as well as future costs that continue to occur regardless of whether the accessories in lace are produced or purchased from outside (for example, the overheads that have been allocated). Instead, variable costs (direct materials, direct labor and variable redistribution costs) are relevant as they would not occur if the organization no longer manufactured those accessories. Consequently, only if the total of avoidable (relevant or differential) costs exceeds the price proposed by the supplier, the offer can be accepted. This cost reasoning could be synthesized as in the following table:

Table no. 4. Calculation of differential costs in the decision to produce or buy

Indicators	Unit cost of production (lei)	Differential unit cost (lei)		Total - 20.000 pieces (lei)	
		To produce	To buy	To produce	To buy
Raw materials and direct materials	16	16	-	300.000	-
Direct labor	6	6	-	120.000	-
Variable overhead expenses	7	7	-	140.000	-
Depreciation special equipment	7	0	-	0	-
Overheads allocated	5	0	-	0	-
External purchase price	0	0	32	0	640.000
Total costs	41	29		580.000	
Differences of manufacturing		3		60.000	

Source: Author's processing

From this analysis, after excluding irrelevant costs, it is noticeable that it is more advantageous for the company to produce its lace accessories instead of purchasing them from the external supplier as it has a cost reduction of 3 lei per unit of product.

Normally, much more cost elements should be considered in this analysis, such as the space for producing these accessories (if this space is inappropriate for any other activity then it would have a zero opportunity cost), the use of the machine and for other activities (otherwise it would not be justifiable to buy it, and should be considered as a relevant cost), the salary of a special quality controller employed to manufacture these accessories, etc. Taking these costs into account could alter the management's decision.

If, for instance, we consider that this company never produced this accessory, and the costs would be all relevant (the equipment is bought specifically to produce these accessories, the space is increased, and staff are employed to work on these accessories) the manager's decision will be to purchase these lace accessories from external suppliers.

5. Conclusions

The problems faced by managers in the garment industry are more complex, the earlier examples having only the aim of creating a cost-model thinking. Moreover, beyond the calculation methodology that is the subject of cost calculation, we have attempted to provide a cost-oriented vision of decision-making, an accentuation of the informative cost side. Recognizing that decisions for which total cost is unsuccessful are uncertainty-specific decisions in which production and sales volumes vary, being necessary to approach them from the point of view of the partial cost information and to analyze the relevant and irrelevant costs .

The relevant costs are taken into account in the decision to manufacture or purchase, replace the equipment and the relevant cost of the materials. Other calculation cost approaches can be introduced for making operational decisions, such as life cycle, target costing and cost management (kaizen costing) as well as cost of quality.

The decision-making process is complex and diverse due to the various situations and cases that may arise in the work of an organization. Thus, the short-term goal is to maximize profit, so to achieve this goal, any manager will look for all the solutions necessary to achieve the aimed performance (Dumitrana *et al*, 2010, p. 185).

6. References

- Collier, P. M., 2003. *Accounting for Managers: Interpreting accounting information for decision-making.* Chichester: John Wiley&Sons.
- Diaconu, P., Albu, N., Mihai, S., Albu, C. and Guinea, F., 2003. *Contabilitate manageriala aprofundata.* Bucharest: Economica.
- Dumitrana, M., Caraiani , C. (coordonatori) and others, 2010. *Control de gestiune.* Bucharest: Universitara.
- Girneata, A., Giurgiu, A., Dobrin, C., O., Popa, I., Popescu, D. I., Cuc, S. and Voicu, L., 2015. Performance management practices in romanian textile and clothing companies. *Industria Textilă,* 66(2), pp. 108-113.
- Girneata, A. and Potcovaru, M., 2015. *The influence of organizational culture in increasing the performance of textile and clothing companies.* Prague, The 4th MAC 2015, pp. 1-8.
- Grant, R. M., 1998. *Contemporary strategy analysis: concepts, techniques, applications..* Oxford: Blackwell.
- Harper, M. Jr., 1961. A new profession to aid management. *Journal of Marketing,* 25(3), pp. 1-6.
- Kaplan, R. S., Atkinson, A. A., 1998. *Advanced management accounting.* New Jersey: Prentice Hall International .
- Pop, C. and Pop, V., 2007. *Management si dezvoltare.* Iasi: TipoMoldova.
- Prowle, M. & Lucas, M., 2016. *Management accounting in the contemporary business world.* United Kingdom: Palgrave.
- Sgardea, F. M., 2009. *Control de gestiune.* Bucharest: Academia de Studii Economice.