

## **TITLE OF MASTER THESIS**

A system of redefining the cost of infrastructure projects due to incorrect estimates and change orders.

## **AUTHOR**

Alexandros Lenis

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## **ABSTRACT**

Infrastructure projects, not only in Greece, but globally, have been the subject matter between all the actors involved due to the fact that in many cases has been noticed that their cost can be changed, during their construction procedure. There are plenty of factors affecting cost combined with the fact that there is not published research work in order to estimate potential sources of cost overruns due to reworks this study attempts to fill this gap. The estimation of cost differentiation as a result of unpredictable changes is necessary. It has been analyzed closely the construction of a highway in West Greece and there have been determined all the causes which lead in an increased total cost, compared to that of the initial approved budget. Deficient initial measurements and inaccurate studies, structural demands, differentiation of the initial planning, construction failures, insufficient geological studies, change of specifications and economic tax factors were the main reasons for cost overruns. Their quantification and their inclusion in general categories, lead in detection of redefinition cost model for infrastructure projects due to wrong estimation and changes in the project. The analysis of the case study leads to an evaluation of the coefficients for each of the factors categories and has been detected that the correct initial planning is very important. A questionnaire survey was also conducted using the technique of telephone interviewing. The study involved people who have previously worked in public infrastructure projects who have experienced in cost modification. Through their answers we come to interesting conclusions and because of their different experiences, the dimensions of the problem are holistically presented. A conceptual model is being proposed based on an extensive review of the literature and a case study of a large infrastructure project in Greece. It is recommended the development

of a database of similar projects in order to perform more reliable analysis and to exclude value laden judgements.

**KEYWORDS**

Cost redefining, infrastructure projects, public projects, cost overruns, project budget, cost of highways, infrastructure planning.