



Positive Effect of Cost Pressure: The Formation of New Routines and Business at Fujitsu

Fumihiko IKUINE^{a)}

Abstract: When a company acquires new knowledge, it expects to create new business by fusing the new knowledge with existing knowledge. At least that is how things appear superficially. However, Fujitsu's new business development discussed in this paper was not related to any new knowledge but sprung up because of other reasons. Because the company had invested a lot of resources to acquire new knowledge, it was impossible to recover the management resources that it had invested, which then became sunk costs, unless the company did something. We call such a situation "sunk cost pressure." In the case examined in this paper, this sunk cost pressure induced the combining of disparate knowledge in the company's possession, thus creating new business.

Keywords: innovation, field, organizational routines, new business, sunk cost

^{a)} Division of Policy and Planning Sciences, Faculty of Engineering, Information and Systems, University of Tsukuba, 1-1-1 Tennodai, Tsukuba-shi, Ibaraki, Japan, fikuine@sk.tsukuba.ac.jp
A version of this paper was presented at the ABAS Conference 2018 Summer (Ikuine, 2018).

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Introduction

Why do companies create new businesses? Research to date has attributed the creation of new businesses to factors such as management ambition and vision (Schumpeter, 1934), changes in market environments (Chandler, 1962), and leveraging of management resources developed in existing businesses (Penrose, 1959). In addition to these, discussions of the relationship between existing businesses and new business development often focus on knowledge. The argument goes that knowledge can be reused when creating new businesses because knowledge is a management resource that can be used in various ways.

By examining the case of new business development at Fujitsu Limited (hereinafter, “Fujitsu”), this paper explores the topic of why companies create new businesses. In the 2000s, Fujitsu created a new business called the Field Innovation business (hereinafter “FI business”). When superficially viewing the process of emergence of this new business, it appears that the company created this new business by leveraging its knowledge of ethnography from a previous project. However, the impact of that knowledge was actually small. We interpret that the impact instead was due to a lot of resources invested in the previous project. As was the case, the company would have been unable to recover the management resources it had invested, meaning that the sunk costs had created pressure. Under this pressure, there was a possibility that the company created a new business by newly combining the knowledge it possessed.

Method

The research methodology employed in this paper is that of a single case study. By describing the case, the paper aims to propose a

hypothesis after examining the changes that occurred over time. The subject of the case study is a new business that Fujitsu started in the 2000s.

This study includes interviews with the current head of the FI business unit, who was involved with its formation, as well as employees involved in improving the FI business. On the basis of information obtained from existing research, public documents, and interviews, the study describes the process whereby the FI business was set up.

Case Description: Emergence of FI Business at Fujitsu

In 2003, Fujitsu and the Palo Alto Research Center (PARC) discussed the sponsoring of a business-based joint project. At the time, Fujitsu had interest in PARC's knowledge of ethnography. Joint research between Fujitsu and PARC had started back in August 2004 with a three-year project. The Fujitsu team members who participated in that project, which involved ethnography, came from Fujitsu Laboratories, the consulting division of Fujitsu Research Institute, and the company's business division (particularly the systems engineering (SE)). The team numbered about 20 people at the peak of this project.

After the PARC project was over, they started a social science center. However, ethnography encompasses many qualitative elements, which makes it difficult for those accustomed to using more quantitative methodologies. Because of this, employees who frequently used quantitative analysis created an "ethnography-based method that engineering firms can use."

Other elements besides ethnography were also incorporated into the social science center. Specifically, various types of expertise from the three divisions (Fujitsu Laboratories, the systems engineering business unit, and Fujitsu Research Institute's consulting division)

were incorporated. For example, C-NAP,¹ which was basic knowledge for field innovation activities, had been created by the systems engineers in the 1980s and was subsequently used by systems engineers as a technique for organizing customers' requirements.

On the other hand, then-president Hiroaki Kurokawa was aware of the need to “strengthen the *genba* (site or workplaces).” Around 2005, he gradually started using the term “field innovation.” Then, around 2007, he started communicating this idea outside of the company. Taking Kurokawa's concept as a base, the company took techniques from Fujitsu's various divisions and combined them with other knowhow to come up with methodologies for field innovation activities. The social science center was reorganized so that it became involved in the FI business.

When starting its field innovation business, the company created the position of Field Innovator (“Fler”). It was decided that to receive the Fler designation, an employee must attend classes for one year and then undergo on-the-job training (OJT).

On October 1, 2007, President Kurokawa took the initiative in assembling the first Fler candidates for field innovation practice. The initial class of FLers numbered 150, with the profile being manager-class employees in their late 30s or older. Mr. Kurokawa decided to invest in this first class of 150 Fler candidates. He said “we push forward like there's no turning back. Since, if we started with only 30–40 people, they would disappear back into the business structure somewhere when the situation were to change.” Training of FLers has occurred annually since that time, and the company had educated 700 FLers by the 10th class in 2017.²

¹ C-NAP is a Fujitsu proprietary “problem-solving technique whereby workplace issues are analyzed and after the goals are identified, those involved come to an agreement regarding an efficient resolution” (<http://www.fujitsu.com/jp/about/businesspolicy/fieldinnovation/technology/#tec08>, confirmed on July 12, 2018).

