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Knowledge Acquisition for Innovation: Networks of Top Managers in the European Fashion Industry

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Past research revealed that social networks play a decisive role for the receipt of new knowledge by engineers and middle-level managers and, thus, essentially contribute to innovation. However, the question of by which network ties top managers – that is, the key organizational decision-makers – acquire which kind of innovation-related knowledge resources has not yet been explored systematically. Our paper addresses this research gap by empirically analyzing knowledge ties of top executives in the European fashion and accessories industry. We draw on the concept of relational embeddedness and focus on knowledge providers and knowledge ties of top managers. Based on this theoretical framework, we conducted 22 semi-structured interviews with top executives from 11 leading European companies within this industry. We present the main results of this explorative study and identify its important implications from both research and managerial perspective.

Keywords: Innovation; knowledge networks; knowledge management; top management; fashion and accessories industry; upper echelons

Introduction

The burgeoning volume of social network research in management and organization studies has shown that networks essentially contribute to the creation of intellectual capital and innovation, particularly the development and implementation of new and useful products, services, and processes (Nahapiet and Ghoshal, 1998; Borgatti and Foster, 2003; Kilduff and Brass, 2010). In innovation-related activities, work performance particularly depends on informal collaboration, for example, obtaining knowledge that contributes to problem solving (Krackhardt and Hanson, 1993; Cross and Cummings, 2004; Fliaster and Schloderer, 2010). Informal social network mechanisms have been found to serve as 'an effective medium for acquiring and encoding timely, current, and soft information' (Tushman and Scanlan, 1981, p. 290) and, thus, foster creativity and innovation (Moran, 2005).

While previous innovation studies (Tushman and Scanlan, 1981; Moran, 2005; Perry-Smith, 2006; Tortoriello and Krackhardt, 2010; Gardet and Mothe, 2011) have focused primarily on networks among R&D scientists, engineers, business consultants and middle managers, less attention has been dedicated to knowledge networks of other key innovation actors – the 'upper echelons' (Hambrick and Mason, 1984). This gap is particularly remarkable as upper echelons – that is, the chief executive officers, other senior managers, and top management teams (TMT) (Bromiley and Rau, 2016) – have been found to strongly affect many organizational areas, including the innovation activities (Bantel and Jackson, 1989; Smith and Tushman, 2005). Empirical studies have revealed, for instance, that top managers (TMs) contribute to a broad range of innovations, such as product-market innovations and organizational innovations that transform organizational structures and processes (e.g., Elenkov *et al.,* 2005; Elenkov and Manev, 2005).

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In this context, past studies found that the TMs' impact on innovation is related to their individual characteristics, such as personality, demographic attributes, individual skills and intraorganizational tenure (e.g., Liu *et al.,* 2012; Balsmeier and Buchwald, 2015). On the other hand, however, network scholars increasingly argue that 'leadership requires the management of social relationships' (Balkundi and Kilduff, 2005, p. 956), and thus more attention has to be paid to the role of leaders' social networks (Bono and Anderson, 2005), particularly with regard to innovation (Fliaster and Golly, 2014). In this context, Bono and Anderson (2005) for example, found that managers who exhibit transformational (that is, more innovation-friendly) leadership behaviors tend to hold more central positions in the organization's informal advice and influence networks. Other studies have shown that in innovative medium-sized companies, senior executives create strong ties with a small number of blue-collar workers to acquire novel product ideas and market insights (Fliaster and Golly, 2014). Previous research also began to address TMs' knowledge networks that cross the organizational boundaries. For instance, Collins and Clark (2003) found that strong and diverse top managerial external networks increase both sales growth and stock price. Furthermore, the study conducted by Peng and Luo (2000) within the context of transition economy revealed that interpersonal ties of Chinese managers with top executives at other firms and with government officials help improve the firms' performance.

Despite these valuable insights, a number of important issues still remain under-investigated. First, prior studies have primarily addressed the structure of top managers' networks (e.g., Cao *et al.,* 2015) and paid less attention to the distinctive features of network ties that are particularly deployed by TMs to acquire innovation-related knowledge. Second, whereas innovation studies found that for successful innovations various kinds of knowledge (such as market-related and technological knowledge) are needed (Sammarra and Biggiero, 2008), the insights about which kinds of innovation-related knowledge are actually acquired by TMs through different types of network ties are still very sparse. Third, while past network studies have mainly addressed TMs' work-related contacts, less is known about the role of private, non-work-related contacts (e.g., family and friends) as well as contacts to former colleagues specifically regarding the acquisition of innovation-related knowledge. Addressing these three research gaps is an important and necessary step, since TMs are the key innovation actors in organizations (e.g., Elenkov and Manev, 2005) and because these gaps concern three very fundamental network facets – network nodes, ties, and knowledge flow (Borgatti and Halgin, 2011; Phelps *et al.,* 2012).

In what follows, we explore these under-investigated research questions theoretically and empirically and analyze, through which types of network ties to which types of network contacts do senior executives in the European fashion and accessories industry acquire which types of knowledge that they consider as relevant for innovation. In doing so, we aim to extend the innovation and social networks literatures and enrich the understanding of innovation-related social activities of TMs. In doing so, we answer recent calls in innovation research for paying more emphasis to the social aspects of TM involvement in innovation, that is, for exploring the contacts between top managers and other people that are conducive to new product development (e.g., Felekoglu and Moultrie, 2014). To deliver this contribution to the literature, we draw on the concept of relational embeddedness (Granovetter, 1985, 1992) and focus on knowledge providers (alters) and knowledge ties of TMs (e.g., Uzzi, 1997; Gabbay and Leenders, 2001). Based on this theoretical framework, we collect and analyze data on ego networks of top executives from leading companies within the European fashion and accessories industry. Finally, we present the main results of this explorative study and identify its implications from both research and managerial perspective.

Knowledge networks at the individual level

The relational embeddedness

As the aim of our study is to explore by which dyadic ties TMs acquire knowledge that is relevant for their innovation endeavors, we define a TM's knowledge network as a set of nodes – that is, the given TM (ego) and his/her direct contacts (alters) – that serve as repositories of distinctive knowledge (Phelps *et al.,* 2012). In doing so, we draw on probably the most fundamental underlying idea for explaining consequences of social networks (Borgatti *et al.,* 2009; Borgatti and Halgin, 2011) – the direct flow of resources from node to node. According to this conception, the work success of a manager is dependent on resources that he or she receives from alters (Borgatti and Foster, 2003). While the ties can act as 'pipes' for various kinds of resources, we focus on one specific flow – the knowledge that is relevant for the actor's innovation efforts.

The organizational research on social networks has been strongly inspired by Granovetter's (1985, p. 487) fundamental argument that the actions of social actors are 'embedded in concrete, ongoing systems of social relations'. The embeddedness principle is currently seen as a core idea that discerns network studies from other research streams (Kilduff and Brass, 2010). More

specifically, social embeddedness means that economic actions and outcomes are affected by two distinctive forces: the structure of the overall network of relations and the dyadic relations that people have developed with each other (Granovetter, 1992; Nahapiet and Ghoshal, 1998).

Previous studies indicated that dyadic, or relational embeddedness plays a strong role particularly in explaining managerial performance in product and process innovation (Moran, 2005). Hence, in what follows, we build on this stream of network research and explore network ties as 'conduits' through which innovation-related knowledge flows. The main indicator of relational embeddedness therefore is the type of ties through which actors directly connect to their partners (Shipilov, 2005).

