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A Study on Management Theory of Local Area Revitalization

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ABSTRACT: The purpose of this paper is to suggest new management theory for local area revitalization. We examined several management theories on management strategies, competitive strategies, cluster strategy, management environment, inter-organizational relations, etc. We interviewed several local business owners working in biomass businesses at Kochi prefecture in Japan in order to investigate changes over time of these businesses, organizations, stakeholders, and industrial structure. Existing management theories are able to be applied for the analysis of large scale enterprises and their management. This paper describes how we analyzed local business cases with existing management theory to evaluate the applicability of existing management theories. We suggest a useful management theory and effective methodology for local business and local revitalization.

KEYWORDS: Local Area Revitalization, Management Theory, Competitive Strategies

1. INTRODUCTION

The purpose of this paper is to suggest a new management theory for local area revitalization. We examined existing theory on management strategy, competitive strategy, cluster strategy, management environment, inter-organizational relations. We then interviewed several local business owners working in biomass businesses at Kochi prefecture in Japan in order to investigate changes over time of these businesses, organizations, stakeholders, and industrial structure.

Finally, after evaluating the applicability of existing management theories, we suggest a useful management theory and effective methodology for local business and local revitalization.

2. Case Studies of Local Area Businesses

2.1 Wooden Biomass Business using local Timber Resources

Soai Co., Ltd. (a consulting company in Kochi Prefecture) has been working in the biomass business using regional timber resources since 2005. Soai Co., Ltd. has cooperated with farmers in Geisei village (Kochi Prefecture) and Kochi University of Technology in the development of a special biomass boiler, which was named *Mokunen*. Following that, Soai Co, Ltd obtained a project subsidy from the Forestry Agency of Japan. The project expense load ratio was government subsidy 50%, Soai 35%, and Geisei Village 15%.

Soai consulted the local farmers during the development of the biomass boiler to pinpoint their specific needs. Stable fuel supply, fuel price, and the level of initial investment were all considered important by the farmers. In

addition, a support system was also deemed necessary. Fortunately, it proved possible to make the *Mokunen* boiler by modifying an existing boiler, helping to keep the farmer's initial investment low.

In November 2008, five farmers in Geisei village began operating a total of seven of these *Mokunen* boilers. Currently, using these boilers is effectively reducing the farmer's annual CO2 emissions by 300 tons. Since inception, the project has won several prizes. The project won the "Kochi Prefecture local industry grand prize" for 2008 fiscal year. In January 2009, it won the silver prize in the "Stop Global Warming - one village, one product nationwide rally 2009", which was sponsored by the Ministry of the Environment. In addition, Soai Co.,Ltd. won the "Kochi eco-industrial grand prize".

The number of *Mokunen* wood pellet boilers in use in Kochi prefecture had increased to 90 by 2010. As a result, the annual usage of wood pellet rose to about 2,500 tons. Consequently, the number of wood pellet factory factories in Kochi prefecture increased rapidly. There are now six pellet plants in the Kochi prefecture, which together supply about 6,000 tons annually.

However, the quality of these locally-produced pellets is not especially good, and there is no universal quality standard either. Farmers have trusted neither the quality nor the price of locally produced pellets, and have purchased pellet supplies from outside suppliers. As a result, an industrial cluster in this area has not been established.

An important stimulus for the formation of an industrial cluster is improvement of the performance efficiency of the biomass boiler. For this reason, Soai has tried to improve efficiency in cooperation with the farmers in Geisei village.

When the price of pellets is consistently lower than oil price, farmer's management revenues will be stable, and industrial clustering will be catalyzed.

Clearly, local small and mid-sized enterprises should try to compete with bigger companies. However, local enterprises often cannot compete against the bigger companies in other prefectures due to their greater capital strength. As a result, natural resources flow out of the prefecture. If local small and mid-sized enterprises are able to compete against bigger, outside enterprises through better technology and quality, industrial clustering in the locality will be steady, and the Geisei region can generate income. These are important business processes.

When a manager starts up a company in an urban area, the probability that the business will succeed is higher because a lot of potential cooperators exist. However, start-up businesses in rural areas often fail because resources for business are scarcer.

Necessary conditions for business success in this context are as follows:

- A stable number of regular customers (farmers) and a local pellet supplier.
- Stake holders cooperating mutually to form an industrial cluster.

