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**PERCEIVED INTERNATIONAL COOPERATION  
BARRIERS AND THE RELATIONSHIP QUALITY –  
EMPIRICAL STUDY ON POLISH SMEs COOPERATING  
WITH PARTNERS FROM CHINA AND GERMANY**

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International business scholars still do not pay much attention to international cooperation barriers and their consequences. Although the problem of cooperation barriers is being discussed in the cooperation, open innovation and international cooperation studies, an in-depth analyses of barriers which influence the cooperation are missing. This study is devoted to the differences in the Polish companies' perception of the barriers hampering the establishing of cooperation with German and Chinese partners, and to the influence exerted by the perceived barriers on the indicators of cooperation quality. The analysis was conducted on a sample of 278 Polish exporters and importers cooperating with partners from China and Germany. It was reported that Polish companies observe greater barriers that hamper establishing cooperation with Chinese rather than German partners, and that the perceived cooperation barriers are related to the following aspects of cooperation quality: perceived risk, perceived partners competencies, atmosphere/commitment, fulfillment of partners' obligations and perceiving the partner to be trustworthy.

**Keywords:** cooperation barriers, relationship quality, international cooperation

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## **1. INTRODUCTION**

Numerous studies are devoted to inter-firm relationships and discuss their components (e.g. Johanson, Mattson, 1987), their quality (e.g. Holmlund, 2008), their indicators (e.g. Provan, Sydow, 2008), the factors influencing them (e.g. Ha et al., 2004) and the benefits of good relations (e.g. Stank et al., 1999). However there are still some gaps that should be bridged. Czakon (2008b), claims that the qualitative criteria of the inter-firm ties are only relatively poorly examined and according to Ha et al. (2004), previous studies were carried out mostly in the U.S. or Western settings, while relatively few studies explore the exporter-importer relationships and the impact of cultural similarity/differences has not been investigated

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adequately. Ten years after the publication of the Ha et al. (2004) paper, these gaps still do not seem to have been bridged.

This paper addresses the issue of exporter-importer relationships from the point of view of Polish companies cooperating with partners from China and Germany, countries differing not only in culture (Danik, Duliniec, 2014), but also (taking the average into account) in climatic conditions, purchasing power of customers, lifestyles, consumer preferences, language, level of literacy (although in this case the differences are not big – see The World Factbook, 2013–14) and education (according to Sousa and Bradley (2006), the individual perception of all this factors makes up psychic distance). As according to the literature (see below), different types of distance (cultural, geographical, etc.) can generate cooperation barriers, the barriers in establishing the cooperation with Chinese and German partners perceived by Polish companies should vary. Moreover, as the distinction in the relations with partners coming from different countries was discussed in the previous study (Danik, Duliniec, 2014), this paper goes deeper into the relationship analysis and explains the influence of the perceived cooperation barriers on the cooperation itself.

## 2. RELATIONSHIP QUALITY

Oliver (1990) integrated the literature on the inter-organizational relationships and identified six main determinants of relationship formation: necessity, asymmetry, reciprocity, efficiency, stability and legitimacy. Each of these determinants may be a separate and sufficient reason for relationship formation, but they can also interact. Vertical ties provide manufacturing productivity along the supply chain, whereas horizontal links enable access to collective resources and joint product innovation (Mesquita, Lazzarini, 2007). Good relationships play a special role in the vertical exchange - as this type of cooperation is commonly subject to moral hazard, partners can benefit from relation-specific assets and reduce this hazard, lower the transaction costs and increase exchange efficiencies (Dyer, 1997; Mesquita, Lazzarini, 2007). An additional condition for inter-organizational relationships initiation is relational competence, or at least ex ante components of relational competence: cooperation proclivity and ability (Klimas, 2015. See also Czakon 2008a).

As the concept of relationship quality has been discussed by the author in another paper (Danik, Duliniec, 2014), only a brief characteristic of the chosen previous studies on relationship quality is presented in Table 1.

