Knowledge Creation in New Ventures Based on the SECI Model: Similarities and Differences Between Japan, South Korea, and Austria

Nadja Drexel

Abstract

This research deals with the question of which similarities and differences exist between Japanese, South Korean, and Austrian new ventures in terms of knowledge creation. The theoretical framework supporting this research is the SECI model developed by the two Japanese economists Nonaka Ikujiro and Takeuchi Hirotaka. Under the consideration of five conditions that must be met in a company, new knowledge can be created through the interaction of implicit and explicit knowledge by passing through the four modes socialisation, externalisation, combination, and internalisation. To answer this research question, an online questionnaire was sent to new ventures in Japan, South Korea, and Austria with a total of 154 companies participating. Additionally, 12 expert interviews with employees or founders of new ventures were held. The result of the non-representative research showed that a lot of similarities exist among the surveyed companies in terms of knowledge creation. Still, there exists one important difference in the implementation of one of the five conditions of the SECI model. In comparison to Austrian companies, the majority of the Japanese and South Korean new ventures stated that their management often intentionally causes crisis/stress conditions, which can support the exchange of information and knowledge in a company.

Keywords: knowledge management, SECI model, new ventures, East Asia

Introduction

The SECI model for organisational knowledge creation was first introduced in 1995 by the two Japanese economists Nonaka Ikujiro and Takeuchi Hirotaka in their book *The Knowledge Creating Company*. In the still relatively young discipline of knowledge management, the model gained great popularity and a nearly ‘paradigmatic status’ (Gourlay and Nurse 2005: 293). Peter Drucker emphasised already in his famous work *The Age of Discontinuities* that nowadays we are living in a knowledge society, where the advantage of competition lays no longer in the possession of natural resources but in the possession of knowledge (1969: 455). According to Drucker, the reason for the change towards a knowledge-based society lies in the fact that knowledge has turned into an important economic factor that can be crucial for the economic success of a company (ibid.: 334).

Knowledge is the only resource that does not decrease but rather increases by using it. It can help to point out special characteristics of a company and to distinguish their own products from competitors’ products. Managers are always looking for new chances to ensure the success of their own company, e.g. through knowledge-intensive products, services, or new markets. However, one risk of the resource of knowledge is that it gets out-dated rather quickly. Therefore, it is consequently important to work on the acquisition, the distribution, the usage, and the preservation of knowledge to assure the uniqueness and the inimitability of their own company (Stankel-Meseke 2008: 96-97). Especially for new ventures, companies younger than ten years old (Lussier 1995: 9), the development of new strategies and the creation of new knowledge play an important role. Knowledge creation can help to change strategies into knowledge resources that can be shared by all members of the company. The result is an improvement of the company’s performance (Tsai and Li 2007: 372).

For a long time an organisation was viewed as a system that merely processes information. The central assumption was that the main task of an organisation is how efficiently it can deal with information in order to make decisions. The problem with this static view lies in the fact that an organisation deals dynamically with a changing economic environment and therefore it does not solely process but also creates new information and knowledge (Nonaka 1994: 14). Knowledge, as well as information, plays a key role in every stage of economic development, because an economical production process always requires both knowledge and information. Hence more knowledge leads to a better performance, to more productivity and more output (Chia 2003: 3). With the help of the SECI model by Nonaka and Takeuchi new knowledge can be created through the interaction of tacit and explicit knowledge by passing through the four modes of socialisation, externalisation, combination, and internalisation. On the basis of the SECI model, organisations can
develop new products or marketing activities by combining new and already existing knowledge from different employees (Nonaka and Takeuchi 1995: 70-71).

**Research Questions**

The aim of this paper is to answer the following three research questions:

- Which of the four modes of the SECI model (socialisation, externalisation, combination, internalisation) are applied in Japanese, South Korean, and Austrian new ventures?
- Is the focus in Japanese, South Korean, and Austrian new ventures on tacit or on explicit knowledge?
- Which of the five conditions of the SECI model exist in Japanese, South Korean, and Austrian new ventures?

Answers to these questions are of interest for a couple of reasons. According to Nonaka and Takeuchi, knowledge is created in a company through the interaction of tacit and explicit knowledge, whereas four different modes of knowledge creation exist (ibid.: 62).

1. From tacit to tacit knowledge $\rightarrow$ socialisation
2. From tacit to explicit knowledge $\rightarrow$ externalisation
3. From explicit to explicit knowledge $\rightarrow$ combination
4. From explicit to tacit knowledge $\rightarrow$ internalisation

Further, there are five conditions that must be met in an organisation to make knowledge creation based on the SECI model possible (ibid: 74):

1. Intention
2. Requisite variety
3. Autonomy
4. Redundancy
5. Creative chaos

The two Japanese economists state that there are several differences between Eastern or Japanese and Western organisations in terms of knowledge creation.$^1$ In their studies, Japan represents the ‘East’ while Western countries are generalised as the

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$^1$ For a detailed overview on the differences between Eastern and Western organisations, please refer to Nonaka and Takeuchi 1995: 20-25 and 198-199.
‘West’ (ibid.: 198). According to them the most striking difference is that in Japan knowledge is mainly considered to be tacit, while in the West it is considered to be explicit (Nonaka 1994: 22; Nonaka and Takeuchi 1995: 198-199; Nonaka, Umemoto, and Senoo 1996: 205; Nonaka, Toyama, and Konno 2000: 8). In regard to the four modes of the SECI model, they write that Japanese companies are especially strong in the process of socialisation and internalisation, while the strength of Western companies lies in the externalisation and combination process (Nonaka and Takeuchi 1995: 198). Nonaka and Takeuchi base these results on their research, mainly conducted in the 1980s but also the 1990s. During their research they examined more than 20 large Japanese organisations, e.g. Canon, Matsushita, NEC, Nissa, Kao, Mazda, Sharp, and so on (ibid.: 17).

At this point the generalisation of the ‘East’ and the ‘West’, with Japan representing the Eastern epistemology and Western countries representing the Western epistemology, needs a clearer differentiation. I think it is important not to forget that the ‘East,’ as well as the ‘West’, consists of different countries with various cultural, social, and also historical backgrounds. According to Matthew Jelavic and Kristie Ogilvie, in various scientific disciplines cultural differences are traditionally divided into ‘Eastern’ and ‘Western’ but often without considering the particular characteristics of a certain nation (2010: 52). In this research I am trying to find out about the conception of knowledge in Japan, South Korea, and Austria. Does the focus in South Korea as an Eastern country also lie on tacit knowledge rather than on explicit knowledge and on the contrary in Austria on explicit knowledge? Based on the results of a self-made questionnaire and 12 expert interviews, I will try to answer these questions.

