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Trust and Commitment in the Inter-Organizational Relationship Life Cycle

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Abstract

Purpose: The complex nature of inter-organizational relationships can be reflected in the number, level, and changes of their features. Focusing on two essential features of relationships – trust and commitment – we explore how they change in the particular phase of the relationship life cycle.

Design/methodology/approach: Using the existing findings from a systematic literature review on IOR features, we aimed to qualitatively verify the changes over the time of two crucial relational characteristics – trust and commitment. Next, using a quantitative surveying, we tested the changeability of these two on a large-scale sample (786) from the software industry in Poland.

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Findings: With strong empirical support, we found the level of trust and commitment intensity as changing in a non-linear manner through the relationship life cycle. Logically, they both increase across the initial, development, and maintenance phases, while in the termination phase they decline. However, the results show that they can rise when the relationship is reactivated.
Research limitations/implications: Due to the industry and cultural-specific limitations, comparative studies on several industries in cross-cultural conditions are recommended. We need further research on a holistic view of relationship characteristics and their changeability through the relationship life cycle. Furthermore, the validity of the cyclical treatment of relationship dynamics is worth reviewing.
Originality/value: We investigate the significance of trust and commitment in inter-organizational relationship development using a mixed research approach. Additionally, as a methodological contribution, this article offers the operationalization and measurement of the above-mentioned features.

Keywords: inter-organizational relationship features, development process, relational dynamics, relationship development.

JEL: L14, L20, L86, M15

Zaufanie i zaangażowanie w cyklu życia relacji międzyorganizacyjnych

Streszczenie

Cel: złożoność relacji międzyorganizacyjnych wyraża się w liczbie, poziomie oraz zmienności ich cech. Koncentrując się na dwóch podstawowych cechach relacji – zaufaniu i zaangażowaniu – artykuł rozpoznaje, jak zmieniają się one w poszczególnych fazach cyklu życia związku.
Metodologia: wykorzystując wyniki systematycznego przeglądu literatury na temat cech IOR, za cel przyjęto jakościową weryfikację zmienności zaufania oraz zaangażowania na przestrzeni czasu. Następnie uzyskane wyniki zostały poddane ilościowemu testowaniu w badaniach przeprowadzonych na próbie 786 twórców oprogramowania w Polsce.
Wyniki: wyniki badań wskazują, że poziom zaufania i intensywności zaangażowania zmieniają się nieliniowo w cyklu życia IOR. Zgodnie z logiką, oba atrybuty zwiększają się w fazach początkowej, rozwoju i utrzymania, natomiast w fazie końcowej się zmniejszają. Jednakże, wyniki badań wskazują, że ich poziom może ponownie wzrosnąć, gdy relacja zostanie reaktywowana.
Ograniczenia/implikacje badawcze: ze względu na ograniczenia branżowe i kulturowe zalecane są badania porównawcze kilku branż w warunkach międzykulturowych. Widzimy też potrzebę dalszych badań nad całościowym spojrzeniem na cechy relacji i ich zmienność w cyklu życia relacji. Ponadto warto przyjrzeć się zasadności cyklicznego traktowania dynamiki relacji IOR.
Oryginalność/wartość: wkładem w istniejący stan wiedzy jest rozpoznanie znaczenia zaufania i zaangażowania w rozwoju relacji międzyorganizacyjnych z wykorzystaniem mieszanego podejścia badawczego. Dodatkowo, jako wkład metodyczny, w artykule przedstawiono operacjonalizację i pomiar rozważanych atrybutów relacji.

Słowa kluczowe: cechy relacji międzyorganizacyjnych, proces rozwoju, dynamika relacji, rozwój relacji.

1. Introduction

Since the publication of Dwyer et al.'s (1987) and Ford's (1980) works, the significance of inter-organizational relationships (IORs) has been growing in strategic management (Holm et al., 1999). As non-zero-sum, long-term linkage in which partners shared their vision and goals (Zineldin, 2002), IORs are indicated as the most critical source of a firm's success (Zaefarian et al., 2017) and performance (Zakrzewska-Bielawska, 2017), as well as a competitive advantage (Claycomb & Frankwick, 2010), including a sustainable one (Holm et al., 1999).

Inter-organizational relationships are continuously developing (Palmatier et al., 2013), evolving over time (Kusari et al., 2013) and becoming more and more complex (Ferreira et al., 2017). It is acknowledged that the IOR evolution can be considered in the light of relationship life cycle (RLC) concept (Batonda & Perry, 2003; Plewa et al., 2013; Hastings et al., 2016; Ferreira et al., 2017) as it is possible to distinguish several phases of the IOR development (Lunardo et al., 2018). The relationship phase refers to the major transitions in the way the parties regard each other (Dwyer et al., 1987). The relationship phase covers the qualitative aspect of a relationship (Mathur & Kumar, 2013), which is reflected in relationship attributes, actors' behaviors and relationship outcomes – generated, perceived and evaluated by the actors. Therefore, it is not reasoned to estimate the duration of a relationship. Instead, the development phase depends on strategic moves which occur in an unstructured and unpredictable manner at any point in time (Ford et al., 1996; Rao & Perry, 2002). Those phases are separated not by stable time periods but by turning points which result in a dramatic, discontinuous change of a relationship's trajectory (Harmeling et al., 2015).

Moreover, the evolutionary nature of IORs manifests itself not only in passing through the subsequent phases of a life cycle but also in changing the types, levels and significance of the relationship characteristics (e.g., trust, commitment, mutual investments, power, quality, strength, etc.) (Hastings et al., 2016).

Inter-organizational relations are complex and many relevant relational attributes appear along the IOR development path (Jap & Anderson, 2007; Eggert et al., 2006; Lee & Johnsen, 2012). Importantly, the relational features *"follow unique path-dependent growth trajectories, according to the relative contribution of a construct-specific set of underlying time-varying processes"* (Palmatier et al., 2013: 27). More precisely, a particular phase of the IOR evolution reflects different levels of attributes (Fynes et al., 2005; Lee & Johnsen, 2012; Hastings et al., 2016).

