The concept, form and mechanism transfer of knowledge in peri-urban areas in Indonesia

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Abstract. Knowledge can encourage local economic development today. But the ability to adapt to the use of information technology that is able to drive knowledge transfer, innovation and productivity of the region differs between the urban and peri-urban areas. This causes the competitiveness of the suburbs to be low. This study aims to determine the concept of forms and mechanisms of dissemination of information and information dissemination in peri-urban areas in Indonesia.

Keyword: transfer of knowledge, peri-urban areas, form

1. Introduction
Regional competitiveness is important to develop so that regions are able to compete locally and regionally. According to Abdullah [1] regional competitiveness is influenced by regional economic conditions; openness; financial system; infrastructure and natural resources; science and technology; human Resources; institutional; government policy as well as management and microeconomics. The role of knowledge transfer becomes important in improving regional competitiveness. Knowledge is able to encourage the growth of the regional economy. But the ability to adapt to the use of information technology that is capable of driving knowledge transfer, innovation and productivity differs between urban and peri-urban areas. This causes the competitiveness of the suburbs to be lower. Cluster approach is felt very suitable to be developed in order to accelerate knowledge transfer in peri-urban area in order to improve regional competitiveness. Thus, in recent decades the cluster model has become significant to be studied and studied in the context of local economic development as an effort to increase the competitiveness of the region [10]. It is also related to the employment aspect in terms of its effect on the worker, because it is able to show the result that there is better repair of wages in the clustered industry [12]. Furthermore, many studies focus the research on the process of knowledge transfer and innovation that occurred in the cluster [3,8,7,11]. Knowledge is needed in order to create innovation, so between them there is a close relationship. Sharing knowledge can encourage innovation to increase local productivity and local competitiveness [19]. This study aims to find a concept of the form and mechanism of information and knowledge dissemination channel in peri-urban areas in Indonesia so that it can be used as consideration in the development of peri-urban areas.
2. Definition and Process of Knowledge Created

Knowledge is data and information combined with the ability, intuition, experience, ideas, motivation from a competent source. An organization though the tiniest must have a knowledge asset. In further detail, there are two types of knowledge as follows [21]:

A. Tacit knowledge is knowledge that mostly resides within an organization. Tacit knowledge is something we know and experience, but it is difficult to express clearly and completely. Tacit knowledge is very difficult to transfer to others, because the knowledge is stored in the individual mind (brain) of individuals within the organization in accordance with its competence.

B. Explicit knowledge is the knowledge and experience of 'how to', which is described in a straightforward and systematic way. A concrete example, a manual for the operation of a machine or an explanation given by an instructor in a training program. Thus, organizations need to be skilled in transferring tacit knowledge to explicit knowledge and returning to tacit that can drive innovation and new product development. Described Setiarso [26], that the process of creation of knowledge organization occurs because of the interaction (conversion) between tacit knowledge and explicit knowledge, through the process of socialization, externalization, combination, and internalization. Nonaka and Takeuchi [22] explain that socialization is sharing and creating tacit knowledge through direct experience; externalization articulates silent knowledge through dialogue and reflection; a combination of systematization and application of explicit knowledge and information while internalizing learning and acquiring new tacit knowledge in practice. The concept of knowledge creation is better known as SECI model (Socialization, Externalization, Combination, Internalization).

![Figure 1. Knowledge SECI Process](source: [22])

3. Model Transfer Knowledge

Jacobson [16] explains that the process at the individual level is the key point that determines the success of knowledge transfer. Jacobson offers a knowledge transfer model adapted from Shannon Weaver and Barlo's communication process model. The models offered by Jacobson are as follows:
There are six main factors that need to be considered in understanding the transfer of knowledge. These factors include the following:

- **The Knowledge Sources** of individuals who have knowledge and transfer that knowledge to others. There are three characteristics of the source of knowledge, that is:
  - The flow of knowledge between individuals associated with the value, then the owner of knowledge is considered more valuable than those who do not have.
  - The credibility of the source of knowledge, it relates to a person's competence to share his knowledge.
  - Motivation from the source of knowledge to be willing to share because those who have knowledge usually have a greater status of power in the organization.

- **Messages.** In this context Jacobson sees that what kind of knowledge and knowledge range will be shared within the organization.

- **Receiver.** In the process of sharing knowledge, its effectiveness depends on the motivation and absorbing capacity of the recipient of knowledge. More motivation on understanding using knowledge from other sources. While the capacity to absorb new knowledge is how knowledge can be combined with the knowledge they have.

- **Channel** or how knowledge is communicated. There are a number of channels that can be used for the transfer of knowledge from face to face meetings, until using the path of information technology (internet, email, discussion forums, to knowledge transfer portals). This communication channel can be formal and non-formal.

- **Feed Back.** Transfer of knowledge can be seen if there is a verbal or non-verbal response from the knowledge recipient indicating the recipient understands the received message.

- **Culture.** A culture that is reflected in organizational values, norms, and practiced in the day-to-day activities of an organization. There are four aspects that can be seen how culture can affect knowledge transfer, that is:
  - The size of cultural assumptions that see knowledge as important
  - Culture mediates among individual, group, and organizational knowledge
  - Culture creates organizational context in social interaction.
  - Culture impacts on the creation and adoption of new knowledge.

