

Some Remarks on a Theoretical issue of the Spatiality of Knowledge and Information:

On the Basis of Experiences of Innovative SMEs Located in a Periphery of Japan*

Kenji YAMAMOTO**

Abstract : Place matters to knowledge creation according to the recent literature on economic geography and its related disciplines. This basic insight is not incorrect. But there is some vagueness in the discussions on this theme and there seems to appear a variety of geo-determinism on the competitiveness of SMEs in manufacturing industries. This paper reexamines that thinking on the basis of the realities of innovative manufacturing SMEs in a periphery of Japan, south of Kyushu Island. As a result, it is possible to classify face-to-face contacts into two kinds of communication. One is the communication, through which a supplier of a way of solution (knowledge) can grasp problems (information) of its customer in detail. The other is the communication, through which one can get some new idea. Information can spread world wide, but not always quickly and ubiquitously, because it often contains tacitness and secret, even if a large part of the information are coded in some form. Details of the information can be communicated only with the help of five senses. And it is necessary for the information receiver to listen to the sender carefully with the help of the other senses. In this meaning, tacitness does matter. Knowledge, namely ability to understand and power to bring some idea in practice, is always connected with some place, either at workshop of supplier or of customer in the case of manufacturing industries. However, not places but human beings possess the knowledge, and human beings can be mobile. Therefore, it is not restricted to a place.

Keywords : knowledge, information, spatiality, communication, place, SMEs, Japan

* This paper was presented at the 1st Korea-Japan Symposium of Economic Geography "Economic Geographies in the Knowledge Information Society", jointly organized by the Economic Geographical Society of Korea and the Japan Association of Economic Geographers on 17th, May 2008, at Cheongju University. Although the title of this paper is different from the one read at the symposium, the content is the same.

** Professor, Faculty of Economics, Kyushu University, Japan.

1. Introduction

The purpose of this paper is to reconsider a theoretical issue of spatiality of knowledge and information on the basis of my own interviews with some Japanese managers of small and medium-sized enterprises in manufacturing industries. Place matters to knowledge creation according to the recent literature on economic geography and its related disciplines. I agree to this basic insight. But there is some vagueness in the discussions on this theme and there seems to appear a variety of geo-determinism on the competitiveness of SMEs in manufacturing industries.

Maskell and Malmberg (1999a, 1999b, 2002), for example, use the both concepts “information” and “knowledge” to point out that localized learning is decisive for competitiveness of companies. They consider geographical proximity as an important factor for the transfer of tacit knowledge among the local firms. But later, they seem to have changed their thinking on the relationship between knowledge and geographical proximity in a paper co-written with Harald Bathelt (Bathelt et al 2004). They show not only the importance of thick flows of information within a local area (local buzz), but also the indispensability of global flows of information from some targeted counter partners located abroad (global pipeline), if a company will create new knowledge. Although I admit their recent thinking on the local buzz and global pipeline is useful to understand the relationship between knowledge creation and place, I think there is still some vagueness in their discussion, because they do not distinguish knowledge and

information clearly.

On the other hand, Florida (2002) argues that the existence of the creative class is decisive for economic growth of a region as well as of a city in the knowledge-based society. According to him, place matters to regional economic development, because the creative class or the talent, who can develop new technology for economic growth, are attracted to a place which is full of tolerance. The place of tolerance is not to be found in rural areas, but in metropolitan areas. While he mainly keeps service occupations such as scientists, engineers, architects, artists, musicians, designers and the other knowledge-based professionals of business, finance, law, health care, education etc. in his mind (Florida 2002: 8), I think the talent should not be restricted to these occupations. We can apply this concept to some occupations in manufacturing industries¹), and moreover not only to engineers in the high-tech but also to workers in the traditional metal working in Japan.

Japan has been successful for the leading manufacturing industries such as automobile and electronics in the last half century in spite of ups and downs of individual companies. We can attribute the Japan's strength in these manufacturing industries partly to the SMEs, especially since the 1980s. Many large-sized corporations had gradually entrusted the task of metal working to SMEs, and the latter has developed technologies and skills for the task independently from the former, rather in collaboration with machine tool manufacturers. In this sense, the workers or craftsmen and owners of SMEs in Japan are talented people, although many of them did visit neither universities nor polytechnics. And the most important

agglomerated area of such SMEs are found in Tokyo and Osaka within Japan. If one speaks about a local cluster of some manufacturing industries full of talented craftsmen in Japan, he or she refers either to Ota-ku in the Tokyo metropolitan area and to Higashi-Osaka city in the Osaka metropolitan area.

