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Implications of knowledge types and transaction atmospheres

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Abstract

Purpose – Knowledge often is the fundament for strategic competitive advantage. Thus, it is highly relevant to understand better how knowledge is transferred from one generation to the next in family businesses. The purpose of this paper is to link the competitive advantage realisation in family businesses to the success of transferring strategically valuable knowledge in different business environments to the next generation.

Design/methodology/approach – Building on the contingency model of family business succession (Royer et al., 2008) knowledge transfer in family businesses from different cultures is investigated in this paper. From a resource-oriented and transaction cost inspired perspective two family businesses with a similar industry background from China and Europe are compared regarding knowledge transfer in the context of family firm succession taking into account the respective transaction atmosphere.

Findings – Different successions for two long-lived family firms are illustrated in a systematic fashion: based on the theoretical elements suggested both cases are described to get insights into the usefulness of the theoretical reasoning developed. On the basis of these, the cases are compared with each other and conclusions for both cases are drawn. Implications for theory and practice as well as avenues for future research are sketched.

Originality/value – The focus of the current study is to gain more insight into long-lived family businesses by comparing two cases over a period of more than 200 years with regard to strategically relevant resources as well as the underlying transaction atmospheres. Implications for family firms depending on the resource types and transaction atmosphere are discussed.

Keywords Family business, Strategic planning, Succession planning

Paper type Research paper

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Introduction

Because of the short history after the economic reform in 1978, research on successions in Chinese family business is sparse especially in terms of publications in English language (Yan and Sorensen, 2006). Investigations exist in the area of financing (Hu, 2003; Chu and Wang, 2004; Zhou, 2008) and explaining Chinese family firms in general (Wong, 1985; Chen, 2004; Zhang, 2002). Despite the relatively short history of existing Chinese family businesses a deepening of reforms and improvement of the business environment raises the attention for this research field (Zhang et al., 2012). Evidence suggests that enterprises in China nowadays again rely on family members to establish and develop their businesses and the majority of companies employ family members (Pistrui et al., 2001). Chinese business leaders tend to prefer long-lasting commitments in work relationships. In comparison, western firms are suggested to emphasise contractual relationships and seniority in successions (Whitley, 1999). Chinese inter-firm relations are perceived as more informal and succession predominantly relies on coparcenary or equal rights to inherit the family property (Chau, 1991; Kao, 1993; Weidenbaum, 1996). To get deeper insights into this field, our research focuses on different successions that have taken place over relatively long periods in two family firms, one located in China, the other in the German-Danish border region.

How to deal with succession issues in family firms in order to prevent failure is widely discussed (e.g. Barach and Ganitsky, 1995; Cabrera-Suárez et al., 2001; Collins and O'Regan, 2011). One relevant aspect is the suitability of family or non-family members since nepotism may be a danger in succession situations where family successors lack the right knowledge (Pollak, 1985). Particular idiosyncratic knowledge on the other hand may be a valuable resource of family members (Bjuggren and Sund, 2002; Lee et al., 2003). A favourable transaction atmosphere in the family firm as opposed to a general environment characterised by unstable institutions and opportunistic behaviour may also lead to a preference for internal successors. On the other hand, conflicts in the family that impact the business relationships may suggest the opposite. However, researchers could not yet provide systematic insights on what knowledge types and transaction atmosphere characteristics lead to successful intra-family generational changes so that the following research questions regarding the two investigated cases are of interest:

RQ1. How can the successions which have taken place in both investigated companies be described with regard to relevant knowledge types and underlying transaction atmosphere?

RQ2. Is there a relationship between underlying knowledge types, transaction atmosphere characteristics and the selected succession mode observable in the investigated cases?

RQ3. Which are the differences and/or similarities in the knowledge transfer in the two family businesses and which pragmatic implications can be derived from those?

To answer these questions, a conceptual framework is first elaborated on the basis of a resource-oriented and transaction cost inspired thinking. We want to better understand what factors do impact knowledge transfer in inter-generational succession in family businesses. In that context we focus on strategically relevant experiential knowledge with its idiosyncratic, subject-related and network-related elements.
(Boyd and Royer, 2012) and highlight the advantages for handing down these resources internally. Further, we take into account the implications of a stable or instable institutional framework into which the value creation activities of the businesses are embedded. We discuss these implications by taking different transaction atmospheres into account that may be reflected in the industry framework, the macro business environment or cultural specificities. Figure 1 summarises the research focus of this study. This reasoning is used to analyse the Kang Baiwan family business (Kang) as well as the Holz und Baustoff Kompanie (HBK) Dethleffsen family business (HBK). The aim is to illustrate different successions for these two long-lived family firms in a systematic fashion. Based on the theoretical elements suggested both cases are described to get insights into the usefulness of the theoretical reasoning developed. On the basis of these, the cases are compared with each other and conclusions for both cases are drawn. Implications for theory and practice as well as avenues for future research are sketched.

