

Design an Assessment Model of Research and Development Capabilities with the New Product Development Approach: A Case Study of Iran Khodro Company

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Abstract : In order to know about the capability level of R & D units in automotive industry, it is essential that organizations always compare themselves with standard level and higher than themselves so that to be improved continuously. In this research, with respect to the importance of this issue, we have tried to present an assessment model for R & D capabilities having reviewed on new products development in automotive industry of Iran. Iran Khodro Company was selected for the case study. To this purpose, first, having a review on the literature, about 200 indicators effective in R & D capabilities and new products development were extracted. Then, of these numbers, 29 indicators which were more important were selected by industry and academia experts and the questionnaire was distributed among statistical population. Statistical population was consisted of 410 individuals in Iran Khodro Company. We used the 410 questionnaires for exploratory factor analysis and then used the data of 308 questionnaires from the same population randomly for confirmatory factor analysis. The results of exploratory factor analysis led to categorization of dimensions in 9 secondary dimensions. Naming the dimensions was done according to a literature review and the professors' opinion. Using structural equation modeling and AMOS software, confirmatory factor analysis was conducted and ultimate model with 9 secondary dimensions was confirmed. Meanwhile, 9 secondary dimensions of this research are as follows: 1) Research and design capability, 2) Customer and market capability, 3) Technology capability, 4) Financial resources capability, 5) Organizational chart, 6) Intellectual capital capability, 7) NPD process capability, 8) Managerial capability and 9) Strategy capability.

Keywords : research and development, new products development, structural equations, exploratory factor analysis, confirmatory factor analysis

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