Discussions on the Industrial Cluster Plan promoted by the Ministry of Economy, Trade and Industry of Japan since 2001 have affinity with the thinking mentioned above. As well known, the concept of the industrial cluster stems from Porter (1990; 1998: 197-287). According to Porter (1998, p.199): "a cluster is a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities." This definition may be good as a working hypothesis. But it is very vague especially in his thinking on the geographical proximity, because he includes a very wide area across countries' border into the concept of geographical proximity. Nevertheless, the academic advisors for the METI's Industrial Cluster Plan overlook the vagueness of the Porter's thinking and simply attach the great importance to face-to-face contacts among companies, research institutes including universities, and governments and its related public organizations which support businesses (Ishikura et al 2003).

We should, however, ask if face-to-face contacts can be always useful for knowledge creation and if they can either occur or be conducted only in some locally or regionally restricted area. Exchanges across different industrial and business sectors in a locality were promoted in the 1980s and the 1990s under the so-called Technopolis program in Japan. There were surely some

successful cases, but people say that most of those exchanges were not fruitful for a new business or knowledge creation. I would like to reexamine the meaning of face-to-face contacts and the relationship between place and knowledge creation by means of shedding light on the realities of innovative SMEs located not in a geographical industrial cluster but isolated in a periphery of Japan.

2. Reverse Irradiation to a Theoretical Issue from Experiences of Innovative SMEs Located in a Periphery of Japan

Whether an enterprise is large or whether it is small and medium-sized, it may well be the most important issue how it can get and maintain its own competitiveness. Because SMEs do not usually have all the resources for competitiveness in-house, it often has to depend on the cooperation with the other companies. The nearer they are located with each other in a geographical space, the more chance they can find a suitable collaborator. Therefore it is important for SMEs to be located in a regional and local industrial cluster, especially in a metropolitan area. We can think so theoretically.

It is, however, possible for a SME to get competitiveness in fact, even if it is not located in a local and regional cluster. I would like to illustrate this and reexamine a theoretical issue of the industrial cluster of SMEs. For this purpose, the METI and the Small and Medium-sized Enterprise Agency (2006) is useful. This book introduces 300

manufacturing SMEs, which are innovative and outstanding in comparison with many other SMEs. These companies have been the most active and incomparable in a region concerned as well as in Japan as a whole. They were awarded in 2006 for the contribution to the Japanese economy by the SMEs Agency of the METI.

Many of them are located either in metropolitan areas (66 SMEs in the Tokyo metropolitan area, 28 in the Nagoya metropolitan area, and 46 in the Osaka-Kyoto-Kobe metropolitan area) and the other industrial cities. But we can find such vigorous companies also in rural areas isolated from the metropolitan areas. In Kyushu, there are only 28 companies which were awarded by the SMEs Agency. Especially in the southern part of this island, there are only a few awarded companies. Nevertheless, there are some very competitive companies in this periphery. The following description about each company stems from my own interview with the manager or the president of each company in 2006.

1) Case of Fujita Works, Co. Ltd.

This company was established in 1990 by the present president. It is engaged in sheet metal working. The number of employees is 100 and the turnout amounted to about 1500 million Yen in 2005. If we convert one US \$ into 120 Japanese Yen, it is comparable to 12.5 million US \$.

It is located in an industrial estate constructed by the Kagoshima prefectural government in the early 1990s. It is about 50 km northeastward away from the prefectural capital city, Kagoshima. Thirteen companies are now located in this industrial estate.

But Fujita Works does not have any relation with the neighboring companies. Its main customers are located far away. It takes more than 2.5 hours by truck in order to deliver its product to its main customers. One of them is a large corporation specialized in manufacturing of machine system for producing semiconductors, and the other is a large chemical corporation. Fujita Works processes stainless steel, titan, nickel and so on with high precision. It is difficult to process such metal with high precision. Besides Fujita Works, there may be no companies with such capability in Kyushu. How could it get this capability?