**Conceptual framework: inter-generational knowledge transfer in different environments**

The resource-based framework (Barney, 1991; Peteraf, 1993) serves as our guiding perspective when comparing two family businesses from similar industry backgrounds regarding their competitive advantages over time, specifically in succession phases. From a resource-oriented perspective competitive advantage is conceptualised in terms of realising so-called scarcity or Ricardian rents on the basis of valuable resources (Peteraf, 1993). Valuable resources are characterised by demand, scarcity and appropriability (Collis and Montgomery, 1996).

In this context – building on the assumption of heterogeneous resources – Peteraf suggests certain ex ante and ex post limits to competition in terms of first mover advantages and isolating mechanisms which make sure that rents are not offset by costs as well as sustained. Due to resources immobility or imperfect mobility such rents further may also be appropriated by a certain firm (Peteraf, 1993). These are the criteria relevant for our research (which is interested in value creation of family firms specifically in succession phases) when investigating the value of identified resources. We are specifically interested in the different levels of transaction costs going along with transferring valuable resources from one generation to the next. In this context the types of resources (with the focus on knowledge as a resource) as well as the transaction atmosphere are relevant for us.

Intangible resources such as knowledge are highly relevant for competitive advantages realisation (Black and Boal, 1994; Itami, 1987; Rao, 1994) and in long-lived family businesses they are transferred from one generation to the next. Stickiness
von Hippel, 1994) may be a characteristic of such knowledge due to difficulties in transferring it to other settings (Szulanski, 1996). Certain knowledge due to its tacitness is difficult to transfer (Cabrera-Suárez et al., 2001) since time consuming learning by doing processes are required. Knowledge idiosyncrasy may be the result of such tacit knowledge (Williamson, 1989) and at the same time a reason for preferring internal successors against externals due to better possibilities of getting hold of relevant tacit knowledge in life-long learning processes starting already in childhood (Bjuggren and Sund, 2002; Royer et al., 2008).

Human resources tend to be mobile resources (Teece et al., 1997). The mobility of human resources, however, is limited with increasing firm-specificity of that resource. Strategic management literature suggests that strategically valuable resources and capabilities lie inside the firm (Barney, 1991; Peteraf, 1993; Eisenhardt and Martin, 2000) and that especially firm-specific human resources may lead to competitive advantage (Cappelli and Crocker-Hefter, 1996). Such resources are especially regarded as strategically relevant for family firms (Sardeshmukh and Corbett, 2011).

Knowledge embedded in human resources may consist of skills, abilities and learning capacity. These may develop through experience as well as formal training (DeNisi et al., 2003). For internal successors it may be composed of elements referring to family business internal settings as well as further external settings. The latter leads us to the understanding that internal successors may show less opportunistic behaviour due to their embeddedness into the (social) family structure usually characterised by a certain amount of mutual trust and honesty (Pollak, 1985; Dyer and Handler, 1994; Longenecker and Schoen, 1978). This plays a crucial role especially in environments characterised by weak or unstable institution systems. When no other effective rules of the game guide the behaviour of actors, family rules and social control may be valuable in terms of effectively coordinating and motivating internal successors.

Family business research on succession has investigated factors leading to successful transfer of knowledge and longevity (Collins et al., 2012; Chirico, 2012; Cabrera-Suárez et al., 2001). Successor training also outside the family business, quality relationships and motivation but also the business context, culture and its environment have an important influence on the effectiveness of succession. This environment or institutional framework (Bjuggren and Sund, 2012) can in a succession context be defined as transaction atmosphere (Memili et al., 2011; Pittino and Visintin, 2011). Another key aspect leading to longevity in family firms are values that are successfully passed on from one generation to the next (Handler, 1994). Tapies and Fernández Moya (2012) show that education and socialisation are the principal ways of transferring values and longevity is not only seen as a consequence but an asset that strengthens the family firm.

Further, social resources as “personal relationships that bind together members of an organisation as well as relationships that link organisational members to other external sources of human capital” (DeNisi et al., 2003, p. 6) may be an essential fundament for value creation in a certain context. If a company builds socially complex tacit knowledge embedded in the organisation an effective isolating mechanisms may prevent other actors from imitation (Barney, 1991; Reed and DeFillippi, 1990). Family businesses may have access to social networks which further foster knowledge development (Basly, 2005).

Explicit knowledge such as general knowledge can be easily transferred to others; technical knowledge demands individuals with a similar background (Huang, 1999; Jensen and Meckling, 1992; Royer et al., 2008). Implicit or tacit knowledge is harder to
transfer, but also offers a greater potential regarding the creation of isolating mechanisms. Falling into the category of tacit knowledge experiential knowledge is “intuitive knowledge, based upon training and experience, which is incapable of translation into written form” (Williamson, 1975; see also Bonus, 1986).