Types of network ties and their innovation-related strengths and weaknesses

With regard to different types of network ties, the notion of 'tie strength' (Granovetter, 1973) has been widely discussed in the literature (e.g., Borgatti and Halgin, 2011; Phelps *et al.,* 2012). The strength of an interpersonal tie usually reflects the duration of the relationship, its emotional closeness, and the frequency of communication among the dyadic partners (Granovetter, 1973; Marsden and Campbell, 1984; Reagans and McEvily, 2003; Perry-Smith, 2006). Past research revealed that both weak and strong ties play an important role with regard to innovation but are characterized by different, partly contrasting advantages and disadvantages (e.g., Zheng, 2010) that are related to the characteristics of knowledge that is transferred via the tie *and* the process of knowledge transfer (Fliaster and Spiess, 2008). On the one hand, weak, infrequent communication ties are likely to connect partners from different, non-overlapping social clusters, providing the receiver with access to diverse and non-redundant information and ideas (Granovetter, 1973), which in turn fosters creativity (Perry-Smith, 2006). On the other hand, strong ties have been found to be especially conducive for the receipt of tacit knowledge (Hansen, 1999) that contributes to organizational learning and serves as a foundation for innovation through knowledge conversion, for instance, in the new product development (Nonaka and von Krogh, 2009).

Moreover, strong, or 'embedded' ties are associated with higher help motivation and availability of knowledge provider (Reagans and McEvily, 2003) and characterized by a higher level of trust when compared to weak, 'arm's-length' ties (Uzzi, 1996, 1997). The enhanced level of trust motivates the partners to provide knowledge that is both idiosyncratic and private (and thus, restricted), such as undocumented capabilities in new products or information on failed problem solutions. In concordance, research found that middle managers who have established high-trust interpersonal relations in their firms are likely to be successful innovators (Moran, 2005). On the contrary, weak, arm's length ties require lower costs in terms of time and energy needed to be spent for establishing and maintaining a relationship (Fliaster and Schloderer, 2010) and have been found to be an efficient means of cheaply acquiring public, unrestricted information, such as standardized reports (Uzzi and Lancaster, 2003, 2004).

Overall, past research revealed that knowledge recipients may draw benefits both from the resources (e.g., distinctive knowledge) which the given alter possesses and the specific characteristics of the dyadic tie to alter (e.g., because strong ties are associated with higher trust and reliability) (Gabbay and Leenders, 2001; Fliaster and Spiess, 2008). The two generic types of ties can be seen as 'complementary rather than cannibalistic when they are combined within the same network, because one type of tie helps overcome the limitations of the other type while enlarging information and governance benefits' (Uzzi, 1999, p. 500). Drawing on these conceptual considerations, we deploy the concept of relational embeddedness and analyze how TMs in the fashion and accessories industry make use of both types of network ties to acquire different components of knowledge, which they essentially need for innovation activities.

Empirical study

Industrial setting: the fashion and accessories industry

Past studies have shown that the influence of TMs' social networks on performance is con-tingent on industry context (Rowley *et al.,* 2000). Accordingly, taking into account the fashion industry literature, we argue that knowledge ties of TMs are also likely to be affected by idiosyncratic attributes of this industry. First, the fashion products are predominantly coined by ephemerality (Arrigo, 2010), resulting out of the fast-changing environment influenced by the newest trends (Cappetta *et al.,* 2006) and frequent and spontaneous buying decisions of customers. Hence, we expect knowledge networks to enable the TMs in the fashion and accessories industry to acquire current and soft information concerning the latest market trends, especially on the demand site. Furthermore, the innovations within this industry tend to reflect cultural phenomena, addressing the way people act and think (e.g., Polese and Blaszczyk, 2012). Thus, we expect network ties to help TMs acquire insights into cultural and societal changes. Second, as the fashion industry extensively implements modern production and logistics technologies (Burns *et al.,*

2011), we also expect TMs to use networks for 'monitoring' the most critical technological developments that affect innovation as well as the company's business in general. Third, we take into account that previous studies in other innovative industrial sectors have indicated that in addition to market-related and technological knowledge, the managerial (e.g., organizational) knowledge is of particular importance for innovation, and this type of knowledge is also exchanged in networks (Sammarra and Biggiero, 2008). As the fashion and accessories industry is dependent on creativity and innovation (e.g., Sperber, 2016), we argue that managerial knowledge that involves, among others, expertise and know-how for an efficient and effective coordination and supervision of innovation processes (Sammarra and Biggiero, 2008) is also likely to be acquired by fashion industry TMs through network ties.

Research methodology

In general, qualitative research includes several heterogeneous methods and approaches (Gehman *et al.,* 2018). While some scholars assume that qualitative studies are primarily to be used in areas of nascent theory, past work discussed many other situations and rationales for the deployment of qualitative data (Graebner *et al.,* 2012). In our case, as mentioned above, seminal network theories (e.g., Granovetter's 1973 'strength of weak ties' theory) do already exist. In such situations, contrary to purely inductive research, the main reason for using qualitative data does not rest on the nascent state of prior theory, but rather 'on re-searchers' fundamental interest in individuals' subjective perspectives' (Graebner *et al.,* 2012, p. 278).

Noteworthy when addressing the process and content of networks, past work also advocated the need to deploy qualitative research approaches, particularly because these approaches derive 'an in-depth understanding of how people behave and act' (Jack, 2005, p. 1255). Concurrently with this line of reasoning, the main objective of our study is to get a deeper understanding of knowledge-related network activities of key innovation actors in organizations as experienced by those actors from their own vantage point (for a similar argument, see Patvardhan *et al.,* 2015). Adhering in particular to Gioia *et al*. (2013), we posit that our in-formants are 'knowledgeable agents': We argue that TMs in our sample 'know what they are trying to do and can explain their thoughts, intentions, and actions' (Gioia *et al.,* 2013, p. 17). Thus, in addressing our research question, we adhere to the logic of the interpretive research approach and rely primarily on knowledgeable TMs in the fashion industry who explain how they deploy network ties to acquire innovation-related knowledge.

In doing so, we followed the line of qualitative research thematized, among others, by Graebner *et al*. (2012), and drew a general theoretical framework (i.e., the relational embeddedness) from the existing network literature and built this framework into our data collection process. Consequently, we deployed an abductive research approach, which advocates 'an explicit incorporation of extant theory within the analysis process, allowing for emerging findings to be compared with theoretically based and predicted results' (Rheinhardt *et al.,* 2017, p. 519). This approach allowed us to explore the interpretations of innovation-related knowledge ties provided by the managers who deploy them, connect these interpretations to the contextual factors of the fashion and accessories industry, and analyze these interpretations in the light of prior theories (see also Nag *et al.,* 2007; Nag and Gioia, 2012).

Sample and data collection

Accordingly, the main data source of our study are 22 semi-structured interviews conducted in 2014 with top-level executives of 11 European fashion industry companies. With regard to the number of companies and the interviewees, our sample is in line with other qualitative studies on relational embeddedness (Uzzi, 1996, 1997, 1999; Jack, 2005). The headquarters of the companies involved in our study are located in Germany (9 firms) and Italy (2 firms).

For the selection of participating companies, various sources were consulted. First, we used the list of the 'TOP 50 German luxury companies' published in the Luxury business report (Inlux, 2013) and the ranking of European fashion companies annually published in the journal *Textilwirtschaft* (2015). In addition, the national association *Meisterkreis*, with its headquarter located in Berlin (Germany), served as an important source for the contact generation. Its members are leading firms that operate in diverse industries of the luxury segment (e.g., automotive, cosmetics, fashion and accessories, and perfume) (Meisterkreis 2013, 2014).