It is attributable to the active behavior of the president of this company. Soon after he succeeded a small workshop from his father at a small town in Miyazaki as he was mid 20 years old, he bought a very expensive machine tool for sheet metal working. In order to pay back his debt, he had to work from early morning to the night. It was difficult to do so in his hometown because of the noise against neighboring residential area. Therefore, he relocated his factory to the newly constructed industrial estate in Kagoshima in 1991 and established his own company. After the relocation, he bought a very expensive machine tool for sheet metal working from Trumpf, a famous German company, in 1996. But it did not work so well as he expected at first, because a lot of dew stuck inside the machine. The machine tool made in Germany was not adapted to the humid climate in Japan.

He went to Germany with a manager of the sales representative of Trumpf in Japan in order to request to improve the machine so as to adapt the precision level of the machine to the Japanese humid climate. This behavior is abnormal, because

Fujita Works is a nameless small company, while Trumpf is a well-known established corporation in the world. Nevertheless, Trumpf responded to the request and Fujita Works could work sheet metal much more precisely than before and its business became more and more successful.

Therefore it bought a second and a third machine from Trumpf. All these machines were produced in response to the specific request from Fujita Works. This relationship between Fujita Works and Trumpf is established not by means of arms-length transaction, but through voice in the sense of Hirschmann (1970). Trumpf may benefit from the specific request of Fujita Works, because it can develop machine tools adapted for humid climate in Southeast Asian countries. Therefore, Trumpf awarded Fujita Works with golden customer prize in 2002.

Fujita Works itself also benefit from the voice of its customers. Their number amounts now to about 60. Each customer has its own need for metal sheet. The customer gives Fujita Works a design for the sheet metal working. But it is not impossible to draw all the details, which the customer wants, into the design. And it is generally impossible to understand all the details of the customer's need only from the drawn design. Therefore, face-to-face-contacts are necessary for Fujita Works to communicate with the engineer in charge at the customer. In order to quickly respond to specific needs of each customer, several divisions have been set up and the chief of each division is responsible for the division's own customers, although Fujita Works is a medium-sized company with 100 employees. The chief of each division often visits its customers and the customers also come to Fujita Works. Through

these face-to-face contacts, Fujita Works can process so precise sheet metal just as its customer needs.

2) Case of Elm Co. Ltd.

The company Elm was established in 1980 by the present president. The number of employees is 38 and the turnout amounted to more than 1000 million Yen (8 million US \$) in 2005. It is engaged in development of various machines and apparatus from agricultural ones to some machine related with ICT branch. It is located 50km southwestward from Kagoshima, in the middle of a vast rural area. Because there is no freeway in this area, it takes more than two hours by car to reach the company Elm from the prefectural capital city.

The president studied electronics at a technical university in Osaka and worked several years at an electric machine company in the same city. He, however, wanted to live in his hometown and came back to establish a small workshop to subcontract from a subsidiary of Matsushita electronics, which was and is located at a town, about 30 km northward from his hometown. Matsushita electronics and its subsidiary in Kagoshima got a license to produce luminous diode from Philips. But Philips did not inform them about all the details of machines and apparatus for producing the luminous diode. Therefore, Matsushita electronics and its subsidiary had to devise their own apparatus partly. The subsidiary had its own right of procurement within the Matsushita group. And Elm could get an order of a specific apparatus for producing and checking (inspection) of the luminous diode directly from the subsidiary. An inspection apparatus for plasma

TV set for Matsushita is also a product of Elm nowadays.

Besides the transaction with Matsushita Electronics, Elm has developed a number of various machines such as agricultural machine, software for transform from Roman letter to Japanese letter for the personal computer, satellite image monitor screen and so on. Above all, a machine to repair CD and DVD has brought rapid increase of turnover and profit to Elm. If CD and DVD are injured, one can repair them with the machine effectively and efficiently. There had been already another repairing machine in the market. It costs only 70 thousand Yen (lower than 600 US \$). On the other hand, Elm's machine is much more expensive than that. It costs 1500 thousand Yen (12,500 US\$) for a completely automatic, 750 thousand Yen (6250 US\$) for a semiautomatic and 300 thousand Yen (2500 US\$) for a hand-powered. But Elm's product is much more efficient, because one can repair fifty CD simultaneously and one CD more than 10 times with the machine, while one can repair only several CD simultaneously and one CD only three times with the machines of the other companies.

