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Research paper

Differential importance of social and economic determinants of relationship performance in professional services

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ABSTRACT

Managing business relationships successfully is critical for many professional service firms (PSFs) in order to be able to address complex client needs. Furthermore, the project-based nature of PSFs' work puts pressure on them to retain clients across project periods. Drawing on both net effect and configurational perspectives, this study provides a holistic understanding of the relative importance and of the interplay of social and economic determinants of business relationship performance in the context of dynamic relationships between PSFs and their clients. Using data from 297 business clients, the results reveal that, overall, social determinants are more important than economic determinants as drivers of the client's willingness to cooperate with a PSF in future. The importance of social determinants increases further in later relationship lifetime phases. The configurational analysis also reveals several equifinal constellations of social and economic determinants across the lifetime phases to drive a client's willingness to cooperate in future. Therefore, no single determinant by itself is sufficient for ensuring relationship performance. We advance the literature by showing that distinct constellations of social and economic determinants are required to achieve the desired outcome, and that these constellations change across business relationship lifetime phases.

1. Introduction

Successful business relationships are critical to the survival and growth of firms because they must leverage other organizations' resources and capabilities to stay competitive (Bao, Li, Pang, Bao, & Yi, 2017; Palmatier, Dant, & Grewal, 2007). In the context of business relationships between professional service firms (PSFs) and their client firms, such relationships are often forged to leverage the expertise required to solve complex business problems (Lawrence, Zhang, & Heineke, 2016; Von Nordenflycht, 2010). However, with the emergence of new PSFs, competitive intensity in the professional services sector has increased (Malhotra & Morris, 2009). Furthermore, the project-based nature of many professional services puts constant pressure on PSFs to retain their clients and build continuous business relationships across distinct projects (Casidy & Nyadzayo, 2017; Lawrence et al., 2016).

Extant research commonly adopts social exchange theory (SET) and transaction cost economics (TCE) to investigate diverse social (e.g. trust, communication, dependence) and economic determinants (e.g. relationship-specific investments, complementary resources) of such business relationships (Cao & Lumineau, 2015; Dyer & Singh, 1998; Harrison, Hitt, Hoskisson, & Ireland, 2001; Palmatier et al., 2007). These social and economic determinants provide a parsimonious summary of the relevant drivers of business relationships (Cao & Lumineau, 2015; Palmatier et al., 2007). Despite the extensive literature on the role of social and economic determinants, little attention has been paid to the *relative importance of these determinants* as drivers of continuing business relationships, and ultimately of relationship performance in professional services. Furthermore, most of the existing studies investigate the role of such determinants using a static snapshot of business relationships, while ignoring their dynamic nature, i.e. the fact that they evolve over time (Jap & Anderson, 2007; Palmatier, Houston, Dant, & Grewal, 2013). Therefore, *our first research objective relates to identifying the relative importance of social and economic determinants as drivers of business relationship performance between PSFs and their clients.* This objective also includes understanding the dynamic nature of PSF relationships with their clients and how this affects the relative importance of social and economic determinants.

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In addition to these considerations, the current literature primarily focuses on the 'net effect' of different (social and economic) determinants of business relationship performance (e.g. Corsten, Gruen, & Peyinghaus, 2011; Palmatier et al., 2007). However, investigating the success of business relationships requires not only an understanding of differential effects of individual determinants, but also of the *complex interplay among them*. Previous research suggests that different drivers of business relationships do not work in isolation but together; they thus show combinatory or 'configurational effects' (Misangyi et al., 2017; Tóth, Thiesbrummel, Henneberg, & Naudé, 2015). A configurational perspective allows for the identification of the complex constellations of several determinants or conditions (Fiss, 2011) that are important for maintaining strong business relationships. Therefore, *our second research objective is to identify the configurations of social and economic determinants that drive the performance of PSFs' business relationships with their clients.*

Addressing these research objectives offers three important contributions. First, we provide a holistic overview of the differential importance of specific social (e.g. inter-organizational trust, personal communication, and interdependence) and economic determinants (e.g. mutual relationship-specific investments, and complementary resources) as determinants of the performance of business relationships between PSFs and their clients. Each of these determinants has been investigated empirically; however, few studies evaluate and compare their *relative* impact on business relationship performance (Palmatier et al., 2007; Zaefarian, Thiesbrummel, Henneberg, & Naudé, 2017). We empirically examine the net effects and differential importance of these determinants with respect to clients' willingness to cooperate in future. A client's future cooperation represents a customer-focused indicator of relationship performance and reflects the client's assessment of the overall relationship experience with a PSF (Palmatier et al., 2007; Ramsey & Sohi, 1997). The level of clients' willingness to cooperate in future is also a key determinant of the survival and growth of project-based firms, such as PSFs (Casidy & Nyadzayo, 2017; Malhotra & Morris, 2009).

Second, we show that the relative importance of social and economic determinants changes with the dynamics of the relationship between PSFs and their clients. We investigate the lifetime phases of a business relationship by measuring both its duration and exchange frequency. This approach helps to overcome limitations associated with the traditional lifecycle perspective (Jap & Anderson, 2007) as well as the age/duration perspective of relationship dynamics (Hibbard, Brunel, Dant, & Iacobucci, 2001). Our approach suggests that a PSF's relationship with its clients follows a continuous lifetime phase trajectory. Measuring both duration and exchange frequency helps to investigate heterogeneous development rates (or growth trajectories) within the lifetime phases (see the comparable arguments on growth trajectory in Palmatier et al., 2013).

Third, we apply a configurational perspective to identify different constellations of social and economic determinants across the lifetime phases to obtain the client's willingness to cooperate in future. We advance the literature by employing analyses based on complex causation (i.e. fuzzy set qualitative comparative analysis; fsQCA), in addition to traditional causal (or 'net effect') analyses (i.e. regression analysis, multi-group analysis) in order to understand the relative importance and the interplay between social and economic determinants. Although there exist a few empirical studies examining drivers of business relationships using a configurational perspective (e.g., Tóth et al., 2015; Zaefarian et al., 2017), the application of both traditional causal as well as configurational perspectives in a complementary manner is still rare.

2. Conceptual background

2.1. Business relationships in PSFs

Driven by the increasing reliance of businesses, governments, and not-for-profit organizations on specialized professional services, the PSF sector has experienced rapid growth (Casidy & Nyadzayo, 2017; Von Nordenflycht, 2010). PSFs encompass a wide range of knowledge-intensive service firms, such as law, accounting, and management consulting firms. Professional services are commonly characterized as 'medium to high contact', where ongoing interactions between the supplier (the PSF) and the client are often critical for the quality of the service (Von Nordenflycht, 2010). The PSF's business activities as part of the service process derive mainly from the information provided by the client, as well as the specialized knowledge of the PSF's employees (Heirati, O'Cass, Schoefer, & Siahtiri, 2016; Malhotra & Morris, 2009). Although PSFs may have the experience and the knowledge required to produce a solution, client firms have specific and situated information about their own business challenges and requirements. Therefore, the quality of the relationships between PSFs and their clients is critical for the ability of the PSF to satisfy customers' needs, thus driving clients' willingness to work with them in future (Casidy & Nyadzayo, 2017; Lawrence et al., 2016). As PSFs routinely generate most of their revenue from repeated business and cross-selling, the willingness of clients to retain their service providers ('future cooperation') is vital for the success of PSFs (Casidy & Nyadzayo, 2017). In this study, we thus investigate specific determinants of a PSF's business relationship from the client's perspective, especially the determinants differential impact on the client's willingness to cooperate in future.