2.2 Case study of sales of Ishigaki Island vegetables by agriculture commerce and industry cooperation

SEKISEI-SYOUKO is the biggest coral reef region in Japan, stretching from Iriomote-jima Island (Okinawa prefecture, Japan) to the west side of Ishigaki-jima Island. Recently, the coral reef in this region has been under serious threat,

due to a number of factors, including:

- infestation by Crown of Thorns' starfish,
- the rise in the ambient temperature of seawater,
- coral reef bleaching,
- drainage,
- red clay,
- nutritive salt deficiency

The Ministry of the Environment of Japan and the Sekisei-Shoko natural reproduction group has been protecting the coral reef since 2002. Moreover, WWF Japan established the Shiraho coral village in the Shiraho area of Ishigaki island in 2000. The Cyura Island Valley Area management and the Red Clay Outflow Control System Society also help to protect the coral reef.

However, more biological research for the maintenance and protection of Ishigaki-jima Island coral reef is needed. In addition, it is necessary to undertake engineering works and also measures to stop the red soil runoff from local cane fields. Finally, it is necessary to design a sustainable management system for the reef.

Therefore, in order to acquire the capital for reef maintenance and protection, we planned the SORA-NO-EKI (lit: 'sky station') project, in which we sold *shima-yasai* (lit: island vegetables) grown on Ishigaki Island directly to local airport users. These are usually grown only for purchase and consumption by island inhabitants.

The capital obtained by this project was assumed to be for coral reef maintenance. Many airport users are tourists, who come to Ishigaki-jima Island to enjoy the natural environment, including the coral reefs.

Tourists feel an obligation to cooperate in coral reef maintenance and regional redevelopment.

As stated, Shimayasai vegetables are not sold usually sold to tourists. However, if tourists from outside the island buy Shimayasai vegetables, farmer's incomes will increase.

As part of this project, we put an 'environmentally friendly' mark on all the vegetables that local farmers shipped. The purpose of this action was to unite all the parties concerned as to the greater purpose, which is to improve environmental awareness among local farmers and visiting tourists.

To date, the SORA-NO-EKI project has been successful, and we hope to continue its development. According to a trial calculation, the project could provide capital of millions of yen every year, which will have a significant economic impact on regional agriculture. A final bonus is that the SORA-NO-EKI project may provide some encouragement to the elderly population (*shima no oba*) on the island. It is also possible that similar projects could offer vitality in other Japanese provinces characterised by declining birthrate and a growing proportion of elderly people.

"Strong leadership" is necessary for revitalization of the local area. Durability is important for the regional management system.

3. Regional Business and management theory model's consideration

3.1 Origin of business administration and details of development

Before 1911, management theory centered on experience and intuition. Then, in 1911, Frederick Winslow Taylor published "The principle of scientific management". He laid the groundwork for modern organization and decision theory.

Following that, in 1912, Joseph Alois Schumpeter suggested that innovation by entrepreneurs was the core of economic theory and economic activity. He also pointed out that 'creative destruction' occurs when relating to the leadership of entrepreneur. Jule Henri Fayol wrote "Industry and general management" in 1916 which he proposed in concept similar to Taylor independently.

Many management theories target big companies that have already been established. At the beginning of the 20th century, for example, theory of rationality pursuit was developed for the maintenance of factory production systems. After World War II, Chester Bernard and Herbert Simon put forward the business administration theories of system pursuit of technical improvement to correspond to changing consumer needs.

In addition, Peter Drucker and the Alfred Chandler Jr put forward the business administration theories of condition pursuit to select the constitution of the management system. Igor Anzoff proposed the business administration theory of need for adaptability, emphasizing the management to changes in the situation.

A common theme of all these theories was "How is big enterprise in the United States controlled?" Also, in recent years, business administration theory has focused on how to rebuild big enterprise after an economic downturn.

(2) Venture business theory and regional business

Both big enterprise management theory and also venture business theory have been developed in Japan. Venture company theory is different in that it recognizes that management

during the preparation and foundation of a business are also important.

Hideichiro Nakamura: "Theory of Middle-sized Company", Toyo Keizai Shinpo-sha (1964)

In the summer of 1970, Mr. Chikao Tsukuda (head of the Ministry of International Trade and Industry Small and Medium Enterprise Agency Intelligence Section), Koji Hirao (assistant to the director of the Limited Survey Department, Long-Term Credit Bank of Japan), Mr. Tadao Kiyonari, and Mr. Hideichiro Nakamura established informed research group. Although the term has not been in the United States, the term "venture business" has been used by this society. Venture business is also a term used in Hideichiro Nakamura, Tadao Kiyonari and Koji Hirao: Venture business, Nihon Keizai Shimbun (1971). However, writing in 2004, Prof. Koichi Yanagi (Waseda University School of Management) pointed out that existing venture company theory targetted business in areas near to a big city, where resources for business are abundant. Business in underpopulated provinces, on the other hand, were not considered.