Notwithstanding, not all the attributes of inter-organizational relationships appear to be of equal importance in different phases of the relationship life cycle. However, a lot of authors agree that given the perspective of firm performance and relationship development (Eng, 2009), there are two critical characteristics – trust and commitment (T&C) (e.g., Dwyer et al., 1987; Morgan & Hunt, 1994; De Ruyter et al., 2001; Standifer et al. 2010; Wang, 2012; Zaefarian et al., 2017).

An in-depth analysis of the existing literature (Klimas et al., 2020) showed inconsistency in the perception of T&C in terms of (1) the level of these

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features and (2) their importance in a particular phase of the relationship life cycle. Given the above, we pose the following research question:

RQ *How do trust and commitment change in the subsequent phases of the IOR life cycle?*

The purpose underlying our study is to indicate the significance of trust and commitment in inter-organizational relationships in the context of the relationship life cycle. More specifically, we explore the importance and changes of T&C through a literature review and mixed methods of field research. Additionally, the paper offers the operationalization and measurement of the factors considered. We found it important as the IOR measurement has gained too little attention so far (Gelei & Dobos, 2014). Moreover, there is no commonly acknowledged operationalization of T&C in the IOR-related literature (Palmatier et al., 2013).

This paper presents empirical results addressing the above-mentioned gaps. However, it should be noted that this paper is a part of a wider project which explores and verifies the IOR features. The entire research process started with a systematic literature review of 108 papers (Klimas et al., 2020) which allowed us to identify a list of 25 IOR features (Klimas et al., 2022a). The next step was aimed at qualitative verification of the findings from desk research using 18 in-depth interviews (i.e., 3 firms and 15 cooperating partners). Last but not least, a large-scale survey was carried out to test the findings quantitatively. The remainder of this paper presents the findings on trust and commitment.

2. Theoretical Background

The features of inter-organizational relationships are also investigated as relationship attributes (Wilson, 1995; Jap & Ganesan, 2000; Gelei & Dobos, 2014), characteristics (Holmlund, 2004; Johnsen & Ford, 2008), properties (Jap & Anderson, 2007; Kam & Lai, 2018), success factors (Plewa et al., 2013) or structural constructs (Palmatier et al., 2013).

By nature, relationships are dynamic, they evolve and change over time (Ford, 1980; Batonda & Perry, 2003; Plewa et al., 2013). Moreover, given the available conceptualizations, they are also complex phenomena described in terms of many different and multi-level characteristics (Holmlund, 2004; Fynes et al., 2005; Lee & Johnsen, 2012; Palmatier et al., 2013; Hastings et al., 2016). Due to a high level of complexity, the IOR attributes are usually explored with a focus on a single feature such as trust (Schilke & Cook, 2013; Czakon & Czernek, 2016; Gaczek et al., 2018), asymmetry (Lee & Johnsen, 2012), quality (Akrout, 2014) or commitment (Sweeney & Webb, 2007; Palmatier et al., 2013). One can also find studies targeting a narrow set of features, for instance commitment and dependence (Holm et al., 1999), commitment and trust (Palmer, 2007; Eng, 2009; Abosag &

Lee, 2013; Weißhaar, Huber), reputation and trust (Johnsen & Ford, 2008; Xie & Haugland, 2016).

This paper focuses on trust and commitment as these two are considered as essential yet imperative features in the process of forming and developing IORs (Ring & Van de Ven, 1994; Wilson, 1995; De Ruyter et al., 2001; Eng, 2009; Standifer et al., 2010; Wang, 2012; Abosag & Lee, 2013; Varotto & Parente, 2016; Weißhaar & Huber, 2016). Indeed, as Eng (2009) states *"both commitment and trust need to be present in order to produce relationship outcomes that promote efficiency, productivity and effectiveness"* (p. 512). In a similar vein, Randall et al. (2011) show that trust and commitment jointly impact value co-creation.

Most scholars agree that relational attributes change over time (Lee & Johnsen, 2012; Kusari et al., 2013, Gelei & Dobos, 2014; Kam & Lai, 2018). Furthermore, every attribute can decrease, increase or remain static throughout the relationship (Ford, 1980), can be active or latent (Wilson, 1995; Plewa et al., 2013). Trust and commitment are also shown as phase-dependent and evolving (Fynes et al. 2005; Goldring, 2010; Kusari et al., 2013; Akrout & Diallo, 2017; Gaczek et al., 2018). We know that as the relationship develops, trust (Dwyer et al., 1987; Gaczek et al., 2018) and commitment (Ford, 1980; Batonda & Perry, 2003; Goldring, 2010; Lee & Johnsen, 2012) attain higher and more complex levels. It seems that their importance grows with the RLC development (Hastings et al., 2016) till the decline phase, when the level of T&C decreases (Palmatier et al., 2013). However, there is no consistency in the significance of these relational features, particularly the phases of RLC and directions of their evolution (Wilson, 1995; Plewa et al., 2013). Indeed, few studies have assessed the changing nature of those crucial variables during the relationship life cycle (Eggert et al., 2006) while the vast majority of claims remain conceptual. All in all, it remains unclear how both commitment and trust change along the relationship development path (De Ruyter et al., 2001).

2.1. Trust

Trust depicts the faith and confidence one party has in the other party's motives, intentions, reliability, integrity, as well as commitment to maintain and develop a relationship (Kam & Lai, 2018). It is not a certain behavior but positive expectations of others' intentions, a psychological state that can cause but also result from undertaken actions (Mandják et al., 2015).

Trust often consists of: (1) benevolence – a belief that one party will act in the interests of the other, (2) honesty – a belief that the other party will be credible (credibility), and (3) competence – a belief in the other party's necessary expertise (Wang, 2012; Mandják et al., 2015). Based on those facets, two main types of trust can be indicated (Andersen & Kumar, 2006): cognitive trust and affective trust (Akrout & Diallo, 2017; Gaczek et al., 2018).

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Cognitive trust refers to assessing the party's competency and credibility in the face of possible costs of destructive behavior. It is the willingness to rely on the other party. Affective trust refers to the mutual feeling, reflecting instincts, intuition, and the impression of trustworthiness. Akrout and Diallo (2017) find that cognitive trust influences investments in a relationship or confidential communication indirectly through the mediation of affective trust (p. 159). Thus, affective trust appears essential in the overall relationship (p. 167), mainly in the situation when information or evidence is insufficient for drawing cognitive conclusions (Gaczek et al., 2018).

