

# Studies and Research on the Possibility of Cost Reduction within the Knowledge-based Organizations in the European Car Industry

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**Abstract** — Nowadays special attention should be paid to the management of all costs more than ever. All managers take intensive actions to this purpose, no matter what kind of organization they lead, making efforts to reduce the cost level to the lowest limit.

Major decreases have been recorded in the industry of car service as far as the volume of activities is concerned, and implicitly the level of incomes in the field of car sales, spare parts and services. There are several questions we are trying to answer at the end of this study?

- Which expenses should we completely give up?
- Which expenses should we reduce?
- Which expenses should we maintain?
- Which directions should we invest to despite the economical crisis?

Nevertheless, we consider that the key to success is the identification of new methods to increase incomes because cost reduction alone, without the support of income increase, will ensure the survival of the organization only for a short period of time.

If we analyze the present economic context, we will notice the opportunity to hire new qualified staff with relatively lower costs than the ones we had last year. In crisis situations, many organizations give up the employees that they have invested in for years. Such employees will be available to competitors.

At this moment, we must pay greater attention to the requirements in our field of activity regarding our employees' competence, their instruction, the management of all resources, particularly the human resources.

It is well-known that in crisis situations we must stimulate creativity and this is the behavior we should all have today and the direction that we should follow.

We need to become creative, to eliminate waste, to explore niche segments and to identify new development opportunities.

All these approaches will contribute to leading positions in the market and will differentiate us from our competitors.

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**Index Terms** — Cost Reduction, Car Industry, Quality Management, Knowledge-based Organizations

## I. INTRODUCTION

It is well known that in crisis situations human creativity is stimulated.

This is the behavior we need today since we must become creative, eliminate all types of wastes, exploit all niche segments and constantly identify new opportunities of organization development.

There are several questions we are trying to answer at the end of this study:

- Which expenses should we completely give up?
- Which expenses should we reduce?
- Which expenses should we maintain?
- Which directions should we invest to despite the economical crisis?

The general secretary of ISO Rob Steele stated: „Due to the global development of car industry, the quality management system based on ISO/TS 16949 will allow enterprises to rationalize activities and thus reduce costs and increase efficiency. Published to support car construction, the specification ISO/TS 16949:2009 will give confidence to consumers and consequently bring significant benefits to the providers in this field at a time when the car industry faces new challenges generated by the crisis.”

## II. GENERAL CONSIDERATIONS

At the moment we must pay greater attention to the specific requirements in each field of activity concerning employee competence, employee training, the efficient management of all resource types, particularly human resources. All these approaches will place the organization on a leading position in the market and will differentiate it from the competitors. Major expense reduction can be obtained by reducing the resources assigned to the inspections throughout the repair activities and at the end of the repairs.

Carl Sewell, in „Clients for life”, notices that workers become less responsible when they know that the inspectors at the end of their activity will examine their work.

As a result, the work quality and client satisfaction have considerably decreased.

In the field of goods transport (raw materials, materials, spare parts), the costs assigned to transportation may be reduced by using the organization transport resources or

transferring transport costs to providers through negotiation.

Another important cost reduction can be achieved through a professional stock management, based on a permanent analysis of turnovers and adjustment of the structure of stocks according to the serviced car category.

The offer system must be extremely dynamic, allow rapid offer, automatic update of prices eliminate manual work. Special offer transmission and the efficiency of the marketing activity should be permanently monitored. Having special offers is not sufficient if our clients are not aware of them.

This is why we must inform our clients on our offers and make sure the offers reach to the decision factor within the organization.

In many cases offers that should reach the decision factor finally get to people who do not pay enough attention to them.

The reduction of costs specific to the workshop equipment and the logistics necessary for special interventions, such as injection pump repair, injector repair, fluid analysis (fuel, oil, cooling liquid) can be achieved by subcontracting these services.

The costs of managing human resources can be reduced through a reevaluation of tasks and responsibilities according to the job assignment in order to provide those resources with an adequate instruction level.

