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From Innovator's Dilemma to Value Chain and Organization's Dilemma

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Abstract. Since Clayton Christensen's popular work pointed out that customer-oriented thinking would block incumbent firms from disruptive innovations, the failure of incumbent firms has been examined over and over again. This article revisits Christensen's theory and tries to integrate two main theories of value chain and organization, with which focus on effect of disruptive innovation systematically instead of technology innovation. Then we reviewed it from organizational angle to observe the dilemma managers confront where we realized that the dilemma should not only be managers' own issue, but also be the organization's issue and there are specifically some factors, ownership pattern, value networks, and organization's size and culture, have influence on it.

Keywords: disruptive innovation, ownership, network, organization size, organization culture

1. Introduction

It is almost fifteen years since The Innovator's Dilemma and its solution, disruptive innovation, first showed-up to the management field. Over time, more and more researchers bring up different dimensions to explain and extend the theory related to all kinds of disruptive innovations, such as it highlights the role of market-facing competence in shaping a firm's response to disruptive innovation [1], it should be broken down into three categories which are technological, business-model, and new-to-the-world product innovations to better illustrate the different consequences they bring at the end [2], and we should develop predictions and test it about which technologies will become disruptive and which firms will succumb versus prosper in their emergence [3]. However, for those intelligent and hardworking managers as Christensen pointed out, even over a decade, they still have difficulty to choose between main customers oriented innovations with high margin and unpredictable disruptive innovations [4]. What if the dilemma is not only existent where senior managers stand but may also be found in the whole organization? According to the phenomena we have observed, we lengthened Christensen's theory from innovator's dilemma to organization's dilemma. We believed that there are barriers and other factors, including ownership pattern, value networks, and organization's size and culture, which made the whole organization confronts conflicts and forced managers to have no choice but giving up disruptive innovation.

2. Literature Review

2.1. Disruptive Innovation

Back in 1997, Christensen focused on disruptions caused by advances in technology. Disruptions, or later called disruptive innovations, are innovations that offer lower product performance and attack existing businesses to grab great opportunities for new profit growth. Whether its discontinuity comes from technology or commerce, it is never a one-time effort. Based on the characters of disruptive innovation, it is intuitively that there must be some barriers or inhibitors get in the way to develop disruptive innovations. Christensen then claimed the main reason and warned managers that paying too much attention on the most

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profitable customers could sometimes lead their way astray [5]. Afterward there are more papers to examine why incumbent firms still fail to develop disruptive innovations even they have been warned for so long. Here we followed Assink's conceptual model and reallocated them into three kinds of barriers [6].

2.1.1 Adoption and Mindset Barrier

Too many firms only improve their existing product design rather than getting involved in disruptive innovation procedure. The truth is that successful product, design, or technology would embedded the old route to success in our mind and unconsciously constrain further development on innovation, therefore firms become the prisoners of the past success and are unable to accept and learn new knowledge. Innovation itself is a highly uncertain thing let alone the disruptive innovation with the ability to overthrow the whole market. Under such uncertainty and stress, it is naturally we lean on something we are familiar with and firms will count on their instincts where they are inevitably built on the past success [7].

2.1.2 Structure Barrier

Inside the organizations, we cannot say that they are all lack of innovative ideas and also not those ideas are valueless. It is the power distribution, centralization or decentralization, has the incidence of running new ideas. Furthermore, large organizations are often equivalent to the meaning of bureaucracy which stifles bright ideas all the time. It is hard to ask them to react or respond to changes like start-ups do, not to mention to put all resource and focus on one innovation. Screening for truly useful and commercially potential ideas would be a heavy burden [8].

2.1.3 Risk Barrier

Risk taking here is what we meant opportunity seeking, decision making and the overall propensity to continually enter into risk taking situations. The situations are usually with unknown outcomes. Gibb and Haar studied 167 New Zealand firms and found high risk taking and innovativeness are linked to higher firm performance [9]. So the ability to take risks is definitely a key factor to determine how firms react to innovations. For example, if existing products now can bring in positive cash flows, firms should be more inclined to take risks on innovation since it will make innovations' initial cost or loss in the primary stage bearable for the firms.

2.2. Ownership Pattern

Under ideal circumstance, members in an organization will seek the most benefits for the organization. But the truth is decision makers, or we say managers, are under so much pressure and have to take full responsibility of the numbers on financial statements. As a result, managers are often busy keeping their positions solid and pay less attention to innovations for company's long term health and revenue. Instead of looking for almost unpredictable disruptive technologies which don't pay off straightaway, focusing myopically on earing per share as their credits of corporate performance seems to be more rational to those managers [4]. In fact, this has made managers not only slow down the growth of their companies but also become barriers for innovations to survive. Professor Lee [10] argued accordingly that when the conflicts exist between ownership and managers, a solution is to overlap the two management sources to make the goal the same, so that value transformation inside the corporate will be more efficient.

2.3. Value Networks

There is no single firm which is independent on external source nowadays. Through business transactions, firms start building up "relationships" with each other. These relationships form the networks worldwide and it has been pointed out that relationships have a lot of synergy effects on accelerating learning curve and innovation processes by reducing search costs [11]. On the other hand, relationships also increase the dangers and uncertainties of dependence when each firm can only deal with a small part of networks. The more resources we choose and invest, the more dependence will be built between relationships [12]. When the networks become stable and tight, innovations get buried easily because no one, especially incumbent firms, would want to break the balance.