Three types of experiential knowledge are differentiated here (Boyd and Royer, 2012): idiosyncratic knowledge (i.e. detailed knowledge about time- and location-specific conditions that may not be formalised); subject-related experiential knowledge (i.e. knowledge depending on skills regarding a particular material/product such as the knowledge of individuals in a certain field of arts or craftsmanship (Patriotta, 2007; Jensen and Meckling, 1992; Royer et al., 2008); and network-related experiential knowledge (i.e. knowledge on social resources of the family business).

The transaction atmosphere reflects “[…] the interactions between transactions that are technologically separable but are joined and have systems consequences” (Williamson, 1995, p. 232). This reflects our understanding that all business activities are embedded into a somehow hierarchical institution system consisting of underlying fundamental institutions and institutions of second order building on them (Dietl, 1993, p. 74). In accordance with Matthews (1986, p. 903) for us “institutions matter and are susceptible to analysis”. Differences in these underlying rules of the game in the environment of the two cases may have a relevant impact on internal succession patterns.

The transaction atmosphere may imply socio-cultural (e.g. friendship) and technical factors (e.g. innovative communication technology) that impact the height of transaction costs (Williamson, 1975). Opportunistic behaviour may, for example be reduced when actors involved in a succession stem from the same family since the cost of opportunistic behaviour in such cases are higher due to the implications not only for the business but also the personal relationship between the actors (Boyd and Royer, 2012). It always plays a role in this context which different ways of reducing the transaction costs of transferring knowledge actually exist as alternatives. Is the family context the safest to exchange certain valuable knowledge? Or are there other legal or cultural institutions which would also allow for an efficient transfer of knowledge between actors from different family contexts? What is the influence of the knowledge type concerned? How well can an internal successor gain the relevant knowledge compared to potential external successors? All these considerations are our points of reference to start investigating two rich cases of family business that have mastered many successful internal succession processes over a long period of time in very different locations, i.e. China and the German-Danish border region.

The points of reference with regard to the transaction atmosphere lie in a categorisation of environmental factors resulting from relevant legal and cultural institutions as well as industry-related factors such as the knowledge relevant to be competitive in a certain industry environment as outlined above. Both facets are investigated also with regard to their evolution over time.

Figure 2 summarises our conceptual considerations in terms of a $2 \times 2$ matrix. On the first dimension we differentiate between different types of transaction atmosphere: Such transaction atmospheres which are characterised by weak and/or instable institution systems in the environment of a firm and such where the institution system is more reliable and stable. We suggest that transaction atmospheres with instable/weak institution systems make it less risky to hand down a company to a family member since the social control and education inside the family does reduce the danger of opportunism. Family outsiders may be more prone to opportunism and due
to the weakness of having none or limited reliable “rules of the game” outside the firm borders, other measures against opportunism such as contracts are not so effective in reducing the opportunism danger. When value creation activities of a family business are embedded into a more favourable external transaction atmosphere it becomes accordingly less risky to also employ external managers as successors.

With the second dimension in Figure 2 we refer to a different relevance of firm-internal experiential knowledge for the competitiveness of a family business: we here differentiate between such situations where the different firm-specific experiential knowledge elements (i.e. idiosyncratic knowledge, subject-related and network-related experiential knowledge) are central for the generation of strategic competitive advantage and other situations where this is not the case. In these latter situations technical and industry-specific knowledge may play a more central role regarding competitive advantage realisation so that it becomes more likely to find talented managers not only inside but also outside the family. Experiential knowledge on the other hand can only be build up in (often life-long) learning-by-doing processes so that we here see a clear advantage for internal successors.

It follows the case analysis regarding the so far outlined aspects which are summarised in Figures 1 and 2 above of the studied Kang as well as the HBK.

**Methodology**

The multiple levels of analysis addressed with no control of the investigator over the past events led us to the case study as the preferred methodology (Yin, 2002). Qualitative interviews and secondary data analysis are used to investigate the longitudinal case studies and explain longevity. The researchers pursue the strategy of purposeful sampling by selecting information rich cases for this study (Miles and Huberman, 1994). Investigating two rich longitudinal cases from different cultures can be very powerful examples that justify the case study methodology (Siggelkow, 2007). The approach we use builds on the conceptual fundament outlined before and the collected data help us to further illustrate this concept and fill it with data of two cases.
of family firms that have mastered a series of successions over a relatively long period in time. The units of analysis are the two family businesses with a focus on the respective successions mastered by them in the different periods investigated. We studied these with regard to the conceptual considerations made in the previous chapter. The aim is to illustrate our conceptualisation of resource transfer and transaction atmosphere thereby.

