Social Impact Information as an Activity Impetus of the Organizational Speciation

Shogo KAMEI, Masakazu OHASHI, Hiroshi ICHIKAWA

The tendency for organizations to typically focus on exploitation and put exploration on the back burner has been discussed in regards to the balance between exploration and exploitation required for sustainable growth. What opportunities exist for exploration within an organization? This paper creates a hypothesis of social impact information in the context of an opportunity for exploration based on the concept of speciation, and aims to present a way to balance exploration and exploitation. Companies experiencing sustainable growth are continually exploring in a way that can overcome changes in business environment. This paper identifies social impact information as one factor in exploration in order to increase exploitation of existing technology using previously acquired knowledge, as well as the permeation of that process, and progressive improvements. In addition, the paper shows that organizations set new directions and leverage newly acquired information by means of speciation that has resulted from social impact information, and also balance exploitation and exploration within that cycle.

Practitioner Summary: This paper presents two hypotheses for balancing exploration and exploitation in organizations experiencing sustainable growth. The first hypothesis discusses the opportunity for organizational speciation brought about by social impact information regarding the employment of disabled individuals, and how it provides an indication of direction. The second hypothesis discusses how organizations that have uncovered new businesses through speciation use existing resource know-how of the organization to drive exploitation. Both of these hypotheses are examined through case studies and interviews.

Keywords: Exploration, Exploitation, Social Impact Information, Speciation, Coexistence

1. Introduction

1.1 Lifetime of companies

Using the “2011 edition White Paper on Small and Medium Enterprises” published by the Small and Medium Enterprise Agency in Japan, the survival rate after a certain period of companies registered in the Teikoku Databank, Ltd. as being in practice between 1980 and 2009 can be determined. The survival rate from start of business after ten years is 70%, but drops to 50% after 20 years. Additionally, the average lifespan of the companies that went bankrupt in 2012 was 23.5 years. Enterprises also have a set lifespan, and even businesses that were once well-established can go bankrupt if they are unable to keep up in a constantly changing world. This tendency can be significant in the rapidly changing manufacturing industry. On the other hand, one can find companies to survive, that actively expand business in a sustainable manner by means of innovation. This paper elucidates the sustained growth mechanism for companies by examining one of these cases.

1.2 Employment of disabled in Japan

According to the 2013 Annual Report on Japan Government Measures for Persons with Disabilities, the total number of disabled in Japan is 7,410,000. Of these, 3,230,000 between the ages of 18 and 64 years are targeted by employment policies, of which, 1,240,000 are physically disabled, 270,000 are intellectually disabled and 1,720,000 have intellectual disorders (aged 20–64). The 2013 Statistics on Employment of the
Disabled in Japan show that 409,000 have regular employment in private-sector companies. As of June 2013, a majority of companies—57%—had a workforce with less than the legal requirement of 2.0% disabled persons. The actual proportion of the disabled in the workforce is 1.76%, which continues to fall below the legal requirement.

Employing disabled is social issue. Meanwhile, we can see some companies that try to solve such a social issue. We call the information of such a corporate activity the social impact information. Can social impact information, which creates the ground for success, become the cause for innovation opportunities? In this paper, we investigate a case study, and examine the effectiveness of social impact information as the cause of the sustainable growth of the companies.

2. Purpose of the paper

In addition to daily improvements in existing businesses, sustainable growth in an organization is realized as the end product of unremitting efforts to find the seeds of new businesses that can be adapted to uncertain environments. The progressive efforts in the former are called “exploitation”, while the intermittent efforts in the latter are called “exploration”. In other words, for companies to achieve sustainable growth, they must balance exploitation and exploration, as was shown by March (1991). Organizations bury themselves in continuous efforts on a daily basis that are certain to bear fruit, and put off efforts to find the seeds of businesses with uncertain outcomes. Organizations that have over the course of months and years found success with stable businesses tend to do this, though companies that do not seek out new innovations will eventually die. Then, what is an occasion that triggers exploration? The purpose of this paper is to answer the question of what causes companies to explore, as well as to use the concept of speciation to present ways that companies balance exploration and exploitation within sustainable growth, as they search for opportunities for speciation.