**Terms and Definitions**

**Knowledge management**

Simplified knowledge management aims to qualify persons and organisations to develop learning aptitude and innovation competency. Both can generate strategically relevant knowledge that can provide an organisation with a competitive advantage (Willke 2011: 62), whereas communication is the basis of knowledge and knowledge management (ibid.: 63).

**Knowledge**

Knowledge is not merely data or information. Drucker writes, ‘information is data endowed with relevance and purpose. Converting data into information thus requires
knowledge. And knowledge, by definition, is specialized’ (1988: 5). Regarding knowledge, three levels need to be differentiated: data, information, and knowledge. Data alone has no meaning. Still, data is important for an organisation because it is the basis of information (Davenport and Prusak 2000: 3). Information is a message often in the form of a written document or through audio or video communication and usually it has a sender and a recipient. Data turns into information if the sender adds meaning and significance to it. New technologies can help to spread information easily in an organisation, but it would be wrong to assume that enhanced technologies alone would lead to a better information exchange (ibid.: 3-5). Knowledge in contrast is a mix of experience, value, and contextual information. In organisations, knowledge is not only archived in written form like documents, but it is also often embedded in its routines, processes, and its praxis. It can be difficult to put knowledge into words. Knowledge derives from information, and again information has its origin in data. Information can only turn into knowledge through human involvement (ibid.: 5-6). Nonaka and Takeuchi understand knowledge as ‘justified true belief’. They consider knowledge as ‘a dynamic human process of justifying personal belief toward the truth’.

Traditional epistemology on the contrary emphasises an absolute and static view of knowledge often expressed in formal logic and propositions (Nonaka and Takeuchi 1995: 58). For their theory of the SECI model, the two Japanese economists are using the definition of tacit and explicit knowledge by the British-Hungarian chemist and philosopher Michael Polanyi (1891–1976).

**Tacit and explicit knowledge**

Polanyi was the first to differentiate between tacit and explicit knowledge. He introduced his concept of tacit knowledge for the first time in 1966 in his book *The Tacit Dimension*, but how exactly are these two terms understood?

**Explicit knowledge**

If we imagine knowledge as an iceberg, explicit knowledge would be the visible part—the tip of the iceberg (Nonaka, Reinmoeller, and Senoo 1998: 675). Explicit knowledge can be expressed with language and words and can be easily transmitted, e.g. through data, documents, manuals, and so on (Nonaka, Toyama, and Konno 2000: 7). It is not hard for companies to accumulate and use explicit knowledge, because clients and deliverers can express and communicate it through words. However, the disadvantage of explicit knowledge is that it is often public knowledge and also accessible for competitors. Therefore, explicit knowledge cannot be the basis for sustainable success and competitive advantage (Nonaka, Reinmoeller, and Senoo 1998: 675).
**Tacit knowledge**

The main part of the iceberg is invisible. This invisible part represents tacit or private, intangible knowledge (ibid.). Polanyi writes: ‘We know more than we can tell’ (1966b: 4), but what is the meaning behind these words? Polanyi gives an easy example. A person who has the ability to ride a bicycle does not necessarily know how he is able to keep balance. It is possible that this person has just a slight idea why he is able to ride the bike, but still he is able to keep on riding (Polanyi 1966a: 4; Polanyi 1962: 601). Polanyi argues that certain areas exist where explicit knowledge alone is inefficient and that it is impossible to learn how to ride a bike solely on the basis of an oral or written explanation (1966a: 6).

**SECI Model**

![SECI Model Diagram](image)

Source: Nonaka and Takeuchi 1995: 62

On the basis of the SECI model new knowledge can be created through the continuous interaction of tacit and explicit knowledge by passing through the four modes socialisation, externalisation, combination, and internalisation. Nonaka and Takeuchi call this process ‘the spiral of knowledge creation’ (ibid.: 71). In the following, I will introduce the four modes of the SECI model in a summarised version with focus on the variables that are relevant for the empirical part of my research.²

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² For the full theory of the SECI model, see Nonaka and Takeuchi 1995: 56-94.
The four modes of knowledge creation

Socialisation

The first mode of the SECI knowledge starts with the process of socialisation. The goal of this mode is to transfer tacit knowledge between two individuals to create mutual mental models and technical skills. This transfer can happen entirely without language. The exchange of tacit knowledge between employees is of high importance for an organisation. A dependency on the knowledge of a single employee can pose danger to the company (Davenport and Prusak 2000: 81).

Implementation in an organisation:

1. One way to avoid this threat is to transfer as much tacit knowledge as possible through assistance or training to avoid that it is completely concentrated in a single person. Therefore, socialisation often takes place in the form of a typical apprenticeship, where an instructor teaches his skills to an apprentice. The apprentice can acquire the skills from the instructor through observation, imitation, and exercising rather than through reference books or instructions (Nonaka, Umemoto, and Senoo 1996: 205-206). It can also help new employees to acquire the right behaviour, values, goals, and knowledge, which are necessary to take part as a full member of the organisation (Payne and Huffman 2005: 158).

2. Socialisation can take place also outside of the formal areas of an organisation. Informal meetings outside of the workplace can help to shape and exchange mutual understanding, mental models, and different views (Nonaka, Umemoto, and Senoo 1996: 206). In Japan, for example, it is common to go drinking with colleagues after work to communicate in an informal atmosphere. This can create trust among them (Davenport and Prusak 2000: 92).

3. The collection of information at production and sales locations and the exchange of experience with distributors, clients, and competitors can also have a positive influence on the socialisation process (Nonaka, Toyama, and Konno 2000: 11). There is a chance that tacit knowledge gets transferred to the employees of their own organisation by participating at joint projects with third parties (Salmador and Bueno 2007: 376).

4. The construction of talk rooms or rooms where employees can communicate in an informal atmosphere is another way to support socialisation. Such

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3 For a definition of mental models, see Chao et al. 1994: 731-732.
informal talks at the workplace are often work related and can lead to the exchange of findings and the creation of new ideas between employees (Davenport and Prusak 2000: 92; Schulze and Hoegl 2008: 1748).

**Externalisation**

Externalisation is viewed as the key for knowledge creation (Nonaka and Takeuchi 1995: 66) and can be crucial for the success of a company. Tacit knowledge is externalised and implemented in the products and services of a company. Externalised and implemented knowledge becomes independent of its original creator, which can lead to a certain type of stability for the company. Therefore, a single expert could leave the company without harming the embedded knowledge capital of a company (Davenport and Prusak 2000: 83).

