THE DYNAMIC OF NEW PRODUCTS' DIFFUSION-SYSTEM DYNAMICS APPROACH

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ABSTRACT

Because technology, product technique, and social environment change rapidly, the shopping style of consumers also change fast. Consumers ’ purchase ability and demand levels are more improve; the competition of market is more intense. Each company should provide new products constantly that maintain competitive advantage in the market. However, new products that the companies provide are success or fail, “ diffusion of innovation ” is the core process. The general researches in diffusion usually use mathematic equation inference, statistic method, and static viewpoint to analyze and investigate. But few researches discuss the dynamic complexity in diffusion. “ System Dynamics ” is good to deal with the dynamic comolex system and bases on feedback control system, so this thesis use system dynamics method and some diffusion theory to investigate the process of the new products ’ diffusion. Then we construct a dynamic model of new products ’ diffusion and analyze the interaction among each structure. After accomplishing the system dynamics model, the model will proceed to scenario analysis. Then this study has five findings: 1. The importance of creat critical relatively attraction: If the companies can creat critical relatively attraction or with more powerful attraction will be the efficient way. 2. Innovation coefficient and imitation coefficient: If the Innovation coefficient or imitation coefficient is large, the adopter per unit time is large and it will reduce the life cycle time. 3. It ’ s important for the company to grow that it would make up dynamic policy. 4. The influence of detected ability in the environment: The company must have the detected ability of the environment in daily, and it will protect the company from damage in danger. 5. The construct of policy laboratory: This thesis construct a dynamic model, policy laboratory, is the process of new products ’ diffusion. According to the system dynamics model, it will proceed to scenario analysis. It provides more effective way for the company to plan marketable policy and management in future. Keyword: System Dynamics, new products ’ management, dynamic complexity, policy laboratory, diffusion of innovation.

Keywords : System Dynamics ; new products ’ management ; dynamic complexity ; policy laboratory ; diffusion of innovation

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