

## THE EFFICIENCY OF OUTSOURCED ACTIVITIES IN THE FIELD OF ROAD TRANSPORTATION INFRASTRUCTURE

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**Abstract:** *Transportation is an important area of the socio economic activity. The road infrastructure must be made and maintained through investments. By it, new transportation networks are developed, while the existent infrastructure is preserved or adapted to the action of various agents. It is generally known that the basis for an investment has in view the indicator of the cost-benefit effect, neglecting many other issues. This paper aims to analyse the investment projects carried out through outsourced activities, which increase the economic efficiency. A need for outsourcing the activities in the road transportation infrastructure has been observed due to the complexity of this activity and of the many areas which interact to achieve a road transportation infrastructure.*

**Key words:** *outsourcing, transportation, infrastructure, efficiency*

### 1. INTRODUCTION

A well developed road infrastructure is a sine qua non condition for the economic and social development of a country. The national and local road network can provide the most effective and cost efficient connection between most towns and economic development centers.

Any road transportation development strategy should show how transport interacts with a country's development objectives.

Thus, if it is safe, harmless and affordable, road transportation can contribute to the development of a country in various ways:

- By facilitating its international trade;
- By ensuring a better connection between cities;
- By opening economic opportunities for the rural communities;
- By providing access to education, health, social services etc.

It is known that in the selling price of a product a significant share is represented by the transportation cost. If this cost is high, there is a negative influence on the income and growth rate.

In other words, a quality road infrastructure is, literally, a fundamental prerequisite for the long-term development of a country.

A poor quality of the roads hampers the development of the road transportation sector within the national network of public roads, the logistics services and the related industry, as well as the country's attractiveness as a transit area for the road transportation.

### 2. OUTSOURCED ACTIVITIES WITHIN AN INVESTMENT PROJECT

Outsourcing has become a common form of restructuring and it has widely spread in all economic sectors.

No entity is able to coordinate all its activities at a very high level of competence. Companies desire now to give up on

activities that can be managed more effectively in an outsourced activity.

The decision for the outsourcing is taken in this case because of the growing need for specialists, namely for experts that should supervise each element of the project. It is difficult to employ, to motivate, to localize them and in the end, it is even more difficult to pay them, through a single entity that carries a specific transportation infrastructure activity.

Given the complexity of both documents and the variety of the activity areas, units wishing to make investments in the road transportation infrastructure are bound to outsource their activities.

In most cases these units (be they governmental or from the private sector) do not have qualified and specialized personnel to carry out the necessary documentation.

For example, the components of a project (pre-feasibility study, feasibility study, authorizations for intervention) under Decision no. 28 (regarding the approval for the content of the technical-economic documentation of the public acquisitions in public investments, as well as for the structure and methodology for elaborating the general estimate for the investment objectives and for interventions) of January 9, 2008 are illustrated in figure 1.

The development of these projects is done through the preparation of reports that have different specialty areas (geotechnical engineering, survey engineering, civil engineering, and economics).

For example, in the feasibility study we find the following chapters:

1. Written parts: Background and general information on the project; The estimated costs and the financing sources of the investment; Cost-benefit analysis and major technical and economic indicators of the investment; Estimates of labor employed through the investment; Opinions and agreements in principle.

2. Drawings: Sheet plan (1:25000 - 1:5000); General plan (1: 2000 - 1:500); Architectural plans and general sections, bearing, equipment, including plans for coordination of all specialties involved in the project; Special plans, longitudinal profiles, cross sections, as appropriate.

The investment projects are made for the funding of the:

- maintenance, repair and reconstruction of national and local roads, road design;
- development of the production units serving roads;
- production of the road construction materials;
- procurement of technique and equipment for road maintenance;
- works of scientific research, design and construction;
- road administration

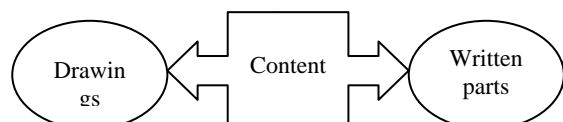


Fig. 1. The components of a project

### 3. EFFICIENCY IN THE ROAD INFRASTRUCTURE OUTSOURCING

It is generally accepted that efficiency is expressed by the ratio of the effectiveness (outcome) and the expense (effort) taken to obtain it, or reversed, the ratio between effort and effect. The efficiency captures issues such as timeliness and efficiency of the investment, the extent to which the services meet the needs of the beneficiaries, the extent to which they can be purchased and used with maximum of yield etc.