Implementation in an organisation:

1. Externalisation is primarily triggered through dialogue and communication with the goal to create new concepts that have their origin in tacit knowledge. The planning of a product concept is one example where externalisation is applied (Nonaka, Umemoto, and Senoo 1996: 206-207). Metaphors that are used in creative dialogue can support externalisation by making it easier to articulate tacit knowledge (Tsai and Li 2007: 373).

2. Models and hypotheses in written form can also support the sharing of tacit knowledge. The written documentation is a suitable way to present a certain concept or idea (Nonaka and Takeuchi 1995: 64). In contrast to the socialisation process, externalisation has a formal character (Schulze and Hoegl 2006: 214). With regard to time and budget, a detailed documentation of all relevant elements of product concepts, projects, and strategies is necessary to facilitate the exchange with third parties like clients, distributors, and competitors (ibid.: 216).

3. The written documentation of the mission statement, the visions, values, and the history of a company in the form of documents and publications are also important (Martín-de-Castro, López-Sáez, and Navas-López 2008: 227). Externalisation takes place when a company expresses its internal rules in a formal way or by explicitly stating its corporate goals (ibid.: 223).

4. Through the joint participation of employees at seminars and professional training camps with external experts it is possible to get in touch with competent persons and talk with them about relevant topics. The acquisition and
sharing of expert knowledge is necessary to specify new knowledge for product development (Tsai and Li 2007: 373).

**Combination**

In the third mode of the SECI model, existent and new explicit knowledge are combined (Nonaka and Takeuchi 1995: 67). The goal is to develop an archetype (e.g. for a prototype of a new product) or a new working model for a company (Nonaka, Umemoto, and Senoo 1996: 208). Especially new concepts should be combined with already existing knowledge to make the concept more ‘tangible’ (Nonaka, Umemoto, and Senoo 1996: 207).

**Implementation in an organisation:**

1. Employees can exchange and combine explicit knowledge out of documents, meetings, telephone calls, or computer-based communication networks. New knowledge can be created through arranging, combining, or adding explicit knowledge (Nonaka and Takeuchi 1995: 67). Knowledge can be easily shared with the help of information technologies (Li, Huang, and Tsai 2009: 448). Fundamental for a successful combination process is the classification of information from data files, databanks, and internal networks as well as company networks (Martín-de-Castro, López-Sáez, and Navas-López 2008: 227). Especially their own employees should have access to newly combined knowledge, e.g. through an online research program (Schulze and Hoegl 2006: 227).

2. Working processes and strategies can be created by collecting internal and external knowledge from databanks and communication networks (Nonaka and Takeuchi 1995: 68) as well as through forecasts and different literature (Nonaka, Toyama, and Konno 2000: 11). The collecting and classifying of a company’s external publications and reports from clients, competitors, or distributors, can support the creation of a product concept (Schulze and Hoegl 2006: 216).

3. Explicit knowledge and information can be easily transferred via information technologies (IT) (Nonaka, Umemoto, and Senoo 1996: 208). Therefore, the utilisation of communication technologies and documented information to contact other members within an organisation is a good way to exchange and combine explicit knowledge (Martín-de-Castro, López-Sáez, and Navas-López 2008: 227).
Especially important is also the regular updating of firm internal documents, databanks, and websites for the products and services a company offers (Nonaka, Toyama, and Konno 2000: 11). Organisations are dynamic, so regular updates of databanks and websites are a crucial part of the combination process that should not be neglected (Davenport and Prusak 2000: 77).

**Internalisation**

The goal of the fourth mode of the SECI model is to convert explicit into tacit knowledge. The process of internalisation is comparable to a learning-by-doing process (Nonaka, Umemoto, and Senoo 1996: 208). Experiences can get internalised as mental models or technical know-how after they have passed through the three modes of socialisation, externalisation, and combination (Nonaka and Takeuchi 1995: 69). In order to enlarge their knowledge capital, organisations can convert explicit into tacit knowledge by taking advantage of the internalisation process (Tsai and Li 2007: 374).

**Implementation in an organisation:**

1. Oral reports, as well as documents and manuals, can support the internalisation process (Nonaka and Takeuchi 1995: 69). Furthermore, employees can comprehend the actual use of a product by their clients by participating at meetings. A realistic understanding of customer preferences supports the process of creating a new product (Schulze and Hoegl 2008: 1746; Martín-de-Castro, López-Sáez, and Navas-López 2008: 227).

2. Significant differences can exist between the departments and sections of a company regarding their standards, their idea about what is important and not, and their evaluation criteria. This can lead to a limited communication and cooperation among them (Brown and Duguid 1998: 101). It is possible to form and harmonise the perspectives, perceptions, and the mental models of an organisation by using documents, handbooks, plans, concepts, and contracts. Contracts provide a good example of how mutual values can develop inside of an organisation out of negotiations and mutual agreement (ibid.: 104).

3. Personal experience also plays an important role. Members of different departments should work together at product development projects, search and exchange mutual values, and try to understand the visions and values of the management through communicative exchange with their colleagues (Nonaka, Toyama, and Konno 2000: 11). Meetings with members of different departments are important for an organisation, because they make it...
possible to build mutual understanding, establish connections, and share mental models between the different divisions (Brown and Duguid 1998: 104).

4. Experimentation is also important. Teams should be formed to conduct experiments and the results should be shared with the whole organisation (Nonaka, Toyama, and Konno 2000: 11). Through experimentation and learning by doing a group is able to obtain a mutual understanding of its activities. A tacit model can emerge among group members that can also enter the knowledge capital of the organisation if the model is shared by most of the employees (Brown and Duguid 1998: 96). Polanyi also points out the importance of practical applications and that it is necessary to internalise a theory in order to understand it. According to Polanyi, the real knowledge of a theory lies in the ability to use it (1966b: 17-18).

The five conditions of knowledge creation

In order to create new knowledge an adequate environment is necessary. Nonaka and Takeuchi list five conditions that must be given in an organisation to successfully activate the SECI knowledge spiral (Nonaka, Reinmöller, and Senoo 1998: 677).

Intention

Essential for the knowledge spiral is a corporate intention or a goal an organisation tries to achieve. The goal of a corporate intention is it to express a vision in a concept and to realise it through a management system in order to implement it. On the basis of corporate intention, it is possible to judge the value of a certain kind of knowledge for an organisation. It is also necessary to introduce the intention to the employees to strengthen their engagement (Nonaka and Takeuchi 1995: 74). All in all, clearly stated goals lead to a better performance and to a higher motivation of the employees than an aimless state (Stangel-Meseke 2008: 106).