Elm has now more than 90 per cent of the world market with its own brand in the repair machine of CD and DVD. It developed this machine, because a person in Fukuoka came to Elm and asked to develop a better machine to repair CD. He had not been satisfied with the machine which had spread at those days. He had heard somewhere the name of Elm as a company with capability of invention and solution. The president of Elm received his request and solved the problem for him.

Recently, Elm developed a machine for cleaning of CD and DVD for rental video shops. Customers

for rental video shops want to rent and use a clean CD or DVD. There is already such a cleaner machine for CD made by another company. But it is hand-used and can bring about a defective service as one per cent probability. On the contrary, Elm's product is an automated machine and the ratio of defective is much lower. Therefore, more custom-conscious shops must introduce the product of Elm.

It is interesting that Elm gets profit not from the machine itself but from consumable articles in the machine such as liquid washing. How much liquid washing is to be used for one cleaning of CD is controlled by a microelectronic chip. In other words, rental video shops must buy liquid washing periodically. The chip is also a consumable article, because it does not work after a limited number of cleaning. Therefore, rental video shops must buy the chip periodically as well. Elm adds some device to the chips, so that it is impossible for the others to imitate the chip. Anyway this is a typical business model to get profit steadily from consumable articles.

The president regards connection with others as very important for invention, because he can perceive social needs from discussions with other people. But he also emphasizes idea born by accident. However, mere accident does not help. A number of accidents have to be accumulated, and from this accumulation of accidents he can get some idea for invention suddenly. Curiosity plays an important role to extract some idea from accidents. And conversations with persons of high quality are important for the rouse of curiosity.

Elm is a so-called virtual manufacturing company. That means, it develops a product, sources out manufacturing activity to the other

companies, and inspects the product by itself. In brief, Elm is a fabless or virtual manufacture. Subcontractors are not always located near Elm. It is not possible for Elm to find a suitable subcontractor in its nearness.

3) Case of Fuchigami Micro, Co. Ltd.

Fuchigami Micro was established in 1979 by the former president. The number of employees is 200 and the turnout amounted to about 3,500 million Yen in 2005. It is engaged mainly in manufacturing of photo mask and photochemical etching for semiconductors. The photo mask is used for integrated circuits required for liquid crystal display, plasma display and so on, and photochemical etching is applied to suspension for hard disc driver and others.

Fuchigami Micro developed from a printing company in Kagoshima. Nowadays its headquarters and a part of production function are located in the site of the printing company. But its main and modern factory is located in the mountainous rural area, 30 km southward away from Kagoshima.

It is easy for a printing company to produce photo mask, because its technology is as same as printing. There are a number of printing companies in Kagoshima, but only the former president of this company thought and decided to enter into this field. He worked at a company engaged in semiconductor field in Osaka and possessed knowledge of photo mask. He came to Kagoshima, because his wife was a daughter of the owner of the printing company and the owner asked him to manage the printing company. At those days, Kyocera Corporation, one of large

companies in the field of the microelectronic technology in Japan, had a factory, which is located at a small town about 40 km northeastward away from Kagoshima city. The former president of Fuchigami tried to get subcontract from Kyocera and it became successful in the mid 1970s.

It is possible for this company to produce photo mask with the precision level of $2\mu(\text{micron}) \times 2\mu$. There is no company that can produce such a precise photo mask as Fuchigami, at least in Kyushu. The market share of Fuchigami in the field of specific photo mask amounts to twenty per cent in the world. The competence stems from its capability to improve the material of photo mask which is supplied by a large corporation. That is made from quartz glass and chrome. The present president must have contributed to this capability, because he joined the company after his study of chemistry at the Kagoshima University.

The product of Fuchigami is applied to an inkjet printer of the largest manufacturing company in this field. There are only two companies in Japan that can produce a micro component for an inkjet printer, and the other company is the largest corporation in the printing industry in Japan. It may be a rare case that a medium-sized company located in a periphery of Japan possesses such a strong capability.

Fuchigami produces also automation machine for the manufacturing of electronics field, and sells it to famous big corporations. The automation machine is developed in the engineering division of Fuchigami. This division originated from another company located in Kagoshima. Fuchigami had invested into this company and merged it later.