Besides pragmatic reasons a longitudinal case design was chosen to compare two very different family businesses from similar industry backgrounds and gain insights which resources and knowledge types are relevant for the survival of family businesses. The fact that these two long-lived companies have survived in different environments with dramatically changing transaction atmospheres over time, makes them worthwhile of closer investigation. Looking at succession as one key area in family business research and in particular at how knowledge was successfully transferred over time can help in developing a family business theory (Collins and O’Regan, 2011). We in this study come up with relevant elements for such a theory.

For Kang historical data records were relevant references and two investigations were carried out in Kang Baiwan Manor. In January 2010, observations and an introduction about Kang Manor, and four days interview with Kang’s descendants took place. Further, we kept constant contact with Kang’s Family Culture Seminar, studying documents available and all the published literature from 1996 to 2012 about Kang, such as journals, books, reports, web articles (Wang, 2007; Tang, 2008; Si, 2009; Pei et al., 2011; Wu, 2012). In July 2012, in-depth interviews followed during a week-long stay with two Kang family descendants, other relevant people including long-term hired hands and neighbours. The descendants were both from the 19th generation of the Kang family and possess a great knowledge about the family; one had lived in Kang Manor for nearly 20 years. The collateral descendant was born in 1927. The neighbours and long-term hired hands were in their 70s and 80s and worked for the Kang family for very long. Parts of their knowledge about Kang have also been transferred over generations in their own families.

The data for HBK have been collected from different interviews, a workshop and various sources on the company. The main interview partner was one of the owners from the eighth generation of HBK and the information could be gathered in March 2005 and 2010 (Boyd and Royer, 2012) and in a workshop in July 2013. The HBK case study contains successions over the past three centuries where the transfer of knowledge could be analysed because of available historical documents, articles, books (Schütt, 1963; Dethlefsen, 1988; Flensburger Tageblatt, 1988, 2013; Petersen, 2010; Becker, 2012). The rich environment in both cases results from the knowledge that was transferred from one generation to the next, documents that still exist and information from other sources. The interviews were carried out to gain insights to family issues and confirm information from secondary sources. This is the reason why interview statements are not cited word for word in the results.

For comparing the two cases the timeline is split into four periods with regard to important environmental changes. The two middle periods overlap in the timeline and serve as basis for a comparison: The first period (P1) starts when the Kang business was established around 1550 and ends around 1650 when the Ming dynasty ended and the HBK founder was born. The second period (P2) ends around 1850 when HBK was no longer Danish but a German company and was split into two separate companies. In 1853, Kang Yingkui died which marks the downturn of Kang’s family business. The third period (P3) ends around 1920 when the Republic of China was
founded and the Kang business was only operating few years afterwards. In 1920 the current border between Denmark and Germany just north of Flensburg has been agreed. In the last period (P4) since 1920 till today the two HBK family firms were operating separately and some descendants of the Kang family build up new companies. The family trees including the different periods of HBK and Kang are illustrated in genograms (Figures 3 and 4). This involves a mapping of the family structure where events and family information can be recorded (McGoldrick and Gerson, 1985). The types of genograms vary according to the research interest (Hoy and Sharma, 2010).

Case Study I: Kang

Kang Shaojing started his trading company during the reign of Emperor Jiajing in the Ming Dynasty, the main goods traded were grain, cotton, silk and wood (Sun and Zhou, 2007). The company lasted for over 400 years and 12 generations before it lost its business resources by uncontrollable forces such as wars, river diversion, and finally agrarian revolution. “Kangbaiwan Manor” is ideally located in Gongyi City, Henan Province as a commercial base. Kang’s ships spanned the six great rivers of China and the area of its total land reached circa 12,000 hectares (Kang et al., 2012). From the late Qing Dynasty to the Republic of China multiple factors influenced the family business before it was forced to shut down. These are in the focus of the following analysis.

P2: Kang Dayong (the 12th generation) shipped grain to disaster areas and obtained a large amount of land as pledge. In 1763, he built Kang Baiwan Manor and moved in. Later the Shandong base was opened up and some original warehouses were built.

![Figure 3. The Kang family genogram](image)

**Sources:** Adapted from the Kang genealogy, N. N. (2010), Wang and Li (2007)
As the single grandson of Dayong, Kang Yingkui (1773-1853) brought Kang to its flourishing time. During his lifetime, he built shipyards and timber mills, monopolised the cloth market of Shanxi Province, and managed to get a ten-year order providing grain for the army. Because of his talent in business and passion for charity he was named “Kang Baiwan” (N. N., 2010).