Requisite Variety

Requisite variety can support an organisation in coping with different eventualities. Requisite variety can be fostered by combining information in a flexible and fast way and by granting employees equal access to necessary information. Furthermore, employees need to know where exactly they have the fastest access to information and knowledge in the company (Nonaka and Takeuchi 1995: 92).


**Autonomy**

Autonomy refers to the freedom of individuals to act as autonomous as possible on the enterprise level (ibid.: 75-76). Managers and employees receive the chance to be self-responsible and optimize their time (Stangel-Meseke 2008: 105). Autonomy motivates employees to create new knowledge. They can unexpectedly reveal new information or develop new ideas that can also spread to other team members (Nonaka and Takeuchi 1995: 75-76). The productivity of employees increases if they have the chance to organise their work on their own. In this context, the self-responsibility raises the motivation (Drucker 1999: 142).

**Redundancy**

Redundancy refers to an intentional overlapping of information of business activities, the responsibilities of the management, and the organisation as a whole (Nonaka and Takeuchi 1995: 80-81). Redundancy accelerates the knowledge creation process in two ways. First of all, the exchange of redundant information stimulates the exchange of tacit knowledge because individuals get an idea of what other people are trying to tell them (Nonaka, Toyama, and Konno 2000: 27; Cohen and Levinthal 1990: 136). Secondly, redundancy can help employees to understand their own role in the company. This makes it possible for the management to lead their actions in a certain direction. Therefore, redundancy provides an organisation with a kind of self-control mechanism. However, one disadvantage of redundancy is the increase in the amount of information, which can be negative if it leads to an overload of information. For this reason, the management has to understand where knowledge can be found and where in the company it is accessible (Nonaka, Toyama, and Konno 2000: 27).

**Creative Chaos**

Creative chaos is necessary for the knowledge creation process to stimulate the cooperation between a company and its environment (Nonaka and Takeuchi 1995: 78-79). Stable structures and habits can be challenged by setting ambitious goals and by feelings of crisis. Creative chaos is chaos induced by the top management on purpose to generate stress conditions among the employees. Thus they draw their attention to a certain problem, define it, and find a solution for it. At the same time the exchange of knowledge and information is stimulated and a higher commitment of the individuals is achieved (Nonaka, Toyama, and Konno 2000: 26). However, employees have to possess the ability to utilize their own actions to make creative
chaos advantageous, because otherwise it will end in destructive chaos (Nonaka and Takeuchi 1995: 79).

**Methods of Research**

**Questionnaire**

To answer my research questions I used quantitative and qualitative research methods. Participants of the questionnaire are employees of new ventures from Japan, South Korea, and Austria. According to Robert Lussier, new ventures are young companies no older than ten years since their founding (1995:9). Thus the companies that participated in this research were not founded before 2003. The companies come from various lines of businesses, like consumer electronics, the service sector, the media sector, and so on. I created the online questionnaire with the survey program Survey Monkey to make it easily available to the participants by offering an online link. Altogether I contacted 843 new venture companies over e-mail and sent them the link to the questionnaire either in Japanese, Korean, or in German. I conducted the survey during three months from November 2012 until January 2013. As a result, I received 154 completed and valid questionnaires back: 57 from Japanese, 45 from South Korean, and 52 from Austrian new ventures. The participants had to choose one of five different answers from an ordinal scale to each of the 21 questions: agree; rather agree; neutral; rather disagree; disagree. The only exception was the fourth question of the combination process where the five possible answers were: daily; once or several times per week; once to three times per month; twice to six times per year; once per year or less.

To answer my research questions I need to find out which of the four modes of the SECI model and which of the five conditions exist in the researched new ventures. To reach a conclusion, I count the percentage numbers of the answers ‘agree’ and ‘rather agree’ together and compare them with the answers ‘rather disagree’ and ‘disagree’. However, if the difference between affirmation and negation is less than 20 percent, I conclude that the difference is too small to draw a conclusion. In such a case I also consider the answers of my interview partners in order to get a better understanding of the questionnaire results. The limit of 20 percent was defined by my discretion. The answer ‘neutral’ is not relevant for my work and will therefore not be included in the analysis of my results.

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4 The Japanese and German questionnaires were created by the author; the Korean translation was done by Stephan Si-Hwan Park.
It is important to note that the results of the questionnaire just refer to the 154 surveyed new ventures. The results do not claim representativeness because possible similarities or differences could also be the result of statistical mistakes.

On basis of the SECI model, the questions for the questionnaire are as follows.\(^5\)

**Socialisation**

1. In case of questions and problems I receive assistance and help from experienced colleagues and/or I help inexperienced colleagues in case of questions and problems.
2. I spend a lot of time off the workplace at informal meetings with my colleagues, e.g. at dinner, at sport activities, at cultural events, and so on.
3. At my workplace I spend a lot of time at joint projects or on the exchange of experiences with customers, suppliers, and companies of the same/ another branch.
4. During my breaks at work I spend a lot of time with colleagues to communicate and exchange ideas and information in an informal atmosphere, e.g. at lunch, at coffee, in the break room, and so on.

**Externalisation**

1. We often use metaphors and models to visualise concepts and ideas to make them more tangible.
2. We spend a lot of time to record ideas of new product concepts, new strategies, projects, and research ideas in the form of protocols, presentations, documents, and so on.
3. We spend a lot of time recording or publishing the corporate mission, the goals, the values, or the history of our company
4. Qualified employees of our company very often attend seminars and on-the-job training.

\(^5\) The English translations of all following interview questions and responses were made by the author.
Combination

1. We spend a lot of time archiving, sorting, or combining internal and external information (e.g. from documents, databases, or networks) with new information.

2. We often develop new concept ideas, strategies, and work processes on the basis of knowledge that we collect from different sources (e.g. reports, publications, projections, and so on).

3. Within our company we often communicate with the help of information and communication technologies, like e.g. telephone, e-mail, IT, and so on.

4. We update internal documents, databases, and websites of our company daily (=1), once or several times per week (=2), once to three times per month (=3), twice to six times per year (=4), or once per year or less (=5).

Internalisation

1. We spend a lot of time at meetings analysing and discussing the contents of external reports, publications, complaints, and suggestions from clients, suppliers, competitors, and so on.

2. Mutual values and understanding are shaped through documents, reference books, concepts, and contracts that are shared within our company.

3. We spend a lot of time at cross-departmental meetings or during projects to discuss the contents of relevant documents regarding the organisational politics and working process in order to better understand the goals and strategies of the management.

4. We spend a lot of time experimenting and learning activities alone or in a group through learning by doing and practice.