In the IOR literature, there is a dissimilarity in how trust links to the other relational features. On the one hand, trust impacts cooperation (Fynes et al., 2005; Panda & Dash, 2016; Gaczek et al., 2018), communication (Fynes et al., 2005; Harwood, 2006; Mandják et al., 2015), commitment (Mandják et al., 2015; Yaqub, 2017), information-sharing (Lee & Johnsen, 2012), adaptation, interdependence and interaction (Hastings et al., 2016). On the other hand, trust is considered rather as an outcome of a relationship than as one of its characteristics (Johnsen & Ford, 2008) or a feature interrelated with other relational features. In that perspective, trust is claimed to result from cooperation (Lussier & Hall, 2018) or communication (Young & Wilkinson, 1998; Franklin & Marshall, 2019). Satisfaction (Lee & Johnsen, 2012) and actors' specific investments, relational norms (Kusari et al., 2013) are seen as the trust's antecedents (Franklin & Marshall, 2019).

All these views strengthen the need to clarify how we perceive trust in the IOR context, mainly in terms of the changes which take place during the evolution of a dynamic relationship.

A deeper understanding of trust is needed, as a high level of trust is a source of competitive advantage (Dyer & Singh, 1998), value co-creation (Randall et al., 2011) and even coopetition with competitors (Lewicka & Zakrzewska-Bielawska, 2020). Moreover, it permits to exchange valuable information (Andersen & Kumar, 2006), adds value to a relationship (Harwood, 2006), impacts the success of a long-term relationship and enhances commitment (Kusari et al., 2013). Some scholars indicate that the level of trust is managed by self-reinforcing mechanisms and that the increasing level of trust is not always desirable between organizations. This means that the high level of trust can lead to carelessness, complacency and inefficiency which calls for a controlled level of trust and "*vigilance*" (Möllering & Sydow, 2019). However, trust is considered as an important and necessary component of the relationship-building process (Mandják et al., 2015) and a crucial characteristic of an established relationship (Morgan & Hunt, 1994; Wang, 2012). All in all, *"the considerable body of published work that conceptualizes, operationalizes and tests the importance of trust in business marketing concludes that it is central to business functions"* (Denize & Young, 2007, p. 968). Given the above, it would be reasoned to explore if trust is a significant feature for the entire IOR development path.

2.2. Commitment

Interestingly, many authors consider commitment as central to the foundation of relationships (Sweeney & Webb, 2007), relevant along relationship-building processes (Weißhaar & Huber, 2016) or even as the most critical factor for relationship success (Wang, 2012; Palmatier et al., 2013; Sharma et al., 2015) because of its positive influence on sales performance (Fynes et al., 2005; Palmatier et al., 2013). Moreover, this relational feature adds value to a relationship (Harwood, 2006) and is crucial for the entire value chain (Hastings et al., 2016) as it reduces the risk of opportunistic behaviors (Kam & Lai, 2018) and leverages co-created value (Randall et al., 2011).

Commitment as *"an implicit or explicit pledge of relational continuity between exchange partners"* (Dwyer et al., 1987, p. 19) implies the adoption of a long-term orientation toward the inter-organizational relationship (Morgan & Hunt, 1994; Wilson, 1995; Jap & Ganesan, 2000) through the desire to maintain a valuable linkage (Weißhaar & Huber, 2016; Varotto & Parente, 2016). Indeed *"commitment implies a higher level of obligation to make the relationship mutually satisfying and beneficial"* (Wang, 2012, p. 361).

Previous research has highlighted several types of commitment. Goldring (2010) distinguishes four dimensions of commitment: affective (emotional), normative (obligation), instrumental (calculation of being involved in a relationship) and continuance (calculation of leaving a relationship). Sharma et al. (2015) identify affective commitment, obligation-based commitment, calculative commitment (which can either be negative – lock-in or positive – value-based), and a behavioral one (investments of time, resources and effort). In general, affective commitment is the most frequently used category (Kumar et al., 1995; Zaefarian et al., 2017) but all the reflections of commitment should be seen as relevant in the IOR context. Regarding the interdependencies with the other IOR features, commitment seems to be a feature reflected in mutual investments (Kam & Lai, 2018; Holm et al., 1999), velocity (Palmatier et al., 2013) or relationship dynamics (Fynes et al., 2005). Commitment is also positively associated with cooperation (Morgan & Hunt, 1994; Fynes et al., 2005) and satisfaction (Yaqub, 2017). Given the above, it would be reasoned to explore if commitment is a significant feature for the entire IOR development path.

2.3. The IOR Life Cycle

The literature on the IOR life cycle (Authors, 2022b) describes and analyzes models covering its different phases ranging from two (Panda & Dash, 2016) to seven (de Almeida Moraes et al., 2017). Nevertheless, models with three (Duanmu & Fai, 2007; Davis & Love, 2011; Lee & Johnsen, 2012; Baptista, 2013), four (Meng, 2010; Ferreira et al., 2017; Restuccia & Legoux, 2019) and five phases (Plewa et al., 2013; Abosag & Lee, 2013) are the most common ones. Following the most frequent approaches, RLC described in this paper covers the following phases[1]: initial, development, maintenance, dormant /end and reactivation.

In the initial phase, partners are only focused on pursuing their objectives (Lau & Goh, 2005; Duanmu & Fai, 2007; Davis & Love, 2011; Meng, 2010; Lee & Johnson, 2012; Ferreira et al., 2017). High degree of uncertainty and distance lead to low T&C but also to a rapid growth of adaptation (Lau & Goh, 2005). In contrast, Panda and Dash (2016) claim that partners invest in trust to develop cooperation fast; thus, the level of trust is high at the beginning and then it decreases. However, according to Gaczek et al. (2018), we believe that a certain level of trust is needed to start cooperation at the beginning of a relationship.

The development phase refers to intensive cooperation (Batonda & Perry, 2003; Duanmu & Fai, 2007; Lee & Johnson, 2012; Abosag & Lee, 2013; Plewa et al., 2013; Ferreira et al., 2017). Notably, some scholars name this phase *commitment* (Dwyer et al., 1987; Davis & Love, 2011), because even though the parties still focus on their objectives, they understand that a partial win is vital for both sides to cooperate (Meng, 2010).