2.2. Determinants of PSF business relationships

The extant literature has identified a range of determinants or governance mechanisms that drive business relationship performance and future cooperation intentions. The seminal work by Palmatier et al. (2007) identifies two prevalent marketing perspectives underpinning these determinants (see also Cao & Lumineau, 2015; Liu, Li, Shi, & Liu, 2017). The first perspective is based on social exchange theory (SET) and relational exchange theory (RET), and argues that *social determinants* (e.g. trust, personal communication, and interdependence) govern supplier–buyer exchanges through social connections and informal practices to encourage desirable behavior as well as build and reinforce mutual relational norms (Liu et al., 2017; Palmatier et al., 2007). The second perspective draws on transaction cost economics (TCE) and the resource-based view of the firm (RBV) in suggesting that *economic determinants* (e.g. relationship-specific investments, and complementary resources) provide a relational governance between partners to reduce the risk of opportunistic behavior, improve relational efficiency, and maintain relationship cooperation (Harrison et al., 2001; Mortensen, 2012).

Although several other theoretical perspectives, such as game theoretic and contractual perspectives, have also been used to investigate business relationships (see Cao & Lumineau, 2015; Parkhe, 1993), we focus on the differential importance of social and economic determinants as drivers of clients' willingness to maintain their relationship with PSFs for two reasons. First, social and economic determinants studied here are generally portrayed in the literature as providing a broad and parsimonious overview of relevant aspects of the structure and quality of business relationships (Cao & Lumineau, 2015; Palmatier et al., 2007). Second, although considerable attention has been paid to the individual effects of social and economic determinants on performance and continuity of business relationship, little is known about the *relative importance* of these determinants, particularly in the context of knowledge- and interaction-intensive professional services. Furthermore, the dynamic nature of business relationships has scarcely been explored. We thus relate the differential roles of social and economic

determinants to the dynamics of PSF business relationships.

2.3. Dynamic perspective on PSF business relationships

Our work is based on the premise that relationships are dynamic and evolve over time through repeated interactions (Dwyer, Schurr, & Oh, 1987; Jap & Anderson, 2007; Palmatier et al., 2013). Research into relationship formation, development, and dissolution processes suggests an important role of relationship change in influencing relationship characteristics as well as attitudes and behaviors (Palmatier et al., 2013). The extant literature adopts two perspectives to investigate business relationship development and dynamism. First, the *relationship lifecycle perspective* views the relationship development through discrete categorical phases of exploration, expansion, maturity, and decline (Dwyer et al., 1987; Jap & Anderson, 2007). Although these phases are used as a means to explain unique characteristics of business relationships at distinct points in time, this perspective has its shortcomings as the development of business relationships is a continuous process (Palmatier et al., 2013). The characteristics of business relationships do not change suddenly at a fixed boundary between lifecycle phases. The lifecycle perspective is also limited in that it expects all relationships within one phase to show similar developmental characteristics and growth rates (trajectories), until they move into the next phase (Palmatier et al., 2013).

Second, the *relationship age/duration perspective* uses time as a continuous temporal proxy to measure the development of business relationships (Hibbard et al., 2001). This perspective is based on the fact that it takes time for exchange parties to develop close relationships and form social bonds. This development is not linear, though, as some studies argue that exchange partners in long-term relationships may become more, rather than less, sensitive to short-term costs and benefits (Gruen, Summers, & Acito, 2000; Hibbard et al., 2001). This stream of research shows that the benefits of relational determinants (i.e. trust, communication) follow an inverted U-shaped trajectory over time (Hibbard et al., 2001; Villena, Revilla, & Choi, 2011; Villena, Revilla, & Choi, In press). However, in assuming that all relationships move through a continuous trajectory over time, the relationship age/duration perspective ignores the heterogeneity of business relationships at specific points of time. For example, it would be hard to argue that all five-year-old relationships have similar exchange frequency and growth rates (Palmatier et al., 2013).

This study employs an alternative approach to overcome the limitations of both the business relationship lifecycle and age/duration perspectives. We extend the duration perspective and characterize PSF relationships in *lifetime phases* by measuring not only the relationship duration (in years), but also the exchange frequency (number of projects). We argue that both business relationship duration and exchange frequency are critical to understand the PSF's relationship development and growth trajectories (see comparable arguments on lifetime duration, service usage, and cross-buying in Aurier & N'Goala, 2010; Reinartz & Kumar, 2003). This approach is also consistent with the literature on customer lifetime value, where both the relationship duration and the number of transactions determine the customer value over time (Glady, Lemmens, & Croux, 2015; Reinartz & Kumar, 2003).

As illustrated in Appendix I, our lifetime phase approach suggests that the characteristics of a relationship depend on both time and growth trajectories. In line with both the business relationship lifecycle and age/duration perspectives, we argue that relationship characteristics and determinants will change through a continuous trajectory over phases of exploration, expansion, maturity, and decline. In a typical exchange, the relationship performance may increase with a slow rate in the exploration phase. The relationship performance may grow at different rates during the expansion phase, depending on the number of exchanges in this phase. Therefore, the expansion phase can be divided into fast and slow growing relationships, where the number of projects and cross-selling activities determine the relationship trajectory. The relationship performance and its continuity expectation may decay at some point, as both the relationship's age and exchange frequency reach a peak in the maturity stage. Furthermore, a relationship may decline at different rates depending on the exchange frequency during this phase. Therefore, our approach helps to understand the heterogeneous growth trajectories within different lifetime phases.

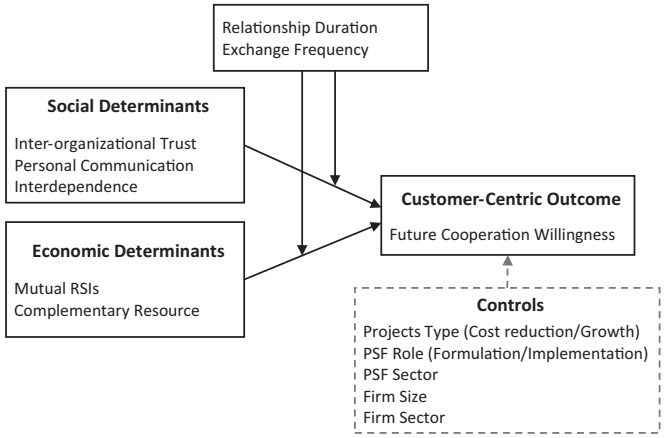


Fig. 1. Nomological framework for net effect analysis.

3. Hypotheses

To address our first research objective, we develop an initial nomological framework (see Fig. 1) and examine the individual (net) effects as well as the differential effects of specific social and economic determinants with respect to the client's future cooperation willingness. We stress customer-focused outcomes because clients that perceive a business relationship as beneficial are more likely to continue to cooperate and purchase more services from a PSF in future (Casidy & Nyadzayo, 2017; Palmatier et al., 2007; Ramsey & Sohi, 1997). We also examine whether the relative importance of social and economic determinants changes over different relationship lifetime phases. Our empirical research is based on snapshots in time of ongoing PSF business relationships, and we thus do not observe longitudinally the entirety of a relationship lifetime (see the similar approach in Palmatier et al., 2013).

3.1. Social determinants of PSF business relationships

Extant research on SET singles out inter-organizational trust, personal communication, and (inter-)dependence as key determinants of business relationship continuity (Fang, Palmatier, Scheer, & Li, 2008; Palmatier, Dant, Grewal, & Evans, 2006). Trust refers to the willingness to rely on another party, and to the confidence that the partner will behave with credibility, integrity, and benevolence (Fang et al., 2008; Ganesan & Hess, 1997). *Inter-organizational trust* is especially critical in business relationships, which often require large investments that could prompt opportunistic partner behaviors. Furthermore, relationships frequently involve multiple constituencies with diverging objectives, yet they rely on high levels of cooperation to generate relational value rather than pure self-interest (Morgan & Hunt, 1994; Villena et al., 2011; Villena et al., In press). Inter-organizational trust functions as a mutual safeguarding mechanism that promotes information sharing and reduces the partners' propensity to engage in opportunistic behaviors (Bao et al., 2017; Fang et al., 2008). In the context of PSFs, this could for example relate to opportunism by the PSF in using proprietary knowledge acquired from one client in projects with other clients. In the absence of trust, conflicts about knowledge use between partners may prevent future investments or even lead to the termination of the

cooperation (Villena et al., 2011). In line with the extant literature, we argue that the inter-organizational trust between a PSF and its client increases the client's willingness to cooperate in future.