Five conditions

1. The intention/goals of our company are clearly stated.

2. I know where in our company I have to look for information/knowledge AND I have quick access to this information/knowledge.
3. Employees of our company have (according to their competency and area of responsibility) the possibility to work on their own responsibly and independently.

4. In our company we very often have an overlap of information or activities between different departments/work groups.

5. Ambitious goals of our management often lead to a sense of crisis/stress condition for the employees.

Interviews

In addition to the questionnaire, I conducted 12 expert interviews, 11 over e-mail and one personal interview with founders or employees of new ventures, to get a better understanding of the questionnaire results. Due to privacy reasons, I will use synonyms instead of the real names of my interview partners and their companies. In what follows, I will give a brief introduction of the interviewees.

Interview partners in Japan

Person J-1: Interview over e-mail in Japanese; 25-year-old full-time employee at a company founded in 2008 that sells a Hawaiian specialty.

Person J-2: Interview over e-mail in Japanese; 25-year-old founder of a business consultancy, founded in 2012.

Person J-3: Interview over e-mail in Japanese; 24-year-old part-time employee at a hostel, founded in 2003, in Kyoto.

Interview partners in South Korea

Person K-1: Interview over e-mail in English; 24-year-old CEO of a jeans’ label founded in 2012.

Person K-2: Interview over e-mail in English; 23-year-old full-time employee who works as a programmer in a company founded in 2011 that developed various apps for smartphones and tablets.

Person K-3: Interview over e-mail in English; 28-year-old full-time programmer who works in a company founded in 2011 that developed two very famous apps for mobile devices in Asia.
Interview partners in Austria

Person A-1: Personal interview in German; 29-year-old scientific employee who works in a research company founded in 2003.

Person A-2: Interview over e-mail in German; 20-year-old student of Japanese language studies who works part-time as a sales-person in a company founded in 2011.

Person A-3: Interview over e-mail in German; 24-year-old founder of a company, founded in 2012, that produces drink bottles.

Person A-4: Interview over e-mail in German; 25-year-old chief editor of a media company founded in 2011 that reports about Austrian and East European new ventures and start-up companies.

Person A-5: Interview over e-mail in German; CEO of a product development/product design company founded in 2004 that holds worldwide various patents on its unique technique to scan and preserve old documents and books.

Person A-6: Interview over e-mail in German; CEO of a travel agency founded in 2012 that has the goal to connect travellers worldwide with the same interests and let them share their experiences.

Answering of the research questions

On the basis of the questionnaire and interview results, I will answer my research questions in three steps. First of all, I will compare the percentage of positive and negative answers of each SECI process to the questions of the questionnaire. In cases where one process’ affirmative answers outweigh the negative answers, I conclude that the respective process gets applied in the majority of the researched companies. However, I conclude in cases where the difference between affirmative and negative answers is smaller than 20 percent that the difference is too small to get a clear result. In such a case, I also consider the answers from the interviewees to reach a conclusion (Drexel 2013: 85-103)

On the basis of the results from the first question, I will answer research question number two. If mainly activities from socialisation and internalisation are applied in a company, I conclude that the focus lies on tacit knowledge because the goal of both processes is it to create tacit knowledge. If however mainly activities from externalisation and combination are applied in the researched companies, I conclude that the focus lies on explicit knowledge because the goal of both processes is it to create explicit knowledge.
In the third step I will answer again my last research question by comparing the amount of affirmative and negative answers to the questions on the five conditions of the SECI model in order to find out which of the conditions are given in the companies.

Analysis of the Questionnaire and the Interview Results

In the following charts I present the results of the questionnaire; all numbers are in percentages. Under each chart I will give a brief analysis of the results of the questionnaire. In cases where they are relevant for the results, I will additionally include extracts from the interviews into the analysis.

Japan

Figure 2 Socialisation in Japanese new ventures

In every question on the socialisation process, affirmative responses outweigh negative responses. This result implies that all four activities of the socialisation process that can support the exchange of tacit knowledge are applied in the majority of the surveyed companies. Therefore, I conclude that socialisation exists in the majority of the 57 Japanese new ventures. However, I was surprised by the results on the second and fourth questions, because I would have expected an even higher percentage of positive answers. Nonaka and Takeuchi emphasize several times in their various publications that in contrast to Western companies, Japanese companies focus on activities that can help transfer tacit knowledge (Nonaka and Takeuchi 1995: 63; Nonaka, Umemoto, and Senoo 1966: 206). Surprisingly—as I will show
in the chart of the Austrian results on the fourth question of the socialisation process—Austria has an even higher percentage of affirmative responses than Japan.

Figure 3 Externalisation in Japanese new ventures

The majority of the surveyed companies state that they perform the first three activities of the externalisation process that support the exchange of explicit knowledge. In the case of question four, it is not possible to conclude whether the fourth activity is applied in the companies or not because the difference between agreement and disagreement is less than 20 percent (45.6 percent agree/28.1 percent disagree). Still, three out of four activities of the externalisation process are conducted in the surveyed companies. For these reasons, I conclude that externalisation is given in the majority of the 57 questioned Japanese new ventures.

Figure 4 Combination in Japanese new ventures

<table>
<thead>
<tr>
<th>Combination Japan</th>
<th>Question 1</th>
<th>Question 2</th>
<th>Question 3</th>
<th>Question 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21.1</td>
<td>45.6</td>
<td>8.8</td>
<td>38.6</td>
</tr>
<tr>
<td></td>
<td>26.3</td>
<td>54.4</td>
<td>10.5</td>
<td>26.3</td>
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<tr>
<td></td>
<td>38.6</td>
<td>26.3</td>
<td>10.5</td>
<td></td>
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<tr>
<td>Agree</td>
<td>8.8</td>
<td>10.5</td>
<td></td>
<td>26.3</td>
</tr>
<tr>
<td>Rather Agree</td>
<td>45.6</td>
<td></td>
<td>10.5</td>
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</tr>
<tr>
<td>Rather Disagree</td>
<td></td>
<td>54.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td></td>
<td></td>
<td>26.3</td>
<td></td>
</tr>
</tbody>
</table>
The results clearly show that all four activities of the combination process that help to combine new with existent explicit knowledge are conducted in the Japanese companies. Therefore, I conclude that combination is applied in the majority of the 57 surveyed Japanese new ventures.

The majority of the surveyed employees agree that the second and fourth activities of the internalisation process are conducted by their company. However, due to the 20-percent limit it is not possible to draw a conclusion whether the first activity (45.6 percent agree/26.7 percent disagree) and the third activity (42.1 percent agree/24.6 percent disagree) are applied. Therefore, I also asked my Japanese interviewees for their opinion.