P3: after Kang Yingkui’s death in 1853, the Kang property was divided into eight parts, and the second son Kang Daoping took over most of the business burden. During the civil war, Daoping led local residents to resist the Nien Rebellion for many times and the Kang business was deeply undermined. In 1862, Kang blockaded rivers and wrecked their ships to contain the Nien Rebellion in response to Qing government’s call, which was a huge disaster for cutting off Kang’s resources. In 1901, Kang Jiande, the 17th generation donated vast sums of money to the Empress Dowager Cixi to protect the interests of his family (Si, 2009). This was the reason why Kang lost its main capital to survive. P3 is characterised by turbulence and instability in China, but Kang showed responsibility and humanitarianism to needy people. From 1912 to 1949 the Chinese society encountered huge changes (war, economic structural and political change) leading to the end of Kang (N.N., 2010).

(Knowledge) resources and succession modes in P2
The knowledge resources in P2 contain two parts, idiosyncratic knowledge and network-related experiential knowledge. Kang’s time- and location-specific knowledge was thoroughly applied in their business activities. Kang took advantage of the opportunity to ship the goods especially to places suffering from natural disasters such as drought. In P2 three generations of Kang were officers in the Qing government and they obtained interpersonal connections and information about the industry situation.
Workers were well treated; clients deeply respected and good relationships with local residents were kept. The relationship between Kang family members and non-family managers (Xiang Gongs) can develop into a strong tie (Pei, 1999) which will strengthen their closeness, trust and loyalty. Gradually the identity of those Xiang Gongs evolved from outsiders to insiders as time passed (Pei et al., 2012).

In P2, the inheritance right was passed straight from 12th successor Kang Dayong to Kang Shilu, then to Kang Yingkui because they were the only boys in each generation. Normally the principle of Kang was not restricted to the preferred Chinese succession mode of primogeniture but first to consider virtuous and talent. Children learned mainly from internal channels at home with private tutors. Kang’s descendants could gain comprehensive knowledge they needed, but what really mattered to be chosen as a qualified successor was tacit knowledge transferred by elder’s personal examples, verbal instructions and doing business with them. Constantly seeing plaques hanging around rewarding the Kang family’s charity acts serve as regulation for the clan and family.

(Knowledge) resources and succession modes in P3
The succession mode of primogeniture remained the same as in P2 but because of the principle of coparcenary the wealth of the family diluted (Chau, 1991). After Kang Yingkui died, the property of the Kang family was divided into three parts, and the second son took over the managerial authority as well as most business capital. The political situation of China began collapsing, and Kang’s business suffered. Destroyed ships and blocked rivers cut off the main sources of Kang and therefore idiosyncratic knowledge was no longer an advantage to Kang. Many of the descendants were officials serving the government and stakeholders kept supporting Kang. In spite of the fact that network-related knowledge and knowledge transfer of the Kang family remained effective and stable, the impact from outside was no longer negligible (Pei et al., 2011, 2012). The family education was challenged when public education offered aspirants of Kang great opportunities to carry the family business forward, however, some unworthy ones chose to decay under the shadow of the Opium War (N. N., 2010).

Among these factors the change of knowledge resources is also important. For example, a new cultural activity “the May 4th Movement of 1919” deeply influenced the mind of Chinese young people, including those of the Kang family (Schwarcz, 1986). They started abandoning the old idea of Confucius and instead pursued equality, freedom and science, so that the cultural background of transferring knowledge from one generation to the next has changed.

Transaction atmosphere and successions in P2
Natural disasters like the Yellow River flood and the frequent famines in Henan were a big concern to people, but not to powerful businessmen. The Kang family took advantage of their location to trade grain, while at the same time organising charity activities to help others. In order to open the Shandong market despite obstruction from local competitors, they showed great determination by burning off all damaged cottons. Kang Yingkui, as a government officer, managed to get a ten-year supply order for the military government. This was a boom period for both government and Kang, and because the government was the primary client taxation was no problem.
China had no well-functioning business credit system, early banks were limited to certain areas and the negotiability of banknotes restricted. Chinese merchants relied mainly on family credit based on blood relationship, guaranteed by family culture and moral principles (Zhou, 2008). This made inside successors very important because of their loyalty, trust-worthiness and high responsibility. Besides the influence on their business partners, this credit had a positive effect on their employees.

Transaction atmosphere and successions in P3
The late Qing Dynasty was marked with political instability and constant battles. Fiscal policy changed with new temporary taxation to support the excessive military expenditure (Yang, 2009). The Kang family was distracted by frequent disturbances from a rebel army, busy organising local residents to resist, at the same time aiding countless suffering residents by spending family fortune. In 1901 Kang Jiande hosted Empress Dowager Cixi who fled from the palace, sacrificed their fortune to protect local officers (Si, 2009). Kang had to sell land to pay back their debts which marked the declining period of the business. Changes were taking place everywhere. Banks became widespread, the family credit system was threatened and no longer as effective as before; the shift of the Yellow River’s route, depression of water transportation and emergence of rail transport impaired Kang’s inherent location advantage; Opium Wars and Japanese aggression against China created extreme misery for all Chinese including the Kang family. The government rather served as fiscal burden and the family could scarcely manage to survive (N. N., 2010; Schwarcz, 1986).