We contacted all potential respondents by e-mail to request their participation in the study. The sample includes various top managerial positions, such as the CEO, CBO, CMO, and Managing Director. Among the participating companies are various well-known international brands such as *Escada*, *Hugo Boss*, *Iris von Arnim*, *Montblanc*, and *Talbot Runhof*. For confidentiality reasons, the companies are referred to by the numeration of letters (e.g., A, B, C) and the interviewees' by their organizational job title (see Table 1).

In 18 out of the 22 cases, TMs have been interviewed face-to-face at the company's site, and four participants have been interviewed via telephone. In case of the face-to-face conversation, the interviews were tape-recorded;

Table 1 Overview of companies and interviewees

Company/# Interviewee	*Position of interviewee*	*Tenure within the company*	*Location of company's headquarter*
A* (TM1)	Director Marketing Activation e-Commerce Western Europe	2012–2014 (2 years)	Germany
A* (TM2)	Director Marketing Operations Originals/Style, Marketing Operations & Business Development	2004-current (13 years)	Germany
A* (TM3)	Engineering Director	1999-current (18 years)	Germany
B (TM4)	CEO	2005-current (12 years)	Germany
C (TM5)	Marketing Director	2009-current (8 years)	Germany
D† (TM6)	Managing Director; CCO; Founding Member	1982-current (35 years)	Italy
D† (TM7)	Managing Director; CFO; Founding Member	1982-current (35 years)	Italy
E* (TM8)	Chairman of the Management Board; CEO	2008–2014 (6 years)	Germany
E* (TM9)	Director Digital Marketing & E-Commerce	2012–2014 (2 years)	Germany
E* (TM10)	Director Marketing, Communications & Licenses Marketing	2008–2014 (6 years)	Germany
F* (TM11)	Business Leader New Business Development	1994-current (23 years)	Germany
F* (TM12)	Manager Textile Technologies Innovation	2009-current (8 years)	Germany
G (TM13)	CBO	2009–2016 (7 years)	Germany
G (TM14)	Chairman of the Management Board; CEO	2008–2016 (8 years)	Germany
G (TM15)	Senior Head of Product Excellence Men	2012-current (5 years)	Germany
G (TM16)	Senior Vice President Global HR	2013-current (4 years)	Germany
H† (TM17)	Managing Director	2006-current (11 years)	Germany
I* (TM18)	Managing Director	1996–2014 (18 years)	Germany
J (TM19)	CCO; Founding Member	2000-current (17 years)	Germany
J (TM20)	CEO	2010-current (7 years)	Germany
K (TM21)	Chairman of the Management Board; CEO	2009–2015 (6 years)	Germany
K (TM22)	Director Logistics and Production	2007-current (10 years)	Germany

Table 2 Questionnaire on name generator and name interpreter

1. Name generator:	
• *Network partners*	If you think back to the past 6 months, with whom have you primarily discussed innovation-relevant issues? (#1, #2, #3, etc.)
2 .Name interpreter:	
• Connection type (TMT member, customer etc.)	In which relationship are you connected to this network partner (regarding #1, #2, #3, etc.)?
• Length of the relationship	For how long have you known the mentioned contact?
• Contact frequency	On average, how often do you communicate with that person?
• Trust	To what extent does the named person share your personal goals and values and to what extent does this person share honest and trustworthy information?
• Type of knowledge exchanged	Which kind of knowledge is transferred or exchanged during this process? (e.g., fashion-related issues, organizational issues, etc.)

in case of the telephonic conversation, the software *Call Graph* was used to record the conversations. Interviews for the face-to-face group lasted for $\bar{x}_{18} = 62.7$ minutes ($SD_{18} = 16.4$), and for the contacts interviewed by phone for $\bar{x}_{4} = 42.5$ minutes ($SD_4 = 11.3$).

As mentioned above, the focus of this paper is on relational embeddedness, that is, dyadic ties of individual top managers, contrary to other studies that explore structural embeddedness and thus, deploy methods such as the roster approach to address structural characteristics (network density, range, centrality etc.). Our data were generated, first, through semi-structured interviews, which were set out to investigate the TMs' role within the company and his or her network contacts and dyadic ties. In addition to the interview questionnaire, we also deployed qualitative methods of social network analysis (SNA) to collect data on network ties (e.g., Fischer, 1982). The SNA aims at the understanding of TMs' interactions with their direct network contacts rather than the TMs' individual attributes (Burt, 1978; Borgatti and Halgin, 2011). To this end, all interviewees have received a network map, which has been designed based on Burt (1984), in order to disclose knowledge ties. Our data collection and network visualization procedure followed the standard *name generator* and *name interpreter* procedures that are extensively described in the SNA literature (e.g., Borgatti et al., 2013; Burt, 1984; Marsden, 2011; Wasserman and Faust, 1994) (see Table 2).This method is the common approach for this type of network analysis, and it has been applied in our case along the lines of previous studies (e.g.,Baer, 2010 ; Rodan and Galunic, 2004).

For the name generator, we asked all interviewees to name the contacts (with the minimum of one and an unlimited maximum) with whom they have discussed innovation-related issues within the last six months (referred to by the contact's initials). The contacts named were neither restricted to a specific organizational area nor to the given TM's company and, thus, could be located inside as well as outside the organizational boundaries. Second, in the name interpreter part, respondents answered questions regarding each of the contacts they named (for instance, 'How many years of relationship do you have with this contact?', 'On average, how frequently do you communicate with this contact?'). This two-step procedure enabled us to explore the characteristics of the ego's contacts (alters), the dyadic ties between ego and alters as well as the specific knowledge components acquired by ego through the given tie.

As indicated above, we first discerned between two general categories of TMs' work-related network contacts – those within and beyond the boundaries of given organization. Based on previous studies on intraorganizational networks (Fliaster and Golly, 2014), we further differed between horizontal ties (within the TMT) and vertical ties (e.g., TMs' ties to subordinates). Network scholars previously also argued that in addition to work-related contacts, non-work-related contacts (family members and friends) might also have a positive impact on innovation as they can provide new knowledge as well as support for the individual's new ideas (Madjar, 2005). Hence, those private contacts have also been taken into consideration in designing the study.

Asking the TMs to focus on ties that enable the receipt of innovation-related knowledge, we followed the approach deployed in other current studies on TM's networks that explored, for instance, the ties of CEOs that are conducive to strategically valuable information and resources (e.g., Cao *et al.,* 2015). In doing so, in reference to alters' knowledge that TMs acquire, we have also taken into account the specific context of the fashion industry in which the TMs operate and innovate. As mentioned above, within this industrial setting, we particularly investigated which ties enable TMs to acquire managerial, technological, and market-related knowledge.

With regard to the attributes of dyadic ties, we refer to the notions of tie strength (Granovetter, 1973) and embedded ties (Uzzi, 1996) discussed above. Based on previous studies, to discern between strong (embedded) and weak (arm's length) ties, we explored the dimensions of frequency of innovation-related communication, the length of relationship (measured in number of months/years of duration), and the level of relational trust (measured on six-point Likert Scale from 'full extent' to 'none at all').

In addition to the questionnaire and the name generator and interpreter, we also deployed other sources to obtain further information on the companies and our interviewees. Similar to other qualitative studies (e.g., Corley and Gioia, 2004; Nag and Gioia, 2012), we collected publicly available corporate data, annual reports, as well as archival data in the form of news and articles published in the fashion industry journals, such as *Textilwirtschaft*; these data served as important triangulation and supplementary sources. Moreover, we also attended a meeting of the *Meisterkreis* association to develop a better understanding of current trends in various sectors of the luxury goods industry.