- Interview question on the first activity: *Do the employees of your organisation spend a lot of time at meetings analysing and discussing the contents of external reports, publications, complaints, and suggestions from clients, suppliers, competitors, and so on?*

  J-3: […] our full-time staff holds a meeting every morning to discuss requests and complaints of our guests. Once every two weeks we hold a meeting for all employees, where we plan for example events. […] I think those meetings are important to exchange opinions and ideas and to get to know the customer preferences.

- Interview question on the fourth activity: *Do you spend a lot of time in your organisation at cross-departmental meetings or during projects discussing the contents of relevant documents regarding the organisational politics*
and working processes in order to better understand the goals and strategies of the management?

J-2: Every Monday morning we have a meeting with all employees to talk about the upcoming week. Also during the week we often have meetings to discuss projects [...] such meetings are very important, for example to split projects between employees, to discuss work processes and to decide the role of the individual in the projects.

By including the answers from the Japanese interviewees, I conclude that the first and third activities of the internalisation process are also applied by the majority of the companies. This result suggests that internalisation is applied in the majority of the surveyed Japanese new ventures. Still, internalisation should especially be fostered in the companies.

Figure 6 The five conditions in Japanese new ventures

<table>
<thead>
<tr>
<th>Five Conditions Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intention</td>
</tr>
<tr>
<td>Requisite Variety</td>
</tr>
<tr>
<td>Autonomy</td>
</tr>
<tr>
<td>Redundancy</td>
</tr>
<tr>
<td>Creative Chaos</td>
</tr>
</tbody>
</table>

In the majority of the questioned 57 Japanese new ventures, all five conditions to enable the SECI knowledge spiral are given.
South Korea

Figure 7 Socialisation in South Korean new ventures

<table>
<thead>
<tr>
<th>Socialisation South Korea</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 1</td>
<td>75.6</td>
</tr>
<tr>
<td>Question 2</td>
<td>20.0</td>
</tr>
<tr>
<td>Question 3</td>
<td>24.4</td>
</tr>
<tr>
<td>Question 4</td>
<td>26.7</td>
</tr>
</tbody>
</table>

All four activities of the socialisation process that support the exchange of tacit knowledge are conducted in the majority of the surveyed companies. Therefore, I conclude that socialisation is applied in the majority of the 45 South Korean new ventures.

Figure 8 Externalisation in South Korean new ventures

<table>
<thead>
<tr>
<th>Externalisation South Korea</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 1</td>
<td>44.4</td>
</tr>
<tr>
<td>Question 2</td>
<td>35.6</td>
</tr>
<tr>
<td>Question 3</td>
<td>20.0</td>
</tr>
<tr>
<td>Question 4</td>
<td>8.9</td>
</tr>
</tbody>
</table>

The results clearly show that all four activities of the externalisation process that help to convert explicit into tacit knowledge are conducted in the South Korean companies. Therefore, I conclude that externalisation is applied in the majority of the 45 surveyed South Korean new ventures.
Figure 9 Combination in South Korean new ventures

<table>
<thead>
<tr>
<th>Combination South Korea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 1</td>
</tr>
<tr>
<td>Agree: 4.4</td>
</tr>
<tr>
<td>Rather Agree: 28.9</td>
</tr>
<tr>
<td>Agree: 35.6</td>
</tr>
<tr>
<td>Rather Disagree: 15.6</td>
</tr>
<tr>
<td>Agree: 4.4</td>
</tr>
<tr>
<td>Rather Disagree: 22.2</td>
</tr>
</tbody>
</table>

All four activities of the combination process that support the combination of new with existent explicit knowledge are conducted in the majority of the surveyed companies. Therefore, I conclude that combination is applied in the majority of the 45 South Korean new ventures.

Figure 10 Internalisation in South Korean new ventures

<table>
<thead>
<tr>
<th>Internalisation South Korea</th>
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</thead>
<tbody>
<tr>
<td>Question 1</td>
</tr>
<tr>
<td>Agree: 11.1</td>
</tr>
<tr>
<td>Rather Agree: 44.4</td>
</tr>
<tr>
<td>Agree: 11.1</td>
</tr>
<tr>
<td>Question 2</td>
</tr>
<tr>
<td>Agree: 11.1</td>
</tr>
<tr>
<td>Rather Agree: 26.7</td>
</tr>
<tr>
<td>Agree: 11.1</td>
</tr>
<tr>
<td>Question 3</td>
</tr>
<tr>
<td>Agree: 22.2</td>
</tr>
<tr>
<td>Rather Disagree: 35.6</td>
</tr>
<tr>
<td>Agree: 22.2</td>
</tr>
<tr>
<td>Question 4</td>
</tr>
<tr>
<td>Agree: 22.2</td>
</tr>
<tr>
<td>Rather Disagree: 55.6</td>
</tr>
<tr>
<td>Agree: 8.9</td>
</tr>
</tbody>
</table>

All four activities of the internalisation process that help to convert explicit into tacit knowledge are conducted in the majority of the surveyed companies. Therefore, I conclude that internalisation is applied in the majority of the 45 South Korean new ventures.
In the majority of the questioned 45 South Korean new ventures, all five conditions to enable the SECI-knowledge spiral are given.

**Austria**

The majority of the surveyed companies agree on three of the four questions. Only question three does not give a clear result because the difference between agreement and disagreement is less than 20 percent (44.3 percent agree/32.6 percent disagree). My Austrian interviewees answered as follows:
Interview question on the fourth activity: *Do you spend a lot of time in your organisation on joint projects or the exchange of experience with customers, suppliers, and companies of the same/another branch?*

A-1: Once a year we have an annual conference where the leaders of the different groups and divisions present their projects. Afterwards we also discuss these projects and collaborations are formed. [...] Thus we have an extremely strong exchange of experience. Also during the year we are exchanging information with other companies and institutes [...].

A-3: We often exchange experiences with our clients and deliverers. There is a lot of communication inside the ‘drink-bottle industry’ and the water NGOs [non-governmental organizations] and sometimes also joint projects. [...] With our clients we usually communicate over e-mail and telephone. Of course there are also personal meetings in case of bigger co-operations. For a start-up company it is inevitable to exchange and to collect as many experiences and opinions from other people as possible [...].

A-5: Yes.

By including the affirmative answers of my three Austrian interview partners, I conclude that also the third activity is conducted in the majority of the surveyed companies. Therefore, the result is that socialisation is conducted in the majority of the questioned 52 Austrian new ventures.