Another important thing to note is the trust factor that is an effort to appreciate the source of knowledge or the owner of the idea. With the element of trust is expected to occur a dynamic relationship between the giver and the recipient of the message. So the process of knowledge transfer goes well and there is knowledge sharing that will foster innovation and increase productivity.
4. Cluster Approach

Starting from the concept of industrial district first introduced by Alfred Marshall (1890) which is an agglomerated human and corporate activity in a geographic social area [2]. The important point of the industrial district is the localized external economy. This will be achieved if similar firms are agglomerated within a certain geographical boundary. So many benefits that will be obtained mainly from the economic side that is the use of facilities and infrastructure are done together. In addition, this geographical proximity causes the process of transfer and sharing of knowledge among stakeholders in the industrial district becomes more evenly distributed. This transfer and sharing of knowledge will encourage the emergence of innovation and productivity between companies and organizations within industry district. So that an industrial district represents the relationship between the economy and the involvement of local communities in every process of the economy in this case the industrial process [4]. The next development is the emergence of the term cluster by [23]. The difference with the theory of marshallian industrial district is the focus of their concept. Where the Marshallian industrial district is more emphasis on the importance of geographically bound companies and communities while as Porterian clusters emphasize more on the functional linkages between firms and supporting institutions. The more clusters that are the areas of agglomeration of companies and organizations is considered to be the catalyst for economic growth [5]. The urgency of the need for corporate agglomeration is to create a working climate that enables the transfer and sharing of knowledge and new innovations [6, 9, 13, 14, 15, 17, 18, 20, 25, 27].

5. Knowledge Transfer Issue in Peri-Urban Area in Indonesia

Characteristics of urban and peri-urban communities differ, this leads to differences in the capacity to receive, absorb and disseminate information and knowledge. Often peri-urban areas are forced to accept and change according to the demands and needs of urban areas. On the other side of the peri-urban area should also accommodate the ability of rural areas around it, so that in this region there is a meeting between urban interaction with rural. The process of attraction between these two great powers leads to the assimilation of culture in the peri-urban area resulting in the exchange of social capital between the two. This process sometimes forms a new social capital in peri-urban areas that is different from urban and rural areas although it is a combination between the two. The concept of cluster becomes an option for the acceleration of knowledge transfer in the peri-urban areas because the agglomeration that occurs allows the process of sharing knowledge faster.

![Figure 3. Urban, Peri-Urban and Rural Interaction](image-url)
• **Source:** learning from the development of a cluster by Nugroho [23] that the need for internal and external agents. Internal agents may be the foremost pioneers or entrepreneurs, informal leaders, local government officials and business associates. External agents such as foreign buyers, exporting companies, intermediaries and non-governmental organizations (NGOs). This means that local multipliers derived from grouping activities can be generated internally or externally. In the process of transfer of knowledge is also required actor who acts as an internal and external agents. In the peri-urban context it is necessary to have an actor who can link between urban area needs to resource availability in rural areas. In this case the peri-urban area plays an important role as an intermediary in the success of knowledge transfer process so as to create innovation and increase productivity.

• **Message:** in the context of the message is usually in the urban area, that is explicit knowledge who is very easily transferred between individuals both conventionally and through modern media. This is different from the rural areas that are often knowledge in circulation is tacit knowledge. So that the peri-urban area once again has a central role in accommodating the exchange of information and knowledge both from tacit to explicit or vice versa.

• **Receiver:** this is more related to the quality of human resources of the actors involved in the transfer of knowledge. Explicitly can be seen that the human resources community in urban areas would be better, the more towards the rural then the degradation of quality of human resources is happen. This certainly affects the motivation and ability to absorb information and knowledge that also increasingly experiencing degradation. So it requires different methods in the process of sharing knowledge between regions. In addition it also affects the ability to utilize existing information technology media. Where in the peri-urban areas the utilization of information technology is still limited to the stage of marketing has not been developed toward the transfer of knowledge that fosters innovation and increase productivity.

• **Channel:** in urban areas, the media used becomes more practical especially amid advances in information technology today. The development of messenger technology allows individuals to exchange information without having to meet face to face (via internet, email, discussion forums, to knowledge transfer portals). However, a slight shift when we look at the characteristics of media communication channels in the peri-urban and rural areas where the concept of meet and face to face directly is still a very important element in building trust between individuals.

• **Feedback:** this is somewhat closely related to the quality of the message recipient. Where in the modern society in urban then the response will be obtained faster than the response of the community in the peri-urban or rural areas. So that people in peri-urban and rural areas tend to respond more slowly to incoming information.

• **Culture:** cultural elements play an important role in the different processes of knowledge transfer in urban, peri-urban and rural areas. Where in the peri-urban and rural areas of culture is still a dominant element. The information that can be entered is information that is acceptable to the cultural values prevailing in their community. So it is important to pay attention to the cultural aspectsin the transfer of knowledge in peri-urban and rural areas. Cultural aspects also influence the change of social network structure from the urban area to the peri-urban and rural areas.

• **Trust:** is the process of accumulation of social interaction undertaken by the community. Where people in the peri-urban and rural areas will have higher trust if the exchange of information is done by meeting face to face. Trust will increase if the actors involved have known each other or have emotional closeness and kinship. In contrast to communities in urban areas who are more likely to believe in written evidence in a transaction.

6. **Concept and Mechanism Transfer of Knowledge in Peri-Urban Area in Indonesia**

Based on the above description we can drawn up a concept and mechanism in the process of transfer of knowledge in peri-urban areas as follows:
Figure 4. Concept and Mechanism Transfer of Knowledge in Peri-Urban Area in Indonesia

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