3. Hypothesis construction

3.1 Literature Review

3.1.1 Exploitation and Exploration

According to March (1991), for an organization to achieve prosperity and survive, exploration and exploitation must coexist. However, organizations tend to prioritize exploitation over exploration (Levinthal and March, 1993). In contrast, Tushman, Anderson, and O’Reilly (1997) posited organizational ambidexterity as an organization’s ability to simultaneously pursue both exploration and exploitation through occasional strategic shifts. Suzuki (2014) introduced the concept of speciation as a desirable element in the trade-off between exploration and exploitation. The biological concept of speciation is one way to explain the development of a new species. Speciation is the process whereby the geographical isolation of a species into a separate niche leads to the evolution of the original species into a different species (Eldredge and Gould, 1972). Suzuki (2014) contended that an organization’s preference for exploitation over exploration results from the current stakeholders’ support of an exploitation-centric organization. Further, he focused on the concept of speciation in the context of an environmental construct in which the current stakeholders do not exist.

3.1.2 Social Impact Information as cause for Innovation Process

Kamei and Ohashi(2014a) described a process by focusing on connections and architecture, and synchronizing these elements dynamically to elucidate the dynamic processes in the two-party collaboration between organizations. In a highly uncertain environment, changes in connection strength may be described by dynamically describing the architecture system as “open” or “closed,” as well as “integral” and “modular,” in relation to the dynamic changes in connections within the vital new business creation process required by companies to achieve sustainable growth. Continual complexity and uncertainty is accompanied by resource limitations for small- and medium-sized companies. This paper validates the idea that small- and medium-sized companies that have a strong tendency to specialize, based on the research theme of how best to find
and use external resources and create original processes, and through interviews of stakeholders in a medium-sized tent manufacturer, are changing dynamically in four stages in the new business creation process between two parties, based on the architecture and strength of connections.

In addition, the synchronization cycle of connections and architecture in the radical innovation implementation process is shown in Figure 1. Small circles represent the organizations that enclose the process, and the depth of the outlines shows the strength of modularization as a modular. In other words, thicker circle outlines indicate, stronger modularization. Arrows indicate the correspondence between the function and process, and represent correspondence between the newly added processes and functions amongst the two parties forming ties. In other words, the one-to-one relationship is modular, and a many-to-many relationship is shown as an integral. Additionally, the large round frame shows a closed reduction and the thicker circle outline indicates a stronger closed reduction; conversely, a thinner outline indicates a weakened closed reduction. In Figure 1, the two parties initially in an open modular relationship with weak connections gradually shift to one with strong ties and a closed integral to make innovation feasible. After innovation is complete, the relationship returns to one with an open modular again.

Figure 1: The Synchronization cycle of connections and architecture in the Radical Innovation Process.
Source: Kamei and Ohashi (2014a)

Kamei, Ohashi, and Hori (2015) validate the claim that social impact information is an effective cause for the formation of connections, which are the source of dynamic changes in connections in the new business creation process of enterprises as clarified by Kamei and Ohashi (2014a). Figure 2 shows the “gradual strengthening of ties from weak connections in the context of social impact information,” namely, the employment of individuals with disabilities.

Figure 2. Gradual strengthening of ties from weak connections in the context of social impact information
Source: Kamei, Ohashi, and Hori (2015)

3.2 Hypothesis construction

One can see from existing literature that introducing the concept of speciation contributes to the possibility of coexistence between exploration and exploitation. In regards to the process of opportunity formation in niches with geographically isolated populations, Kamei, Ohashi, and Horii (2015) showed that social impact
information regarding the employment of individuals with disabilities is effective as an incentive for forming ties. In this paper, incentives created by social impact information that begins a cycle is what brings about the speciation discussed by Suzuki (2014) and Levinthal (1998), and likely shows the direction of exploration activities. In this paper, we created our first hypothesis whereby social impact information regarding the hiring of individuals with disabilities provides the opportunity for speciation, and test the hypothesis using a case study of organizational speciation. In addition, an important point of discussion regarding exploitation and exploration in organizational learning is that both have a relationship wherein each competes with the other for the limited resources of the organization, and once resources have been allocated to one it is difficult to reallocate them to the other (March, 1991). Levinthal (1998) defined speciation as the adaptation of existing technology to new application areas. New technologies are created as new fields are increasingly exploited with existing technologies. In this paper, we set forth the second hypothesis in which organizations that have found new businesses through speciation further evolve the exploitation of existing resource know-how of the organization. In other words, behaviours to solve the social issue of employment of individuals with disabilities become an incentive for exploration in this paper, and we herein identify the process of permeation of new findings acquired through exploration, by the exploitation of existing resource know-how. The hypotheses are shown again below, and present the state of sustainable growth experienced by corporate organizations through the coexistence of exploration and exploitation.