2.4. Organization Theory

It has been discussed in early studies that there are several organization factors which are positively associated with innovations [13][14]. Here we specifically pick up two factors, size and culture, for further discussion. First, large organizational size can, indeed, create numerous advantages such as marketing, product development, and bargaining power of purchasing, but there are also disadvantages of being a large bureaucratic harbor like employees with strong preference to the status quo. Therefore, innovation is slower and new products/services are barely well developed [15]. Second, organization culture is usually defined as the shared guiding beliefs and values held by those within the organization and always playing a vital role to lead an organization to provide members creative thinking [16][17].

3. Conceptual Framework

Innovators' dilemma focused on the struggle senior managers faced. Despite the theory has been introduced more than ten years, incumbent firms are still fighting against whether to get involved with disruptive innovation and more papers are discussing if it is rational for managers to do so. As we dug deeper in the overwhelming debates and contentions, we figured out that the dilemma is in truth an organizational problem. In addition to previous literature review we try to extend from Christensen's points, get the idea more precisely, and address that each factor has its own effect to the organization which will make firms to decide if they should engage in disruptive innovations. Fig. 1 has summed up the idea structure. Base on the discussion, we hypothesize that:

Hypothesis 1: Overlapping of ownership and management is positively related to the intention to engage in disruptive innovation for incumbent firms.

Hypothesis 2: Steadiness and tightness of existing networks is negatively related to the intention to engage in disruptive innovation for incumbent firms.

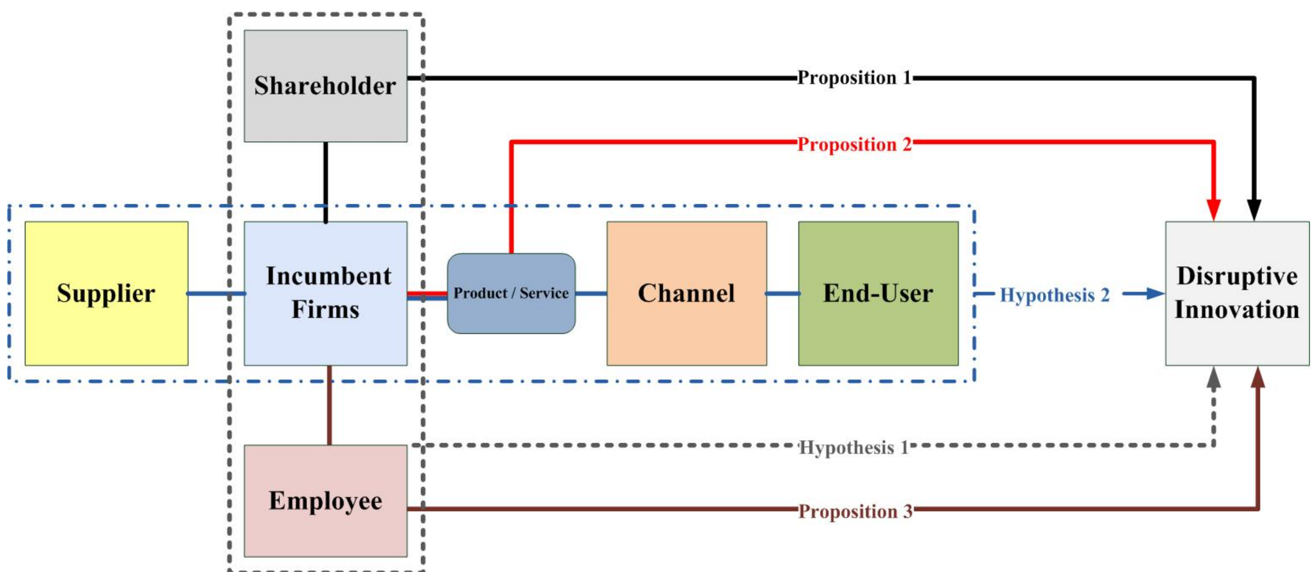

Fig. 1: Hypothesis and proposition structure

4. Data Collection and Analysis

This research intends to take public companies in Taiwan technology industry as study objects which their operating, shareholder structure, earning distribution and financial condition are disclosed fairly. The study objective firms are mostly chosen from Liquid Crystal Display (LCD) manufacturers. These firms back in the days were all manufactured Cathode Ray Tube (CRT) monitors. After LCD technology appeared, some giant firms fail to step in the shifting from the disruption at the very beginning thus lost the incumbent position. We exam and scale their shareholders and managers' structure, the supply chains they involved, product lines, and earning distribution for investors to observe the behaviour pattern and correlation with engaging in disruptive innovation.

Base on the discussion of hypothesis 1, we propose that:

Proposition 1: Incumbent firms have less intention to engage in disruptive innovation when new products' short term revenue is much less than the existent products'.

Proposition 2: Incumbent firms have less intention to engage in disruptive innovation when new products/services have greater chances to substitute existent products/services.

According to the discussion of hypothesis 2, we propose that:

Proposition 3: Incumbent firms have less intention to engage in disruptive innovation when organization size is too big and organizational culture is ossified.

5. Conclusion

According to the examination, we suggest that incumbent firms should adjust their ownership pattern or at least try to make managers' interests in line with their shareholders. As long as the overlapping part isn't large enough to cover the difference and conflicts between short and long term benefits, managers will have no intention to switch to disruptive innovations. As regards the networks, to eliminate organizations' bureaucracy stems from the size and culture, incumbent firms might consider to downsize the organization or consider about the merits of deriving a spin-off to pursue disruptive technology.

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