Communication between individual exchange partners such as boundary spanners in business relationships, is facilitated through closeness and friendship based on frequent (in-)formal contacts and social interactions (Cousins, Handfield, Lawson, & Petersen, 2006; Liu et al., 2017). *Personal communication* in particular has been shown to be an effective mechanism for building social bonds between managers across business relationships (Brush & Rexha, 2007; Cousins et al., 2006). Personal communication between business partners helps to align expectations, resolve disputes, and provide valuable information to the partner (Cousins et al., 2006; Liu et al., 2017). Effective knowledge sharing between PSFs and clients represents an important aspect in PSF business relationships to develop customized services and address client needs (Heirati et al., 2016; Noordhoff, Kyriakopoulos, Moorman, Pauwels, & Dellaert, 2011). Furthermore, close personal communication helps to nurture social bonds between exchange partners to harmonize bilateral norms and build a cooperative relationship atmosphere (Liu et al., 2017; Villena et al., 2011). Based on the extant literature we posit that personal communication increases the client's willingness to cooperate in future.

Dependence refers to the need to maintain a business relationship to achieve individual goals (Gilliland, Bello, & Gundlach, 2010). Dependence on a business partner reflects the firm's evaluation of the value of a partner for which few or no alternatives are available (Scheer, Miao, & Palmatier, 2015). Research shows that the mutual dependence of both partners, i.e. their *interdependence* are critical to driving business relationships (Jap & Ganesan, 2000; Scheer et al., 2015). Interdependence creates a bond between the relationship partners, emphasizing the extent to which the partners are enmeshed with each other in a business relationship, thereby forestalling destructive activities (Scheer et al., 2015). Therefore, interdependence increases the partners' desire to maintain the relationship (Palmatier et al., 2007). In our study, we thus argue that interdependence drives a client's willingness to cooperate in future. Our first set of hypotheses regarding social determinants is:

H1.: *A client's perceptions of (a) inter-organizational trust, (b) personal communication, and (c) interdependence influence positively the client's future cooperation willingness*.

3.2. Economic determinants of PSF business relationships

TCE emphasizes the economic importance of employing effective governance structures to reduce contractual as well as relational hazards such as opportunistic behavior, as part of business relationships (Dwyer et al., 1987; Kang, Mahoney, & Tan, 2009). Such hazards can arise from unilateral (i.e. asymmetric) investments by a partner in a relationship, through which this partner's reliance on the other one increases. The former thus becomes vulnerable to the opportunistic behavior that the latter may engage in, as retaliating involves the loss of the initial investment (Jap & Ganesan, 2000; Kang et al., 2009). In contrast, when one partner's relationship-specific investments (RSIs) match with the other partner's reciprocal investments, these *mutual RSIs* lead to the development of quasi-integrated channel structures based on the reciprocal commitments of both parties (Dwyer et al., 1987; Jap & Ganesan, 2000). Mutual RSIs in our study refer to the reciprocal investments by both clients and PSFs with the intention of achieving common objectives that benefit both partners (Bercovitz, Jap, & Nickerson, 2006). We argue that mutual RSIs reinforce the bonds between the exchange parties and serve as the basis for committed relationships (Jap & Ganesan, 2000; Lin, Wu, & Chiou, 2017). Mutual RSIs can act via a 'mutual hostage' mechanism, which inhibits both partners from behaving opportunistically, increase switching costs, and encourages them to safeguard their mutual investments and benefits (Jap & Ganesan, 2000; Kang et al., 2009). With fewer opportunism concerns, the cooperation becomes more effective, thereby enhancing the relationship continuity intentions. Mutual RSIs provide a credible signal of both parties' commitment to the relationship (Palmatier et al., 2006; Zaefarian, Henneberg, & Naudé, 2013). In line with extant literature, we propose that mutual RSIs are important to increase the client's willingness to cooperate in future.

The literature on the RBV suggests that cooperation in business relationships helps firms mobilize their partners' resources, and to integrate these external resources with their own (internal) resources to achieve their business objectives more effectively and efficiently (Dyer & Singh, 1998; Zaefarian, Henneberg, & Naudé, 2011). In this context *complementary resources* refer to a partner's (e.g. a PSF's) knowledge, expertise, and capabilities that enable another firm (e.g. a client) to fill its resource gaps and thus to achieve its business goals more successfully than it otherwise would (Bao et al., 2017; Ennen & Richter, 2010). Access to the specialized and complementary resources held by other firms has been identified as the foundation of business relationships (Zaefarian et al., 2011) and as a determinant of a supplier's attractiveness for a customer (Harris, O'Malley, & Patterson, 2003; Mortensen, 2012). The supplier's complementary resources are especially critical in the context of professional services, where the central characteristic associated with a PSF is its mastery of a complex knowledge base that is costly or even impossible to develop internally by the client firm (Von Nordenflycht, 2010). Thus, the client firm's ability to generate rents from its resources depends on these resources being deployed in conjunction with complementary external resources and expertise provided by the PSF (Dyer & Singh, 1998). Therefore, we expect that the client's perception of the PSF's complementary resources increases its willingness to cooperate in future. Our second set of hypotheses regarding economic determinants is:

H2.: *A client's perceptions of (a) mutual RSIs and (b) PSF complementary resources influence positively the client's future cooperation willingness*.

3.3. The relative importance of social and economic determinants

Despite the extensive literature on social and economic determinants of business relationships, little is known about their *relative importance vis-à-vis* each other, particularly in the context of PSFs. We argue that while the mutual RSIs and complementary resources are important economic determinants of relational continuity, social determinants are more critical to influencing a client's decision to continue a PSF cooperation for several reasons. First, although PSFs must have the expertise to offer effective business solutions, the clients have the proprietary knowledge about their complex challenges and needs (Noordhoff et al., 2011). Therefore, the effective cooperation between the PSF and the client firm is pivotal to the service effectiveness (i.e. the utilization of the economic determinants) and thus the relationship performance (Heirati et al., 2016; Noordhoff et al., 2011). Given that clients may be required to share sensitive information associated with their complex business problems (e.g. business model details, financial records), inter-organizational trust as well as other social determinants are essential for driving the client's willingness to cooperate with a PSF (Becerra, Lunnan, & Huemer, 2008; Uzzi & Lancaster, 2003).

Second, the PSF's idiosyncratic investments in an exchange carry considerable risk of strategic knowledge transfer (Becerra et al., 2008; Kotabe, Martin, & Domoto, 2003). This issue is especially critical in the context of PSFs, given the importance of specialized knowledge as a foundation for competitive success (Von Nordenflycht, 2010). The on-going cooperation among the PSF's and the client's employees facilitates knowledge transfer (Kotabe et al., 2003), and the client may therefore be able to develop comparable competencies and become a substitute for the PSF in future (Heirati et al., 2016). In the absence of inter-organizational trust and social bonds, a PSF may withhold idiosyncratic investments and sensitive knowledge even in on-going relationships

with its clients. Likewise, the client may begin to avoid sharing sensitive knowledge about their needs. Ineffective social collaboration between the exchange parties, in turn, minimizes the PSF's ability to identify the client's requirements and utilize their knowledge to offer effective business solutions (Heirati et al., 2016; Noordhoff et al., 2011). Therefore, the contribution of social determinants in the PSF's business relationships is posited to be more important than economic determinants to affect the client's decision for future cooperation. We hypothesize:

H3.: *Social determinants are relatively more important than economic ones in influencing positively the client's future cooperation willingness.*

3.4. Importance of determinants by relationship lifetime phases

Building on the dynamic relationship perspective, business relationships are socially derived mechanisms for collective action, which are continually shaped and restructured by actions and symbolic interpretations of the parties involved (Dowell, Morrison, & Heffernan, 2015; Hibbard et al., 2001). Through a series of role interactions, parties may become more familiar with one another as persons, and they increasingly rely on interpersonal, as opposed to inter-organizational, determinants in the relationship (Hibbard et al., 2001; Jap & Anderson, 2007). The exchange parties may also experience conflicts and changing expectations over time, and these factors can provide cause for rethinking the terms of the relationship (Claycomb & Frankwick, 2010). Jap and Anderson (2007) show that the levels of both social (e.g. trust, dependence, goal congruence) and economic (e.g. mutual idiosyncratic investments) determinants grow with relationship development from exploration to maturity and will finally decrease during the decline phase. In a similar vein, the effects of trust and communication on relationship performance follow an inverted U-shaped trajectory over time (Hibbard et al., 2001; Villena et al., 2011; Villena et al., In press). Recent work by Dowell et al. (2015) demonstrates that different dimensions of trust have different effects on the level of commitment and liking across early-stage as compared to mature business relationships. However, none of these studies compare the relative importance of social and economic determinants over different relationship lifecycle phases.

