

Development and dissemination of nursing care and welfare equipment using social capital

Executive Summary

1. Objectives and perspectives of this research

This research examined the development and dissemination of nursing care and welfare equipment based on the FY 2018 research report "Challenges for the growth of a healthcare industry using RT and ICT - based on the research on the introduction situation and needs in the field of nursing robots and -." Currently, many subsidies and grants are being allocated to the development and dissemination of nursing robots. However, according to a survey conducted by our office for 1,000 elderly nursing homes and other facilities nationwide (collection rate: 21.1%), a nursing robot's average dissemination rate is only 7.4%.

Therefore, in the FY 2019 research, based on the analysis result of the obstructive factors to nursing robot's dissemination indicated in the above research report, we conducted a research and analysis on the dissemination and development of nursing and welfare equipment, including a nursing robot, from "fresh perspective." The concept of "fresh perspective" this time is social capital (hereinafter referred to as "SC.") SC is a concept constituted of norms and networks of trust and reciprocity, which is deeply related to sociological viewpoints, such as community, social organization, and social network formed in a local community. In other words, SC is a concept that expresses the relationship of mutual trust and connection among people in a local community. Since mutual trust and cooperation can be obtained in a society where SC has been accumulated, there is less vigilance against others, and it has a positive effect on public security, economy, education, health, and happiness, thus increasing social efficiency.

In other words, this research empirically examines the relationship between the concept of SC and business development, such as the development and dissemination of nursing and welfare equipment. This research's significance is that it goes into the areas that have been hardly studied so far, such as the relationship between SC and the economy, management, and industry. Therefore, this research focuses on the relationship between the "value difficult to evaluate in the market" and corporate activities targeting "markets" such as developing and disseminating nursing and welfare equipment. It is exploratory research on such issues as what effects are brought about (or not brought about) by using SC on the development and dissemination of nursing and welfare equipment.

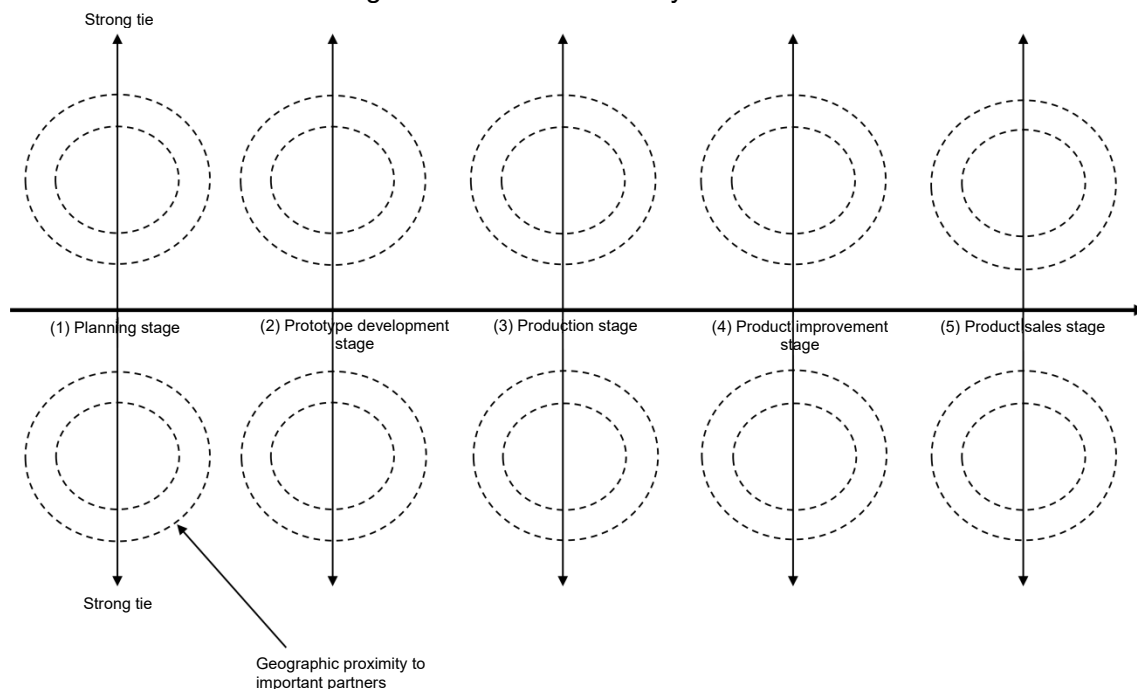
2. Outline of the research report

As mentioned above, SC is a concept constituted of norms and networks of trust and reciprocity, which is deeply related to sociological viewpoints, such as community, social organization, and social network formed in a local community. On the other hand, the use of nursing and welfare equipment is also closely related to the "local community's characteristics." It is considered that this SC's perspective will be important when