We also took several additional steps to make sure that our data meet Lincoln and Guba's (1985) seminal criteria for trustworthiness (for current discussion on rigor in qualitative re-search, see Gioia *et al.,* 2013; Rheinhardt *et al.,* 2017; Gehman *et al.,* 2018). Similar to other studies (e.g., Gioia *et al*., 2010), while the interviews have been conducted by one (second) author to maintain consistency in data gathering, both authors were involved in the data analysis in order to make sure that the trustworthiness of the findings does not rely solely on the interpretations of a single analyst. Following the recommendations provided by Gioia *et al*. (2013), we reread the interview data and engaged both in mutual discussions to achieve agreements about codings. Moreover, we also used peer debriefing to gain an outsider's perspective (e.g., Corley and Gioia, 2004). Finally, we deployed several qualitative reliability procedures, including, for instance, the checking of transcripts for obvious mistakes, and the securing that there is no shift in the meaning of applied codes during the ongoing coding process (Creswell, 2014).

Data analysis and data structure

Our data structure is displayed in Figure 1. In line with the guidelines specified by Gioia *et al*. (2013), this data structure in a systematic way represents the informant-based, first-order codes (left side of the figure) that we assembled into researcher-centric, second-order themes (middle of the figure), which we further aggregated into more general, overarching theoretical dimensions (right side of the figure) (for this methodology, see also Corley and Gioia, 2004; Nag *et al.,* 2007; Patvardhan *et al.,* 2015).

More specifically, in the initial phase of the analysis, we began by reading interview transcripts and identifying phrases and concepts related to our research question on TMs' knowledge ties. We deployed first-order (Van Maanen, 1979) codes, that is, words and phrases used by the interviewees, or short descriptive phrases, when this code was not directly available (Gioia *et al.,* 2013). We reread the interviews several times; as we discerned codes that were similar, we collated them into first-order categories. In line with our structural framework described above, we assigned these codes to three predefined groups

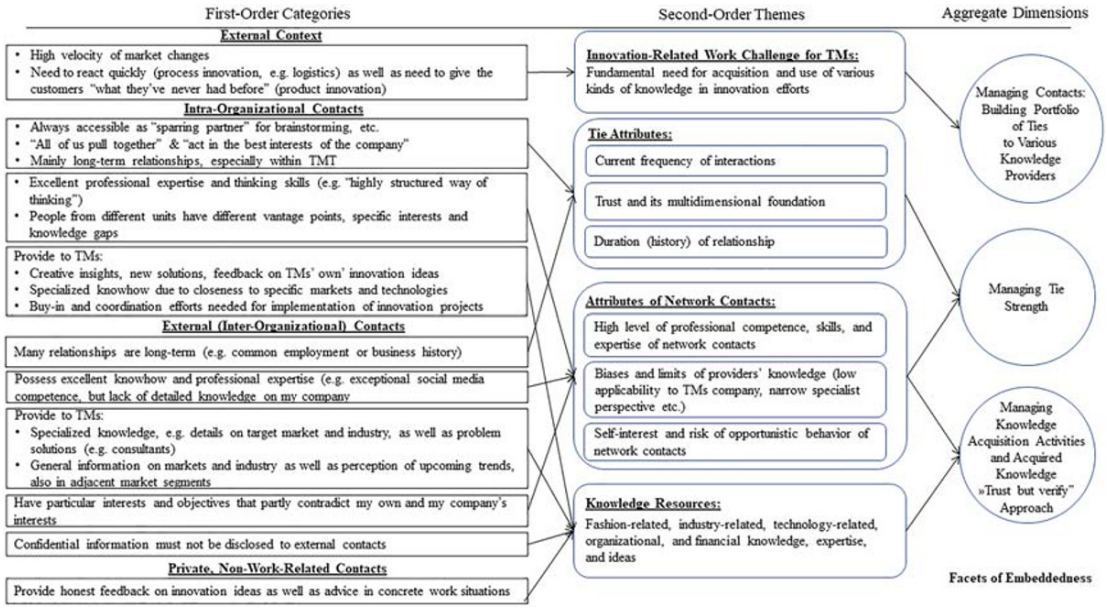

Figure 1 Data structure [Colour figure can be viewed at wileyonlinelibrary.com]

of network nodes (TMs' intra- and interorganizational contacts as well as external contacts). The interview transcripts were prepared with the software program f4 (Version 2012); the computerized content analysis in regard to item selection and coding of the interview data was conducted by the use of the qualitative data analysis software program MAXQDA® (Version 11). Concurrently with the development of the first-order categories, we started discerning linkages among the categories and assembled them into second-order themes, induced by the theoretical considerations (Nag *et al.,* 2007; Nag and Gioia, 2012). In agreement with Gioia *et al*. (2013, p. 20), in this 2nd-order analysis, we were 'firmly in the theoretical realm', asking whether the emerging theoretically distinctive themes might help us better explain the network ties built and used by the TMs for the acquisition of innovation-related knowledge. In doing so, from the procedural perspective we 'traveled back and forth' (Uzzi, 1997, p. 41) between emergent themes and facets and the relevant literature on the network theory, such as the 'tie strength'. Finally, we distilled the emergent 2nd-order themes even further, aggregating similar themes into four overarching dimensions that are shown on the right-hand of Figure 1.

Findings

Top managers' innovation networks: the knowledge providers

In sum, calculated over all 22 analyzed networks, 116 ties have been mentioned by the TMs as conduits of innovation-related knowledge. The average network size was 5.3 contacts (SD_{22} = 1.2). As mentioned above, we discern between two general categories of TMs' work-related network contacts in the research framework – those within and beyond the organizational borders. Among the intraorganizational ties, we further differ between horizontal and vertical ties. Moreover, based on previous studies, we also considered private contacts (e.g., family members) as possible providers of new and useful innovation-related knowledge.

Foremost, our data show that the majority of TMs' knowledge providers (58.6%) are located *within the company*, while a very substantial portion of these ties (39.7% of all ties mentioned) are horizontal ties within the TMT. With regard to the remainder (vertical ties), we were able to refine our framework as the data reveal that TMs turn to both middle (14.6%) as well as low-level managers (4.3%) to obtain innovation-related knowledge.

Furthermore, TMs' external contacts also turned out to be quite diverse; accordingly, we refined the network framework building four categories of knowledge providers that reside outside the organizational borders. First, about 15.5% of network ties link TMs to contacts who occupy positions within the 'innovation value chain' (IVC) (Afuah and Bahram, 1995) – the suppliers, distributors, department stores, and customers. The further 18.9% of knowledge ties lead TMs to partners which we describe as 'supplementary knowledge providers'. This category includes bloggers, journalists, trend-scouts, academic partners and management consultants. Supplementary partners neither deliver raw materials nor do they sell or buy the fashion firm's products; instead,

they purely serve as suppliers of innovation-related knowledge such as the latest market trends.

The fourth category is knowledge ties that lead to *direct as well as indirect competitors* (that is, managers of companies within the same industry that address different customer segments and/or deliver no substitutes). TMs' ties to competitors are rather rare (3.5%), and they are exclusively located at the top managerial level. The final 3.5% of knowledge providers are TMs' private, non-work-related contacts (e.g., spouse, family). The configuration of the aggregated innovation-related knowledge network is shown in Figure *2*.