Conclusions from the Kang case study
For Kang, the preferred Chinese succession mode of primogeniture was not predominant (Wang and Si, 2011). They prioritise virtue and ability when considering successors. Due to Chinese culture, females are not considered as candidates and not recorded in the genealogy. In the second period when the family was in a growth stage, they took advantage of both idiosyncratic and network-related knowledge to carry forward the business. In P3, changes and instability such as wars drained Kang and destroyed idiosyncratic knowledge resources, and one important network source turned into a huge burden. Kang resources, time, location and network mainly depended on the government and they were powerless facing the turbulent external situation.

Case Study II: HBK
The history of HBK (stands for “Holz und Baustoff Kompanie” meaning Wood and Building Material Company) goes back to the year 1738 when Christian Dethleffsen founded a trading business in Flensburg shipping agricultural products, spirits and wood to and from the West Indies. The year 1870 marked a big change for HBK because after the German-Danish war the company was split into two separate entities, wood trade and a distillery and was no longer part of the Danish empire but of Prussia. The wood trade division HBK is managed by a family member in the ninth generation today. The distillery was sold in 1997 but the four main owners of the company set up a family foundation and bought shares of a variety of other businesses (Holz and Baustoff Kompanie (HBK), 2013; Dethleffsen, 1988).

P2: Christian Dethleffsen was born as the youngest of eight siblings and founded HBK as an overseas trading business. After his death his son Lorenz took over
(four brothers died young, one became a priest and another died when sailing to the West Indies). After Lorenz death in 1825 his wife Botilla managed the business till her oldest son Christian and his brother Lorenz (who died in 1836) took over in 1830. Christian handed the business over to his two sons Diederich and Hermann Georg leaving his will to separate the business into two parts (Dethleffsen, 1988).

P2 can be characterised by external troubles including the national bankruptcy of Denmark when Norway split from the state around 1820. Moreover the Schleswig-Holstein upheaval was followed by a world economic crisis around 1850 and the 1864 war. In the second generation there were ten and in the third generation eight siblings. The succession decision seemed to be influenced not only by birth order and gender but also capabilities and health of the successors (Flensburger Tageblatt, 1988).

P3: After 1870, Diederich took over the wood trade and Hermann Georg handled the distillery part. In both firms the successors were well educated and some gained work experience abroad. The distillery part was flourishing up to around 1900 when several other distilleries were taken over. Shortly after the two sons Lorenz and Hermann Georg III took over, the father Hermann Georg II died at the age of 61. This led to a loss of knowledge and fragmentation of resources towards several heirs until finally the company had to be sold. In the flourishing wood trade Diederich II extended and modernised the business and set up a partnership with his three children and son-in-law. Problems in the partnership were solved and Diederich Biehl was announced as successor in 1924 (Boyd and Royer, 2012). Diederich I had eight and Diederich II had six siblings and both lived a long life so that they were able to transfer their knowledge. In the distillery a similar amount of siblings existed in each generation but the successors passed away much earlier which made knowledge transfer more difficult (Dethleffsen, 1988).

(Knowledge) resources and succession modes in P2
The resources in P2 are to a large extent built on the high number of siblings and therefore a wide choice of successors. The preferred European succession mode of primogeniture where the company is handed over to the oldest male heir (Chau, 1991) could be generally observed. Nonetheless the company deviated from this succession mode because the older brothers died early or in one case a wife took over until the sons were ready to manage the business (Schütt, 1963). The rules for the succession tradition suggest that only one or two sons that are active in the management should inherit ownership.

The successors acquired their knowledge through an education within the business but also by sailing to the West Indian colonies with their own fleet of ships. They gained experience by learning from their father and mother who lived long lives and were able to transfer experiential knowledge. In one generation the last will of the owner was that the company should be split into two parts. As a rule of tradition this last will was followed.

(Knowledge) resources and succession modes in P3
P3 can be characterised by a flourishing financial development because of innovations in both parts (steam-powered sawmill and buying of the Bommerlunder recipe), modernisation and extensions of the businesses. Because of the solid financial base as well as the increasing stability of the environment outside education became possible.
Hermann G. III worked in the USA for three years before taking over the distillery and his brother Lorenz studied in Cologne to gain work experience. Diederich III became a well-educated tradesman after working for several German wood trading companies.

In P3 the business was no longer principally following the succession mode of primogeniture. First, the business was split up into two separate entities. Then Diederich II built up a limited partnership with his three children and son-in-law (Petersen, 2010; Boyd and Royer, 2012). The flexibility that was shown with regard to succession and education of the siblings can be seen as a good base for keeping valuable experiential knowledge within the family business.