Table 1  
Selected concepts of business relationship components

Study	Category	Relationship attributes/dimensions
Johanson, Mattson (1987)	Components of relationships and interactions in industrial networks	Relationships: mutual orientation, investments, bonds, dependence Interaction: social/business/information exchange, adaptation processes
Morgan, Hunt (1994)	Elements of KMV Relationship Marketing	Relationship commitment, trust, relationship termination costs, relationship benefits, shared values, communication, opportunistic behavior, acquiescence, propensity to leave, cooperation, functional conflict, uncertainty
Naudé, Buttle (2000)	Major constructs of relationship quality	Trust, needs, integration, power, profit
Roslin, Melewar (2004)	Relational factors in channel relationships	Cooperation: working very closely with distributors, assisting distributors, supplier's support to distributors Relational value: long period relationship, highly valued relationship, supplier's effort to maintain relationship, supplier intention to ensure relationship stay for a long time Relationship orientation: support to distributors, happiness with the relationship Commitment: suppliers commitment to the relationship, suppliers satisfaction with the relationship, supplier recommending distributor to others
de Burca et al. (2004)	Dimensions of relationship quality	Social dimension: trust, honesty, building a personal relationship, understanding of consumer needs and problems Technical dimension: provision of timely and relevant information, professionalism of the technical support service, knowledge and expertise of technical support staff Economic dimension: fulfilling the promises made during negotiation or before the conclusion of the deal, special privileges, fair prices, fulfilment of customers' expectations, good value for money
Ha et al. (2004)	Aspects of importers - exporters relationships	Dependence, cooperation, satisfaction, trust, commitment
Lages et al. (2005)	Relationship quality scale	Amount of information sharing, communication quality of the relationship, long-term relationship orientation, satisfaction with the relationship
Woo, Ennew (2004)	Dimensions of relationship quality	Institutionalization/cooperation, adaptation, atmosphere

Table 1, cont.

Światowiec (2006)	Categories of relations behaviors and partnership relation indicators	Categories of behavior: flexibility, information exchange, solidarity Partnership relation indicators: specific assets in relationship, dependence, risk and uncertainty, opportunism, relational behaviors (trust), necessity of formal protection and control mechanisms
Ułaga, Eggert (2006)	Key characteristics of relationship quality	Trust, commitment, satisfaction
Czakon (2008b)	Quality of ties	The speed of decision making, trust, reciprocity
Holmlund (2008)	Dimensions of perceived relationship quality	Technical dimension: 1) process domain: reliability, innovativeness, use of competence, speed, use of physical resources, flexibility, security; 2) outcome domain: reliability, innovation, conformance, aesthetics, durability Social dimension: 1) process domain: appeal, trust, acquaintance, respect, congeniality, pleasure; 2) outcome domain on the individual level: appeal, trust, acquaintance, respect, congeniality, pleasure/outcome domain on the company level: inter-firm cohesion, attraction, trust Economic dimension: 1) process domain: pricing, costing, productivity; 2) outcome domain: relationship benefits (competitive price level, volume, profit margin, productivity enhancement, latent relationship rewards), relationship costs (direct relationship costs, indirect relationship costs, latent relationship costs)
Provan, Sydow (2008)	Indicators of interorganizational relationships	Structural indicators: type of relationships/ties, density, multiplexity, centrality, reciprocity, fragmentation Process Indicators: learning, trust, fairness, legitimacy, power Outcome indicators: innovation, financial and non-financial performance, survival
Skarneas, Robinson (2008)	Determinants of relationship quality in importer-exporter relationships	Trust, commitment, conflict, satisfaction
Heroux, Hammoutene (2012)	Major constructs playing a critical role in successful business relationships	Distance, trust, understanding, dependence, commitment, communication, conflict, adaptation, cooperation, satisfaction

Source: own elaboration

In accordance with the stream of research, the following factors were applied to measure the relationship quality in this study: trust, atmosphere/commitment, information flow, forced cooperation/dependence, flexibility, fulfillment of obligations by the partner, conflicts, similarity, perceived risk and competencies.