Key dimensions of relational embeddedness

Enriching the results from previous studies (e.g., Reagans and McEvily, 2003; Perry-Smith, 2006), our data demonstrate that all three components of tie strength – contact frequency, length of relationship, and trust – do affect knowledge acquisition by the TMs and that these components are partly interrelated, but nevertheless operate differently.

Contact frequency. Overall, our data show that in the fashion industry, TMs make use of network ties on a very systematic basis to acquire innovation-related knowledge. This extensive use is essentially owed to the above-mentioned fact that the fashion industry is highly innovation-driven. For example, TM21 explained: 'The frequent exchange always has to take place when many things can happen. The market can develop differently, other innovations become necessary or other actions in reaction to the innovations (…) become necessary. Hence, you always have to remain active'.

In more concrete terms, concerning the contacts within the company, TMs first access innovation-related knowledge by communicating with other TMT members. For example, TM16 declared: 'The exchange within the management board is, as I believe, of essential importance for all of us. Indeed, this is true in my case'. Within the TMT, many interviewees referred to the special role of the CEO: on the one hand, the frequency of communication with the CEO is lower than with the other TMT colleagues, particularly due to time restrictions and/or geographical distance from the CEO. However, the conversations with the CEO regarding innovation are seen as extremely important: 'As he is my supervisor, this exchange is quite necessary as I always get new ideas from it'. (TM10).

Several TMs also reported on very frequent communication with their subordinates, particularly with the middle managers in charge of current innovation projects. For instance, TM18 explained: 'My most frequent exchange (…) on innovation topics by far probably really is with my direct reports. In this topic, they are indeed my most important sparring partners'.

Second, the frequency of innovation-related communication with the contacts along the innovation value chain is also high. For example, TM2 stated: 'With the customers and the distributors, my communication certainly takes place once a week. (…) Especially regarding the product itself, there are many things I learn from him and then try to integrate this knowledge. Hence, I often contact him directly in order to get new information'. The buying agents and CEOs from the

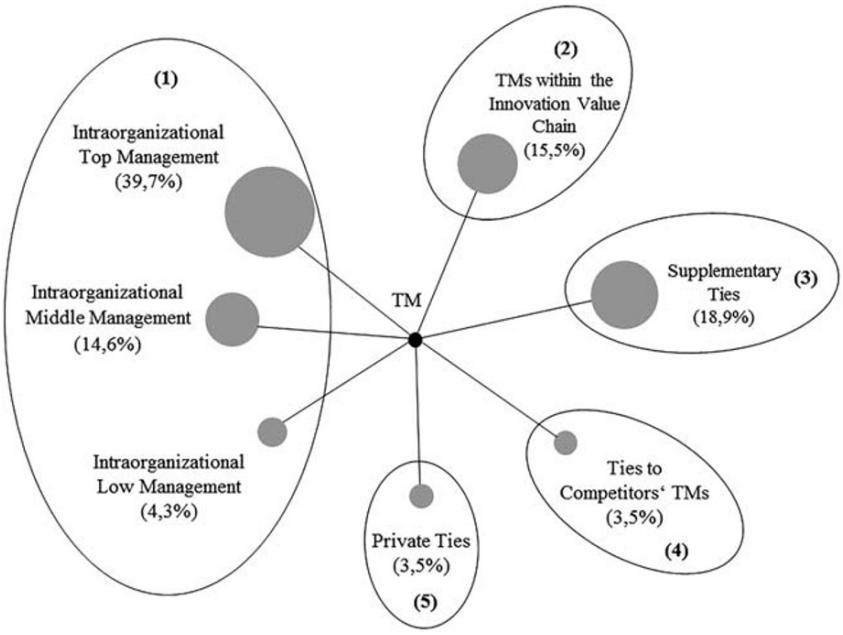

Figure 2 Composition of the TM's innovation-related knowledge networks

department stores also turned out to provide essential innovation-related knowledge to the TMs. As TM19 declared, '(...) the monthly contact to consult on news is sufficient. But this regular conversation is important to me'. As digitization goes forward shaping the competitive landscape of many industries, it is little surprising that contacts from IT companies also play a role as providers of innovation-related knowledge: 'The exchange takes place here, when something comes up. When projects are running – which is the case several times per year – [this exchange] of course is more frequent. This, however, usually concerns precise questions, and is less of 'Let's brainstorm together and search for new ideas and solutions!" (TM22).

Third, the acquisition of innovation-related knowledge from supplementary contacts generally takes place less frequently than in the case of intraorganizational communication and communication along the IVC. One of the most regularly consulted contacts within this group are bloggers and journalists. This finding is related to the idiosyncrasies of the industry, particularly a large influence of the public opinion and the media. Our data indicate that journalists and bloggers significantly shape the opinion of TMs especially regarding the industry's trends: 'Concerning market developments, for instance regarding social media, there are certain bloggers to whom I talk. (…) Especially within the fashion sector, they are extremely important, since trends can even be codetermined or defined by these people. Thus, you always have to stay informed'. (TM17).

Next to bloggers and journalists, another important knowledge provider within the supplementary ties category are the trend and media agencies. These agencies deliver not only industry-specific, but more general, industry-spanning knowledge: 'Regarding these contacts, the market knowledge is relevant concerning which trends, also over all branches, are approaching us and in which direction the market is developing'. (TM16). Furthermore, some TMs also noted that contacts to university staff and non-academic management consultants are instrumental for acquisition of knowledge in specific innovation projects.

In regard to TMs' knowledge exchange with managers who work for competitors, our data help identify two different subcategories. On the one hand, contacts with direct competitors are rare and coined by contingency (e.g., chance encounters at business events) and superficiality. For instance, TM17 explained: 'I do talk to (…) as direct competitor when I see him, but besides that I never look for the contact. But also then it's just like 'Hey, what's up?' Not more than that'. On the other hand, however, this particular TM also mentioned much more fruitful contacts with peers from other companies in the fashion industry that do not operate in the same branch segment and thus might have similar issues, but do not directly compete with the TM's firm: 'This regular exchange is very important to me, as we all are operating within the fashion industry, so many questions and problems concern us all'. In the past studies, scholars have already argued that formal membership in various clubs and societies, such as chambers of commerce and charitable organizations, provides managers with various opportunities for communication on a personal basis with influential members of other organizations (Carroll and Teo, 1996). Our data indicate that these exchanges are less frequent but nevertheless perceived as rewarding – for instance, the weak ties to other members of the *Meisterkreis* association: 'Every year, about three meetings take place on-site. When you see each other, it is always very informative'. (TM18).

Finally, contrary to work-related contacts, the exchange of innovation-related knowledge with private, non-work-related contacts does not follow a certain regular time pattern as there are no fixed meetings, project management time schedules, etc. As TM12 observed, this communication might occur *'(…) when you just anyway talk to each other as it happens'*. In other words, this sort of knowledge receipt is characterized by a high level of spontaneity and contingency.

Length of relationship. By and large, our data confirm that the duration of the relationship is a very sound measure of strong, embedded ties (Uzzi, 1999). Several interviewees stated that their informal horizontal relationships within the company are of long-term nature. This is likely to be associated with the fact that a large share of the interviewed TMs hold a long intra-firm tenure. For instance, TM22 declared: 'To all top managerial colleagues, I have been connected tightly over years, no, almost over decades'. Moreover, some managers explained that their strong TMT ties transcend the boundaries of the current employment relationship: 'I have known my boss before. Probably due to that, the exchange with him is so essential for me, as we have known each other quite long for ten years and we trust each other'. (TM10).