According to the present president, the first base of the technological development of Fuchigami is

attributable to the severe cost demand of its first customer, Kyocera. But the second customer is more important for the technological development. It is a subsidiary of a famous electronics corporation and located 60 km northwestward away from Kagoshima city as the crow flies. In fact, there may be more than 100 km and it may take more than two hours. This company helped Fuchigami to introduce CAD system and instructed how to use this system. Formerly, the subsidiary of the large corporation procured photo masks from a larger company located in Tokyo. But it was not satisfied with the work of the larger company. The subsidiary might intend to let the larger company and Fuchigami compete with each other in order to procure better and cheaper photo masks.

Fuchigami had an experience to supply the subsidiary with bad component. But the latter did not stop the transaction with Fuchigami at once. On the contrary, it gave Fuchigami one more chance and it imposed a severer task on Fuchigami. That means training up to perform good practice. As a result of longer training, Fuchigami could perform better work in respect of cost, quality and delivery time than its competitor in Tokyo. The reputation of Fuchigami gradually spread to the whole concern of the large corporation, and more and more demand came, not only from the group companies of the large customer, but also from the other large corporations. Once the trust has been established, then the number of customers has become multiplied.

Fuchigami tries now to produce its own brand, using its technology of photochemical etching. It is a new device, with which the heat in the semiconductor can be smoothly and effectively

spread around. The development of the new brand is already completed by the first half of 2006 with the collaboration of the Kagoshima University. This university, however, merely conducted simulation or testing of the new device, so that the development of the device in itself is attributed only to Fuchigami. Therefore, the patent of the brand is in hand of Fuchigami alone. The METI gave support Fuchigami financially. It amounted to 44 million Yen.

The president of this company thinks it important to raise some idea on the basis of the experiences of the company. In this sense, the path dependency is the case for this company. However, he considers it important to cooperate with the other company as well. Dialogue and communication with the other companies is a key to innovate something. If he or the other sales engineers of Fuchigami show the attitude of readiness to solve problems of customers, the latter openly talk about the problems in detail to Fuchigami. For this communication, it is important to have face-to-face contacts. Of course, trust is prerequisite for such a consultation. In this sense, voice with face-to-face contacts plays an important role of the communication with both existing and new customers.

3. Concluding Remarks on a Theoretical Issue on the Spatiality of Knowledge and Information

Scholars on the theme of geography of knowledge and information tend to think that

information is important for knowledge creation and this information is acquired more effectively in a metropolitan area and a regional industrial cluster through face-to-face contacts. This thinking may not be incorrect. But it is necessary to think what kind of information and what kind of face-to-face contacts are important for what kind of knowledge creation.

We should classify face-to-face contacts into two kinds of communication. One is the communication, through which a supplier or a proposer of a way of solution can grasp problems of his/her customer in detail. The other type of face-to-face contacts is communication, through which one can get some new idea.

The object of the first type of face-to-face contacts is not to merely get various and a lot of information, at least for SMEs in manufacturing industries in Japan. It is necessary for Fujita Works and Fuchigami to make face-to-face-contacts with customers in order to grasp their problems and needs exactly. They can do so with their customers, because they have constructed trust with them. This trust is not embedded in a locality²⁾, but stems either from the past experience of common success or from reputation.

Reputation or a kind of information can be spread in a country, and even in the world. It may be, however, different between final goods producers and component producers. Mass media play an important role for the first. On the other hand, for the latter, the reputation diffuses rather by word of mouth only within a limited circle. This is the case for most of SMEs in Japan. It is sure that the reputation can spread much more quickly and much easier in a local and regional cluster than far away. And the place name of an eminent cluster

can bring about SMEs more benefit than the place name of a periphery. But reputation can be firmly recognized, if the sender of this information and the receiver trust each other. Once trust has been created, it is not difficult to communicate with each other, even if they are located far away. Moreover, potential customers appear from far away through the diffusion of the reputation. This is exemplified in ELM and Fuchigami.

In any case, the very important information for a supplier and its customer can spread neither quickly nor world wide, because it often contains tacitness and secret, even if a large part of the information are coded in some form. Details of the information can be communicated only with the help of five senses, namely through senses of sight, hearing, smell, taste and touch. And it is necessary for the information receiver to listen to the sender carefully. In this meaning, tacitness does matter. But this tacitness is not embedded in a locality, but shared between the information sender and receiver with each other on the spot of the face-to-face contacts. And the persons concerned can be mobile to the spot. Geographical distance does not always hinder the contacts.

