Research on Managerial Pressures Perception and "Enterprise on Cloud" Decision

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Abstract: Based on the grounded theoretical and field research of three manufacturing enterprises in Gaoyou City Jiangsu Province, this paper study the impact of institutional pressure, performance pressure, managerial response and other factors on cloud decision of small and medium-sized enterprises. The research conclusions show that in the face of "on cloud" decision, managers will be affected by external institutional pressure and internal performance pressure. Managerial characteristics will affect the Managerial perception of these pressures. Managerial response are intermediate factor between pressure perception and on cloud decision.

1. Introduction

Enterprise Cloud is a commercial cloud system specially applied in the domain of commercial. It specializes in designing CRM (Customer Relationship Management) customer relationship management software, HR (Human Resource) human resource management software, database software and other internal systems for commercial companies. What is the Enterprise on cloud decision process in the enterprise? None of the existing studies gives a clear answer. We explored the impact of institutional pressure, performance pressure, and managerial perception of pressure on the adoption of cloud technologies through the grounded theory analysis of Gaoyou City's "Enterprise Cloud" related companies. The rest of the paper is organized as follows. In the next section, we develop our theoretical framework, which integrates institutional theory with technology adoption study. Subsequent section introduces our research method and build on cloud decision mode from grounded theory.

2. Literature and Theoretical Background

Adoption process theory can be traced back to Nolan's stage hypothesis of IT penetration in the 1970s. Based on empirical observations of multiple organizations use statistical methods,Nolan concluded that IT penetration in organizations is phased and different phases reflect the different maturity of the organizational[1]. In 1983, Rogers proposed the Diffusion of Innovations theory, which explained the statistical conclusion of Nolan's input cost into a sigmoid curve[2]. However, its adoption process theory is a "Pull" theory that emphasizes the role of adopters, ignoring the influence of suppliers, society, management interventions and other factors on the IT adoption process. Later, Ball and others studied the impact of IT development team's characteristics on customer adoption behavior [3].

The main point of the new institutional theory is that organizations are influenced by three institutional factors: Coercive, Mimetic, and Normative [4]. Scott has made a deeper definition of these three institutional elements. Coercive is a "regulatory" factor, including laws, regulations, and other institutional forms that obligate people or organizational behavior. Coercive Pressures are defined as formal or informal Pressures exerted on organizations by other organizations up on which they are dependent. Mimetic is actually "Culture-cognitive factors", which forms the common beliefs,

behaviors and social identity of organizations or groups. Mimetic pressures may cause an organization to change over time to become more like other organizations in its environment. Mimetic pressures manifest themselves in two ways: the prevalence of a practicing the focal organization's industry and the perceived success of organizations within the focal organization's industry that have adopted the practice [5].Normative mechanism is embodied in “normative factors” such as values, practices and standards. Sharing these norms through relational Channels among members of a network facilitates consensus which in turn increases the strength of these norms and their Potential influence on organizational behavior. These normative Pressures manifest themselves through dyadic inter-organizational channels of firm-supplier and firm-customer as well as through Professional, trade, business, and other key organizations[6]. From the perspective of the new institutional theory, organizations face pressure to obey the form and behavior of sharing organizations to obtain the specific resources necessary for the organization to survive, otherwise it will bring about the loss of legitimacy[7].

3. Methods

Our research topic is to explore “what”, “why”, and “how” make enterprise on the cloud. In this process, multiple factors will have an impact on this, so the multi-case study method is a more appropriate choice. The reasons are as follows: First, when the firm makes technology adoption, the scale of the enterprise, the business model of the enterprise will all have an impact on it. Therefore, choosing a multi-case study method is beneficial to the author to further this complex process; Secondly, based on the comprehensive analysis of commonality and difference, it is helpful to find some commonalities and characteristics of different types of enterprises, so as to construct a more universal construct and form theoretical ideas in the multi-case study; Finally, the analysis of each case can make the original theoretical concept concrete, so that the theory can be combined with the reality to be easier to understand. In addition to the case study method, this paper also used grounded theory, which involves the construction of theory through the analysis of data in order to provide validity and reliability for the study[8].