We argue that mobilizing specialized knowledge and resources is a key trigger for the quality of business relationships in the context of professional services (Harris et al., 2003; Mortensen, 2012). Therefore, economic determinants such as complementary resources increase a PSF's attractiveness and the client's willingness to initiate and form a business relationship. Through cooperation in the exploration phase, a client will gain a better understanding of the economic benefits that the PSF can provide, thereby enhancing their willingness to maintain the relationship (see comparable arguments in Jap & Anderson, 2007). Thus, the relative importance of economic determinants is expected to be higher in the initiation and the fast expansion phase, when a client expands the relationship with the PSF at an increasing rate of growth.

On the other hand, social aspects, particularly trust, are constitutive for business relationships (Fang et al., 2008; Uzzi & Lancaster, 2003). Building trust is critical in the professional services context, where clients are required to share confidential information about their business challenges (Malhotra & Morris, 2009). In the absence of trust, client firms are less likely to share information and to engage with PSFs. Therefore, social determinants are becoming more critical for developing and solidifying a business relationship from the exploration phase onwards. Furthermore, trust and social bonds provide assurances for clients that the knowledge and information they transfer to their service providers will be used to the mutual benefit of both parties (Uzzi & Lancaster, 2003; Villena et al., 2011). Consequently, we expect the relative importance of social determinants to grow over time in the business relationship as the exchange frequency increases, especially during the maturity phase.

In sum, we propose that the relative importance of social and economic determinants will change over the relationship lifetime phases. While social determinants are relatively more important than economic ones in the later lifetime phases (especially during relationship maturity), the economic determinants are relatively more important for driving the client's future cooperation when the relationship is starting and expanding. We hypothesize:

H4.: *The relative importance of social and economic determinants of the client's future cooperation willingness changes over the lifetime of the relationship, with social determinants becoming more important in later phases.*

3.5. The interplay among determinants of PSF business relationships

To address our second research objective, we examine the *configurational* effects of social and economic determinants across the lifetime phases on the client's future cooperation willingness. The review of extant literature on social and economic determinants of business relationships reveals several approaches to investigating the interplay among determinants. The first approach views particular determinants as the antecedents of others (mediating approach by Palmatier et al., 2007; or the key mediating model by Morgan & Hunt, 1994). The second approach emphasizes the contextual effect of particular determinants (moderation approach; see Luo, 2008, regarding the amplifying effect of mutual RSIs on the relationship between inter-organizational trust on alliance profitability; see also Liu, Luo, & Liu, 2009).

Recent developments in the business relationship literature suggest a further perspective that takes a combinatory approach to understanding the interplay among determinants of business relationships. In taking a configurational perspective (Fiss, 2011; Ragin, 2008), this approach provides a holistic way to investigating the interplay among different social and economic determinants (Tóth et al., 2015; Zaefarian et al., 2017). The underlying assumption of the configuration perspective is the concept of *equifinality*, which asserts that a specific outcome can be achieved through distinct configurations (i.e. combinations) of causal determinants, rather than through a single determinant or an optimal array of individual determinants (Fiss, 2011). Therefore, several configurations of mutually supportive determinants may exist for achieving a specific outcome (Schneider & Wagemann, 2006). Identification of equifinal configurations for a performance outcome provides firms with a variety of design choices and solutions to achieve the desired outcome (Misangyi et al., 2017). We adopt the configuration perspective to investigate different interplays (or configurations) among the social and economic determinants of PSF business relationships, as well as the relationship duration and exchange frequency. We thus adapt our initial nomological model of net effects based on simple causation, and derive a further model (see Fig. 2) for combinatory effects involving complex causation (Ragin, 2008; Schneider & Wagemann, 2006). We contend that there are distinct and equifinal configurations of social and economic determinants across the lifetime of the relationship that drive clients' willingness to cooperate in future.[1] We hypothesize:

H5.: *Different equifinal configurations of social and economic determinants in different lifetime phases influence a client's future cooperation willingness.*

[1] In line with the configurational perspective, we do not posit specific hypotheses about configurations but formulate a general hypothesis (similar to a proposition) about the existence of equifinal configurations (Fiss, 2011; Ragin, 2008). Although fsQCA can be used as a confirmatory approach, this assumes an already well-established literature, which allows for the derivation of specific configurations. The literature on social and economic determinants of relationship performance, in particular across different lifetime phases, is not sufficiently mature to do so yet.

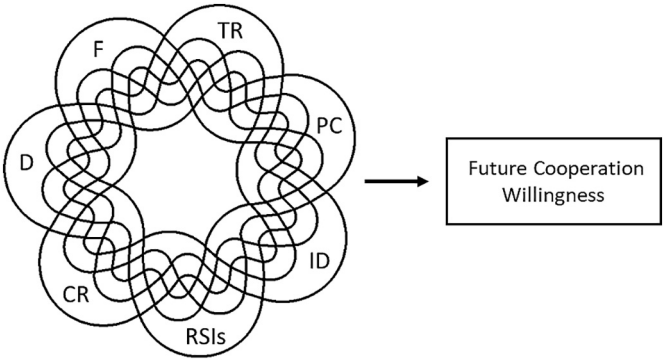


Fig. 2. Nomological framework for configurational effect analysis.
Note: TR = Inter-organizational trust, PC = Personal communication, ID = Interdependence, RSIs = Mutual RSIs, CR = Complementary resources, D = Relationship duration, F = Exchange frequency.

4. Research method

4.1. Data collection

We collected data from firms that regularly work with PSFs (in this instance, management consulting firms). We employed a single key-informant method and distributed a questionnaire by mail to 5475 executive board members of firms operating in the German-speaking area of Germany, Austria, and Switzerland with revenues greater than EUR 100 million, based on a commercial list provider. The questionnaires were distributed along with a personal cover letter inviting firms to participate, while also explaining the content of the study and giving the assurance of confidentiality. In the cover letter, we asked respondents to self-identify as clients of a specific consulting firm; they were instructed to randomly select a consulting firm if they were working with several consulting firms, and to answer all questions with regard to the selected consulting firm. We pretested the questionnaire with several academics and managers to identify and revise unclear expressions and complicated sentence structures to ensure the neutral wording of scale items and descriptions.

We received 365 responses and dropped incomplete surveys, resulting in 297 usable questionnaires (effective response rate of 5.4%). Most of the respondents were male (91.9%) and based in Germany (94.9%, otherwise Switzerland or Austria). The respondents' average age was 46 years. The average relationship length with the chosen PSF was approximately four years, with an average of five projects. Table 1 shows the sample composition.