Figure 13 Externalisation in Austrian new ventures

The majority of the companies agree on the first and second question of the externalisation process. The third question (46.2 percent agree/36.5 percent disagree) and
fourth question (48.1 percent agree/32.7 percent disagree) do not give a clear result, therefore I also asked my Austrian interviewees:

- Interview question on the third activity: *Do the employees spend a lot of time to record or to publish the corporate mission, the goals, the values, or the history of your organisation?*

  A-1: The goals of our company are to achieve new scientific findings, especially in the ‘Basic-Research Sector’. And of course the goal of every scientist is it to publish his findings. [...] our group leaders often give radio interviews and interviews for every kind of print media or they give lectures at universities. [...] Publications of our institute in high impact journals can attract more excellent researchers [...].

  A-4: At least once a week we have a 2-3 hour group meeting where we discuss our goals—the most important points are documented in a written form, shared, and progressed. In comparison with other start-ups we hardly publish them. [...] the documentation helps us to pursue our goals and to strengthen the internal company culture. The publication [...] is an important part of the marketing because lots of potential customers and investors are interested in the history, the visions, and the people behind the company [...].

- Interview question on the fourth activity: *Do qualified employees of your organisation often attend seminars or on-the-job training? If your answer is no, would you like to have the possibility to attend seminars and/or on-the-job training?*

  A-1: We have many chances to attend advanced training. Our company hires, for example, people who give courses [...]. Or our people are sent abroad to attend workshops. [...] You can also share the acquired knowledge at informal meetings with others [...].

  A-6: Yes. Advanced training in the IT sector is crucial for the competitive success. It is important to deal with new technologies and possibilities. It is important, that our employees are well acquainted with the latest state-of-the-art technology.

However, even by considering the interview results it is not possible to draw a conclusion. Externalisation exists to a certain degree in the surveyed 52 Austrian companies. However, the externalisation process plays an important role in the
knowledge-creation process. Therefore, my recommendation would be to foster activities of the externalisation process in the young companies.

Figure 14 Combination in Austrian new ventures

<table>
<thead>
<tr>
<th>Combination Austria</th>
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<tbody>
<tr>
<td>Question 1</td>
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<tr>
<td>13.5 Agree</td>
</tr>
<tr>
<td>25.0 Rather Agree</td>
</tr>
<tr>
<td>15.4 Disagree</td>
</tr>
<tr>
<td>7.7 Disagree</td>
</tr>
<tr>
<td>Question 2</td>
</tr>
<tr>
<td>25.0 Agree</td>
</tr>
<tr>
<td>51.9 Rather Agree</td>
</tr>
<tr>
<td>8.6 Disagree</td>
</tr>
<tr>
<td>3.8 Disagree</td>
</tr>
<tr>
<td>Question 3</td>
</tr>
<tr>
<td>88.5 Agree</td>
</tr>
<tr>
<td>9.6 Rather Disagree</td>
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<tr>
<td>7.7 Disagree</td>
</tr>
<tr>
<td>Question 4</td>
</tr>
<tr>
<td>25.0 Agree</td>
</tr>
<tr>
<td>48.1 Rather Agree</td>
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<tr>
<td>7.7 Disagree</td>
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</tbody>
</table>

Three of the four questions on the combination process were answered with agreement by the majority of the Austrian companies. Only question number one does not give a clear result because the difference between agreement and disagreement is less than 20 percent (38.5 percent agree/23.1 percent disagree). Also the answers of my two interview partners did not lead to a clear result (Drexel 2013: 85-103). Still, three of four activities are conducted, so my conclusion is that the majority of the surveyed 52 Austrian new ventures apply the combination process in their company.

Figure 15 Internalisation in Austrian new ventures

<table>
<thead>
<tr>
<th>Internalisation Austria</th>
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<tbody>
<tr>
<td>Question 1</td>
</tr>
<tr>
<td>13.5 Agree</td>
</tr>
<tr>
<td>28.8 Rather Agree</td>
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<tr>
<td>21.2 Disagree</td>
</tr>
<tr>
<td>1.9 Disagree</td>
</tr>
<tr>
<td>Question 2</td>
</tr>
<tr>
<td>9.6 Agree</td>
</tr>
<tr>
<td>42.3 Rather Agree</td>
</tr>
<tr>
<td>15.4 Disagree</td>
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<tr>
<td>3.8 Disagree</td>
</tr>
<tr>
<td>Question 3</td>
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<tr>
<td>21.2 Agree</td>
</tr>
<tr>
<td>25.0 Rather Agree</td>
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<tr>
<td>28.8 Agree</td>
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</tr>
<tr>
<td>15.4 Disagree</td>
</tr>
<tr>
<td>1.9 Disagree</td>
</tr>
</tbody>
</table>
The majority of the 52 companies agree on three of the four questions on the internalisation process, only question number one (42.3 percent agree/23.1 percent disagree) does not lead to a clear result.

- Interview question on the first activity: Do you spend a lot of time in your organisation at meetings analysing and discussing the contents of external reports, publications, complaints, and suggestions from clients, suppliers, competitors, and so on?

  A-1: We have meetings three times a week. We use six to eight hours alone for meetings where we also discuss external publications and reports […].

  A-3: We try to read all articles about us and answer all the questions by customers or deliverers. […] External opinions are always useful, because you get another point of view and you get out of your daily routine and system […].

Due to the affirmative and comprehensible answers of my Austrian interview partners, I conclude that also the first activity is applied in the companies. The result is that internalisation exists in the majority of the questioned 52 Austrian new ventures.

**Figure 16 The five conditions in Austrian new ventures**

The majority of the companies answered that all the conditions except for creative chaos are given in their company. In the case of creative chaos, the majority of the Austrian new ventures answered that they do not think that ambitious goals of their management often lead to a sense of crisis for the employees (28.9 percent agree/42.3 percent disagree). This is a significant difference from the results of the Japanese (64.9 percent agree/10.5 percent disagree) and South Korean (86.7 per-
cent agree/2.2 percent disagree) new ventures. Still the difference between agreement and disagreement was less than 20 percent. In order to reach a conclusion, I also asked my interview partners for their opinion. In difference to my Japanese and South Korean interview partners, all three of the questioned Austrian interviewees disagreed and they also emphasised that they do not think that crisis situations can be positive for an organisation. They answered as follows.

- **Interview question on creative chaos:** *Do you think that the ambitious goals of your management often lead to a sense of crisis/stress conditions for the employees?*

  A-1: No, not at all. I do not feel stressed due to ambitious goals, no. The company succeeds to awake our ambitions, by organising informal meetings with other employees, which in turn has a further motivating effect on us. […] Pressure from the management is not necessary, indeed it is a very good working atmosphere and the motivation comes from us.