**Transaction atmosphere and successions in P2**

In P2 the transaction atmosphere was influenced by an economic environment of bankruptcies and wars. Christian Dethleffsen started his business despite the economic crisis which he rather interpreted as an opportunity. The trading business started with shipping wood and building material to Copenhagen and agricultural products to the West Indies. The trade with Norway consisted of selling spirits and buying fish and wood there. Christian’s son Lorenz concentrated on the trade with the Baltic countries because overseas trade was disrupted by the Napoleon wars (Flensburger Tageblatt, 1988). The Dethleffsen family was involved in networks with other businesses and a nephew of Christian was assigned as director of the Flensburg steamship association as well as the head of the chamber of trade (Becker, 2012). These connections proved to be valuable and later facilitated innovations in the business.

**Transaction atmosphere and successions in P3**

A transaction atmosphere of economic welfare and political stability after the end of the German-Danish war in 1864 can be regarded as one driver which led to flourishing developments in both parts of the business. In the twentieth century a development towards a more complex legal framework including corporate, tax and inheritance laws was observed. This increased the necessity for partnerships and external advice. Further problems started in the distillery part of the company when Hermann, G. II died relatively young and the two sons Hans and Lorenz also died young which made it difficult to pass on (experiential) knowledge (Boyd and Royer, 2012). Therefore not only the outside environmental conditions affected the transaction atmosphere but also the age of the predecessors who in these times were the main source of experiential knowledge.

**Conclusions from the HBK case study**

At HBK the preferred European succession mode of primogeniture was not predominant in the later period (Whitley, 1999; Chau, 1991). The family tried to solve succession problems with flexibility but also following traditions. In P2 they suffered from wars and economic crises but still managed to keep the company alive. One factor can be seen in the number of siblings in each generation which made it easier to make a good choice and build up wide networks and also have a certain “competition between suitable successors” and the possibility to choose the best. Also, inter-generational (implicit) knowledge transfer is suggested to work better when the managing family members had a long life. In P3 the educational possibilities and the economic wellbeing of the company supported a continuation of the businesses. According the family business owner in the ninth generation, rules and traditions as well as obligations derived from the respected company name Dethleffsen were followed by
family members also in their private lives. Moreover he stated that the perception of the family business as a loan and commitment rather than a right of property was a key to success. Underlying values were part of the tradition that the successors were educated with over generations.

Comparison and implications
When comparing the two family businesses it has to be acknowledged that in P2 Kang was an established company whereas HBK has just been founded. The pool of experiential knowledge at Kang was more advanced especially at the beginning of P2. For the Kang business virtue and ability are preferred in successions, not primogeniture, through all phases. HBK also followed a less strict mode by allowing two brothers or in one case the mother take over, which impacted the knowledge transfer. In the Kang business, successors started life-long learning processes early in their childhood and therefore gained relevant tacit and experiential knowledge (Bjuggren and Sund, 2002).

HBK had the advantage of choosing their successors from a large number of siblings. They gradually built up their experiential pool of knowledge when starting the company and took advantage of this later in P2 and in P3. The high number of children in all generations of HBK further can be seen as a reason for the high level of network-related experiential knowledge. The access to social networks within the family business can further foster the development of knowledge (Basly, 2005). The high level of experiential knowledge at the end of P2 can be seen as reason why HBK was able to build up a flourishing business in P3 supported by a stable transaction atmosphere. HBK followed unwritten inheritance rules that only one or two sons as active managers could inherit the ownership of the company’s real estate and capital.

The situation for Kang was different in P3 because even on a high level of idiosyncratic and subject-related knowledge the network-related knowledge dominated by the government was disrupted. The reason here can be seen in political and economic changes but also in the predominant Chinese succession mode of family coparcenary (Chau, 1991).

Following Table I shows a comparison of the main characteristics of Kang and HBK. For the two periods succession modes, relevant resources and transaction atmospheres are summarised.

In terms of our conceptual framework we can observe that the elements suggested worked well to structure the different successions in the investigated periods P2 and P3 for both family businesses, Kang as well as HBK. Figure 5 summarises and further illustrates the situations identified for the different phases. It becomes obvious that both family businesses have been embedded in environments in P2 that suffered from difficult institutional frameworks: for Kang the institutional framework lacked clear and practical rules of the game. This was similar for HBK in that phase. In addition to that for HBK instability of the existent weak institution system becomes obvious in the case description. These characteristics of the transaction atmosphere made the transfer of relevant knowledge resources to externals basically impossible due to the very high risk of opportunism in both investigated businesses. The rules of the game inside the family firms were clear to the family members and also going along with adequate sanctioning possibilities. A focus on internal learning also with regard to other than the experiential knowledge thus became dominant. Regarding the transfer of the strategically valuable experiential knowledge for Kang it has been observed that idiosyncratic and network-related knowledge elements were kept in the family and handed down in formalised and informal ways from one generation to the next.
At HBK it additionally played a relevant role to gain idiosyncratic knowledge by travelling early in the lives on the ships belonging to the company. It was favourable that the family members with the relevant knowledge got rather old so that they could pass on their subject-related knowledge easier. Due to the large (family) network in the home location of HBK the transfer of this knowledge element also worked well.