We examined non-response bias by comparing early and late respondents (Armstrong & Overton, 1977). The results indicate no significant differences between the two samples, thus non-response bias was not a concern. We examined common method bias using the confirmatory factor analysis (CFA) and marker variable (MV) technique (Lindell & Whitney, 2001; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). We assessed a single factor CFA in which all of the items load on the same factor. However, the model indicated poor fit statistics ($\chi 2/df = 5.66, p < .01$; CFI = 0.58; TLI = 0.54; RMSEA = 0.12). Using the MV technique, we asked respondents whether they communicated project success to external media on a seven-point scale of "1 = Not at all" to "7 = Very much so"; we thus used a construct which is theoretically unrelated to other variables in the model. After adjusting coefficients using the lowest positive coefficient value ($r_m = 0.02$), the results indicate that the MV adjustment did not significantly change any correlation coefficients. Thus, both tests suggest no evidence of common method bias.

Table 1
Sample composition.

Respondent and firm characteristics	%
Client firm size	
Small (< 100 employees)	11.4
Medium-sized (between 100 and 500 employees)	28.9
Large (> 500 employees)	59.7
Client firm revenue	
Between €100 K and €500 K	48.1
Between €500 K and €1bn	14.2
Over €1bn	20.9
Over €5bn	16.8
Client firm sector	
Industrial manufacturing and energy industry	27.6
Service industry including banking and IT services	25.2
Retail and consumer goods industry	12.4
Logistics and transportation	8.4
Pharmaceuticals	5.7
Others	20.7
Respondents' position	
Senior Management	68.0
Head of Strategy Development	14.2
Project Manager	17.8

4.2. Measures

We measured all constructs using established scales from the literature (see Appendix II) on seven-point Likert scales, anchored in "1 = Not at all" and "7 = Very much so". We slightly adapted the wording of some measures to the context of the study. We measured inter-organizational trust using eight items from Ganesan and Hess (1997), comprising both credibility and benevolence aspects. We measured personal communication using two items from Brush and Rexha (2007), and complementary resources using three items from Kale, Singh, and Perlmutter (2000) and Parkhe (1993). Following Palmatier et al. (2007), we operationalized interdependence as the product of the client's dependence on the PSF and its perception of the PSF's dependence on it. Both the PSF and the client dependence were measured using three items each from Ganesan (1994). Similarly, mutual RSIs were operationalized as the product of the client's RSIs and its perception of the PSF's RSIs. Both the PSF and the client RSIs were measured using three items each from Ganesan (1994). We used four items from Ramsey and Sohi (1997) to measure the client's future cooperation willingness as the dependent variable. Finally, we considered the project type (cost reduction vs. growth), the PSF's role (planning vs implementation), the PSF sector, the client sector, and the client size (number of full-time employees) as single item control variables.

We employed different steps to assess the robustness of the measures. First, we used CFA to assess the measurement model fit, and the results showed a good fit ($\chi 2/df = 1.60$, $p < .01$, CFI = 0.96, TLI = 0.95, RMSEA = 0.04). All indicators had satisfactory loadings (over 0.50) and critical ratios (over 1.96), supporting convergent validity (Fornell & Larcker, 1981). Second, we performed exploratory factor analysis to ensure all item loadings with their respective construct were > 0.60, with no significant cross-loadings. Third, as indicated in Table 2, all constructs had satisfactory average variance extracted (AVE > 0.50) and composite reliability (CR > 0.70), indicating acceptable convergent validity. The square root of the AVEs of all constructs was greater than the respective individual correlations in Table 2, indicating satisfactory discriminant validity.

5. Results

We employed multiple statistical techniques to test hypotheses. First, we employed regression analysis to examine net effects of social and economic determinants on the client's future cooperation willingness (H1 and H2). Second, we examined the relative importance of

Table 2
Correlations table.

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Inter-organizational Trust	**0.78**												
2. Personal Communication	0.09	**0.84**											
3. Client Dependence	0.24**	0.20**	**0.87**										
4. Supplier Dependence	0.08	0.16**	0.23**	**0.83**									
5. Client RSIs	−0.07	0.28**	0.20**	0.25**	**0.88**								
6. Supplier RSIs	0.41**	0.20**	0.20**	0.13*	0.11	**0.86**							
7. Complementary Resources	0.32**	0.17**	0.36**	−0.07	0.02	0.23**	**0.77**						
8. Future Cooperation Willingness	0.46**	0.33**	0.38**	0.06	−0.06	0.36**	0.32**	**0.89**					
9. Projects Type	0.01	0.01	0.04	0.08	−0.02	−0.01	−0.01	0.05	–				
10. Supplier Role	−0.06	−0.01	−0.05	−0.07	0.02	0.03	−0.01	0.01	−0.10	–			
11. Supplier Sector	−0.05	−0.03	0.05	0.05	0.01	0.03	−0.07	−0.01	0.01	0.05	–		
12. Client firm Size	0.07	0.04	−0.06	0.08	−0.04	0.03	0.05	0.05	−0.09	−0.06	−0.15*	–	
13. Client firm Sector	−0.04	0.04	−0.04	−0.03	0.07	−0.02	−0.01	−0.01	−0.05	−0.07	−0.04	0.04	–
Mean	5.37	3.61	2.72	2.70	3.26	4.84	5.08	5.02	–	–	–	–	–
SD	0.98	1.47	1.07	1.13	1.39	1.26	1.15	1.39	–	–	–	–	–
AVE	0.61	0.71	0.76	0.69	0.77	0.74	0.59	0.79	–	–	–	–	–
CR	0.90	0.83	0.86	0.82	0.87	0.90	0.81	0.94	–	–	–	–	–

Diagonal entries in bold show the square roots of average variance extracted; others represent correlation coefficients.
* $p < .05$ (two-tailed).
** $p < .01$ (two-tailed).

social and economic determinants (H3) using the Relative Weight Analysis (RWA) (LeBreton & Tonidandel, 2008). RWA is a supplement to regression analysis for investigating the relative contribution (or importance) of multiple (often correlated) predictor variables in a regression equation. It is considered superior to other methods such as standardized regression weights (Tonidandel & LeBreton, 2015). RWA is an alternative approach to divide the total variance predicted in a regression model (R^2) into weights that accurately reflect the relative contribution of multiple predictors (Tonidandel & LeBreton, 2015). Third, we employed a multi-group analysis (based on a two-step cluster analysis) to examine the extent to which the importance of determinants will change with relationship duration and exchange frequency (H4). Fourth, we used fuzzy set qualitative comparative analysis (fsQCA) to investigate the interplay among social and economic determinants over different relationship lifetime phases (H5). FsQCA identifies patterns of necessary and sufficient conditions that lead to an outcome rather than simply establishing correlations between independent and dependent variables (Misangyi et al., 2017). Therefore, fsQCA is deemed appropriate to examine how different configurations of determinants, relationship duration, and exchange frequency drive a client's willingness to cooperate with a PSF in future.

5.1. Net effect results

Tables 3 and 4 detail results related to H1 to H4. The findings indicate that the perception of inter-organizational trust ($\beta = 0.38$, $t = 7.32$), personal communication ($\beta = 0.25$, $t = 4.83$), and interdependence ($\beta = 0.15$, $t = 2.74$) positively influence the client's future cooperation willingness, supporting H1a, H1b, and H1c. However, the results show that the effect of mutual RSIs on future cooperation willingness is not statistically significant ($\beta = -0.04$, ns), rejecting H2a. The PSF's complementary resources positively influence future cooperation willingness, supporting H2b ($\beta = 0.14$, $t = 2.62$). As shown in Table 4, RWA indicates the relative importance (indicated as ranks) of social and economic determinants. The results imply that inter-organizational trust and personal communication as two social determinants are relatively more important than the economic determinants of future cooperation willingness. However, complementary resources as an economic determinant are more important than interdependence (a social determinant) to drive future cooperation willingness. Thus, we conclude that RWA provides partial support for H3.