Not only with regard to TMTs but throughout all network relationships, several interviewed TMs seem to see trust as a product of a long-term interpersonal history. This is particularly true for vertical ties to the subordinates: 'The two aspects of duration and trust are probably inevitably linked to each other. This, as I believe, is highly important especially for the internal employees. I have to be able to trust them, and this is only possible over time'. (TM18). In a similar vein, TM3 described his relationship with a university faculty member: '(…) fifteen years – that's for how long I've known him. (…). In general, it is very important for me to know them a long time; it makes you understand very well how people tick.

Only if you understand how people tick, you will be able to fully understand their ideas'.

Most intriguingly, even regarding their knowledge ties to TMs who work for competitors, several interviewees also reported a long relationship history. These ties were also mainly built up during prior employment at the same firm, as it is for instance highlighted by TM16:'Yet these are completely informal contacts from my part. Everybody within our management team has different contacts (…), mostly deriving out of previous employments'.

Trust. In previous studies on relational embeddedness, trust has been found to be a crucial 'condition that allows an actor to reliably expect to obtain and use the resources made available through one's contacts' (Moran, 2005, p. 1136). As a vast majority of our interview partners provided detailed comments on the role of trust for their knowledge acquisition activities, our data tell a multifaceted story regarding this decisive factor.

In general, data indicate that TMs are very much aware of the high importance of trust for the acquisition of innovation-related knowledge from contacts inside the company. TM12 explained: 'With the internal contacts, I actually have an above-average level of trust. (…). When you have to arrange things (…) with someone, then you have to talk to this person, even if you do not trust him. But then I just talk with those whom I trust'.

In addition to the duration of the relationship mentioned above, the respondents also delivered descriptions of several other foundations of trust. With regard to intraorganizational contacts, they repeatedly referred to organizational norms and values and mentioned that they expect other managers and employees to be strongly committed to the company. Referring to the knowledge-providing contacts at the middle as well as top management level, TM1 declared: 'We all pursue the same goal. (…) If I would not trust the internals, we could close up the company'. These statements support the theoretical arguments from past research on the crucial role of norms and values for the creation of social capital at the organizational level (Nahapiet and Ghoshal, 1998).

Besides this rather general expectation of norm conformity, the respondents repeatedly referred to another foundation of trust that in recent studies has been found to affect knowledge sharing in interpersonal networks – the perceived competence of the knowledge provider. In particular, the competence-based trust has been addressed by TM21 as follows: 'Everyone within the top management has his own specialist division, for which he is responsible. Then I just have to trust the person in charge for the respective area, since she is the one there to know the solution'.

In these terms, high level of trust constitutes an essential social capital as it reduces the need for time-consuming verification processes and reduces transaction costs (Nahapiet and Ghoshal, 1998; Fliaster and Spiess, 2008). On the other hand, however, our study enriches the insights from previous research by revealing that TMs' trust is fundamentally limited as TMs recognize two important restrictions for it.

First, the TM's internal contacts who serve for other departments might be biased by the specific perspectives that are typical for the given organizational and/or professional sphere. For instance, technology experts might be more oriented towards new technical possibilities and oversee commercial risks, as stated, for instance, by TM3: 'They might be a hundred percent trustworthy, but with regard to what they say I always think 'Oh, that's wrong.' (…) since everybody has his specialized area. So I just cannot trust totally here, even if I wanted'.

What's more, the assumption that knowledge received from the given contact might be biased was also present with regard to the vertical internal ties. The TMs attest their contacts at lower hierarchical levels the lack of ability to evaluate the whole situation and think in strategic categories: 'They definitely act in the best interests of the company, but when it comes to innovation, I think that they often can only assess it to a limited extent. (…) They are rather the executing element'. (TM9).

This aspect has been emphasized even more strongly with regard to the supplementary contacts, which the TMs also see as inevitably biased: '(…) they are absolutely honest with me, but I think they are in a totally different environment. (…) Therefore, the trust has to be limited; compared to me, they have a different angle from which they view'. (TM3) In a similar vein, TM5 declared concerning the knowledge he obtained from his contacts at the trend and media agencies: 'They have incredible media knowledge (…). But still, my trust is limited as they often lack sense about the brand. They are very much focused only on operating figures and less whether it also fits into the brand's world'.

Second, in addition to professional and specialization-based biases, our data reveal that TMs take into account that their internal knowledge providers are likely to have dissenting and even conflicting interests as they represent different departments. Hence, the TMs' trust seldom achieves the highest level. For example, TM10 explained: 'I never fully trust anyone, including my colleagues on the same level. (…) Every one of them has his own specialist division, and therefore a self-interest for it to go well'.

The resulting need for knowledge verification and control is even more clearly present in relationships with actors beyond the organizational borders, even with IVC partners. TMs recognize that those partners are important collaborators but expect them to have own interests which might contradict the interests of the TM's company. For instance, TM5 stated: 'We have different goals. The

customers of course always try to squeeze out the most possible. Therefore, I am always cautious'. In a similar vein, TM9 explained why his trust in contacts who work for external service providers (e.g., logistics enterprises and e-commerce providers) is limited: 'I would rate it at the medium range (…) since it eventually is a service provider, which always has to position itself in a good way. (…) Here, you have to ponder very well what he recommends out of the own profit mentality, and what really out of conviction for our company'. In an even more drastic form, TM7 explained that he always looks for the 'hidden agenda' communicating with the company's most important distributors: 'The externals, they are free entrepreneurs, right? They can hoax me and tell me "We necessarily need this and that on the market". Therefore, I am rather very critical about it'.

On the contrary, the private ties are coined by a very high level of trust. TM9 stated: 'As I seek this conversation on a completely voluntary basis (…), I have full trust in this relation. This is probably also the main difference to the others: With this contact, I know that I get the honest opinion. Nothing is embellished'. This finding augments the theoretical arguments raised in previous network studies: scholars argued that non-work-related others can help realize that there are better ways of doing things that come from different area of expertise (Madjar, 2005). Our interviews provide empirical support for this line of reasoning, as many of the private contacts named by the TMs are engaged in different working environments in diverse branches.

Knowledge resources acquired via the ties

With regard to the acquired innovation-related knowledge, the interviews have shown that its content reasonably depends on the professional background of the given provider (for instance, R&D experts are consulted for information on new technological possibilities). Furthermore, our data analysis reveals that the acquired knowledge essentially differs depending on the type of tie and the contact. It is worth noting that TMs discuss issues related to concrete product and process innovations almost exclusively with internal contacts. For instance, TM17 described a tie to one of his direct reports as follows: 'We do communicate very intensively (…) because she (…) exactly knows in which direction the brand development should go. Therefore, she has the strategic knowledge on what fits and what doesn't'.

Hence, the high level of a provider's familiarity with the company's internal innovation agenda makes the obtained knowledge more reliable for the receiver. In addition, the concentration on internal sources might be related to confidentiality issues, especially if the company follows the first mover strategy: 'Regarding the high frequency of innovations which we implement (…), we simply cannot ask our [external] partners every time "What do you think on it?" I would not even want to know it. We advance the market, so I don't ask any external groups on their opinion'. (TM14). This emphasis on time advantages provided by internal ties that has been placed by several respondents provides empirical support for theoretical arguments raised in the recent network literature: In addition to content-related benefits such as novelty, the value of transferred knowledge for the innovation activities of the recipient also relates to its acquisition process, in particular to the time and costs its transfer to the recipient requires (Fliaster and Spiess, 2008).