In the maintenance phase (Meng, 2010; Davis & Love, 2011; Abosag & Lee, 2013; Restuccia & Legoux, 2019) cooperation is deeper, more stable (Lau & Goh, 2005), highly valued (Lee & Johnsen, 2012) and each party is strongly committed to the best value achievement (Meng, 2010). This phase reflects a strong focus on mutual goals and a relationship based on mutual trust, competency trust and personal commitments (Abosag & Lee, 2013).

A process of successive partners' disengagement (Duanmu & Fai, 2007), caused by expired contract (mutually agreed) (Batonda & Perry, 2003) or by dissatisfaction with the relationship (Duanmu & Fai, 2007), is the ending phase (Batonda & Perry, 2003; Meng, 2010; Abosag & Lee, 2013; Restuccia & Legoux, 2019). In this phase, mutual commitment becomes asymmetric, decreases over time and the relationship is dissolved. However, some RLC models indicate that the relationship can only go to the dormant, latent phase (Plewa et al., 2013), which means that IORs are never definitely terminated. During the dormant relationship, the potential for future cooperation remains due to a continued personal engagement and can be rebuilt anytime under appropriate conditions (Plewa et al., 2013; Restuccia & Legoux, 2019).

Finally, it is also claimed that IORs can move to a reactivation phase (Batonda & Perry, 2003). This phase can appear at any stage of the relationship development and is understood as a return to the typical and linear development path after a temporary slowdown of the IOR dynamics.

Ford (1980) assumes that relationship can be broken or can regress at any time. Relationships may end for many reasons – decreased trust, changes in product specifications (Havila & Wilkinson, 2002), because of strategies that no longer fit (Seabright et al., 1992) or simply unwillingness to continue working together (Plewa et al., 2013). The energy and perceived value of a relationship affect decisions about whether it ceases permanently or only temporarily (Polonsky et al., 2010). Moreover, there are examples showing that a dormant relationship may reactivate in different phases of the cycle (Plewa et al., 2013).

The literature highlights that the features of IORs (including trust and commitment) change over time, also throughout the phases of RLC (Meng, 2010; Abosag & Lee, 2013; Hasting et al., 2016). However, to the best of our knowledge such statement remains conceptual (cf., Ring & Van de Ven, 1994; Eng, 2009; Varotto & Parente, 2016). Thus, it would be interesting to explore how trust and commitment change in the subsequent phases of the IOR life cycle.

3. Research Design

This paper aims to identify the specifics of trust and commitment in the context of the IOR life cycle. In particular, it addresses the research questions: *RQ How do trust and commitment change in the subsequent phases of the IOR life cycle?* The research process targeting the above RQ was organized as a mixed study. It started with desk research, where we used a systematic literature review (SLR – more details in Klimas et al., 2020). Then we focused on field research conducted with the use of in-depth interviews and large-scale surveys.

SLR focused on a content and thematic analysis of 108 papers. Regarding T&C, our research team focused on their conceptualizations, interlinks, levels, changeability over time, operationalizations and possible measurements including available valid measurement scales. The findings from this stage were used as an input to the qualitative field studies but also gave secondary data useful in answering the RQ posed above.

SLR's assumptions were used and verified in the next stage of our research process, namely the in-depth interviews. In this part of our investigation, interviewees were asked to categorize T&C and to identify RLC and its changeability. In total, 18 direct, semi-structured, in-depth interviews were conducted in February 2020. The interviews were carried out with 3 software developers and 15 strategic partners (i.e., 5 partners per developer). The average duration of the interview was 96 minutes. The research team analyzed the transcriptions of all the interviews using content-centric analysis. The interviews were coded using the letters from A to S[2]. The findings from IDIs were used to fine-tune our measurement assumptions implemented in quantitative research.

Quantitative survey aimed at testing the T&C measurements and their reliability was the last step of the research process. The measurement scales were based on subjective, 7-point Likert-type questions. The questions

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included in the questionnaire were developed based on the results of both SLR and the 18 IDIs. Following methodological recommendations, research tools for measuring relationship characteristics were pre-tested on a group of 12 MBA students and 45 randomly selected software developers. This allowed us to ensure both content and face validity (Connell et al., 2018). Three research techniques were used: CAWI (87% questionnaires), PAPI (9%) and CATI (4%).

As our study investigates dynamic and evolutionary phenomena (i.e., IOR – Palmatier et al., 2013; RLC – Jap & Anderson, 2007), we purposefully decided to target the software development industry which is also acknowledged as being highly dynamic and cooperation-based (Krings-Klebe et al., 2017). That gave us a population of 124 000 companies according to the Local Data Bank of Statistics Poland. Using a probabilistic sampling scheme, we got a sample size at the level of 800, which guarantees its representativeness.

Before main analyses were performed, we checked the data in terms of no-response bias, duplicates and outliers – no biases were found. Nonetheless, we found the tendency error in the case of 14 respondents answering the questions marking the same value in all questions. Given the above, the effective sample size was 786.

Data analysis was carried out using variability, reliability, and variance analyses. First, to check the variability of the observations of individual items (observed variables – the questions asked), the coefficient of variation with median absolute deviation from the median (CV_{MADM}) was used. Second, we used reliability coefficients (Cronbach's α) to select items constituting constructs of latent variables (sets of items used to measure theoretical constructs). Third, the data collected allowed us to determine the levels of the T&C features in the subsequent phases of the IOR life cycle. The variables of these levels were computed as the sum of the items (observable measures) for a particular feature. To compare the means of the features in the distinguished five phases of the life cycle, we used the one-way analysis of variance/one-way ANOVA method together with Levene›s test of homogeneity of variance. The results of the test determined the use of appropriate approach.

In the case of finding an inequality of variance, Welch›s ANOVA method (robust test of equality of means) was used. Rejecting the null hypothesis in ANOVA leads to the conclusion that there are differences between the average values of the features in all phases. With the intention of assessing which pair of phases significant differences occur in, post hoc tests were performed. However, in the case of the equality of variance, we use the Tukey test for multiple comparisons, and in the opposite situation, the Games-Howell test.

The data were analyzed using Statistica ver. 13 and IBM SPSS ver. 25 software.