It is not necessary for a SME to be always located near to its customer. An employee or the owner of the SME can travel to the customer, and the travel and transportation costs can be covered, if the solution or new knowledge the SME proposes brings about some source of the rent to the customer. This knowledge is created on the workshop of the solution supplier, thus in a place. If this knowledge contains some tacitness and secret, it can be transferred only through face-to-face contacts, namely on the spot of customer's workshop, to which the solution supplier can

travel.

The second type of face-to-face contacts is illustrated by the behavior of the president of Elm. He also thinks that face-to-face contacts are important for his activity. But the reason is different than ones for the other two companies. He thinks that face-to-face-contacts are effective in stumbling on a new idea. It might be better if he were either in a metropolitan area or in some regional industrial cluster. He, however, considers it unnecessary to be so. Rather he attaches more importance to face-to-face contacts with high-quality persons, even if the frequency of contacts is low and his counterparts live far away from his hometown. Geographical distance does not obstruct face-to-face contacts for him as well as for Fujita Works and Fuchigami.

The second type of face-to-face contacts does not always require mutual trust in advance. But mere face-to-face contacts do not help to get a new idea. It is much more important to communicate with persons of high quality and to think out the new idea reflectively after the contact. That means that different information, different view, different way of thinking than his/her own are important for knowledge creation. If a local and regional industrial cluster is featured with a single color, it is difficult to have such face-to-face contacts.

Before some idea flashes on an entrepreneur, he/she has to have accumulated various information. Some kind of information can be acquired through mass media and internet. It does not be restricted to some place. There is, however, another kind of information which one can get only through face-to-face contacts with persons of high-quality thinking, with whom one does not

always need to have trust in advance. This type of face-to-face contacts may be restricted to some place, either where either information sender or taker resides, or where the both can meet with each other. Anyway, the information exchanged between them is not yet knowledge. Knowledge is ability to understand new information, and power to put some idea into practice. These ability and power are not embedded in place or locality, but in a body including brain of the entrepreneur.

Of course, there are places advantageous to foster the ability and power. Metropolitan areas are more favorable than rural areas without doubt. But we should not fall into fatalism or geodeterminism. There are possibilities for human beings, and this possibility can be realized either on some locality they live or on another locality to which they can travel. Economic geographer should always think the two possibilities. Because of the development of transportation technologies, it is now possible to realize frequent face-to-face contacts, even if the actors concerned are located far away from each other. Therefore, companies can transact business with other companies located outside of their hometown and home region, what is partially possible through the telecommunication technologies. On the other hand, it is not always easy for an actor to make acquaintance of the other actors in his/her local area, if there are a very large number of actors in the area. Spatial proximity is not a necessary condition for the exchange among companies, but only provides possibility of encounter of themselves with each other.

Notes

- 1) Although Florida (2002, 8) also includes workers in a factory into the creative class, if they really work creatively as his father Florida (2002, 38-39), we must recognize that his analysis focuses on the professionals mainly in the service industries.
- 2) But it might be misleading, if one would think that regional and local industrial clusters do not matter for the competitiveness of SMEs. If trust and social capital is embedded in the cluster, SMEs located there have chances to collaborate with each other, and have a chance to make a collaborative undertaking successful. Then the trust will be strengthened (Yamamoto, 2006). Social capital is usually accumulated in a local area or a region, with which the local people and companies feel strong identity. It is not a simple function of geographical distance. But identity surely correlates with local and regional history. Because this point is beyond the theme of this paper, I do not discuss the relation between the local industrial cluster and social capital.

