The Modern Industrial Cost Management

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Abstract

This is a description of a case study of the group "O Boticário", a cosmetic company that began in 1977 as a "handling" drugstore and today became the largest private franchising group in Brazil with nine companies, 750 direct workers and more than 6.000 indirect ones. This case is the combined implementation, integrated, systematized and decentralized of the ABC method (Activity Based Costing), UP' method (Production Unit) and Absorption for raw materials, in a way maybe unprecedented not only in Brazil but also all over the world. The ABC method in the overhead costs, the UP' method in the industrial costs and the Absorption method in the raw-materials, all three working together in a simple way and computerized. The system results exceed the limits of a simple cost model, actually consisting in a base for the establishment of quality routines, productivity control, planning and even for the application of many other techniques already available.

A General Outlook

In December 1993 the management of "O Boticário" asked for a study of new methods to improve the budget system of the various companies of the group, the objective was the improvement of the managerial process through a better (deeper) knowledge of the results obtained at both levels: programming and execution (achievement). Since the beginning we found out that the budget system could be improved only by making two more changes: the Planning system which is the base for the budget and the Cost system which is the base for the budget implementation.

It was also understood that the cost issue was fundamental not only for the budget but it would affect the competitiveness as it was the base for the budget, product analysis and sales besides other activities carried out by the group. Although the cost routines are only administrative routines in a company, the number of decisions they affect justify giving them more attentions from the managers, what's an essential element to any company. Also the dissatisfaction observed at the start of the project relative to the information obtained about costs was due to the use of "ancient" methods while the cost structure of the company itself system was being deeply modified.

The result obtained goes beyond the limits of a simple cost system, it is really a base program for improving productivity, quality, control and planning and other activities introduced or executed in a business organization.

With this system operating for more than a year, we can claim to be the pioneer in the integral implementation of the ABC (Activity-Based Costing) together with the UP' (Production Unit) also known as UEP (Production Effort Unit) and the Components costs (raw-materials and packing materials) in a periodical, integrated, systematized and decentralized form.

The Project

Especially in the stage of benchmarking visits it was possible to observe that the method (ABC, UP', etc.) would be important but the way of organizing and carrying out (conduct) the project would be fundamental. During the period that we researched the subject, we never found a company that had abandoned the ABC and

UP' methods after their effective implementation and usage. However, we knew many organizations that aborted similar projects in midcourse.

By observing all this, we structured the project by means of the following stages:

Stage	Execution Period
Planning and Research	12/93 at 03/94
Persuasion and Involvement	04/94 at 05/94
Development and Joint implantation of ABC and UP' methods	06/94 at 03/95
Maintenance and Improvement	04/95 at today

Possibly the most "important" phase were Planning and Research when the following tasks were executed:

Study of the situation at the time being
Benchmarking visits
Contact and selection of consultants
Seminars and Courses
Theoretical study
Software study
Project planning (Team, phases, time limit)

Purpose, objectives and vision

Before anything else we wanted to define the purpose of the project and its objectives by analyzing the following aspects:

a) To identify the information users.
b) Opinions survey and levels of satisfaction.
c) Study of the present situation (Methods, criteria, problems, etc.).

These data allowed our determining the objectives of the project and the expected results, time limits, costs, etc. Afterwards the data were consolidated always remarking the results achieved. While working on the project we held always a medium and long term vision, as the level of change identified could not be reached in a short period. The project was split at macro level in three distinct stages:

a) Plan and implantation of the Cost Model: Simulation, setting up of a basic operational form (still impaired by the lack of some information), operating routine (setting up of flows, tools, computerization, periodicity, responsibilities, etc.) implantation and operation.
b) Maintenance/Improvement: Handling of the exceptions, improvement of cost structure and data base, rationalization, etc.
c) ABM (still developing): Activity classification, identification of production levels, capacity, study of feasibility of Target Cost, Value analysis, Activity Budgets, etc.

Persuading and involving

To reach this objective, many activities (tasks) were accomplished. Amongst them we emphasize:

a) Presenting the Project Proposal to the Management and all the personnel who would be involved with it; explaining the objectives, the cost, the execution time limits, difficulties and requests, impact in the decisions process, explanation of the cost methods suggested.
b) Development of Information System: Aiming to inform people of every step of the system implementation and emphasize the reason of the changes and its benefits with testimony of the personal directly or indirectly involved.

c) Creating a Logo/Symbol: To identify visually this project, it was called “Financial System”, with its own “logo”.
d) Project Structuring: So as to involve all the Organization areas and to decentralize the decision process by assigning responsibilities.