(3) Business creation in the provinces and theories of management strategy

With regard to academic research on local area revitalization, although there have been a lot of inquiries into the causes of rural impoverishment, useful research into the practice of the siting of regional businesses is actually quite scarce. In the case of regional businesses, business resources (material, human, monetary) are limited. Actually, when urban areas are compared with rural areas, business promotion potential is very different. Firstly, there are no local revitalization

specialists. Also, a standard methodology for local revitalization has not been established.

In the second section of this paper, a business administration model that is useful for the siting of regional businesses is considered.

Consideration of M. Porter's theories and regional business

In the 1980's, Professor Michael Porter (Harvard University) established the competing strategy theory. This theory of management strategy values both the positioning and the organizational ability. It values the influence that the outside environment of the enterprise has on enterprise management. The business area of its company is (reference by location) is important.

Michael Porter's main theories are 'The Five Forces' and 'Three Generic Strategies' and 'Cluster and Competition'.

(a) The Five Forces

The Five Forces is the most famous of Porter's theories. Porter said in his book

"The state of competition in an industry depends on five basic competitive forces, which are shown in Figure 1.

The five competitive forces -entry, threat of substitutions, bargaining power of buyers, bargaining power of suppliers, and rivalry among current competitors- reflect the fact that competition in an industry goes well beyond the established players.¹

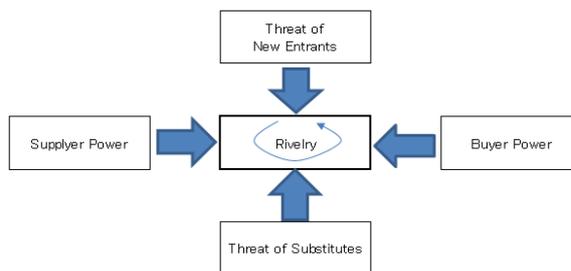


Figure1 Five Forces
Source: M.Poter: "Competitive Strategy: Techniques for Analyzing Industries and Competitors", free press,(1980)

To clarify the long-term benefits and potentials of an industry, the five forces that control competition in the industry are analyzed.

The Five Forces examines whether there are a customer needs from the marketing viewpoint. In addition to this, a method for research into an industry sector by which to judge whether a business concerned essentially makes a profit. It is a structural analysis methodology to examine whether the industrial profitability increases or decreases.

If the manager notes the Threat of the New Entrants and the Threat of the Substitute Products, this will influence the increase and decrease in the company's earnings in mid/long term.

In industries with low barriers to new entrants, own earnings do not rise in the mid/long term.

Porter states that the Threat of New Entrants be smaller in the following 7 scenarios [3].

- Economies of Scale
- Product Differentiation
- Capital Requirements
- Switching Costs
- Access to Distribution Channels
- Cost Disadvantages Independent of scale
- Government Policy²

¹ M.Poter: "Competitive Strategy: Techniques for Analyzing Industries and Competitors", pp.3-6,(1980)

² M.Poter: "Competitive Strategy: Techniques for Analyzing

“RIVALRY AMONG EXISTING COMPETITORS” is competition between the same trade company. This is connected directly with its company’s own earnings immediately. Porter states that competition will increase in the following 8 scenarios³.

- Numerous or Equally Balanced Competitors.
- Slow Industry Growth.
- High Fixed or Storage Costs.
- Lack of Differentiation or Switching Costs.
- Capacity Augmented in Large Increments.
- Diverse Competitors.
- High Strategic Stakes.
- High Fixed Barriers.

“PRESSURE FROM SUBSTITUTE PRODUCTS” grows when there are products with a high substitutability for which the problem of cost and performance have been solved. Examples are the landline and the cellular phone, and the cassette tape and CD. In reference, Porter says:

*“Substitute products that deserve the most attention are those that (1) are subject to trends improving their price-performance tradeoff with the industry’s product, or (2) are produced by industries earning high profits.”*⁴

The bargaining power of suppliers controls the price of in-house manufactured goods. If the bargaining power of customers is strong, the

buying cost influences the cost of the in-house product. As a result, its own earnings are affected. M.Porter set the following 5 conditions for a supplier group to become powerful⁵:

- It is dominated by a few companies and is more concentrated than the industry it sells to.
- Its product is unique or at least differentiated, or if it has built up switching costs.
- It is not obligated to contend with other products for sale to the industry.
- It poses a credible threat of integrating forward into the industry’s business.
- The industry is not an important customer of the supplier group.