4. Results

At the stage of SLR, among 108 analyzed works, we found 61 articles dealing with the topic of relationship life cycle. Moreover, in the scope of 108 papers, we identified 47 works which included any features of IORs. Only in 23 out of 61 articles (Table 1), some attempts were made to describe the changing level of trust and/or commitment throughout the phases of the IOR life cycle. Those works were included in further analyses.

As shown in Table 1, information on considered IOR features mostly stems from conceptual and explorative papers, while the quantitative base is shallow (i.e., 6 quantitative and 2 mixed empirical works). It confirms a research gap resulting from insufficient empirical recognition of T&C in the context of life cycle of inter-organizational relationships.

Table 1
SLR Results for Trust and Commitment in the Scope of RLC Models (by Paper Type)

Type of paper on RLC (no. of papers identified)	Focus on trust only	Focus on commitment only	Focus on both trust and commitment	T&C focus in sum:
Theoretical / conceptual (14)	Wong & Chan (1999); Lambe et al., 2000; Schilke & Cook (2013)	Ford (1980); Goldring (2010)	Ring & Van de Ven (1994)	6
Theoretical/ qualitative (5)	Panda & Dash (2016); Plewa et al. (2013)	-	-	2
Theoretical/ quantitative (3)	-	-	Eng (2009); Varotto & Parente (2016)	2
Reviewing (3)	-	-	Meng (2010)	1
Research / qualitative (16)	Lee & Johnsen (2012); Mandjak et al. (2015)	-	Harwood (2006); Abosag & Lee (2013)	4
Research / quantitative (16)	Fynes et al. (2005); Akrout & Diallo (2017); Kam & Lai (2018); Lunardo et al. (2018)	Jap & Ganesan (2000); Palmatier et al. (2013)	-	6
Empirical based on mixed research (4)	Kusari et al. (2013)	-	Hasting et al. (2016)	2
In sum: 61	12	4	7	**23**

Source: This table was prepared by the authors of this study.

The literature analysis allowed us to develop conceptualizations of both trust and commitment which were then verified and supported by operational clarifications during the in-depth interviews – Table 2. Interestingly, the clarifications made during our interviews show T&C as features directly

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shaped by the partners' behaviors (e.g., trust – lack of pressure on formal contracts; commitment – devoting time to IORs) and their actions (e.g., commitment – implementation of tasks based on special prioritization).

Table 2
Conceptualization of Trust and Commitment as Relationship Features

IOR feature	References	Conceptualization based on SLR	Clarification based on IDIs
Trust	Jap & Anderson, (2007); Lee & Johnsen, (2012); Wang, (2012); Abosag & Lee, (2013); Palmatier et al., (2013); Kam & Lai, (2018); Gaczek et al., (2018); Ndubisi & Nataraajan, (2018)	• faith and confidence in the motives, credibility, honesty and commitment of the other party(ies) • intention or willingness to accept any weaknesses of the party(ies) • sincere belief in the final positive outcome of the joint action	In a relationship with a high level of trust we believe our partner so much that, in principle, we could cooperate without any formal or written arrangements.
Commitment	Wilson, (1995); Jap & Ganesan, (2000); Fynes et al., (2005); Palmatier, (2008); Ali & Ndubisi, (2010); Wang, (2012); Zaefarian et al., (2017)	• active approach of the parties to maintain continuity of the relationship • parties' willingness to make short-term sacrifices to achieve mutual goals and long-term effects • lasting desire to maintain a valuable relationship	A high commitment means that the firm prioritizes the tasks performed for the partner, devotes the maximum amount of time to the partner, engages people and other resources to meet the partner's expectations and maintains the relationship in the long term.

Source: This table was prepared by the authors of this study.

The literature-based assumptions about considering T&C as significant features find additional support in the conducted interviews as both T&C have been found to be underlying higher-order features. Enquired about trust, one of our interviewees said that *"relationships' stability comes from trusting each other"* (I). When it comes to commitment he stated *"I think maybe we would say that commitment can be linked* (ref. to impact and determining role) *with stability and maybe longevity"* (I).

Regarding the significance of considered features, the interviewees highlighted their role and strict linkage to the relationship – Table 3. They see the T&C features as a valuable driving force for IORs but also across the whole IOR development process. Interestingly, trust was indicated more often as the most important (or even crucial) factor of the relationship's long-term success (K, P). According to our respondents' opinions, trust is inseparably linked with commitment (E, K, M, S).

Table 3
The Meaning of Trust and Commitment in IORs – Results of Qualitative Research

Topic: The most relevant features (also factors, issues), success, and long-term use of IORs
*"If **trust** is lost, the client is lost (…). We cooperate closely with distributors and vendors. The **trust must be here**, inside this cooperation triangle. And we would like to have trust, really (…) I will repeat it like a mantra – **the trust**. It is very, very important here".* (A). *"So, the first thing that would be **trust**, that honesty, that constant care and **commitment**. The same commitment to projects for ten thousand and the same commitment to projects worth a million"* (A). *"Information exchange is the key to mutuality, **commitment, trust**, and complexity of a cooperation"* (A).
*"Competencies come first. **Trust** comes second."* (C).
*"**Trust**. Competencies. Responsibility"* (D).
*"**Mutual trust**, focusing on the partner's needs, coherent perception, shared goals and **mutual commitment** (…) quality of work, engagement in everyday work and the trouble-free nature of these people"* (ref. engaged in everyday cooperation) (E). *"**Commitment and mutual trust**"* (E).
*"To undertake a task together, to undertake a project together, it must be based on **mutual trust** that neither of the parties will fail"* (J). *"Professionalism of both partners… The second thing is **mutual trust**… Commitment, communication, I forgot about that, which is very important"* (J).
*"There must be **trust**"* (K). (ref. commitment) *"It has huge significance (…) there should always be **mutual commitment**"*. Researcher: "*Which of the mentioned attributes is the most valuable for your IOR?"* Interviewee: *"Transparency and **trust** (…) However, in a long-term perspective, if partners are committed, there is **trust**. They are triggered by one another"* (K).
*"We **trust** each other, we meet the deadlines – it reflects mutual respect"* (M). *"The key attributes will be again our **trust**, timeliness, communication, **commitment**, the right skills"* (M).
*"First of all, we have to **trust** this partner because this partner represents our product, represents our brand"* (N).
*"First and foremost, loyalty. And **trust**"* (P).
*"I would definitely connect **trust with commitment** (…) when we see a **strong commitment, we build trust** in our partner somewhere there in the back of our minds"* (S).