We examined the relative importance of social and economic determinants with increasing levels of relationship duration and exchange frequency in two steps. First, we performed a two-step cluster analysis to identify different business relationship phases based on two control factors, i.e. the relationship duration and exchange frequency. We performed the cluster analysis several times and chose the optimal number of clusters using silhouette analysis and the Tukey test (De Bruyn, Liechty, Huizingh, & Lilien, 2008; Zhang, Hu, & Gu, 2008). The initial cluster analysis suggested eight clusters, while the Tukey test showed that these clusters could be grouped into four homogenous subsets based on the means of both control factors. We performed a further cluster analysis by decreasing the number of clusters from eight to four, finding that the 4-cluster solution worked best for our cross-validation samples. As shown in Table 5, one-way analysis of variance (ANOVA) was conducted to test the mean differences of the control factors (relationship duration and exchange frequency). F-values indicate that the four clusters significantly differ from one another. We conducted pair-wise comparisons using the Tukey test to determine which cluster differences were responsible for the overall significant ANOVA result. The Tukey test showed that the relationship duration and exchange frequency are significant across all clusters. As shown in Table 5, business relationships in the first cluster are characterized as the 'exploration' phases with low duration (≤2 years) and low-frequency rates (≤2 projects). The second cluster is labeled as 'fast expansion' phase with low duration (≤2 years) and medium frequency rate (3–5 projects), while the third cluster is labeled 'slow expansion' phase, with a medium duration of 3–5 years and low-frequency rate (≤2 projects). The fourth cluster indicates the 'maturity' phase, with long duration (over 10 years) and high-frequency rate (over 10 projects).

Second, we performed multi-group regression and RWA analyses across the four identified clusters. As shown in Table 4, inter-organizational trust is relatively more important than other determinants in all clusters except for the fast expansion phase, where the PSF's complementary resources are relatively more important than other determinants in driving the client's future cooperation willingness. The results also show that the relative importances of both economic determinants lose their statistical significance with increasing levels of business relationship duration (slow expansion and maturity phases). Only inter-organizational trust significantly drives future cooperation willingness in the maturity phase. Therefore, we conclude that results provide partial support for H4.

Table 3
Regression analysis.

	DV: Future Cooperation Willingness									
	Complete Sample (N = 297)		Exploration Phase (N = 80)		Fast Expansion Phase (N = 79)		Slow Expansion Phase (N = 62)		Maturity Phase (N = 76)	
	Beta	t	Beta	t	Beta	t	Beta	t	Beta	t
Social Determinants										
Inter-organizational Trust	**0.38****	**7.32**	**0.40****	**3.73**	**0.35****	**3.56**	**0.56****	**5.02**	**0.34***	**2.62**
Personal Communication	**0.25****	**4.83**	**0.25***	**2.40**	**0.27****	**2.83**	0.16	1.30	0.15	1.20
Interdependence	**0.15****	**2.74**	0.19	1.87	0.01	0.11	0.20	1.80	0.05	0.35
Economic Determinants										
Mutual RSIs	−0.04	0.79	0.05	0.44	**−0.20***	**1.96**	−0.02	0.18	0.00	0.01
Complementary Resources	**0.14***	**2.62**	0.11	1.02	**0.38****	**3.68**	0.07	0.67	0.12	0.94
Control Variables										
Projects Type	0.05	0.98	0.03	0.34	−0.08	0.83	0.11	0.94	0.11	0.97
Supplier Role	0.06	1.22	0.10	1.06	−0.01	0.01	0.06	0.56	0.12	1.02
Supplier Sector	0.02	0.50	0.08	0.86	0.09	0.90	0.09	0.78	−0.16	1.42
Client firm Size	0.03	0.52	0.09	1.00	−0.09	−0.96	0.03	0.26	0.00	0.01
Client firm Sector	0.01	0.18	0.04	0.37	−0.11	−1.21	0.01	0.02	0.05	0.41
R^2	0.34		0.46		0.44		0.44		0.26	

Supported hypotheses are indicated in bold for visual clarity.
* p < .05.
** p < .01.

5.2. Combinatory effect results

To analyze H5, we performed a fsQCA in three steps. First, the raw data was calibrated into fuzzy set scores ranging from 0 to 1 (see the calibration details in Appendix III). Second, we examined whether any condition or its negate (i.e. the absence of a condition) were necessary for the outcome (future cooperation). A condition is necessary if it is always present (or absent) when the outcome exists. A single condition can be considered necessary when the corresponding consistency score exceeds the threshold of 0.9 (Fiss, 2011). As shown in Table 6, only inter-organizational trust exceeds the required threshold, indicating that the presence of this condition is always necessary to achieve the client's willingness to cooperate in future.

Third, we performed an analysis of sufficient conditions based on the truth table, which lists all logically possible configurations of the seven conditions. Using the calibrated membership scores, each observation is assigned to a specific configuration in the truth table. Overall, the truth table consists of $2^{k=7} = 128$ different configurations (k = number of conditions). To identify meaningful configurations and reduce the truth table, we chose a frequency threshold of three observations to exclude less important configurations (thus, configurations between four and the maximum number of 34 cases were treated as remainders). We defined which configurations are sufficient for obtaining the client's future cooperation using a predefined consistency threshold of ≥0.80 (Fiss, 2011). The fsQCA program calculates the meaningful configurations using Boolean algebra and provides different sets of solutions. Following Fiss (2011), we identified peripheral conditions using the intermediate solutions, and core conditions using additionally the parsimonious solutions, with core conditions being more essential as part of a configuration.

As shown in Table 7, the analysis indicates a solution based on the existence of five equifinal configurations sufficient for the client's future cooperation willingness (Configurations 1a to 2b). Table 7 also shows that the overall solution consistency score is 0.96, and the consistency scores for each configuration is 0.96 or above. Furthermore, the

Table 5
Cluster analysis.

Cluster Group	Frequency	% of the Sample	Cluster Factors	
			Duration	Exchange Frequency
Exploration Phase	80	26.9	1.00	1.00
Fast Expansion Phase	79	26.6	1.49	2.16
Slow Expansion Phase	62	20.9	2.00	2.00
Maturity Phase	76	25.6	3.67	3.25
F			248.95	121.69
Tukey test of difference across clusters			All clusters	All clusters, except 2 and 3

Table 4
Relative weight analysis (RWA) results.

	Complete Sample		Exploration Phase	Fast Expansion Phase		Slow Expansion Phase		Maturity Phase	
	Relative Weight	Rank	Relative Weight	Rank	Relative Weight	Rank	Relative Weight	Rank	Relative Weight	Rank
Inter-organizational Trust	0.16 (.08[a] –.25[b])	1	0.18 (0.06–0.34)	1	0.13 (0.01–0.30)	2	0.30 (0.16–0.48)	1	0.10 (0.06–0.27)	1
Personal Communication	0.07 (0.03–0.13)	2	0.08 (0.01–0.20)	2	0.10 (0.02–0.23)	3	0.02 (−0.03–0.11)	ns	0.04 (−0.02–0.19)	ns
Interdependence	0.04 (0.07–0.09)	4	0.07 (−0.01–0.17)	ns	0.01 (−0.02–0.09)	ns	0.07 (−0.03–0.19)	ns	0.01 (−0.04–0.13)	ns
Mutual RSIs	0.01 (−0.01–0.03)	ns	0.03 (−0.01–0.12)	ns	0.01 (−0.02–0.11)	ns	0.02 (−0.03–0.10)	ns	0.01 (−0.02–0.08)	ns
Complementary Resources	0.05 (0.01–0.12)	3	0.06 (0.01–0.19)	3	0.15 (0.03–0.37)	1	0.01 (−0.03–0.08)	ns	0.05 (−0.01–0.20)	ns

a. Lower bound confidence interval; b. Upper bound confidence interval; ns: Not significant.

Table 6
Necessary conditions for the presence of future cooperation.