M.Porter set the following 7 conditions for a buyer group to become powerful⁶:

- It is concentrated or purchases in large volumes.
- The products it purchases from the industry are standard or undifferentiated.
- The products it purchases from the industry from a component of its product and represent a significant fraction of its cost.
- It earns low profits, which create great incentive to lower its purchasing costs.
- The industry’s product is unimportant to the quality of the buyers’ products or services.
- The industry’s product does not save the buyer money.

Industries and Competitors”, pp.7-13,(1980)

³ M.Poter: ”Competitive Strategy: Techniques for Analyzing Industries and Competitors”, pp.17-20,(1980)

⁴ M.Poter: ”Competitive Strategy: Techniques for Analyzing Industries and Competitors”, p24,(1980)

⁵ M.Poter: ”On Competition”, Harvard Business Review Book Series,(1998)

⁶ M.Poter: ”On Competition”, Harvard Business Review Book Series,(1998)

- The buyers pose a credible threat of integrating backward to make the industry's product.

However, in the case of the most regional businesses in Japan, markets are small. Moreover, the population is gradually decreasing, and business opportunities are limited. In Porter's competing strategy theory assumes the existence of competitors, and a market, and is a theory of how it adjusts to the business environment. A model that doesn't make such assumptions is needed.

In Porter's theory a perfectly competitive market is required. It is a discussion in the situation in which the perfectly competitive market and the market have been approved to some degree.

However, regional business is different. For instance, there is no biomass market in Kochi Prefecture for the biomass of Kochi Prefecture. There are biomass markets elsewhere in Japan and world though it is not in Kochi Prefecture. When there is no ready-made market, initially new entrants must scramble for business.

(b) THREE GENETIC STRATEGIES

Porter states in his book *Competing Strategy* that

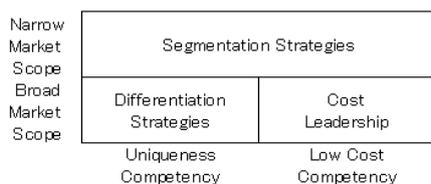


Figure 2 Porter Genetic Strategies

Source: Source: M.Poter: "Competitive Strategy: Techniques for Analyzing Industries and Competitors", Free press,(1980)

continue in the strategy position".⁷

The strategic management position is to identify it appropriate strategy without understanding the business its company is engaged in.

There are strong points and weaknesses in any enterprise.

He said, the dominant types for competition are "Cost leadership" and "Differentiation Strategies" to think about the strategy for competitiveness.

Three genetic strategies with a better than average success rate are the cost leadership strategy, the differentiation strategy, and the segmentation strategy.

1) Cost Leadership strategy

This is a strategy in which a company undercuts other companies. Using original technology, the raw material securing, the experience curve effect, and economy of scale, the total operating cost is reduced.

2) Differentiation strategy

This is a strategy in which a product or services with features that are better than competitors products are developed, and the brand established. It is a strategy in which the price of the commodity is kept high by quality assurance, guaranteed performance, and marketing techniques, etc. The differentiation strategy is a strategy of selling a commodity different from the other companies. To sell a different commodity is to create incomplete competition. To create incomplete competition is to have price control.

3) Segmentation strategy

"The dominant choice for a competitor is to

⁷ M.Poter: "Competitive Strategy: Techniques for Analyzing Industries and Competitors", p39,(1980)

The segmentation strategy is a strategy that focuses on target market segments such as specific regions and customers.

(There are two types of focus strategies. One is "Differentiation focus strategy" that differentiates in the target segment. The second is "Cost focus strategy" that aims at the cost leadership in the target segment.)

Soai is obviously in a state of oligopoly, due to its unique boiler technology. However, subsidies were necessary in the first stage of the business, for the reason that the manufacturing cost is high, and there is no market. In this context, the situation will change if another company manufactures a better or cheaper boiler. When succeeds in differentiation strategy overwhelms Soai, the state of the oligopoly of the market can be maintained.