Source: This table was prepared by the authors of this study. Bold added by the researchers.

Using the adopted conceptualizations and clarifications, we decided to use the measurement scales developed under compatible approaches previously used by other scholars – Table 4. Every measurement scale was tested for validity and reliability. The next step was to check the variability of the observations of individual items (questions). For this purpose, we used the coefficient of variation with median absolute deviation from the median (CV_{MADM}). Moreover, we used reliability coefficients to check the consistency of the measurement for each trust and commitment factor, assuming that values no less than 0.7 and no higher than 0.95 proved the reliability of the measurement (Cronbach & Shavelson, 2004). The results confirm the internal consistency of the measurement of the features indicating the consistency ratio of 0.896 for trust and 0.814 for commitment. Table 4 shows that trust and commitment with an average variance extracted higher than 0.4 (Fornell & Larcker, 1981), and the composite reliability higher than 0.7 (Bagozzi et al., 1991) meet the validity criterion.

Table 4
Results of Trust and Commitment Items Testing

IOR feature	References to measurement	Question (items)	Cronbach's α	CR	AVE
Trust	Kam & Lai, (2018); Liu et al., (2009); Zhou et al., (2015)	*Though the circumstances are changing, we believe that this partner (buyer/farmer) will be ready and willing to offer us assistance and support*	0.896	0.894	0.585
	Jap, (1999); Jap & Anderson, (2007); Palmatier et al., (2013); Kam & Lai, (2018); Ndubisi & Nataraajan, (2018)	*This business partner usually keeps the promises they make to our firm*			
		We believe that this business partner is honest in their dealings with us			
		We trust that this partner deals fairly with us			
		When making important decisions, this business partner is concerned about our welfare			
		Whenever this business partner gives us advice on our business operations, we know they are sharing their best judgement			
Commitment	Ali & Ndubisi, (2010)	*We are committed to meeting the individual needs of this business partner*	0.814	0.805	0.420
	Jap & Ganesan, (2000); Zaefarian et al., (2017)	*We are quite willing to dedicate whatever people and other types of resources it takes to grow partner's performance*			
		We are quite willing to make sacrifices to help out our business partner from time to time			
		We spend a greater amount of time and effort with this business partner than with other partners that we cooperate with			
	Palmatier, (2008)	*We are willing "to go the extra mile" to work with this partner*			
		We feel committed to our relationship with this business partner			

Source: This table is based on Klimas et al. (2022a).

Furthermore, as a result of the SLR analysis (Klimas et al., 2020; 2022b), we developed the IOR life cycle model covering 5 phases: initial, development, maintenance, dormant/end, and reactivation. Interviewees confirmed that the relationship goes through the suggested phases. They found that in different relationships the phases are *"rather similar"* (E), *similar"* (L), or *"very similar"* (S). In general, our interviews supported the developed model of RLC. Moreover, both features (i.e., trust and commitment) have been found as relevant (B, J) or even crucial for inter-organizational relationships in general (A, C, I, M), but also in various phases of RLC including initiation (C, F), development and maintenance (B, F), dormancy/end (E), and reactivation (B, E, F, G, J). Note that interviewees' additional opinions corresponding with our RQ can be also found in Table 3.

Last but not least, in the light of our interlocutors' opinions, trust and commitment (together with other attributes such as cooperation and information exchange (J), communication and intensity (G), experience (J) and formality (C)), change over time. This proves the dynamic nature of the IOR features empirically – Table 5.

Table 5
Dynamic Nature of the IOR Features

Feature	Quotation
Cooperation, information exchange, trust	*"We gain higher trust. Relationship becomes more mature, we gain more knowledge about our partner, cooperation is stronger, and trust is higher as well"* (J).
Communication, intensity	*"In specific periods [IOR] is maintained as very intensive, while later on is looks like dormant, which does not mean that we stop to communicate"* (G).
Trust	*"Trust is gained in difficulties appearing across cooperation and requiring proper reactions"* (B).
Experience, information exchange, trust	*"Trust grows over time. It takes time. Trust, building a relationship already based on experience and knowledge of the other partner takes time too"* (J).
Formality, trust	*"The beginning* (ref. to IOR) *is more formalized, for sure. We don't know each other, we don't trust each other. The moment we have trust, we do these projects in a much lighter way"* (C).

Source: From the database of qualitative research results – the authors' own study.

The importance of the IOR features can be estimated through their level in particular phases of the IOR life cycle – Table 6. Although both trust and commitment reach levels significantly higher than the minimum,

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it seems that trust is more important than commitment throughout the entire life cycle of IOR as it reaches the values closer to the maximum score in all the phases.

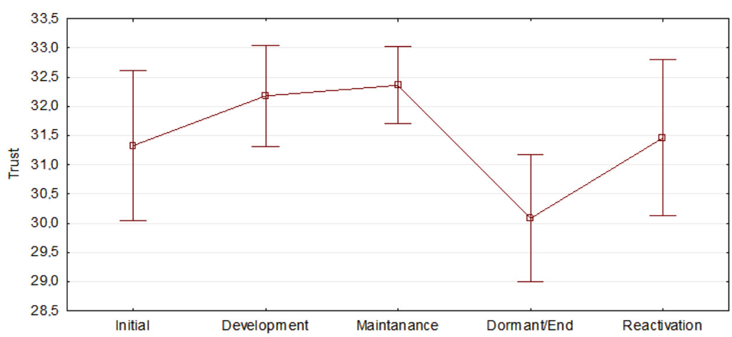
Table 6
Trust and Commitment Mean Values in Particular RLC Phases

IOR feature	Values	Initial	Development	Maintenance	Dormant/ End	Reactivation
Trust	*mean-t*	31.33	32.18	32.36	30.08	31.46
	upper-t	32.52	33.05	33.00	31.20	32.80
	lower-t	30.14	31.31	31.72	28.96	30.12
Commitment	*mean*	20.94	21.56	21.97	19.66	21.49
	upper	21.73	22.20	22.40	20.40	22.30
	lower	20.15	20.92	21.54	18.92	20.68

Source: This table was prepared by the authors of this study.