Committees of Directors ⟶ Committees of Managers ⟶ Leader and Project Team

Decentralization

We believe that some aspects of the project’s decentralization were unprecedented and precious under various points of view:

a) To set up criteria and information flow: It was executed for each supervisor under the coordination of the project team; for instance, each manager really identified his task, his drivers, etc.
b) Committee of managers: Organized with a representative from each Directorate, it was responsible for arbitrating all the work and the “key” decisions that would be submitted to the Committee of director.
c) Responsibility for all the information: Monthly, all the company areas are responsible for filling she system forms with the information under its responsibility that are necessary for the system operation. This way, the controller (which in the Group is responsible for costs control among other things) became “a compiler” of the data supplied by its best specialist -the real user - specializing in analysis and orientation of the other areas.

Computerization

Many times forgotten by companies who study advanced system of cost control (multiple criteria), computerization had a very important role in the “O Boticário” case:

a) Since the beginning it was detected that the volume of operations transacted in those systems would demand a very high number of calculations that only a computer network could perform.
b) We tried to avoid an oversizing of the cost structure like we could observe in some other companies.
c) Only computerization would be suitable for our project operation.
d) All the processes of simulations of models would be impossible without it.

In the computerization process we took two distinct measures.

The ABC method, due to its complexity, was executed by, initially, acquiring the EASY ABC (imported from USA), chosen because it is sold all over the world and for offering training and support in Brazil, easiness of data import and export in various computer languages and could be run in many systems (especially Windows), etc. Later, with the objective to supply data to the whole company, the OROS software was acquired, from the same producer, with more resources for multi-users, reports, etc.

For the UP’s, a system was developed in the Microsoft Access, because when the system was installed, there were no other program suitable to our specific needs. Besides, the use of this language itself is interesting due to the easiness of development and maintenance by the user (Cost department personnel) and for the transfer of data from the company bases of information, this transfer being possible also to the ABC system.

The Result: A System of Management

Why combine ABC, UP’ and Raw-materials

The decision to innovate through the simultaneous use of ABC and UP’ was not taken with the objective of differentiating but due to the company information needs. All our studies indicated that that the ABC and UP’ methods were the most advanced methods of cost information available in the market, as both operated

multiple criteria, took the "cost x benefit" ratio in consideration and were real business management systems. Finally, discarding all our traditional cost base (fixed and variable costs or direct and indirect costs), we chose the UP' for the Production Process costs and ABC for the Overhead costs basically for the following reasons:

a) Complex necessities: Due to the size and number of companies involved and the need of information always faster and more detailed imposed by the marketplace. This requirement could only be heeded by substituting the traditional structure of fixed and variable or direct and indirect costs with the use of a system that could supply information about raw materials, production process and overhead at different level of detail.
b) Project objectives: The financial system was structured not only with the object of costs but also to assist productivity, value analysis, process engineering, ABM, budget planning, Etc.
c) ABC and UP' methods characteristics: Both methods employ detailed and diverse identifications or proportional cost methods. Meanwhile, the ABC method requires periodical "controls " of information (drivers) and when applied to production causes generalizations (line grouping, for instance) or superstructures of costs in the "controls" (due to the low level of computerization of the factory floor), for the resulting high volume of work. The UP' is a "Standard" method, therefore difficult to employ in the overhead where the operational flow is not linear as in the production process (where the alternative flow pattern's are easily identifiable and documented with the objective of guaranteeing the process quality).

How the integration of ABC and UP' was accomplished

Initially we started working with the same integration alternative that some companies were studying, i.e., employing the two methods separately and then grouping them. This alternative would limit the information to the product level (costs would be "added "for each product) and would require control routines to avoid duplicating the data. Our innovation was the structuring of ABC and UP' individually but integrating them as a system of cost management:

a) Initially we employed global values for the production activities of ABC as the amount of manufacturing expenses in the period, employed in the UP' (data transfer).
b) Later (or in parallel) we transferred the number of UP's for product in the period as a driver to the ABC production activity (data transfer).
c) Finally we transferred the amount spent in raw materials in the period to the ABC.

This process can be represented in the graphic below (Figure 1):

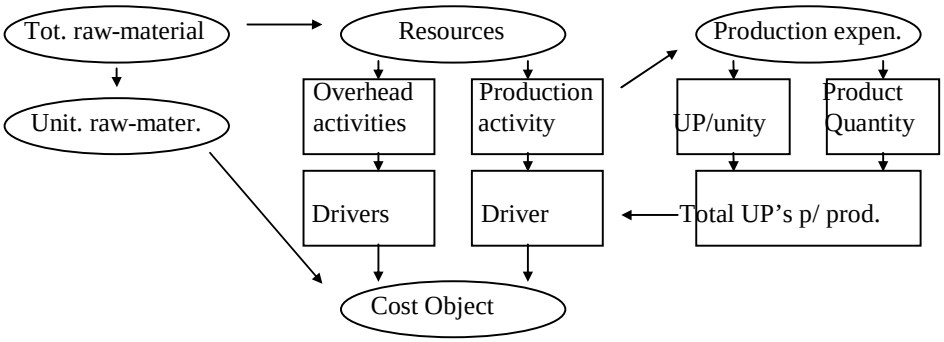
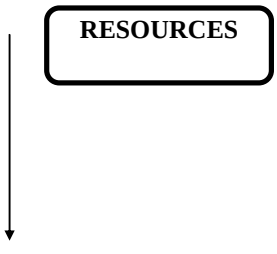