There is no need to increase expenses by using employees with superior instruction to fulfill usual tasks that do not require a high training level (the right man in the right place).

The solution to overcome such shortcomings is to make the system work efficiently. If we need data, the system can collect them automatically, without wasting resources.

### III. CASE STUDY

We have identified the following categories of fixed expenses:

- expenses with consumables, energy, waste collection and elimination;
- expenses with tool and equipment repair and maintenance;
- expenses with metrological check-ups of measure and control devices;
- expenses with employees cars and the support cars for customers;
- expenses with staff training;
- expenses with work equipments (acquisition, maintenance, cleaning)
- expenses with mobility, delegations, protocol;
- expenses with contributions and taxes;
- expenses with the elaboration of legal documents, judicial documents, consultancy;
- expenses with cleaning (subcontracting);
- expenses with car insurance and service insurance;
- marketing expenses, promotion campaigns, sponsorship;
- administrative expenses.

The data concerning the analysis are presented in Table I. One can notice that within the total monthly expenses, the fixed monthly expenses represent 33%.

TABLE I  
EXPENSE CLASSIFICATION

| Expense classification | Value of monthly expenses |
|------------------------|---------------------------|
| Variable expenses      | -108.970 €                |
| Fixed expenses         | -53.769 €                 |

According to Table II, the monthly expenses assigned to staff payment represent 80% of the total fixed monthly expenses, whereas the other fixed expenses represent 20%. Considering the specificity of the service activity and the high salary level, the personnel costs have greater share within the total costs of the service shop.

TABLE II  
FIXED EXPENSES DISTRIBUTION

|                       |                  |
|-----------------------|------------------|
| <b>Fixed expenses</b> | <b>-53.769 €</b> |
| Personnel payment     | -43.144 €        |
| Other fixed expenses  | -10.625 €        |

In Figure 1, there is a graphic representation of the value of monthly expenses starting from the data in Table I and Table II.

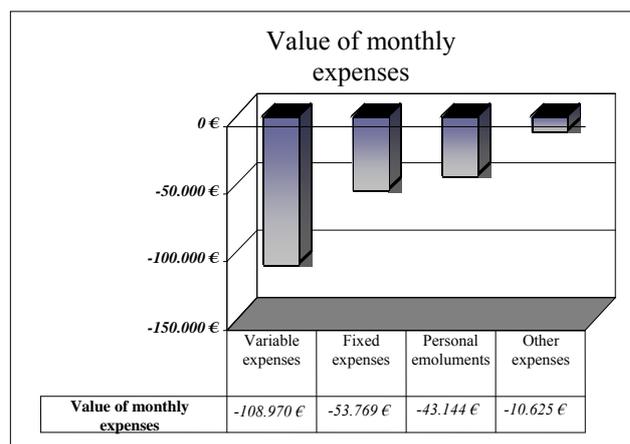


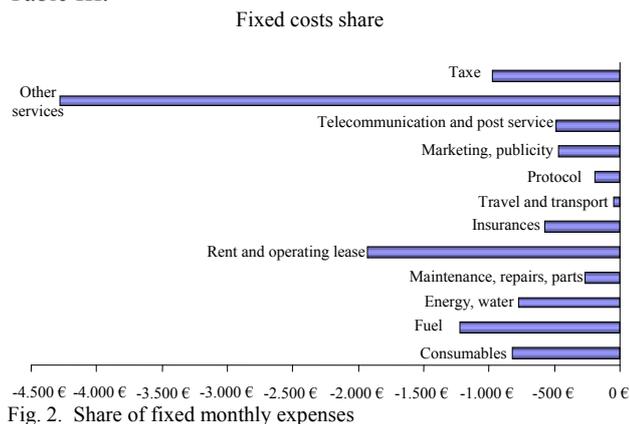
Fig.1. Status of fixed expenses distribution

In Table III we can notice the structure of fixed expenses except for the expenses with personnel payment.