Moreover, according to the results of the ANOVA test, the T&C features show significant differences in value depending on the development phase – this is clearly visible in Figures 1 and 2.

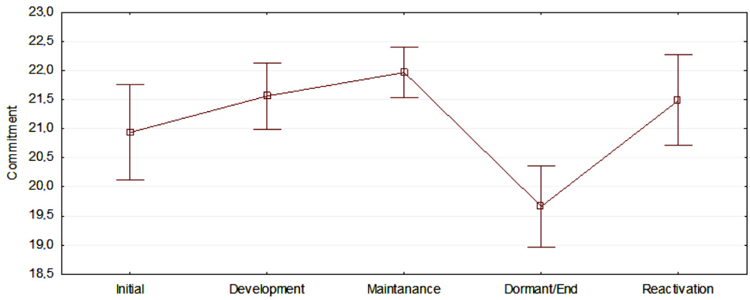
Figure 1
Trust: Means Interval Plot Through RLC Phases (95% Confidence Interval of the Variable)



Note. 6 is the minimum, while 42 is the maximum value (6 items evaluated using 7-point scale).

Figure 2

Commitment: Means Interval Plot Through RLC Phases (95% Confidence Interval of the Variable)



Note. 6 is the minimum, while 42 is the maximum value (6 items evaluated using 7-point scale).

With a further detailed analysis of the dependence of the T&C features on the phase of the inter-organizational RLC, Levene's test shows no grounds to reject the hypothesis of the equality of variance. Therefore, the classical ANOVA method was used to analyze their differences (Table 7). For the T&C features, the ANOVA test results show significant differences between the means.

Table 7

ANOVA Results for Trust and Commitment

IOR feature	*F statistic*	*p-value*
Trust	4.018	0.0031
Commitment	9.244	0.0000

Source: This table was prepared by the authors of this study.

Post-hoc tests were used to determine phases pairs affected by the differences. The results are presented in Table 8.

Table 8

P-value of Multiple Comparisons Between All Pairs of RLC Phases for Trust and Commitment

	Trust	Commitment
Initial – Development	0.802	0.716
Initial – Maintenance	0.611	0.181
Initial – Dormant/End	0.510	0.094

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Tab. 8 – continued

	Trust	Commitment
Initial – Reactivation	1.000	0.890
Development – Maintenance	0.998	0.817
Development – Dormant/End	**0.013**	**0.000**
Development – Reactivation	0.905	1.000
Maintenance – Dormant/End	**0.002**	**0.000**
Maintenance – Reactivation	0.775	0.875
Dormant/End – Reactivation	0.469	0.007

Source: This table was prepared by the authors of this study.

Multiple comparisons allow us to state and confirm that the most significant differences ($p < 0.05$) occur between the development – dormant/end and maintenance – dormant/end phases for trust and commitment, and dormant / end – reactivation for commitment only.

5. Discussion

The interviews showed that the RLC is a non-linear one, namely that it is possible to find different "endings" of IORs. Moreover, it is possible to minimize the use of a relationship and then re-use it more intensively later – in other words, to reactivate the passive relationship at any point in time. For instance, as highlighted by one of our interlocutors *"As I told you our relationships are continuous, thus it is hard to talk about the past form of our relationships"* (G) and others conclude in a similar vein – *"We never end the relationship"* (J) or *"The end is never the definite end. It is rather a specific part* (ref. to IOR) *between one project and the other"* (F). Regarding the dormancy/end phase of the relationship, one of our interviewees stated that IOR *"(…) might be dormant at the commercial level* (ref. to financial flows) *while at the technical level it exists all the time* (ref. to technical support). *We have to divide our perception into these levels, really… It is also possible that I am not ending a commercial relationship, whereas some technical people do"* (A). This may explain the two scenarios described in the existing literature. The first scenario describes the definite end of a relationship (e.g. Lau & Goh, 2005; Plewa et al., 2013), while the second considers a kind of relationship dormancy/hibernation (Plewa et al., 2013; Restuccia & Legoux, 2019). Given the above, both scenarios may take place simultaneously, yet in different dimensions of the relationship. It seems possible and legitimate, as relationships are thought to consist of a set of different ties/bonds/interactions (Gelei & Dobos, 2014; Holmlund, 2004; Lussier & Hall, 2018; Palmatier et al., 2013) and if some bonds become broken, others can still be maintained, even quite intensively.

The argument of non-linear development of RLC also finds support in the discussion about the reactivation phase as a relevant part of the IOR development process. Indeed, in 8 interviews (codes: A, B, C, E, F, G, J, N), reactivation appeared as a relevant, or even integral, part of the IOR life cycle. Given our interviews, IORs, when maintained, can be dimmed or minimized. When the flow of resources is reduced, communication is weakened, but if there is a need, it is reactivated immediately – *"it is possible that after dormancy or maintenance there can be the development of the relationship"* (B); *"there are some relationships being upheld/sustained, those are not very absorbing, which means they don't develop, they remain unchanged for some time (…) till next initiation"* (D); *"It is for sure that all of those phases* (ref. phases of RLC) *are …, I don't know, they can be like as you said …* (Researcher: dormant?) *Yes, dormant, and it is possible that reactivation may occur anytime"* (F). In this sense, the reactivation phase does not occur as a sequence following the dormant phase in the entire RLC process. Simply speaking, RLC is a construct much more complex than the views of many authors (Batonda & Perry, 2003; Polonsky et al., 2010). In addition to the fact that the phases may loop, the life cycle can end at any time and it can be reactivated at any phase.

Most authors indicate trust and commitment (T&C) as features crucial for relationship development (e.g., Dwyer et al., 1987; Morgan & Hunt, 1994; De Ruyter et al., 2001; Standifer et al. 2010; Wang, 2012; Zaefarian et al., 2017) and the ones needed to produce relationship outcomes (Eng, 2009) impacting value co-creation (Randall et al., 2011).

Interviewees confirmed assumptions based on the findings from SLR, namely T&C significance, as the most relevant features of IORs, their success, and long-term use (Table 3). The interviews indicate T&C as important factors for the relationship's stability and longevity (I).

Additionally, supportively to theoretical claims (Eng, 2009; Davis & Lowe, 2011) our interviews provide evidence for interdependency of the features of IORs – e.g., *"during cooperation we have gained mutual trust, and this trust has solidified our relationships"* (ref. in terms of strength and longevity) (M).