Hypothesis 1: The social impact information of employment of individuals with disabilities provides an opportunity for speciation, and indicates the direction of speciation.

Hypothesis 2: Organizations that have found new businesses through speciation further evolve the exploitation through the existing resource know-how of the organization.

4. Research Method

Our case study focuses on Kokuyo Co., Ltd. to examine an organization in which the current stakeholders support exploitation. Kokuyo is a major Japanese corporation founded more than a century ago, and a leading Japanese manufacturer and seller of stationery products. Kokuyo has a well-established position in its industry and has advanced the employment of people with disabilities by meeting with like-minded organizations in this regard. Further, it has advanced in the field of agriculture, which is geographically isolated from its main business. We test our hypotheses by interviewing the president and management of Kokuyo’s agricultural subsidiary. Further, we investigate the establishment process of the agricultural business to explore whether the aforementioned speciation contributes to the coexistence of exploration and exploitation.

5. Case Studies

5.1 Kokuyo Co., Ltd.

Since its inception by Kuroda Zentaro as a manufacturer of Japanese-style account book covers in 1905, the Kokuyo Group has had its headquarters in Osaka's Higashinari Ward, with its primary entity being Kokuyo Co., Ltd. It is the top Japanese company in terms of the manufacture and sales of stationary, office furniture, and business equipment. Kokuyo's primary product is the “Campus” notepad, of which the company has shipped 2.7 billion in the 39 years since it began selling them in 1975 until 2014. Kokuyo employs 6,400 people, and as of the year ending December 2014 has on a consolidated basis racked up sales of 293.1 billion yen and an operating profit of 9.6 billion yen.

5.2 Heartland Co., Ltd.

Heartland Co., Ltd. is a special subsidiary of Kokuyo established in 2006. It is located in 2018 Hatashiro, in Osaka Prefecture's Sennan City; the company itself produces and sells hydroponic-grown vegetables. It’s farm encompasses 4,200 square meters, 2,920 of which are taken up by greenhouses. There are 19 employees, eight of whom have some sort of disability (six have a intellectual disability, two have psychological disabilities). The main product produced on the
farm is spinach for use in salads, which can be eaten raw. The farm produces the equivalent of 3,000 bags of spinach every day, which is then sold to large supermarkets, department stores, and cooperatives. The farm is operating in surplus, with sales of about 100 million yen per year.

5.3 Interview

Below are records of semi-structured interviews conducted with those involved with recent projects. Section 5.3.1 contains the responses to questions asked during an interview with the representative director and president of Heartland Co., Ltd., Mr. Hidehiko Kuroda. The interview was conducted from 3:00 to 5:00 P.M. on January 22, 2015 at a Heartland headquarters meeting room. Also in attendance was a general manager of the company, Mr. Sei Kihara. Section 5.3.2 notes the responses to questions asked during an interview with Mr. Michihiro Nakai, the former representative director and president of Heartland. That interview was conducted from 10:00 A.M. to 12:00 P.M. on February 28, 2015 in the lobby of the Station Hotel Kuwana in Chuo-cho, Kuwana City, Mie Prefecture.

5.3.1 Interview with CEO at Heartland Co.Ltd

Question 1: Timeline and background beginning with the company founding

In the 1940s, the printing machine used to make office products in the Kokuyo factory was very noisy, and the founder, Kuroda Zentaro, thought that workers could concentrate on their work better if they weren’t distracted by the noise. He proactively hired hearing-impaired individuals and promoted excellent employees to leadership roles. With 100 years having passed since the company was founded, the company had an opportunity to return to its founding spirit, namely to “actively strive to do even the most cumbersome and loathsome work in a manner that makes our customers happy”. It was in those circumstances that our previous president, Mr. Nakai, happened to meet Mr. Uji who was hiring persons with intellectual disabilities in Toyama and trying his hand at hydroponic farming. Our management all liked the idea of starting a hydroponic farm for those with intellectual disabilities as part of the Kokuyo Group, and that is how the company started. I became the second president of the company in 2010, following Mr. Nakai. At Kokuyo I was the head of marketing, and also worked on product strategy and product development. We currently have 11 people in the company with no disabilities, and 6 of those are seconded from Kokuyo. After becoming president I focused primarily on sales strategy and product development for salad spinach. Using the power of disabled individuals has been part of Kokuyo's business since the company’s founding, and I feel a deep significance in that work.