Skarmeas and Robson (2008) showed that asset specificity, role performance and cultural sensitivity are the determinants of relationship quality in importer-exporter relationships. The list proposed by these authors seems to be incomplete. The attitude towards cooperation should also explain the relationship quality, and the perception of cooperation barriers is one of the elements of the cooperation attitude.

### **3. COOPERATION BARRIERS**

Three streams devoted to inter-firm cooperation barriers are most visible in the present literature: the studies on the cooperation itself, studies on open innovation and on international cooperation. Although there is no agreement as regards the list of barriers to the cooperation, a general approach to measure and to discuss the perceived (not the “real”) barriers can be observed, which is fully understandable, as perceiving a barrier as important or not can influence the decisions about cooperation and the cooperation itself (which will be demonstrated in this study). However, most of the studies on cooperation barriers tend to list perceived barriers rather than measure their relation with, or influence on business phenomena. One of the exceptions are the studies of Lewandowska and Danik (2013) and of Danik (2015).

#### **3.1. Studies on cooperation barriers**

A comprehensive list of cooperation barriers is presented by Klimas (2015). According to her, the factors hampering cooperation can be associated with the resources (financial, human, technological, knowledge), competencies (lack of relational competencies, lack of cooperation experience, low level of absorptive capacity), organization and management (dissimilarity, lack of cooperation need), whereas the barriers related to human resources are the most important.

Surprisingly, a lot of studies have been dedicated in recent years to the cooperation of Polish companies. According to Nowak (2009), the most frequently reported barriers to the development of cooperational links are: delayed deliveries, fear of failure to observe contract clauses, lack of trust,

insufficient information about the customer, anxiety about possible changes in cooperation conditions without proper notice and the information flow, with certain differences in the barriers perception depending on company size. In his latest study based on new data on inter-organizational cooperative relations Nowak (2015) grouped the cooperation barriers under: risk, people, restriction, production, logistic, relation and quality.

Zaremba (2009), who analyzed exchanging data between medium size enterprises and their contractors, points out the following obstacles in entering into effective relations (the importance of the named factors is decreasing): too many competing projects/tasks, no cooperation between company organizational units, unimplemented technology supporting the partnership, lack of conviction that the cooperation can be improved, insufficient staff experience in managing big restructuring projects, missing data to analyze present and future processes, inadequate process monitoring and controlling system, establishing many business contacts via the Internet and the lack of cooperation between given functions in the company. The barriers found by Zaremba refer rather to the internal company resources, so this list of barriers should not be treated as complete.

Unlike Zaremba, Stępień (2011) concentrates on the relational aspects of cooperation, examining the fears of Polish firms and the weak points of the cooperation with the Polish branches of international companies perceived by them. The fear mostly mentioned by the respondents was that of being dominated by the partner/becoming dependent, followed by: the threat of too strong a technical and trade dependence on the partner, the fear that the international company will start cooperation with the respondent's supplier and will eliminate the respondent's company, the possibility of losing their own identity because of undue subordination to the partner, the threat of copying/losing the technical/organizational advantages, the possibility of them taking-over the respondent's staff, fear of being taken-over, and the possibility of losing key competences.

Danik and Lewandowska (2013), in their study on cooperation within the Polish engineering industry, took into account the following cooperation barriers: negative cooperation experience, lack of full trust, legal barriers, risk of creating new competitors, necessity to share profits, language barriers, lack of need to cooperate. The general results for all firms under study indicated that the most crucial cooperation barriers are: negative cooperation experience, lack of full trust and the legal barriers. Although the indications for cooperation barriers in each of the firms' functions (R&D, production, marketing, sales) slightly differed from each other, the cooperation barrier ranking was similar for all functions.