² However, about half of these employees are engaged in FI activities while

The first teaching materials on techniques and skills for FI activities were created around 2008 on the basis of internal knowhow and Fler suggestions from the initial phase of its activity. Because useful knowhow existed in various places within the company, the initial drafts referenced this knowledge. For example, consultants contributed ideas such as preparing a summary of the customer's business ahead of time, drawing up an internal overview of the customers, making a site (genba) visit after preparing a sample output, and preparing a communication plan. The sales department contributed the idea of making a diagram of the power structure. These concepts were subsequently revised as the Fliers gained practical experience.

Ethnography thus remained as an element; however, FI knowhow was actually created by combining various techniques proprietary to Fujitsu. After these techniques were inculcated in the Fler candidates through their studies, they started working on field innovation with more experienced Fliers. A formal system of certification as a Fler was established.

FI activities were initially implemented within Fujitsu itself. They were soon offered gratis to client companies as an add-on service to systems implementation. Beginning around 2012, some within Fujitsu began asking whether FI activities would be able to contribute to the company as a business. Moreover, client companies that had implemented FI activities gave them very high marks. Fujitsu, therefore, began to charge for FI activities.

However, FI activities had started with the concept of getting closer to customers. Therefore, the first and second classes of Fliers, who had created the FI activities, were uncomfortable with the idea of making this a contributor to Fujitsu's business. These Fliers had not been taking a business-like stance in dealing with customers but

belonging to the FI business unit, while the remaining half have transferred out of the FI business unit.

rather had adopted the understanding that they were working “for the customer.” Fujitsu currently maintains its philosophy of viewing things from the customer’s perspective, which has been an important part of FI activities from the beginning, even though field innovation has become a contributor to Fujitsu’s business. More than 1,500 FI projects have been implemented to date.

Discussion and Conclusion

Maegawa, Sugiyama, Kang, and Yamaki (2009) focus on Fujitsu’s use of ethnography during its process of creating the FI business. This article asserts that by bringing in the element of ethnography, which differed from the knowledge then held by Fujitsu, the company came up with a new combination that led to the creation of a new business.

However, a closer examination of this case shows that the impact of knowledge on ethnography from a previous project was limited. Instead, we can find other reasons which lead the establishment of FI business. Firstly, we pay attention to the initiative of Mr. Kurokawa. He was aware of the need to “strengthen the genba (site or workplaces)” and intentionally made a large investment in human resources so that the company would not be able to go back on its commitment to establish the FI business. Secondly, we pay attention to the fact that the resources had already been disbursed. Fujitsu had set up the social science center to utilize the social scientific knowledge including ethnography for the business, the establishment of social science center had needed certain amount of investment. Therefore, the manager of social science center might have thought that they can recoup the investment for setting up the social science center, if they start the field innovation activities, turn ethnography into “a method usable by an engineering firm” and leverage their knowledge. As the

new business was taking shape, the knowledge that Fujitsu already possessed was recombined and elements of ethnography were added, thus forming new knowledge and routines (Nelson & Winter, 1982).

Many prior studies assert that costs that have already been invested, or sunk costs, have a negative impact. These studies take the view that people and money invested in traditional activities “create sunk costs” and argue that these sunk costs will impede efforts geared toward new activities, such as the development of new businesses (Tripsas & Gavetti, 2000) and the introduction of new technologies (Ichikohji, 2018).

Nonetheless, when management resources are invested in new activities for whatever reason, it generates sunk cost pressure that can sometimes promote the next new activity. After the effort has been made, a decision is made to continue with new initiatives, which may then generate promising businesses (Kuwashima, 2017). We interpret that this may be the case with Fujitsu’s FI business. It put pressure on the company to implement the PARC project, create the social science center, and allocate management resources on developing Flers so that they could implement FI activities. These FI activities, in turn, became services that were offered externally and even went on to become paid services. The existence of sunk cost pressure caused the company to explore ways of leveraging its management resources through repeated trial and error (Wada, 2015), which eventually induced executives and employees to break out of their shells (Takahashi, 2015) to create a new business. This example suggests that sunk cost pressure should not be seen as a factor that only impedes business but as one that can contribute to new business development.

Thus, what is important is not whether there are any sunk costs but what decisions are made after the management resources have been invested. Different post-investment decisions will result in different sunk cost pressures. Sunk cost pressure may sometimes

exert a negative effect; however, it can also have a positive effect. Because of this, the creation of sunk costs is a neutral phenomenon in and of itself.

Acknowledgments

This research is financially supported by the Japan Society for the Promotion of Science (JSPS), Grant-in-Aid for Scientific Research (KAKENHI) (C) JP18K01788 and Grant-in-Aid for Publication of Scientific Research Results, Grant Number JP16HP2004.

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