Some authors also point out the crucial importance of trust for an established relationship (Morgan & Hunt, 1994; Wang, 2012), or quite the opposite – commitment becomes a priority in maintaining the continuity of a relationship (Dwyer et al., 1987). Importantly, respondents state opinions that trust and commitment are interrelated, connected (S), and one entails the other (K). Moreover, we have found that the initiation of a relationship requires a minimum level of trust and commitment. What is more, both features are of a similarly high level in the development and maintenance phase. Both are also important for the reactivation phase. Interestingly, in the software industry trust seems to be of higher importance than commitment, which may be regulated by meeting formal obligations.

We have also pointed out a counter-perspective. Studies show that a high level of trust is not always needed to maintain inter-organizational relations (Möllering & Sydow, 2019). Indeed, our research shows that lowering the level of trust (reactivation phase) does not mean the end of a relationship. In the software industry, purely technological motives for staying in a relationship are identified (interviewee A). Some interviewees admit that trust grows over time (B, J), it is a self-reinforcing mechanism, but at the same time it facilitates reactions (B) and project realization (C). Our research does not indicate problems or trust downsides.

6. Conclusions

This work addresses the fundamental IOR features, namely trust and commitment (T&C) in the subsequent phases of the RLC.

In the literature, one can find that IORs are developing over time (Ford, 1980; Kusari et al., 2013; Palmatier et al., 2013). The same refers to their key characteristics (Hastings et al., 2016). The features can be at a different level in the evolution phases which means that their level is not necessarily linearly increasing or decreasing (Fynes et al., 2005; Lee & Johnsen, 2012; Palmatier et al., 2013; Hastings et al., 2016). However, there is no agreement on the direction in which they change in a particular phase of the life cycle (cf., Lau & Goh, 2005; Panda & Dash, 2016). Moreover, lower-order features are the driving force for higher-order features (Holm et al., 1999; Jap & Ganesan, 2000; Kusari et al., 2013; Varotto & Parente, 2016). As second-order features, lower-order ones indirectly result in the IOR nature. They are determined directly by the mutual and individual behaviors of the related parties (Jap & Ganesan, 2000), which means that the actors can shape them (Abosag & Lee, 2013; Fynes et al., 2005; Lee & Johnsen, 2012; Palmatier et al., 2013). Among previously considered relational features, two are thought to be critical for relationship development: trust and commitment (Dwyer et al., 1987; Morgan & Hunt, 1994; De Ruyter et al., 2001; Standifer et al. 2010; Wang, 2012; Zaefarian et al., 2017).

Due to the fact that much of the research on T&C in the context of RLC remains conceptual or fragmented, we asked the following question RQ: *How do trust and commitment change in the subsequent phases of the IOR life cycle?* To answer the question, we used secondary data from the literature and primary data from field studies. Basically, we conducted a three-stage study including SLR, qualitative research (18 IDIs) and quantitative research (786 respondents' sample).

The most important contribution of this paper is the confirmation that T&C are RLC phase-dependent and change during the relationship cycle. Additionally, it sheds light on the significance of these concepts.

First, in line with the relationship life cycle (Batonda & Perry, 2003), we verified the IOR development phases, i.e., initial, development, maintenance, dormant/end, reactivation, and we differentiated the T&C characteristics according to the life cycle phase and the non-linear nature of the life cycle. Interestingly, interviewees claim that relationships are continuous (F, G) and never-ending (J). Moreover, reactivation is not a sequence of all the previous phases but can occur at any phase of the cycle. This conclusion may raise the topic of the validity of cyclical treatment of relationship dynamics, whose phases are looping.

Second, we found that the T&C features are identified in all the phases, although their levels differ and change over time (Fynes et al., 2005; Lee & Johnsen, 2012; Palmatier et al., 2013; Hastings et al., 2016). The conducted quantitative studies clearly show that the intensity level of trust and commitment does not change linearly, i.e., both characteristics first increase, then decline, and finally gain strength during the reactivation phase. Relationship reactivation always requires a certain level of trust and commitment but is still a better solution than initiating a new relationship. While during reactivation, the T&C level is higher than in the phase of relationship initiation, only a higher level of commitment is statistically significant in comparison to the dormant/end phase. This means that renewing relationships after a long time is associated not with a start, but with the parties' higher level of commitment to the relationship (Table 6, Figure 2-3). Interviewee F sums it up *"we build stronger reliability going from one project to another"*. This situation explains the desire to maintain long-term relationships with one partner. The willingness to become more involved in a renewed relationship may result from high competitiveness in the fast-growing industry (Sharma, 2021). However, trust is not favored in a situation when the key employee directly involved in the previous relationship changes, breaking interpersonal "expressive tie" (Standifer et al., 2010) and psychological benefits (Sweeney & Webb, 2007), resulting from *"many years with a mutual colleague"*, as respondent B stated.

The results of our study should be interpreted in the light of several limitations that indicate avenues for further research. Due to the industry and cultural-specific limitations, comparative studies on several industries in cross-cultural conditions are recommended. So far, the IOR empirical research has been concentrated on more dynamic sectors of activity. There is also a need for expanding research into the more traditional sectors of medium and low-tech industries (Czakon et al., 2014). Moreover, a comprehensive view on changing relationship characteristics during life cycle remains an under-researched (Eggert et al., 2006). Thus, further research should unfold perspective as applying other complementary features (Jap & Anderson, 2007; Kusari et al., 2013; Lussier & Hall, 2018) and their evolution (Jap & Ganesan, 2000; Lee & Johnsen, 2012; Kam & Lai, 2018). Future research also requires considering the issue of relationship phases looping, as well as the topic of validity of cyclical treatment of relationship dynamics. Due to the fact that a relationship can be reactivated at any moment, this issue seems worthy of further exploration. Nonetheless, we believe that this work provides a roadmap for improving IORs through the prism of trust and commitment. It can help organizations understand how critical trust and commitment are for the improvement of future relationships.

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Endnotes

1 To identify the phases in the IOR development path we run systematic literature review which was supplemented with meta-synthesis of existing qualitative works in the considered field (Klimas et al., 2022b).

2 In the results section the codes are always given in brackets.

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