Moreover, it has to be emphasized that the company's culture itself can be a barrier to cooperation, which was made clear in Roeschl's (2005) study on family business and inter-firm cooperation, discussing, *inter alia*, the sustainability of fundamental beliefs in family businesses, decision-making problems (group decisions), independence considerations and cultural differences in non-family businesses as barriers to cooperation.

Finally the study of Danik (2015) showed that companies which see more barriers are more diffident and tend to verify the potential cooperation partners more carefully.

### **3.2. Studies on open innovation barriers**

The studies on innovation revealed the open innovation approach (Chesbrough, 2003, a, b), which involves cooperation with external partners within the innovation process. The necessity of open innovation is pressing, especially in industries responsive to the following trends: globalization, technology intensity, technology fusion, new business models and knowledge leveraging (Gassmann, 2006). Barriers to open innovation were studied by Van de Vrande et al. (2009), who analyzed the following categories of factors hampering open innovation practices: administration, finance, knowledge, marketing, organization/culture, resources, intellectual property rights, quality of partners, adoption, demand, competences, commitment, idea management and others. Moreover they argued that different sets of barriers are related to various types of innovation activities, with barriers connected with organization and culture being most significant.

The study by Lewandowska and Danik (2013) on Polish companies cooperating for innovation confirms that different sets of barriers hamper cooperation for different innovation types. None of the studied barriers influenced the cooperation for product innovation and for organizational innovation. However, the cooperation for marketing innovation was determined by problems with profit distribution, the necessity to share the intellectual property rights and the lack of trust. The cooperation for process innovation was influenced by problems with finding a partner willing to cooperate and by technical barriers.

### **3.3. Studies on international cooperation barriers**

While analyzing barriers to international cooperation, one has to consider both the studies on cooperation barriers and the studies on barriers to internationalization itself, as the list of potential cooperation barriers should be supplemented with barriers idiosyncratic to the international cooperation.

Although there is no agreement as to how to measure internationalization barriers (Arteaga-Ortiz, Fernández-Ortiz, 2010), the studies on factors hampering internationalization tackle the following issues: knowledge barriers (lack of knowledge of potential export markets, lack of staff for export planning, lack of knowledge of export assistance programmes, ignorance of the financial and nonfinancial benefits that exporting can generate, general lack of knowledge of how to export, lack of information about opportunities for one's products/services abroad); resources barriers (high financial cost of the means of payment used in international operations, lack of resources to face the period of time needed to recover export-related investments, insufficient production capacity in one's firm, lack of local banks with adequate international expertise, inadequate foreign network of the banks to work with); procedure barriers (transportation costs and shipping arrangements, documentation and red tape required for export operation, language differences, cultural differences, tariff barriers to exports, non-tariff barriers related to the standardization and homologation of the product, or health, phytosanitary or similar barriers, differences in product usages in foreign markets, cost of adapting the product to the foreign market, logistical difficulties, locating a suitable distributor or distribution channels); exogenous barriers (strong overseas competition, high value of the euro, risk from variation of the exchange rates, risk of losing money by selling abroad, political instability in the destination country) – see Arteaga-Ortiz and Fernández-Ortiz, 2010. The internationalization barriers listed by Arteaga-Ortiz and Fernández-Ortiz can also hinder international cooperation.

Dimitrov et al. (2003), who studied cross-border cooperation barriers in southeastern Europe, examine the firms' perception of the following cooperation barriers classified into seven categories: infrastructure conditions, border crossing conditions, trade conditions, financial conditions, lack of assistance (i.e. government assistance, local business associations); general conditions (i.e. corruption, political stability, quality of banking system) and language. They stated some national tendencies in the perception of cooperation barriers (e.g. firms from Albania considered barriers in general less important than firms from other countries). Nevertheless, the general conditions prevailing in a country, the lack of assistance in developing cross-border relations and poor financial conditions seem to hinder the cooperation in this region the most.