Condition	Consistency	Coverage
Inter-organizational Trust	0.93	0.85
Personal Communication	0.57	0.92
Interdependence	0.44	0.94
Mutual RSIs	0.75	0.88
Complementary Resources	0.87	0.85
Duration	0.51	0.85
Exchange Frequency	0.57	0.83
~ Inter-organizational Trust	0.29	0.85
~ Personal Communication	0.65	0.80
~ Interdependence	0.79	0.82
~ Mutual RSI	0.51	0.88
~ Complementary Resources	0.35	0.85
~ Duration	0.63	0.75
~ Exchange Frequency	0.55	0.74

Note: ~ indicates negate, i.e. the absence of a condition.

Table 7
fsQCA results.

	Outcome: Future Cooperation Willingness				
	1a	1b	1c	2a	2b
Inter-organizational Trust	●	●	●	●	●
Personal Communication	⊗	●	●	●	●
Interdependence	⊗	⊗		⊗	●
Mutual RSIs		●	●	⊗	●
Complementary Resources	●		●	●	●
Duration	●	●	●	⊗	⊗
Exchange Frequency	●	●	●	⊗	⊗
Raw coverage	.28	.26	.27	.21	.20
Unique coverage	.07	.01	.02	.03	.03
Consistency (>.75)	.96	.98	.98	.97	.98
Solution coverage			.50		
Solution consistency			.96		

Note: Black circles indicate the presence of a condition; circles with "X" indicate the absence; large circles indicate core conditions; small circles indicate peripheral conditions.

combined model has an overall coverage score of 0.50, indicating that the configurations account for 50% of memberships in the outcome (similar to R^2 scores). The raw coverage scores for the configurations range between 0.20 and 0.28. Following Fiss (2011), we grouped configurations based on core conditions of the relationship duration and exchange frequency. Configurations 1a, 1b, and 1c are related to the maturity phase (presence of duration and exchange frequency). Configurations 2a and 2b are related to the exploration phases (absence of duration and exchange frequency).

Overall, Table 7 shows that multiple configurations exist for different relationships lifetime phases, supporting H5. In the maturity phase (denoted by the black circles in the 'Duration' and 'Exchange frequency' categories), Configuration 1a shows that inter-organizational trust and complementary resources are sufficient in the absence of other social determinants. In Configurations 1b and 1c, inter-organizational trust, personal communication, and mutual RSIs are sufficient conditions. Configurations 1b and 1c indicate that complementary resources are not important to achieve future cooperation in the absence of interdependence. Within the exploration phase (denoted by empty circles with an x in the 'Duration' and 'Exchange frequency' categories), Configuration 2a indicates that inter-organizational trust, personal communication, and complementary resources are sufficient in the absence of interdependence and mutual RSIs. Alternatively, Configuration 2b shows that all social and economic determinants are required to achieve future cooperation willingness in the exploration phase.

6. Discussion and conclusions

This study aims to provide a holistic understanding of the net effects, the differential importance, and the configurational effects of social and economic determinants of business relationship performance in the context of dynamic relationships between PSFs and their clients. We measure business relationship performance as the willingness of a client to cooperate with the PSF in future. Our results show that, overall, social determinants are more important than economic ones in this respect. However, the importance of social determinants increases in later lifetime phases. The configurational analysis also reveals several equifinal constellations of social and economic determinants across the lifetime phases. Each of these configurations drives a client's willingness to cooperate in future. Our findings offer several theoretical and managerial implications.

6.1. Theoretical implications

Extant empirical research has investigated the individual net effects of social and economic determinants of business relationships (Dowell et al., 2015; Liu et al., 2009; Palmatier et al., 2007). These studies commonly provide a static perspective of business relationships. They suggest that firms should focus on performing well in terms of all determinants that drive business relationship performance. However, the relative importance of different social and economic determinants of the relationships between PSFs and their clients has remained unclear. Furthermore, the extant literature has neglected the fact that these relationships are dynamic in nature, i.e. the relative importance of alternative determinants of clients' willingness to maintain a relationship may vary over time. Against this background, we advance the literature in several ways.

First, we show that social determinants, particularly inter-organizational trust and personal communication, are more important than economic ones as drivers of the client's future cooperation willingness. Specifically, we find that inter-organizational trust is the most important determinant, whereas mutual RSIs are the least important ones. The configuration analysis also reveals that the presence of inter-organizational trust is a necessary, but by itself not a sufficient condition for all solutions, which indicates that inter-organizational trust *in combination* with other social and economic determinants drives the client's willingness to cooperate in future. The results are in line with studies that emphasize trustworthiness of suppliers as an integral determinant of business relationships (Becerra et al., 2008), especially when customers are required to share sensitive information regarding their complex business problems (Heirati et al., 2016; Malhotra & Morris, 2009). However, our findings regarding the insignificant net effect of mutual RSIs require further nuance. The configuration analysis shows that mutual RSIs are in fact important in driving clients' future cooperation willingness in the maturity phase, but only in conjunction with inter-organizational trust and personal communication. Thus, mutual RSIs are important *in combination* with social determinants, and in a specific relationship lifetime phase (i.e. maturity). This finding is consistent with studies suggesting that the interaction of trust and RSIs positively influences business relationship performance (Liu et al., 2009). Simple causation (regression) analysis masks this result.

Second, we show that the relative importance of social and economic determinants changes across the relationship lifetime phases characterized by duration and growth trajectory. We extend the

traditional lifecycle perspective (Jap & Anderson, 2007) and the age/duration perspective (Hibbard et al., 2001) of relationship dynamics, and characterize PSF relationships in lifetime phases by measuring both the relationship duration and exchange frequency. This approach helps to capture heterogeneous growth trajectories over the lifetime of the relationship. The results reveal (partially contrary to what was hypothesized) that social determinants, particularly inter-organizational trust and personal communication, are relatively more important than economic determinants in the exploration stage. However, complementary resources as an economic determinant become more important than social determinants in the fast expansion phase, where the PSF and the client move through the expansion phase with a high growth trajectory (i.e. high exchange frequency). The findings show that the relative importance of economic determinants diminishes with increasing relationship lifetime. Inter-organizational trust becomes the key determinant of the client's future cooperation willingness in the maturity phase, where the relationship duration and exchange frequency are at the highest level. We thus address the call by Palmatier et al. (2013, p.27) for more research to "*provide a more complete picture of relationship dynamics*" in business relationships (see also Jap & Anderson, 2007).

Third, we demonstrate that analyzing net effects and configurational effects in a *complementary manner* advances the understanding of the interplay between social and economic determinants across lifetime phases. Employing a configurational approach based on fsQCA helps to simultaneously examine the distinct and joint effects of social and economic determinants of the client's future cooperation willingness. Doing so provides nuanced findings, e.g. that no single determinant by itself is a sufficient condition for ensuring the client's future cooperation willingness. Distinct constellations of the presence (or absence) of multiple social and economic determinants are required to achieve the desired outcome (see Zaefarian et al., 2017), and these constellations change across the lifetime of a relationship. We advance the literature by showing how distinct configurations of social and economic determinants across the relationship lifetime phases are sufficient for achieving the client's future cooperation willingness in the context of PSFs.

6.2. Managerial implications

This study offers several implications for managers. As is the case with other firms, PSFs need to decide how to invest their scarce resources and efforts effectively when managing business relationships. Managers, therefore, must know which governance determinants are most important, and which configurations of these determinants drive the client's future cooperation willingness. Using the relative importance analysis and the configuration perspective, we provide specific guidelines to help PSFs managers to build and maintain business relationships with their clients across different relationship lifetime phases.