Question 2: Creating a Hydroponic Farming Process

We used some ingenuity to improve the effectiveness of the hydroponic farming process created by our previous president, and to match those processes to the intellectually disabled. Specifically, we began with washing hands, then automating packaging and washing, seedling terraces, implementation of the net method, and putting the shipping cases into grids. We also put all of that into a manual to make it visible. We used the manual creation know-how for processes that we have in the Kokuyo Group, so that anyone doing this work can help provide high quality produce to our customers. In addition, we tested the most efficient process for the best number of seeds per sheet to grow the produce in the most efficient way possible. As a result, we changed the number of seeds we plan by season. For product appeal, we implemented a process of cutting the roots when we harvest them to make the product more appealing and so we can sell them as produce edible as is. These process improvements were cultivated at Kokuyo, and we’ll continue to review them in the future.

Question 3: Marketing, product strategy, and development

We tried to discern what type of product will be most attractive to customers, and settled on salad spinach to anchor our product lineup. Spinach is high in vitamin C and carotene, and is good for your health. It’s easy to eat, though traditional spinach has a particular aftertaste that makes it difficult to eat raw. That aftertaste was removed from salad spinach by using the know-how of an equipment company in the farming process. We then sold the merits of the spinach to our customers. Likewise, when it came to sales we opened up unique sales channels in supermarkets and department stores by teaching cooking salad spinach
cooking methods in the stores, and promoting the product while also listening to our customers. We added further value by developing a soup that uses our vegetables, and are currently thinking about selling it to business professionals who lack vegetables in their diet. We started out by putting it in the Kokuyo headquarters employee cafeteria, and are now acquiring data on price settings. We'll then do product design, development, and creation of sales channels based on marketing, since we have employees who did that for stationery and office products while they were at Kokuyo.

5.3.2 Interview with former CEO at Heartland Co.Ltd

Question 1: Events leading up to hydroponic farming

After heading up the sales division with direct sales of office furniture to companies while at Kokuyo, I was appointed as the president of Kokuyo’s special subsidiary that employs those with hearing disabilities in the printing business. While in that role I was wondering what could be done to create jobs for those with intellectual disabilities. I thought about many types of business, but arrived at hydroponic farming, since the work is safe and has simple, repetitive work that doesn’t require highly technical skills. Meeting Mr. Uji, who had done hydroponic farming while employing those with intellectual disabilities in Toyama had a major impact. We created this company in 2006, and I became the first president, a position which I held until 2010.

Question 2: Events leading up to the approval for the establishment of Heartland within Kokuyo

In getting approval for this business, I remember having four separate discussions in Kokuyo management meetings. Based on the assumption that this would be viable as a business, we extensively discussed food safety in particular, which we at Kokuyo knew nothing about. I was able to get this business approved by making the board members understand the characteristics of hydroponic farming, which is very systematized.

Question 3: Struggles

We implemented the same system used by Mr. Uji for our process. In the beginning we weren’t able to get the quantities we had expected, but we made improvement after improvement, using ideas to make each process adapted to those with disabilities. We had the most trouble in finding places to sell into. In the beginning we farmed different kinds of vegetables, and tried to find market needs. We gradually narrowed our efforts down to salad spinach, which we felt had the highest potential for sales. Our sales targets were places like supermarkets, where we could leverage the direct sales experience I had developed at Kokuyo. We found key persons at each place, and gradually opened up those sales channels.

5.4 Device of process

Heartland follows a five-step process that takes their main product, salad spinach, from cultivation to harvest, then to shipment. These processes are seeding, raising seedlings, cultivating, harvesting, and shipment. Each process has been carefully designed in the following way to support those with disabilities.