A broader classification of international cooperation barriers was proposed by Leick (2011) in her study on cross-border networks: barriers related to firms' internal resources (i.e. financial problems, lack of

experienced personnel for foreign ventures); barriers connected to collaboration (e.g. problems with partners' opportunistic behavior, quality deficits); barriers which are external both to the firm and cooperation itself (i.e. macroeconomic factors, high level of bureaucracy); information deficits (e.g. the lack of knowledge on foreign markets or competitors); socio-cultural differences (i.e. language barriers, corporate culture differences).

All the three studies on the barriers present a different approach towards their classification. As this study refers to the barriers that hamper establishing cooperation with a partner from a foreign country, the further analysis refers only to the barriers that can be of importance in the initial stage of cooperation. In order to reflect the idiosyncrasy of international cooperation, the barriers were grouped into three categories. The first category refers to the distance between the partners' countries. These barriers are external to the company. The second category comprises the barriers related to the resources of the company. The third one refers to the lack of trust reported to be an important cooperation barrier in the study of Nowak (2009), Gołębiowski (2009) and Danik and Lewandowska (2013), and to the fears showed by Stepień (2011). They show the uncertainties caused by the potential opportunistic behavior of the partner.

1. Barriers related to distance (macro-level barriers)
  - 1.1. Distance (geographical distance)
  - 1.2. Technological barrier
  - 1.3. Language barrier
  - 1.4. Different way of conducting business in the partner's country
  - 1.5. Different level of economic development
  - 1.6. Political differences
  - 1.7. Legal system differences
2. Internal barriers (barriers related to the company's resources, including lack of external support for a given company)
  - 2.1. Limited experience of the partner's country
  - 2.2. The necessity to adapt to the partner's needs
  - 2.3. High cooperation costs
  - 2.4. Lack of employees who could coordinate international cooperation
  - 2.5. Lack of government and government agencies' support for international cooperation
3. Fears related to the relationship
  - 3.1. Fear of becoming dependent on a partner
  - 3.2. Fear of having our know-how copied

- 3.3. Fear of being eliminated from the market because of the partner's activities
- 3.4. Fear of losing one's own identity and of undue subordination to the partner
- 3.5. Fear that partner can take over the staff

#### **4. RESEARCH ON POLISH COMPANIES COOPERATING WITH PARTNERS FROM CHINA AND GERMANY**

The paper presents a part of the results of the research project devoted to dependencies between company relationships and cultural differences (conducted as a statutory project in the Institute of International Management and Marketing, Collegium of the World Economy, Warsaw School of Economics). The aim of this study is twofold. First, it attempts to determine whether there are significant differences in the barriers to the cooperation with partners from China and Germany perceived by Polish exporters and importers. Second, the study attempts to test the hypotheses regarding the influence of the perception of barriers on the relationship with partners coming from this country.

##### **4.1. Hypotheses**

As China and Germany belong to different cultural zones (Gesteland, 2000; Hofstede et al., 2011; House et al., 2004), have a different location regarding Poland, differ in terms of language (the German language is quite common in Poland), technology, legal and political systems, etc., the perception of barriers hampering establishing the cooperation with a partner from those countries should be different. Based on this logic and taking into consideration that internal and distance related barriers build one group (see Danik, 2015) the following hypotheses were proposed:

- H1: The Polish companies' perception of internal and distance related barriers hampering establishing the cooperation with partners from China is different from the perception of internal and distance related barriers hampering the establishing of cooperation with partners from Germany.
- H2: The Polish companies' perception of fears related to relationship as barriers hampering the establishing of cooperation with partners from China is different from the perception of fears related to relationship as barriers hampering the establishing of cooperation with partners from Germany.

The perception of barriers hampering the establishing of cooperation with a partner from a given country can influence the choice of the partner, and later, the attitude towards the partner and the cooperation itself, and this is why the cooperation quality can depend on the perceived barriers hampering the establishing of cooperation with partners from a given country. This is why the following hypotheses were proposed.