Figure 1: Graphic representation of the ABC, UP' and Raw-material integration

This way, in our model, ABC works as an assembler of information that can be shown with the level of details needed for every area of the company with access to such information, organized as in (Figure 2):



"What was spent" Ex: water, electrical power, etc.

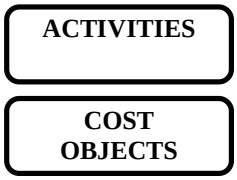


Figure 2: Information detail level in the ABC method

In the Resource module, expenses were grouped (through accounts) as it follows:

a) Current accounts: They are the funds spent on power, salaries, etc. By "clicking" on accounts many of them can be listed with their relative amounts, codes, etc.
b) Stocks accounts: The amounts spent on raw materials used for the production/sales or consumption (tests, cleaning, etc.) which may be detailed to quantity level. As for raw materials detailing, a system (MM) can be used that "associates" those values to the state of that product.
c) Investments and Delayed Expenses: Unlike the rest of the accounts, this one groups expenses that took place in periods preceding the verification, resulting from previous expenses and investments duly dealt with, according to their useful life (six months for uniforms) or return (investments in progress, casts, etc. are divided by the expected return period for each product/project).

In the Activities module, two main accounts can be observed:

a) Activities costs: They are subdivided in various accounts. For instance, in areas, and within the areas in activities (inclusive, we create there the value of the production activity upon which the UP' driver will incur). By "clicking" on an activity center, can be observed all the costs of its total value, the driver employed and even the value or the percentage of each driver.
b) Products costs: It's the result of the transfer/calculation of the stock total (for the module's verification) and resources allotted exclusively to products (when necessary a separate control: as for royalties) existing only for the three modules verification.

In the Cost Objects module the following accounts can be observed:

a) Line products: It's the account that includes all the products sold by the (organization).By clicking on a product center can be observed all the costs that formed its total value, the driver employed and even the value or the percentage of each driver.
b) New products: It's the account which contains all the costs of the products in the development process (research, development, promotion marketing, etc.). Which could be postponed up to the date of their first issue. By "clicking" on product center can be observed all the costs that made up its total value, the driver employed and even the value of each driver.
c) Activities: It includes all the activities not related to production, with the detailing possibility of the previous items.
d) No-Productivity: Not totally implemented yet, this account will group all the data relative to losses, lack of productivity, internal investment (activities), etc.

A Comparison between the old and the new cost model

To have an idea of the effect this change brought to the quality of information and consequently to the process of decision-making, we present a comparative chart (Table 1) between the traditional cost method and the new one for five real products, with their differences observed in few months in 1995, expressed in percent.

Table 1: Comparison between the old system and the new one (ABC, UP', Raw-materials - % variation).

	% participation in the product cost						% of cost variation		
	Traditional cost			ABC e UP' cost					
Products	**CPS**	**DFC**	**IFC**	**CPS**	**UP'**	**ABC**	**Jan/95**	**Fev/ 95**	**Mar/95**
Lipstick "A"	26	32	42	30	21	49	-14	+02	+37
Deo Cologne "B"	50	22	28	85	05	10	-41	-37	-37
Shampoo "C"	52	21	27	41	06	53	+28	+40	+56
Deodorant "D"	32	30	38	70	10	20	-52	-40	-46
Toilet soap "E"	32	29	39	33	37	30	-05	+07	+05

Legend: CPS = Cost of product sold
DFC = Direct fixed cost
IFC = Indirect fixed cost
UP' = Cost in Production Units (UP's)
ABC = Cost in Activity Based Costing

We can come to the following conclusion:

a) In the new system we observed lower costs for high volume products (ex. Deo Cologne "B" and Deodorant "D"). Actually, the traditional method "socialized" the low volume product costs. (ex. Shampoo "C").
b) Between one period and another, there is a costs well above what had been thought. Actually, today we can see that it's practically impossible to have a machine or a production cell or even an activity (maintenance, quality control, stock, etc.) produce the same effort or have the same productivity for all products and at all times.
c) The part corresponding to the production process cost, though less representative in the total cost sum, was important in some of the products essentially handmade, proving the necessity of employing the UP' method too (see toilet soap "E").

Actually, the ABC and UP' methods are run monthly, requiring just a part-time employee to do that in addition to the effort of the company people employed to provide data and analysis so as to improve the tool knowledge.