1) Nutrient flow technique (cultivation process)

![Figure 3. Source: Heartland Co.Ltd Homepage](Image)

The NFT method creates spinach that fits in shallow cultivation beds, using hydroponic farming that recycles a growing solution and makes the work easier. The NFT method has the following three main characteristics.

- Since the growing solution is shallow, oxygen is sufficiently delivered to the roots, and makes cultivation easy and fast
- Beds are light in weight, so they are easily put in place where it is easy to work on
- Beds are shallow, so washing them is easy
2) Introduction of automated packaging equipment (shipping process)

![Image](57x659 to 141x719)

Figure 4. Source: Heartland Co.Ltd Homepage

When placing spinach to be shipped in cardboard boxes, there is a concern that workers might lose count. With that in mind, a system was put in place whereby grids were placed inside boxes, with one bag of spinach placed inside each grid. If all the grids are filled, then workers know they have the right count. Depending on the size of box, there may be 10, 20, 30 bags per box.

6. Considerations

This paper clarifies how a company that created a business that employs individuals with disabilities, normally thought to be bottlenecks, uses these individuals in their business and explores new businesses in an effort to achieve sustainable growth. In addition, the paper identifies how the company balances exploitation and exploration.

Kokuyo Group, a focus of our case study, is a company that began by printing covers for Japanese-style account books, and then expanded into peripheral areas such as stationery and office furniture. Their business ethic is to “actively strive to do even the most cumbersome and loathsome work in a manner that makes our customers happy”. Based on this, the company has a history of proactively using individuals with disabilities. Mr. Nakai, a former Kokuyo employee, encountered hydroponic farming that used individuals with intellectual disabilities. With the understanding of the Kokuyo management team that had a desire to return to the company’s founding spirit after more than 100 years, Mr. Nakai established Heartland, a special subsidiary with the purpose of employing those with intellectual disabilities. Heartland takes the jobs that others would not choose; in other words, they have created a solution to a social problem. Japanese companies have been slow to employ those with disabilities, and because many with intellectual disabilities are perceived as being severely handicapped, creating a system for them was seen by Kokuyo as being right in line with the company’s founding spirit. The social impact information regarding the company’s actions to solve a societal issue by employing those with disabilities took on the context of the company entering the hydroponic farming space. In other words, we can see that the seed of expanding into a new business in another field for Kokuyo was gained by exploration for which a new direction was indicated by the social impact information of hiring those with disabilities.

Heartland began doing hydroponic farming. In doing so, they improved processes to enable those with intellectual disabilities to continuously work, and also reviewed their product lineup as a strategy for achieving sustainable growth, and chose to focus on salad spinach, which sells at a high price. They then showed their customers new recipes using the salad spinach, and created a unique sales network of supermarkets, department stores, and other outlets. They recently developed a soup product, and are devising new business models. These process improvements, product development, and sales strategies all leverage abilities developed at Kokuyo. The seeds of a new business created by leveraging these abilities have blossomed.

Companies that achieve sustainable growth continually explore in order to withstand changes in business environment. The knowledge they acquire is permeated in that process, while continually leveraging existing technology as noted by Levinthal (1998). One incentive for exploration is social impact information. Companies determine a direction based on speciation caused by those activity impetus, and then leverage the newly acquired knowledge. In this cycle, companies balance exploitation and exploration. Figure 5 below shows exploration and exploitation in a business that has determined a direction with social impact information. In other words, a direction is moved from an existing business domain to a new business domain with social impact information as an activity impetus. Then the exploitation of that explored space is further advanced.
7. Conclusion

An analysis of these case studies validates our first hypothesis — that social impact information regarding the employment of individuals with disabilities provides an opportunity for organizational speciation, and the direction of that speciation — and our second hypothesis — that an organization finds new businesses through speciation will develop the exploitation of that business using the existing resource know-how of the organization. This paper elucidates the process of balancing exploration and exploitation of social impact information as an activity impetus for organizational speciation, and contributes to the discussion of how sustainable growth should be achieved in an organization. However, this study has limitations, in that our analysis is qualitative rather than quantitative. Additional cases should be analyzed to further validate our hypotheses.

Acknowledgements

We would like to thank Hidehiko Kuroda, Sho Kihara, Heartland Co Ltd., and Michihiro Nakai for their cooperation.

References