considering social issues such as how to reduce national social security benefit expenses in the future. The "community integrated care system" can be pointed out as a measure that is considered to be closely related to SC in the national efforts to resolve issues in the super-aged society. The national government aims to establish a "community integrated care system" by 2025, when the baby-boomer generation will be 75 years old or older. In the system, services, such as housing, medical care, nursing, prevention, and livelihood support, are provided in an integrated manner, and people can continue to live, until the end of their lives, in the area where they have lived long even if they become the severe condition of need for long-term care. It is necessary for municipalities and prefectures, which are insurers, to establish this system in accordance with the characteristics of the area based on the autonomy and independence of the region. In other words, in terms of measures based on regional autonomy and independence, the "community integrated care system" and SC have an affinity.

Therefore, this research regards the "nursing and welfare equipment," which is a machinery industry sector's region, as an important device (tool) to construct the "community integrated care system" and sets an analytical frame as shown in Fig. 1 for the relationship between their development and dissemination and SC. This analytical frame is used to capture the changes in the relationship between each phase of the business process of nursing and welfare equipment and SC. In other words, the frame is used to analyze the state and change of each phase of two ties, namely, the strong ties and weak ties, which are the structural dimensions of SC, and the geographical proximity to the partners (actors), which are important in each phase.

Fig. 1 This research's analytical frame



3. Findings obtained from research

This research introduced specific cases of welfare equipment development in small and medium enterprises and clarified the characteristics of the relationship between the development and dissemination of nursing and welfare equipment and SC based on the questionnaire survey for the enterprises related to nursing and welfare equipment in Japan (see the main text of the research report for cases.) As a result, the influence of weak ties was confirmed to some extent at the planning and planning stage and the prototype development stage of nursing care and welfare equipment. In other words, it was inferred that bridging SC had an influence on the development of nursing care and welfare equipment. On the other hand, the influence of strong ties was confirmed at the manufacturing and sales stages of nursing and welfare equipment. In other words, it was confirmed that the bonding-type SC is important at SC's manufacturing and sales stages of nursing and welfare equipment. Furthermore, it was also statistically confirmed that the geographical proximity to important actors in the development and dissemination of nursing and welfare equipment varied in different business process phases.

4. Findings in this research

This report presents findings in this research at the end.

- A trend that can be seen from the free responses to the questionnaire is the following: The bonding-type SC seems to play a more significant role in the development and dissemination of nursing and welfare equipment than the bridging-type SC when the relationship between SC and small and medium enterprises is viewed from the "perspective of innovation." In other words, this trend suggests that there is a business environment in which it is difficult to create innovative products.
- In response to the 2025 problem (the problem of concerns about a rapid increase in social security expenses, such as nursing and medical expenses, as the baby-boomer generation reaches the late-stage elderly by around 2025,) it is expected that manufacturers with no experience in this field will attempt to commercialize health and welfare equipment to prevent long-term care by using positive feedback from SC.
- In the case of the development and dissemination of nursing and welfare equipment in small and medium enterprises, there are not yet many cases where the proximity to virtual spaces, such as SC-type network, is used. However, even in such a case, the SC-type network's effectiveness can be demonstrated in the relevant field if it is broken down into phases, such as the planning conception stage, prototype development stage, production stage, and sales stage.
- SC has a certain positive impact on the development and dissemination of nursing and welfare equipment in small and medium enterprises. However, the possibility does not reach all local small and medium enterprises. The influence of SC depends on the local industries and the characteristics of small and medium businesses that participate in the development and dissemination of nursing and welfare equipment.