Despite its complexity and difficulties met in assessing the efficiency, all decisions are based on the analysis of the obtained results, both from the economical and social perspective.

In this respect, *the main criteria for evaluating the efficiency* of the road transportation sector are:

- the return that expresses synthetically the efficiency;
- the cost level that is expressed in both absolute and relative indicators.

The return may be expressed in absolute size or relative size, calculated as a ratio between the profit (effect) and the capital used (effort). The main rates of the return are: the economic rate of return and the financial rate of return.

*The economic rate of return* (also called operating return) (Toma & Alexandru, 2003) measures the efficiency in using the assigned financial and material resources, as follows:

$$r_{eb} = \frac{EBE}{A_t} \quad \& \quad r_{en} = \frac{Pe}{A_t} \quad (1)$$

In the relations EBE - represents the gross operating surplus,  $A_t$  - total assets (some authors use the term "economic assets") (Stancu, 2002); Pe - operating profit,  $r_{eb}$  - gross rate of return,  $r_{en}$  - net economic return rate.

*The rate of the financial return* expresses the degree of effectiveness in using the equity (Toma & Alexandru, 2003) and is calculated with the expression:

$$r_f = \frac{P_n}{C_{pr}} \quad (2)$$

We define  $P_n$  as the net profit and  $C_{pr}$  as own capital.

In calculating the efficiency of the activities involved in the road infrastructure, the main criterion is the cost resulted from the effective work. The aspects of quality, of technical and human capital endowment, financial history etc. have a secondary importance in this system. However, this situation creates prerequisites for arrangements between uncompetitive companies on the market.

Thereby, starting from the determining elements of efficiency, we can say that outsourcing in the road transportation infrastructure increases the overall efficiency in this area due to the following factors:

- Reducing the total cost, which will eventually lead to the decrease of concerns, defining the quality levels, re-establishing the price, renegotiation, restructuring of costs;
- Changing the ratio between the fixed and variable costs by creating a more predictable cost;
- Access to the best operational practices that are too difficult or time consuming, to be implemented in the company.
- Access to a wide variety of specialists, particularly in the field of science and engineering.

Therefore, even if the level of the income sources is maintained, by outsourcing an activity, an overall decrease of the costs will result and thus an increase in the efficiency of the overall activity, which ultimately determines an increased efficiency in the road transportation infrastructure.

In order to maximize the result of a project, the increase of

the efficiency through outsourcing must be correlated with the increase in the activity quality.

There must be made clear though that the reason for the failure of an investment project is the insufficiency of the financial resources and the lack of efficiency, and transparency in the use of the funds collected for this purpose. Insufficient financial resources for financing the roads is common to most European countries due to the traffic growth rates, to the road wear, which, in the recent years, has exceeded almost twice the rates of growth of the national economies.

### 4. CONCLUSIONS

It is not by accident that road quality is often used as one of the relevant indicators expressing the overall development of the country. Consistent measures must be taken towards a more efficient road financing mechanism.

It is clearly in the interest of businesses to outsource the activities in order to maximize the results. This will result in lower costs and therefore in the increase of profitability. The benefits of outsourcing should translate into an increased efficiency for companies that practice outsourcing.

Organizations that practice outsourcing desire to achieve the following benefits:

- The reduction of the total cost of service. This will involve the reduction of concerns, defining the quality levels, re-establishing the price, renegotiation, restructuring of costs;

- The operating leverage is a measure that compares the fixed costs with the variable costs. The outsourcing is changing the ratio between the two costs types, by creating a more predictable cost;

- The access to the operational best practices that are normally too difficult or time consuming, to be implemented in the company. Access to a wide variety of specialists, particularly in the field of science and engineering and the resources are focused on developing the business strategy;

- An improved method of managing the services and the technology, in which the provider bears the risk of supplying with capacity in excess;

Most organizations turn to outsourcing to minimize development costs and to attract highly qualified specialists. Thus, in the near future, it could become one of the most effective ways of developing applications.

Organizations are moving towards transferring expertise, facilities and equipment to third parties in response to the issues raised by the trends and fierce competition, by the tax burden and economic crisis.

Although the arguments above express that outsourcing produces efficiency gains, managers must be careful on how to proceed for implementation, because, as it was already pointed out, it is not enough only to initiate outsourcing processes. They have to be correlated with transparency and with the efficient use of the funding resources.

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