First, managers should be cognizant of the fact that business relationships are dynamic, and that their nature changes in different lifetime phases characterized by the relationship duration and exchange frequency. For instance, managers should emphasize building inter-organizational trust and personal communication (e.g. setting up clear communication processes, building social bonds) in the early relationship phases. This approach helps clients to trust the PSF and thus enable sharing of sensitive information related to their complex business problem. Building trust and social bonds provide assurances for clients. When clients intend to rely on the PSF's expertise for more projects (e.g. fast expansion phase), PSFs should promote their expertise to the client and show how their knowledge and skills complement the client's resources and help them to address their business problems. In the later relationship lifetime phases (i.e. maturity), the PSF and the client should foster becoming more familiar with one another through a series of role interactions and active building of social bonds (e.g. through joint long-term project teams). Simultaneously, clients may experience conflicts and changing expectations over time. Our findings show that clients are more willing to continue cooperation with trustworthy PSFs as they perceive inter-organizational trust – a social determinant – as relatively more important than economic determinants in the maturity phase. However, to allow for a more nuanced management of different relational determinants by lifetime phase requires PSFs to have relationship audits in place which provide an understanding of the lifetime phase of specific client relationships.

Second, managers are advised that there is no single best relationship strategy to drive the client's future cooperation willingness. PSFs, instead, should orchestrate different social and relational determinants across their relationship lifetime with the client. For example, one of the identified configurations (2b in Table 7) shows that all conditions (i.e. social and economic determinants) are important (or sufficient) to increase the client's future cooperation willingness in the exploration phase. Alternatively, Configuration 2a indicates that PSFs in the exploration phase can predominantly emphasize personal communication (compared to inter-organizational trust and complementary resource) when interdependence and mutual RSIs are yet to be established. Our findings also suggest that building interdependence is a less relevant determinant in the maturity phase (Configurations 1a, 1b, and 1c). Furthermore, PSFs should enhance mutual RSIs when strong inter-organizational trust and personal communication are established in the maturity phase (Configurations 1b and 1c). These findings are consistent with the extant literature that argues that trust and social bonds provide assurances for clients to invest in a relationship with a PSF and share more knowledge about their requirements and problems (Uzzi & Lancaster, 2003). In this sense, the reciprocal RSIs by the PSFs will help to enhance the client's future cooperation willingness.

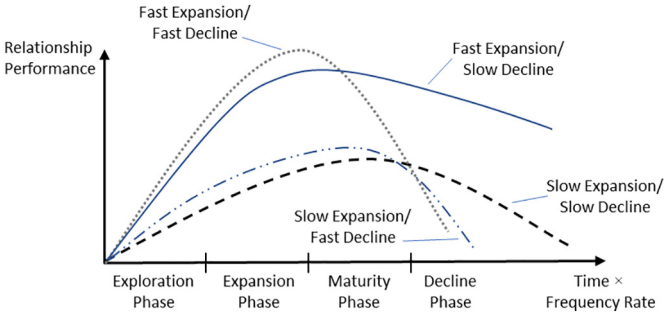
In conclusion, managers of PSFs should not waste their resources and efforts on the less important social or economic determinants at a specific relationship lifetime phase. In each lifetime phase, different configurations (or 'recipes') of success should be followed.

6.3. Limitations and future research

Although employing two complementary theoretical perspectives and multiple analytical methods increases confidence in our results, our study is subject to several limitations. First, our data is based on the PSF's clients across sectors; thus, the results might be different for clients in specific sectors (e.g. manufacturing). Future research can replicate this study in single sectors to strengthen the generalizability of findings. Second, contextual factors such as the competitive intensity and market turbulence may influence business relationships. Future studies can extend our study by investigating which configurations of social and economic determinants are beneficial under different boundary conditions. Third, we measured specific social and economic determinants, particularly interdependence and mutual RSIs, from the client firm's perspective. However, the nature of these factors may vary across the supplier and client firms. Future research needs to integrate the perspectives of both PSFs and clients simultaneously using a dyadic multi-informant research design. Lastly, further studies should include specific analyses of the decline lifetime phase (which was not empirically represented in our sample) and conduct longitudinal analyses of the PSF-client business relationship to complement our comparative static analysis of relationship dynamics.

Appendices

Appendix I. Relationship lifetime phase model



Appendix II. Constructs and variables

	Loading
Inter-organizational Trust (Ganesan & Hess, 1997)	
Promises made by this PSF are reliable.	0.80
This PSF has been frank in dealing with us.	0.81
If problems such as shipment delays arise, this PSF is honest about the problems.	0.76
This PSF has been consistent in terms of their policies.	0.78
This PSF cares for us.	*
This PSF considers our interests when problems arise.	0.79
This PSF has gone out of its way to help us out.	0.76
This PSF has made sacrifices for us in the past.	*
Client Dependence (Ganesan, 1994)	
This PSF is important to our firm.	0.87
This PSF is a major supplier for our firm in our trading area.	0.87
It would be difficult for us to replace this PSF.	*
Supplier Dependence (Ganesan, 1994)	
We are important to this PSF.	0.83
We are a major client for this PSF in our trading area.	*
It would be difficult for this supplier to replace our firm in this trading area.	0.83
Client RSIs (Ganesan, 1994)	
We have made significant investments in our relationship with this PSF.	0.88
If we switch to a competing supplier, we will lose a lot of the investment we have made in this PSF.	0.88
We have invested a lot of time and effort into establishing and maintaining the relationship with this PSF.	*
Supplier RSIs (Ganesan, 1994)	
This PSF has made significant investments in our relationship.	0.86
If this PSF switch to a competing client, it would lose a lot of the investment made in this relationship.	0.85
This PSF has invested a lot of time and effort into establishing and maintaining the relationship with our firm.	0.88
PSF complementary resource (Kale et al., 2000; Parkhe, 1993)	
This PSF possesses knowledge that our employees do not have.	0.84
This PSF possesses skills that our employees do not have.	0.78
This PSF has information that we do not have.	0.67
Personal Communication (Brush & Rexha, 2007)	
Our firm's managers have a personal relationship with the contact person from this PSF.	0.84
The contact person of this PSF is a good friend of our managers.	0.84
Future Cooperation (Ramsey & Sohi, 1997)	
It is probable that we will involve this provider again.	0.93
We are willing to discuss business with this provider again.	0.86
We plan to purchase services from this provider again.	0.94
We plan to continue conducting projects with this provider.	0.83

* Items were dropped after confirmatory factor analysis.

Appendix III. fsQCA calibration

The raw data was calibrated into fuzzy set scores ranging from 0 to 1 (Ragin, 2007). Three anchors are required to define the full non-membership (fuzzy set score of 0), the full membership (fuzzy set score of 1), and the crossover point (fuzzy set score of 0.50) thresholds (Fiss, 2011; Zaefarian et al., 2017). The calibration of raw data into fuzzy set variables was performed using the direct method in the fsQCA 3.0 program.

Following Leischnig and Geigenmüller (2017), we define the membership anchors based on the 7-point Likert scale utilized in the survey. We set the full membership threshold of determinants (conditions in fsQCA terminology) and the outcome (except interdependence and mutual RSIs) to 7, the crossover point to 4, and the full non-membership to 1. Given that interdependence and mutual RSIs are operationalized as the product of the client's dependence/RSIs and its perception of the PSF's dependence/RSI, we fixed the full membership threshold of these variables to 14, the crossover point to 7, and the full non-membership to 2. Regarding the relationship duration and exchange frequency, these categorical variables are measured on a 5-point scale. Consistent with phases identified in the cluster analysis, we set the full membership threshold of these variables to scores of 3 (over 5 years, over 5 projects), the crossover point to scores of 4 (2–5 year, 2–5 projects), and the full non-membership to scores of 1 (2 or < 2 years, 2 or < 2 projects). Given that calibration of variables can produce fuzzy-set membership scores of 0.5, it is difficult to determine whether a case is in or out of a set. Following Fiss (2011), we addressed this issue by adding a constant of 0.001 to the fuzzy-set membership scores for all conditions (except for full membership).

To examine the robustness of results, we performed fsQCA using alternative calibration anchors (e.g., 6–4-1 for all variable except interdependence and mutual RSIs; 13–7-3 for interdependence and mutual RSIs). The results using the alternative calibration anchors were consistent with the calibration used in the paper.

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