References

- Bathelt, H., A. Malmberg and P. Maskell, 2004, Clusters and knowledge: Local buzz, global pipelines and the process of knowledge creation. *Progress in Human Geography*, 28, pp.31-56.
- Florida, R., 2004, *The Rise of the Creative Class*. Paperback edition. New York: Basic Books.
- Hirschman, A. O., 1970, *Exit, Voice and Loyalty. Responses to Decline in Firms, Organizations and States*, Cambridge: Harvard University Press.
- Ishikura, Y., M. Fujita, N. Maeda, K. Kanai and A. Yamasaki, 2003, *Nihon no Sangyo Kurasutaa Senryaku - Chiiki ni okeru Kyouso Yuui no Kakuritsu (Strategy for Cluster Initiatives in Japan - Establishment of the Competitive Advantage in Regions)*. Tokyo: Yuuhikaku, (in Japanese).
- Maskell P. and A. Malmberg, 1999a, The competitiveness of firms and regions. 'Ubiquitification' and the importance of localized learning, *European Urban and Regional Studies* 6, pp.9-25.
- Maskell P. and A. Malmberg, 1999b, Localized learning and industrial competitiveness, *Cambridge Journal of Economics* 23, pp.167-185.
- Maskell P. and A. Malmberg, 2002, The elusive concept of localization economies: Towards a knowledge-based theory of spatial clustering, *Environment and Planning A* 34, pp.429-449.
- METI and the Small and Medium-sized Enterprise Agency, 2006, *Asu no Nihon o sasaeru genkina mono-zukuri chuusho kigyo 300 sha (300 Vigorous SMEs supporting the future of Japan)*, Tokyo.
- Porter, M. E., 1990, *Competitive Advantage of Nations*. The Free Press: New York.
- Porter, M. E., 1998, Clusters and competition: New agenda for companies, governments, and institutions, M. E. Porter, *On Competition*, Harvard Business School Publishing: Boston, pp.197-287.
- Yamamoto, K., 2006, The industrial cluster plan of the Japanese government and the realities of regional economies in Japan, *Raumforschung und Raumordnung* 64 Jg, Heft 1, S.28-40.
- 交信：山本健児, 812-8581, 福岡市東区箱崎 6-19-1, 九州大學經濟學研究院(電話：+81-92-642-2464, Fax: +81-92-642-2349, イ-メ-ル: kenji@en.kyushu-u.ac.jp)
- Correspondence: Kenji YAMAMOTO, Faculty of Economics, Kyushu Univ., Hakozaki 6-19-1, Higashi-ku, Fukuoka 812-8581(phon: +81-92-642-2464, Fax.: +81-92-642-2349, e-mail: kenji@en.kyushu-u.ac.jp)

최초투고일 2008년 9월 1일
최종접수일 2008년 9월 15일

韓國經濟地理學會誌 第11卷 第3号 2008(350~361)

知識と情報の空間性の理論的問題に関する覺書

－日本の周縁的地域に立地するイノベーターな中小企業の經驗をもとに－

山本健兒*

日本語抄録

經濟地理学及び関連分野の近年の文献によれば、知識創造にとって場所は重要である。この基本的認識は間違っていない。しかし、このテーマに関する議論にはある種の曖昧さがあるし、製造業における中小企業の競争力に関して一種の地理的決定論が表れつつあるように思われる。本稿は日本の周縁的地域である九州南部に立地するイノベーターな中小企業の実態に基づいて、そうした考え方を再検討しようとするものである。本稿の結論は、対面接触を2つのコミュニケーションの類型に分類することが可能だということにある。ひとつは、ある解決方法（知識）を提供する企業が、顧客の抱えている問題（情報）を詳細に把握することを可能にするためのコミュニケーションである。もうひとつは、なんらかの新しいアイデアを思いつくことを可能にするためのコミュニケーションである。情報は世界規模で拡散しうるが、必ずしも瞬時に伝わり、いたるところに拡散するというわけではない。なぜならば、情報は、たとえその大部分がコード化されていたとしても、暗黙性を内包しているし、秘匿されることがあるからである。情報の詳細は、五感の助けを得て初めて伝達されうるものである。情報の受け手にとって、その送り手が語ろうとするものを、聴覚以外の他の感覚の助けを得て、注意深く聴こうとすることが重要である。この意味において、暗黙性は重要である。他方、知識、すなわち他者の語ろうとするものを理解する力や、なんらかのアイデアを実践する力は、製造業の場合、サプライヤーあるいは顧客の作業場という場所と関係しているのが常である。しかしながら、知識を所有しているのは場所ではなく、人間である。そして人間は移動することができる存在である。それゆえ、知識は一つの場所に限定されるものではない。

主要語

知識、情報、空間性、コミュニケーション、場所、中小企業、日本

*九州大学大学院 經濟學研究院, 教授