TABLE III  
STRUCTURE OF FIXED EXPENSES

|                                    |                  |
|------------------------------------|------------------|
| <b>Other fixed expenses</b>        | <b>-10.625 €</b> |
| Consumables                        | -826 €           |
| Fuel                               | -1.220 €         |
| Energy, water                      | -773 €           |
| Maintenance, repairs, parts        | -272 €           |
| Rent and operational leasing       | -1.928 €         |
| Insurance                          | -576 €           |
| Mobility and transport             | -45 €            |
| Protocol                           | -190 €           |
| Marketing, publicity               | -464 €           |
| Mail and telecommunication         | -485 €           |
| Other services done by third parts | -4.285 €         |
| Contributions and taxes            | -972 €           |

In Figure 2 there is a graphic representation of the share of fixed monthly expenses based on the data presented in Table III.



The first place (40%) is occupied by the expenses assigned to the services made by third parts (transport of cars by platform, IT services).

The second place is occupied by expenses assigned to rent and operational leasing (soft license for each car type, technical documentation for repairs, diagnosis devices, and specific programs for the identification of spare parts).

The unproductive time in the case of technicians generates high costs.

The losses of the organization rise every time a car is stationary in the service shop or in the service park due to client decision, part provision, incomplete or wrong diagnosis, part order wrongly done or transmitted, and lack of stock monitoring.

In order to reduce unproductive time, we can apply several measures:

- judicious work planning;
- general works in the service shop in the time lap when the level of loading is not the one planned in advance, which allows the reduction of costs afferent to subcontracting such services;
- the increase of service inputs by means of the Marketing department;
- the corresponding assignments to technicians considering their level of competence;
- the adjustment of the working program of the organization (technician, counselor for spare parts sales, shop manager, ) according to customers' requirements;

If the activity in the workshop reaches its entire capacity, there are certain services that can be externalized (bringing cars to service and car return, cleaning).

Introducing two work shifts provides a better exploitation of each job and generates a substantial increase of profit.

Operation costs can be reduced through:

- process optimization;
- permanent monitoring of cost evolution;
- renegotiation of contracts with the providers of parts and services;
- the reduction of spare parts stocks and the increase of the rotation factor;
- programs of internal training according to which the technicians who attended external courses will train the other technicians who did not;
- redecorating and renting spaces which are not used;

- careful analysis of each requirement to buy special tools and comparison to the possibility of borrowing them;
- the correct management of individual tools and equipments through weekly check-ups;
- reconfiguring the lighting system through the separation of electric lighting circuits and installation of presence sensors instead of automatic switches;
- use of the oil that has been recovered to generate the energy necessary to the heating system.

#### IV. CONCLUSIONS

One of the most efficient methods meant to reduce costs is the increase of product and service quality.

According to Philip B. Crosby, quality is free, and what is really expensive is non-quality.

There are no acceptable quality levels. Everything has to be done right first time and every time.

Starting from an analysis of the current economic context, we notice that there is a new opportunity to hire qualified people with relatively lower costs.

In crisis situations, many organizations give up the employees that they have invested in for years.

Such employees will be available to competitors.

The costs assigned to research should not be considered as expenses; they are investments.

What we need to monitor is the quality of the research result, its immediate practicability, and not the quantity of the information resulted from the research.

We consider that the main method of cost reduction, which can be successfully applied in any organization that provides services, is customer loyalty.

Special attention should be paid to maintaining the current customers and gaining their loyalty.

Philip Kotler believes that replacing old customers generates costs, which are five times higher than the costs of maintaining them.

Fixed expenses reduction can be achieved, but their share (except for the costs for personnel payment) within the total expenses is 20%.

At the end of this study, we still believe that the key the success of an organization is the identification of new methods to increase incomes because cost reduction alone, without the support of income increase, will ensure the survival of the organization only for a short period of time.

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