3.1 Sampling

In order to promote the development of “Internet and advanced manufacturing industry”, accelerate the pace of “enterprise on the cloud” and implement further upgrading and development of the manufacturing industry, Gaoyou Municipal Government has held several special training courses on “enterprise on the cloud”. For the impact of institutional pressure and managerial pressure perception on the enterprise in the process of “enterprise on the cloud”, we select Gaoyou Electric Plastic company, Yangzhou Xingyi Machinery and Jiangsu Jinfeida Power Tools Company as the research object. In the manufacturing industry in Gaoyou, Gaoyou Electric Plastic Factory, Yangzhou Xingyi Machinery and Jiangsu Jinfeida Power Tools Company are typical representatives of small, medium and large enterprises, representing the direction of enterprise development in different scales. Their business model also covers most of Gaoyou's machinery manufacturing business model. They can influence on the response of enterprise on the cloud in a certain range, and can be used as a typical strategy of understanding and adopting the new concept, technology of mechanical manufacturing for the "enterprise on the cloud".

3.2 Data collection

We relied on two primary data sources: interviews and archives. To answer our research question, semi-structured interview was developed. We began data collection by interviewing the General manager and Functional executives(technical) of Gaoyou Electric Plastic Factory, the Functional executives(technical) of Yangzhou Xingyi Machinery, and two Functional executives of Jinfeida Power Tools Company. The interview time lasted 0.3-1 hours.