In P3, Kang increasingly had difficulties to transfer idiosyncratic knowledge to the next generation and in addition relevant network-related knowledge partly lost its value. Moreover the institution system was characterised by instability. Due to a more favourable transaction atmosphere for HBK in P3 new options regarding education...
emerged. The more reliable outside institutional framework made it possible and useful to “outsource” the part of the education that referred to more general industry-specific knowledge. Strategically valuable idiosyncratic knowledge were, however, still gained by working experiences in the own business and subject-related knowledge handed down by long living older generations. The access to the large network through the family was complemented by possibilities for the younger generations to build up an additional network through their external experiences.

In general it could be stated in both cases that internal successors were the preferred choice due to their embeddedness into the social family structure characterised by mutual trust and honesty (Pollak, 1985; Dyer and Handler, 1994). Long-term traditions and rules ensured knowledge transfer over generations and the quality of management. Therefore the network-related experiential knowledge was of great value in the two trading businesses. Overall, experiential knowledge analysed in both phases was a critical resource for both family businesses. Relevant idiosyncratic, subject-related experiential and network-related experiential knowledge was acquired in life-long learning-by-doing processes of the successors who identified themselves with the company values and were linked into a network of relationships which spanned private and business lives.

In summary, from these two cases the following implications may be derived: family firms in different industries embedded into different institutional contexts have different knowledge types to transfer, as well as different ways of transferring knowledge. The Kang family relies mostly on education within the family, such as family instructions, clan regulations, teaching of elders and private tutors, good examples of Xiang Gong and some culture atmosphere, those approaches were beneficial to tacit knowledge transfer such as business senses in an environment characterised by weak and instable institutions. HBK chose a mixed mode of internal and external education activities as soon as the transaction atmosphere allowed for it. In our investigation we focused on similarities between the two cases in terms of different transaction atmospheres and knowledge-sharing behaviours. In a future study it would, however, be a fruitful path to also come to a more in-depth investigation of cultural differences.
Conclusions
The fact of having found two rich cases from different cultures to compare over a period of more than 200 years is in itself a contribution to family business research. Single cases can be very powerful examples that make a case study persuasive (Siggelkow, 2007). With the cases of Kang and HBK we could examine the knowledge transfer in these long-lived family firms from a similar industry and thereby focusing on the implications of different types of strategically relevant resources and transaction atmospheres during succession. Interesting empirical observations reveal how the two companies used their resources to move from one generation to the next. Hereby the transaction atmosphere during two time periods were investigated and compared with each other.

For both cases idiosyncratic knowledge was most relevant in the earlier stages and transferred within the family. Later on network-related knowledge got more important. At Kang a rich environment contributed to this knowledge transfer process in consisting of two characters: One is the high cohesive family business culture, that drives all family members to sustain their business by all means, in particular, to keep a balanced relationship with all the stakeholders which is indispensable in their network-related knowledge transfer. Second, the unique family business system that cannot be easily replicated by others ensures the knowledge transfer, e.g. the Xiang Gong system. At HBK the resources can also be seen in subject-related experiential knowledge because of innovations in the distillery and wood trade part that helped to keep the business alive after a period of crises. The family commitment, traditions and underlying values at HBK are seen as success factors for longevity.

For family business owners it would be helpful to see what resources were relevant in the two different cases in the two periods and learn how to deal with different transaction atmospheres. The case descriptions of what succession modes were dominant in the different periods and what resources and transaction atmospheres affected the family business longevity provide valuable insights for family firms.

Linking competitive advantage realisation in family businesses to the success of transferring strategically valuable knowledge to the next generation is the point of reference of our study. Next to highlighting and illustrating this relationship with data material from two in-depth case studies we also want to show the relevance of the institutional system a company is embedded into. We have broken down the complexity of an institution system to different transaction atmospheres which may be more or less favourable with regard to reducing potential opportunism of external successors in family businesses. We have shown first explorative insights into how this conceptual framework can be used to understand competitive advantages of family firms better. More research is certainly necessary to come to further insights. For future studies, the knowledge elements as well as the transaction atmosphere characteristics would profit from further specification and operationalisation. More case analyses would be valuable contributions to further contrast this perspective with the reality of long-lived family firms and thereby also include further insights into the framework of thoughts. In addition, the development of testable propositions would be a next step.

References


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Further reading

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