  A-2: I do not think that the management puts stress on the employees […].

  A-5: No, goals and a mutual vision are essential to ensure that everyone works together. […] It is important, that the status of success is understandable for the team and transparent for everyone and also to celebrate successes regularly. Missed goals should also be disclosed, discussed, and analysed […].

- **Follow-up question on creative chaos:** *Do you think that a sense of crisis/stress condition for the employees can also have advantages for an organisation?*

  A-1: No, as I said I do not think that crisis conditions are necessary to motivate us. Thanks to meetings and events we obtain inner motivation.

  A-2: No, I do not think that crisis conditions can be good for employees, because I cannot imagine that this would be a good working atmosphere. In my opinion a good working atmosphere without crisis and stress conditions is the basis for motivated work.

  A-5: Everybody enjoys solving a new ‘mission impossible’. If there are no such projects employees get unchallenged and demotivated. Everyone aspires for success and recognition. If there are no visionary projects, employees fall into the ‘comfort zone’. […] However, those goals must not be connected with negative stress. If the team has the feeling that everybody sticks together and supports each other and also understands that someone can be
in a bad mood due to excessive demands, then the atmosphere is still positive and motivating.

On basis of the questionnaire and interview results I conclude that in contrast to the surveyed Japanese and South Korean new ventures, creative chaos does not exist in the majority of the 54 Austrian new ventures.

Conclusion

Based on the questionnaire and interview results, I answer my three research questions as follows.

Which of the four modes of the SECI model (socialisation, externalisation, combination, internalisation) are applied in Japanese, South Korean, and Austrian new ventures?

Japan: All four modes of the SECI model are applied in the majority of the 57 surveyed Japanese new ventures. However, internalisation should especially be fostered.

South Korea: All four modes of the SECI model are applied in the majority of the 45 surveyed South Korean new ventures.

Austria: All four modes of the SECI model are applied in the majority of the 52 surveyed Austrian new ventures. However, externalisation should be specially fostered.

Does the focus in Japanese, South Korean and Austrian new ventures lie on tacit or explicit knowledge?

Japan: In the majority of the 57 surveyed Japanese new ventures the focus lies on both, tacit and explicit knowledge.

South Korea: In the majority of the 45 surveyed South Korean new ventures the focus lies on both, tacit and explicit knowledge.

Austria: In the majority of the 52 surveyed Austrian new ventures the focus lies on both, tacit and explicit knowledge.

Which of the five conditions of the SECI model exist in Japanese, South Korean, and Austrian new ventures?

Japan: All five conditions of the SECI model exist in the majority of the 57 surveyed Japanese new ventures.
South Korea: All five conditions of the SECI model exist in the majority of the 45 surveyed South Korean new ventures.

Austria: Except for creative chaos, the other four conditions of the SECI model exist in the majority of the 52 surveyed Austrian new ventures.

Many similarities can be found between the researched 154 Japanese, South Korean, and Austrian new ventures in terms of knowledge creation. The conduction of the different activities of the SECI model and the use of tacit and explicit knowledge are very similar in the new ventures of all three countries. According to Nonaka and Takeuchi, the strength of Japanese and Eastern companies lies in socialisation and internalisation, Western companies, on the contrary, are strong in the externalisation and internalisation process. However, the results suggest that no significant differences in the use of tacit and explicit knowledge between the new ventures of the three countries exist.

Various reasons could have caused these differing results. First of all, since the first publication of the SECI model in 1995 almost 20 years have passed. Furthermore, the two Japanese economists collected most of their empirical results in the 1980s. A lot of time has passed since then and much could have changed. The results suggest a possible rethinking of the companies on the importance of tacit as well as explicit knowledge. Furthermore, the increasing popularity of knowledge management could also explain the few differences between Japanese, South Korean, and Austrian new ventures. One major reason could also lie in the fact that the focus of my study lies on new ventures, whereas Nonaka and Takeuchi researched large and well-established organisations. In addition, the surprising results of the second and fourth question on the socialisation process from the Japanese participants can be explained by the fact that, in contrast to Nonaka and Takeuchi, the participants of my survey were young companies.

Still, the results of the study suggest that there exists one important difference in the implementation of one of the five conditions of the SECI model. The non-representative results show a clear difference in terms of intentionally caused crisis/stress conditions by the management between the Japanese and South Korean new ventures on the one hand and the Austrian new ventures on the other hand. In contrast to the Austrian companies, the majority of the Japanese and South Korean new ventures stated that their management often intentionally causes a sense of crisis/stress conditions that can support the exchange of information and knowledge in a company. The majority of the Austrian companies however are not of the opinion that ambitious goals of their management lead to stress conditions for the employees and they also do not think that such crisis situations can be positive for a company.

The reason for the few differences in the results between the new ventures of the three countries could also lay in the formulation of the questionnaire and interview...
questions in general. One way to avoid a possible response bias or acquiescence would be the usage of a more balanced questionnaire in terms of positively and negatively formulated questions. This could result in a more sensible detection of even small differences between the three countries. Nevertheless, in my opinion it is remarkable that even in light of a possible acquiescence, the majority of the Austrian questionnaire participants answered the question on creative chaos in the negative. Furthermore, the questioned Austrian interview partners are in agreement with this finding and stated understandable reasons for their opinion. This result differs from the responses of the Japanese and South Korean participants. Another source for the few differences between the countries could lay in the method of evaluating the results. The used ordinal scale with the self-defined limit of 20 percent is clearly a restriction. The usage of an alternative limit may contribute again to an improved sensibility of the questionnaire.

Finally, what is the relevance of the results? As I already stated, knowledge has become the major component for organisational success besides the traditional factors labour and capital. A company’s performance can be enhanced by the creation of new knowledge. Thereby a competitive advantage can be achieved, since more knowledge can increase a company’s performance, which can in turn lead to more output and productivity. Especially for new ventures the knowledge factor can be crucial for a company’s success. The results do not claim to be representative, however they offer great potential to get a better understanding of the importance of implementing knowledge. This could prove useful for new ventures in creating new activities, in order to support the usage and the sharing of both tacit and explicit knowledge. The study could also be a trigger for young Austrian companies to follow the example of Japanese and South Korean new ventures and to introduce intentionally caused crisis conditions by their management into their company. According to Nonaka and Takeuchi, this could support the creation of knowledge in an organisation. For future studies it could be of interest to further investigate the difference between Eastern and Western companies in terms of intentionally caused crisis/stress conditions by the management and their influence on knowledge creation in companies.
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