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Knowledge Creation in Technology Transfer

--From Russian Basic Research to Japanese

Manufacturing Industry --

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Keyword: technology transfer, knowledge creation, Russia, Japan

This case study investigated the transfer of results of Russian fundamental research to the development and manufacturing in Japanese companies.

Chapter 2 includes a review of documents about knowledge transfer from fundamental research to product development, as well as documents about cross-cultural management and knowledge creation, and features of Russian industry. Chapter 3 is a survey of 52 examples of knowledge transfer from Russian fundamental research to Japanese manufacturers. In Chapter 4, the IT, biotechnology, and nanotechnology fields are selected and analyzed in depth, to draw conclusions in Chapter 5.

The major research question (MRQ) of this paper is to identify knowledge creation model of technology transfer. And subsidiary research questions (SRQs) are: 1. to investigate the reasons that knowledge transfer between Russia and Japan has not been very successful so far, 2. to investigate successful cases, and 3. to identify types of actors engaged in successful cases.

As for SRQ1, it was identified that technologically Russian organizations and Japanese companies aim in different directions and have different objective orientation. Also, regarding human aspect, there was a situation of cultural misunderstanding, such as prejudice or a lack of common understanding.

As for SRQ2, it was found that Russian scientists understood the necessity of Japanese engineers to approach needs with technical seeds. The persons concerned understood Russian culture and Japanese culture, and had confidence in human beings ability to

overcome alienation factors.

As for SRQ3, the existence of "dual-core personnel" is pointed out as a necessary factor in mediation of knowledge transfer.

A theoretical contribution of this study is that identified that the "dual-core personnel" and the organizational mechanism which supports it are necessary for cross-cultural knowledge transfer between different areas such as fundamental research and product development, as well as between Russia and Japan. The further agenda of this study is to investigate the features and characteristics of such dual-core personnel to apply for other areas of knowledge transfer.