

Ministry of Higher Education and Scientific Research
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**The stimulating innovation and the
investment allocation mechanisms by
using the post optimality analysis in the
engineering industries sector
(Light Industries company case study)**

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(Abstract)

It is known that investment flows to the various economic sectors of a country, is the process that achieved economic development in both developed and developing countries.

However, investment in any productive sector of a country will increase in conjunction with the improvement of both its technological and price competitive abilities compared to the same sector in other countries, especially with the expansion of the production processes globalization.

Therefore both Governments and business doing their efforts to improve the investment climate, competitive abilities and building-up the knowledge economy requirements, where the latter became a necessary condition for sustainable development.

Most engineering companies in Iraq, suffer from weakness of their competitive abilities, which result decreasing engineering industries sector abilities to create value added and lowering their contribution in the formation of gross domestic product (GDP).

As a result of the above, slowing GDP growth in addition to the slowing investment flows to the engineering industries sector in Iraq, while it was possible to avoid it by speeding activities of building-up the knowledge economy pillars as well as to assist decision makers in the engineering industries sector for the production, distribution and use of knowledge to stimulate innovation and the investment allocation.

Accordingly, the choice of the subject of this thesis takes the title : "The stimulating innovation and the investment allocation mechanisms by using the post optimality analysis in the engineering industries sector (light industries company case study)".

The study hypothesis is: - Lead efforts to accelerate the construction of the knowledge economy pillars in general, and promoting to the contribution of decision makers using the post optimality analysis in the engineering industries sector on according to a specific methodology for the generation, exchange and use of appropriate knowledge to stimulate innovation and the investment allocation in the engineering industries sector especially to enhancing of competitive abilities and sustainable development of the sector concerned.

The main objective of the study is an attempt to provide an appropriate methodology to improve the decision making processes in the engineering industries sector. This methodology is based on the use of post optimality analysis for the linear programming models as a way account within a simulation model for the generation of suitable knowledge and use it to achieve the main objective.

The research covered three chapters: the first chapter deals with the theoretical economic framework, reviewing ideas connected with the subject of investment allocation and Stimulating innovation in the knowledge economy .

The second chapter deals with actual facts of engineering industries sector in Iraq for the period of (2000-2008). The first section covered the nature of engineering industries sector and its importance to the manufacturing industries sector, while the second sector covered a brief historical review about its main economic and financial indicators development. In addition, the third section covered both the progress of tangible and intangible investment in engineering industries and it's related with actual knowledge use for development in Iraq.

The third chapter, deals with the practical side of the research, which determined to explain the proposal methodology application in the light-industries company (mixed sector) as a case study in engineering industries sector in Iraq .

The research was concluded with a number of conclusions and recommendations.

The most prominent conclusion that despite the difficulty of promoting to use of the proposed methodology on a large scale because of the lack of ready program which facilitates the proposed methodology application by the community that candidate to take its advantage , It became clear that the proposed methodology can be applied successfully to improve the decision-making processes and promoting development based on knowledge in the engineering industries sector. Therefore it was recommended to develop an appropriate programs to facilitate use of this methodology and get its advantage on a large scale.