With regard to knowledge content, particularly the CEOs are likely to play a special role as they deliver not only expert knowledge in a specific area such as sales but also what can be called 'guiding knowledge' that refers to the strategic positioning and vision of the company. As explained by TM9, '[t]he CEO keeps track of the overall development of the company. And this knowledge is essential for me in order to know which direction the innovation development is supposed to go'.

In addition, some interviewees stated that they also deliberately make use of weak ties and sporadically talk to short-term employees at the shop floor level (e.g., trainees) as these people might possibly offer a fresh perspective on long-established organizational routines and other thought-provoking impulses: 'Actually, these contacts (…) come to the company without any bias. With them, you can have a conversation after a certain time regarding what they would change or see differently. Ideas for processes result out of this, but partly also for products'. (TM16).

Contrary to the internal contacts, the ties along the IVC predominantly provide market-related information. Concerning the contact from a department store, for example, TM17 explained: 'He has a very good perception of the market – what the customers want and what not. To have this information is indispensable especially in view of design and fabric innovation'. Moreover, information on technology trends (e.g., new materials, new fabrics, and designs) is also mainly obtained by the TMs via the IVC ties. In a similar vein, supplementary contacts are mainly consulted for general information, such as trends in the business environment: 'When I turn (…) to the external partners, I want to talk about the general innovative capacity of the market, stay on top of new trends (…). [The exchange] is not very specific, it's rather an open search for information about new insights on the market'. (TM9). In this context, several interviewees mentioned that bloggers and journalists provide soft information concerning market trends as well as information on other companies within

the fashion industry, which all are essential for the future development of innovations and the strategic orientation of the TMs' organizations.

Finally, as mentioned above, private ties mainly serve as conduits for general information on trends, new developments, and best practices in other industries. Moreover, private ties that are characterized by a high level of trust are used to honestly discuss current work situations in the innovation context and beyond, and help TMs find better problem solutions.

Discussion and conclusion

From the theoretical perspective, our study builds on the concept of relational embeddedness that argues that a manager's performance is affected by the amount and quality of resources the manager obtains from his or her network contacts (Borgatti and Foster, 2003). Substantiating and further concretizing this concept in the innovation context, our study empirically found that actors in fashion companies strive to acquire the critical innovation resource, that is, new and useful knowledge, from various alters and through various types of network ties.

In particular, our study addressed a very specific and important category of network actors – TMs as formally designated managerial leaders. Network scholars have reasoned that management of network relations is intrinsic to the leadership role (e.g., Balkundi and Kilduff, 2005). In support of this argument, past research has indicated that, for instance, relational embeddedness plays a strong role in predicting better work and innovation performance of middle managers (Moran, 2005). However, samples of middle and low level managers are often criticized for low relevance and explanatory power regarding positions within the 'upper echelons' (e.g., Elenkov *et al.,* 2005). Our explorative study has specifically focused on top executives and disclosed who the alters are from whom TMs acquire knowledge for innovation, which kinds of innovation-related knowledge TMs acquire from those alters, and what the key attributes of ties in TMs' knowledge networks are.

In more specific terms, our study enriches insights from past research which argued that different kinds of knowledge have to be integrated and combined for innovation (Nahapiet and Ghoshal, 1998). For instance, communication with the CEO equips TMs with a better understanding of strategic corporate priorities that serve as guidelines for innovation activities, while TMs' detailed conversations with direct reports are more focused on specific innovation projects. Furthermore, from extra-organizational alters, TMs gain a better understanding of market and industry trends as well as promising technology developments.

The attention TMs pay to external contacts beyond the organizational borders is another important finding of our study. With some notable exceptions (e.g., Peng and Luo, 2000; Cao *et al.,* 2015; both in Chinese context), most previous research on top managerial networks has focused on intraorganizational ties (e.g., Fliaster and Golly, 2014), mainly within the TMT (e.g., Bantel and Jackson, 1989; Athanassiou and Roth, 2006). Our data show, however, that a very substantial part of interpersonal ties (41.4%) leads TMs to external contacts. Network ties to external contacts, such as managers of department stores and journalists, allow TMs to acquire rich knowledge that is valuable for innovation.

In addition to these insights, our study also detected another important aspect regarding the TMs' network activities. It probably came at no surprise that for industry-specific information (e.g., on certain market conditions, competitors' behavior, etc.), the TMs turn to knowledge-rich contacts who also operate within the fashion industry. Our data show, however, that even if innovation-related information is not industry-specific (such as technological megatrends like digitization), TMs rarely seek this information from contacts with a different industry background, but mostly still turn to contacts from the fashion industry. This empirical observation is important as knowledge exchange across industrial borders has been found in the literature to be beneficial for innovation since it offers insights into other contexts and, hence, provides opportunities for new, creative knowledge combinations (Hargadon, 2003). According to our study, TMs only relatively rarely make use of this opportunity narrowing their network activities to focus on the fashion industry.

In addition to the insights regarding innovation-related knowledge content and contacts in TMs' networks, our study also shed light on specific relational characteristics of network ties. More specifically, past research (e.g., Moran, 2005; Perry-Smith, 2006) indicated that various components of tie strength – relationship duration, communication frequency, and trust – affect the acquisition of resources by the managers and that these components are partly interrelated, but nevertheless operate differently. With regard to these components, our research tells a multifaceted story. First, a large majority of the interviewed TMs emphasized the crucial importance of (particularly the competence-based) trust for the acquisition of innovation-related knowledge. Previous studies highlighted the relevance of competence-based trust for the receipt of task advice (e.g., Chua *et al.,* 2008) as well as for the receipt of knowledge that is generally useful in the work context (Levin and Cross, 2004). Augmenting the literature on trust, our study found that from the TMs' perspective, the perceived competence of the network contact is crucial for the acquisition of another very important type of

knowledge – knowledge that is related to the receivers' innovation activities.

Furthermore, in our setting, the criticality of trust seems to be additionally strengthened by contingent factors. Scholars argued that strong trustful ties are especially valuable in contexts that are characterized by a high level of uncertainty and risk (Moran, 2005). The fashion industry represents exactly such kind of environments as fashion companies are confronted with a high level of turbulence and risks associated with permanent market changes, TMs are reluctant to base their innovation decisions on information without having enough trust in its source. Second, our research found that for a large number of TMs, trust emerges out of repeated interactions and the common history, that is, long-lasting interpersonal ties that result from working for the same employer at present and/or in the past. From the theoretical perspective, these findings provide support for Granovetter's (1992) fundamental request to avoid 'temporal reductionism' by considering that any social relation is shaped by its history. In particular, it is primarily the direct interpersonal experience that helps the receiver correctly evaluate the competences and expertise of the given knowledge source and, thus, contributes to competence-based trust. Research indicates that competence-based trust is especially relevant for acquisition of tacit knowledge that is difficult to verify (Levin and Cross, 2004), but very instrumental for creativity and innovation (Nahapiet and Ghoshal, 1998; Nonaka and von Krogh, 2009), which are of key importance in the fashion industry.

Finally, our data reveal that the belief that the given contact has internalized organizational norms of cooperation (Nahapiet and Ghoshal, 1998) and acts in the best interest of the company also positively contributes to trust. Consequently, we argue that trust that is based on the expectation of norm conformity and commitment to the company is likely to lead to more frequent and intensive interaction and knowledge exchange and thus, strengthens the dyadic tie even further.

