The Key Success Factors of Introducing Industry 4.0 in Industrial Computer Industry - Case study of F company

Student: Sheng-Min Lin   Advisor：Dr. Chieh-Yuan

Tsai Institute of Industrial Engineering and Management
Yuan-Ze University

ABSTRACT

Following the rapid development of POS, and the threats of declined profits and changeable competitive market, automation would not be adequate for dealing with. To improve the competitiveness of F company, the import of Industry 4.0 is a crucial decision for F company. Besides informative devices, internet, sensing devices and artificial intelligence, F company thus should review the overall production procedures and optimize the business processes to find out the critical success factors of importing Industry 4.0. Not only the business performance would be boosted, but also the upgrade of industry would be done. The purpose of study is to find out the critical success factors of importing Industry 4.0 in F company, and the questionnaires are composed by the reviews of relevant literature and professional interview. The questionnaire initially is edited by 6 experts and then become AHP expert questionnaire; 25 professionals in industry then are invited to fill the AHP expert questionnaires, and the data eventually are analyzed by analytic hierarchical process. The results are as follows: 1、The first layer of the framework of critical success factors in importing Industry 4.0 embraces five structures, such as production and operation management, the second layer embraces 20 critical success factors such as reinforcing the flexibility of production through big data. 2、Among all critical success factors, production and operation management is the most critical and then is the research and development management. 3、Among all critical success factors in the production and operation management structure, the combination of production and quality system is the most critical. 4、Among the overall evaluation, the combination of production and quality system is the most critical and then is reinforcing the flexibility of production through big data

Key Words: Industry 4.0, AHP, Intelligence Factory, Critical Success Factor