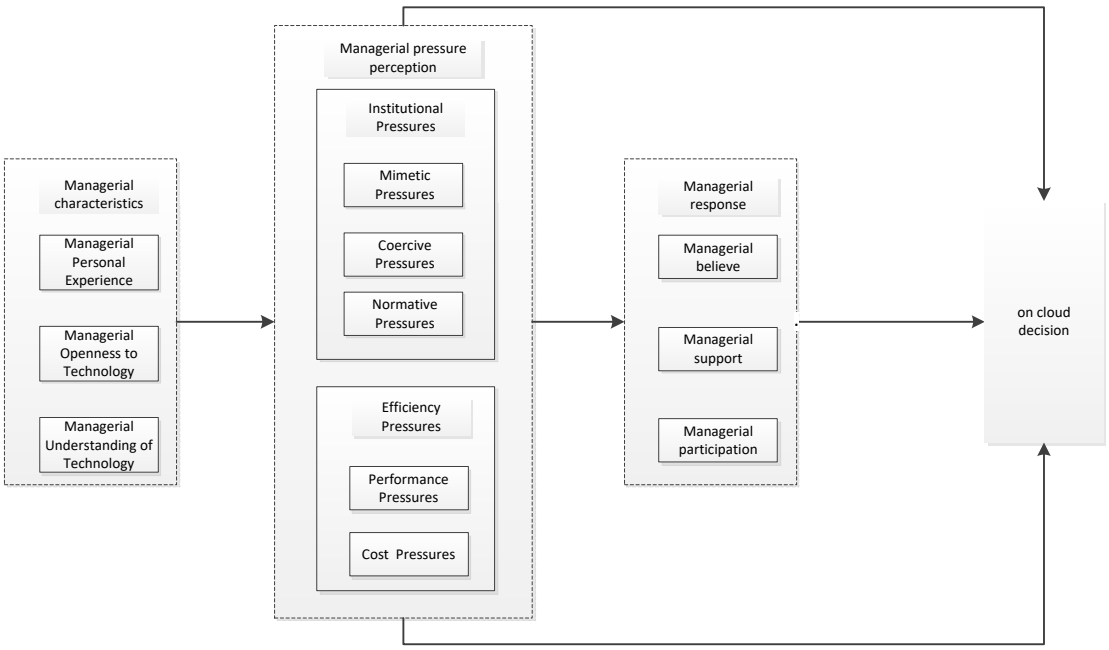

Figure 1. Managerial Pressures perception and “Enterprise on Cloud” decision

4. Finding

4.1 Motivation of firm "on cloud" decision: managerial pressure perception

Through research, it is not difficult to find that whether it is a small and medium-sized enterprise represented by Gaoyou Electric Plastic Factory or Yangzhou Xingyi Machinery, the medium and large enterprises represented by Jinfeida Electric will think about current cost issue when adopting a new technology. Especially for small and medium-sized enterprises, due to the size of firms and the limitations of their product types, they will pay special attention to cost when adopting “on cloud”. The adoption of technology does not only need to consider the cost of introducing technology, but managers need to consider the cost of introducing talent because of the size of the firm and the lack of relevant talents. Therefore, firms will consider the current cost issues when conducting on cloud decision of firms. Whether adopting “on cloud” can make firms achieve performance is an important aspect considered by firms on the cloud. For firms, adopting technology will not only consider current performance. If a technology adoption cannot bring long-term performance, it is difficult for firms to change managerial cognition. This technology lacks the necessary appeal for managers.

Proposition 1: On cloud decision of firms is affected by internal efficiency pressures

Proposition 1a: On cloud decision of firms needs to consider current costs

Proposition 1b: On cloud decision of firms needs to consider future performance

Three enterprises are obviously influenced by government policies, But there are also some differences. Firstly, because medium and large enterprises play a leading role in the industry, so the factors affected are larger than mall and medium-sized enterprises. Secondly, the influence of external regulatory pressure is far less than internal efficiency, current cost, and future performance. We also found that the normative pressure, which is the influence of the industry norms of the trade union or industry on firm is obviously. If a new technology is launched and most manufacturers support it, the normative pressure of the industry will be reflected. However, if most manufacturers hold a wait-and-see attitude, the normative pressure will be reduced. Therefore, the on cloud decision will be affected by the normative pressure. Through coding, we learned that both three firms affected by the pressure of imitation. On the one hand, for medium and large enterprises, the mimetic pressure exists from the direct competitors, especially competitors make great progress by adopting a technology. On the other hand, for small businesses, their imitation pressure is not only derived from their peers but also from medium and large enterprises.

Proposition 2: On cloud decision of firms is affected by external institutional pressures
Proposition 2a: On cloud decision of firms is affected by regulatory pressure
Proposition 2b: On cloud decision of firms is affected by normative pressure
Proposition 2c: On cloud decision of firms is affected by the imitation pressure

4.2 The intermediate mechanism : managerial response

In our research, we found that managerial perceptions of external institutional pressures and internal efficiency pressures effected response of managers, which ultimately affected the results of "on cloud" decision. Managerial responses to stress perception mainly include three types: managerial trust, managerial support and managerial participation. The two SMEs mentioned that the competition in the same industry is relatively high, so the behavior of adopting new technologies between SMEs will also have an interaction. If an enterprise adopts cloud, this affects the belief of another business manager. At the same time, performance also has a strong influence on managers. When manager found the right direction for improvement and development of the firm, it will actively adopt its information technology. It can be seen that performance and imitation pressure will affect the managerial belief and support of new technologies, which will further affect the on cloud decision of firms. According to interview, we can see that the three institutional pressures and two efficiency pressures affect managers to belief the new technologies, and ultimately enable managers to participate. As can be seen from the above, the managerial response is an intermediate factor between pressure perception and on cloud decision of firm.

Proposition 3: Managerial response is an intermediate factor between pressure perception and on cloud decision of firm.

Proposition 3a: Managerial believe is an intermediate factor between pressure perception and on cloud decision of firm.

Proposition 3b: Managerial support is an intermediate factor between pressure perception and on cloud decision of firm.

Proposition 3c: Managerial involvement is an intermediate factor between pressure perception and on cloud decision of firm.

5. Conclusions

We proposed the characteristics of the pre-influence factors of firm's on cloud decision, and used the Qualitative Research Method to develop a firm's on cloud decision model. Our study has some theoretical contributions. First, On the basis of institutional pressure and managerial perception and behavior, it further enriches and perfects the influencing factors of firms' adoption of new technologies, making them more comprehensive and the research conclusions more convincing. Secondly, although previous scholars have recognized the influence of managers on the adoption of firm technology, they have not thoroughly explored the internal mechanisms of managerial different behaviors. This study deeply discusses the adoption of new technologies under the pressure of institutional pressure and performance, and elaborates the reasons for a series of reactions affecting managers.

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