In addition to enhancing research on the factors that support TMs' trust in dyadic relationships, this study revealed another crucial aspect that has been underexplored in past literature: our data analysis uncovers that TMs' trust in the given knowledge provider is *fundamentally limited*. Being experienced organizational actors, TMs realize that their contacts might well be biased. These biases result from specific professional training related to functional background which the knowledge providers have. Previous innovation studies have also found, for instance, that main barriers to effective R&D/marketing integration are related to perceptual, cultural, and language factors (Trott, 2008). The interviewed TMs bear in mind that the expertise and ideas their contacts deliver are affected by the contacts' idiosyncratic training and background.

Further, TMs' trust in knowledge providers is essentially limited as they recognize the specific interests which their alters pursue. This is true for both intraorganizational contacts and contacts outside the corporate border. With regard to the former, our findings shed additional light on the research on interest biases that arise in the presence of conflicting incentives, when organizational decision-makers adopt views or seek outcomes favorable to their own unit or to themselves (Lovallo and Sibony, 2010). This aspect has been mentioned by several interviewed TMs. Furthermore, the perceptions of corporate goals might also be misaligned, which eventually leads to disagreements about the importance of various innovation projects as well as various strategic objectives pursued by the organization and the tradeoffs between them (Lovallo and Sibony, 2010).

As a consequence, TMs do not receive innovation-related knowledge passively but bear additional transaction costs, such as monitoring costs related to the supervision of the quality and quantity of the received knowledge (Fliaster and Spiess, 2008). This is even more true with regard to knowledge that TMs receive from external contacts: Many interviewees in our study noted that they are very much aware, for instance, of particular business interests which the managers of department stores strive to pursue.

From what has been mentioned above, we hope to have advanced research on the key role that relational embeddedness of TMs plays for their knowledge acquisition activities. Despite the insights which have been gained, the current study also contains some limitations which require further research in the future. First, we followed the 'tie approach', leaving some key questions related to structural embeddedness (Nahapiet and Ghoshal, 1998; Moran, 2005) open to further analysis. Future research has yet to investigate, particularly in quantitative terms, how different network configurations, that is, the key features of the structural form (such as network density), affect knowledge acquisition and innovation activities of TMs.

Second, the current study focused on interpersonal networks. In many cases, we were also able to observe that business alliances (e.g., within the IVC) lead to informal network ties between representatives of different organizations. Previous research indicates, however, that interpersonal friendships and other informal links between TMs can also lead to formal interorganizational alliances (Balkundi and Kilduff, 2005). In these terms, interpersonal knowledge networks among TMs can be more closely linked in future studies to the empirical exploration of interorganizational ties. As the current network literature calls for more multi-level studies to

better understand network interdependencies and dynamics (Shipilov *et al.,* 2014), this link represents an underexplored and very promising area of future network research.

Third, another open question for further research is related to contingency: The insights gained from our study are angled on this industry's conditions, and therefore cannot claim generalizability. Past studies indicate, for instance, that the economies of time, for example, the ability to rapidly adapt and respond to frequently changing customer preferences might be more important for gaining competitive advantages in the fashion industry than in other industries (Uzzi, 1997). As our data also provide some evidence for this line of reasoning, we advocate the need for further empirical studies that elaborate the impact of industrial idiosyncrasies on TMs' knowledge networks in other industries.

Moreover, it is worth noting that managerial careers in the modern workplace increasingly become 'boundaryless' (Arthur and Rousseau, 1996), being associated with a higher interorganizational and inter-industry mobility. Therefore, at the individual level, important career steps accompanied with the move from one industry to another might make decompositions of managers' ego networks necessary to meet new, industry-specific work and innovation requirements. Our results point out the need for future research on this important issue.

Fifth, a further limitation results from the sample of our study, which is based especially on branch rankings. This focus on top-ranked companies is an important aspect, since the given TM's affiliation within a top-ranked company, which is a famous and prestigious brand in the public eye, might have an effect on the network ties that this TM can potentially establish. Thus, the high status of the company can enable its TMs to build relationships to contacts who serve for other top-ranked firms or renowned institutions, which a TM of a low-ranked company might not be able to build. Moreover, organizational membership in associations such as the 'Meisterkreis' is also likely to have a selective impact on TMs' networks as those branch networks are on invitation-only. TMs of firms which are not top-ranked lack the chance of information exchange as well as other opportunities offered by the organizational membership in those closed, prestigious circles. Hence, the fact whether or not a company is ranked among the leading firms might impact the network ties that the TMs of these firms build, and the results of our study cannot claim generalizability for all companies in the fashion industry.

Sixth, and in context with the previous remarks regarding the specific branch under research, it has to be mentioned that the limited sample size of the qualitative study represents a further limitation. However, taking into consideration that we only focus on C-suite managers and investigate an industry with a relatively small number of key players, the overall number of possible interview partners is also limited.

Seventh and finally, our study has not only confirmed a crucial role of trust, but also highlighted its important limits from the perspective of knowledge receivers, that is, organizational decision-makers. Further research can address this issue empirically, for instance, by exploring monitoring costs that managers bear (Fliaster and Spiess, 2008) and, thus, shedding more light on the complex nature of social ties in innovation networks beyond the knowledge benefits these ties provide.

Despite these limitations, the current study has several managerial implications particularly for TMs in the fashion industry. First and foremost, it shows that network activities enable TMs to acquire crucial innovation-related knowledge and, thus, TMs are well-advised to perform these activities strategically. The question of whose innovation-related advice to take is of high importance for decision-making, particularly if the stakes are high, as this is the case for senior decision-makers in the fashion industry.

Furthermore, our study found that network ties that have different relational characteristics and connect TMs to different contacts allow TMs to gain different benefits from both the knowledge content (e.g., tacit insights related to market trends) and its acquisition process (time savings due to the contact's accessibility). On the other hand, however, our data analysis reveals that these positive, instrumental aspects of TMs' network activities might also create a number of critical tradeoffs, and the TMs are well-advised to be aware of them. In particular, we stress two tradeoffs and risks that TMs have to consider: Over-reliance on long-term, trustful ties and over-reliance on intra-industrial ties.

With regard to the first risk, it is worth reminding that over a quarter century ago, Granovetter (1982, p. 106) warned that people who lack weak ties might be confined to the 'provincial news and views of their close friends'. This confinement can develop further negative dynamics particularly in crisis situations: Recent studies argue that in response to low firm performance the CEOs seek more advice from executives of other firms who are their friends or similar to them – which in turn leads to an even stronger organizational decline (McDonald and Westphal, 2003). We found that close long-year relationships play a very essential, partly dominating role in the networks of TMs in the fashion industry. Thus, TMs are well-advised to be aware of the risk that very high level of relational embeddedness might give birth to 'cognitive confinement' which is detrimental to innovation.

Second, we observed that the typical network of TMs in the fashion industry involves various contacts from within the fashion industry and thus, allows the receipt of manifold industry-specific ideas and insights. While

enabling TMs an intensive (and necessary) immersion into the fashion industry, this focus seems to discourage the cross-industry learning and is likely to seriously limit TMs' creativity. To overcome this barrier, TMs can be recommended to increase the 'range' of their knowledge networks (Reagans and McEvily, 2003), that is, diversity of network contacts allowing new, creative combinations of ideas from various fields of experience and expertise.

In one of the first studies on managers' social networks almost 25 years ago, Krackhardt and Hanson (1993) made a seminal conclusion arguing that understanding relationships will be the key to managerial success. In sum, we hope that our findings enrich the understanding of this crucial success factor particularly in the innovation area.

Statement of conflict of interest

There is no conflict of interest.

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