For a regional business, it first is necessary to examine the differentiation strategy. If the differentiation strategy succeeds, the next step is to examine the cost leadership strategy. In a situation where there is no initial market, the cost leadership strategy is impossible. It is necessary to form an initial market. The cost leadership strategy only becomes possible in later stages of market growth.

(c) Industrial cluster strategy

M. Porter defines the cluster as follows in his book.

*"A cluster is a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities. The geographic scope of a cluster can range from a single city or state to a country or even a network of neighboring countries."*⁸

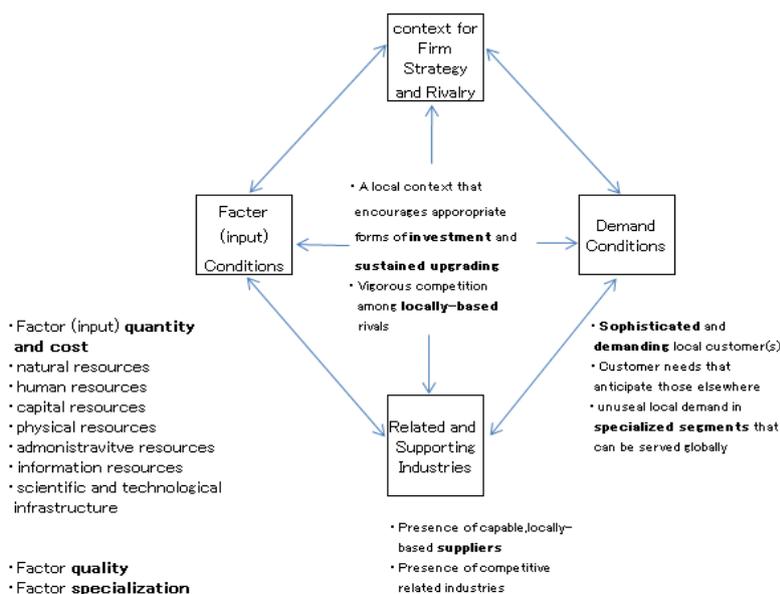


Figure 3 Sources of Local Competitive Advantage
Source: M. Porter: "On Competition", Harvard Business Review Book, p. 211 figure 7-4, (2008)

⁸ M. Porter: "On Competition", Harvard Business Review Book Series, p. 199, (1998)

Porter's concept recognizes that "location influences competition". Porter pointed out that it is important how an enterprise competes in the region because location has a big influence on productivity.

Second, it is to have to note four elements of diamond type framework to understand features of the business environment in regional location.

Porter's diamond type framework is shown as follows.

1) Factor (Input) Conditions are the necessary resources. It is a point whether these are maintained within the country. For example, natural resources, human resources, capital resources, physical infrastructure, information infrastructure⁹.

2) Demand Condition is existence of demand for a product and service. For example, sophisticated and demanding local customers, cluster needs that anticipate those elsewhere, unusual local demand in specialized segments that can be served globally¹⁰.

3) Context for Firm Strategy and Rivalry are organization and management situations of domestic enterprises.

4) Related and Supporting Industries are the relative industries and suppliers that have the competitive edge within the region.

Continuous innovation is necessary to improve productivity in the inter-enterprise competition considering the interaction of four elements in industrial cluster strategies.

In regional business, there is often no demand condition. Examples are the vegetable business and forestry business in Kochi. Why has the venture company Soai survived, and expanded? One reason is that in this context (Soai) the Venture Company has created a unique technology. However, when such a technology doesn't exist, some other explanation is necessary. For instance, to explain the regional domination of the *Tsumamono* [Leaf] business and *Yuzu* orange business.

There is no discussion in this cluster strategy either of situations in which there is no ready-made market. The cluster doesn't exist though the elementary conditions plentiful resource exist. Therefore, it is important for provinces to try and create a cluster. In addition to the creation of the cluster, it is important to stabilize the cluster. In most regional businesses, there is no ready-made market and no demand either. There is only an elementary condition if it says with the diamond frame. There is a demand condition and no relative industry and no supporting industry. Cluster design is necessary. It is necessary to think of creating demand at a constant level and the supply in the cluster design.

In urban areas, there are usually enough stimuli for the formation of an industrial cluster, even if neither relative industries nor supporting industries are present. If there are enough elements to form the cluster, stake holders will gather. By contrast, because a cluster cannot spontaneously form in the provinces, it is necessary to design one. The problem is then who designs the cluster.

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⁹ M.Poter: "On Competition", Harvard Business Review Book Series, p.211, (1998)

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