The perception of internal and distance related barriers hampering the establishing of international cooperation influences the following constructs of relationship quality:

- trust (H3),
- atmosphere/commitment (H4),
- information flow (H5),
- forced cooperation/dependence (H6),
- flexibility (H7),
- fulfillment of obligations by partner (H8),
- conflicts (H9),
- similarity (H10),
- perceived risk (H11),
- competencies (H12).

The perception of fears related to relationship as barriers hampering the establishing of international cooperation influences the following constructs of relationship quality:

- trust (H13),
- atmosphere/commitment (H14),
- information flow (H15),
- forced cooperation/dependence (H16),
- flexibility (H17),
- fulfillment of obligations by partner (H18),
- conflicts (H19),
- similarity (H20),
- perceived risk (H21),
- competencies (H22).

#### **4.2. Sample characteristics and research methodology**

A total sample of 280 Computer Assisted Telephone Interviewing (CATI) surveys with companies cooperating with partners from China or Germany were completed in January and February 2013. The sampling frame was the Hoppenstedt & Bonnier (HBI) database updated at the end of 2010 and

containing information about all companies operating in Poland. The entry frame (gross sampling) was  $N = 41,520$  records (enterprises employing 1 to 249 employees and belonging to the C section of the Polish Classification of Activities PKD, i.e. firms dealing in industrial processing). A random-stratified sampling was applied. The randomized algorithm in the software for telephone surveys offered an equal chance of entering the sample to each record in the data base. The interviews began with the screening questions eliminating companies not cooperating with Chinese or German partners, whereas the cooperation was defined as relationships lasting for at least one year and consisting in the regular, not one-time, completion of the tasks by partners when the partners are independent, i.e. with no capital ties, or (if capital ties exist) none of the firms enjoy supervision powers over a partner (see Stępień, 2011, pp. 15–33). The response coefficient was 0.67 and the maximum standard estimation error was 0.058. The CATI method guaranteed a high level of interview standardization, minimized the interviewer effect on data gathered, enabled reaching the respondents in high managerial positions and provided them with a feeling of greater anonymity than in the face-to-face interviews. According to Malhotra (2010, p. 213), this method has many advantages: the data collection flows naturally and smoothly, the interviewing time is reduced, the data quality is enhanced, coding and entering the data into the computer are eliminated. The respondents were people responsible for cooperation with foreign partners (sales, export and marketing directors and the company's owners, followed by sales, export and marketing managers). Two companies not fulfilling the criterion of SMEs were not considered in the further analysis. The characteristics of the responding firms are presented in Table 2.

In order to examine the perception of barriers, the following question was asked: to what extent do the factors mentioned below hamper establishing the cooperation with partners from China/Germany. A 5-point Likert type scale was applied: from 1 (this factor definitely does not make it difficult for us to establish the cooperation) to 5 (this factor definitely does make it difficult for us to establish the cooperation). Companies cooperating with partners from China were asked about the factors hampering cooperation with Chinese partners, and companies cooperating with partners from Germany were asked about barriers in establishing cooperation with German partners. This logic was justified by the experience of a given group of companies in cooperation with partners from a given country. On the other hand, this can be treated as one of the shortcomings of the study, because only companies which managed to overcome cooperation barriers were studied.

Table 2  
Sample characteristic

Cooperation type (category/frequencies)		Staff size (category/frequencies)	
Exporters to China	64	1–9	24
Importers of goods from China	84	10–49	107
Exporters to Germany	83	50–249	147
Importers of goods from Germany	76	Total	278
Share of exports in total sales over the past three years (category/frequencies)		Share of imports in total purchases over the past three years (category/frequencies)	
Under 30%	84	Under 30%	120
30–49%	65	30–49%	45
50–79%	74	50–79%	42
80–100%	36	80–100%	15
Total	259*	Total	222*

\* Some respondents refused or were unable to provide answers, hence  $n < 278$ .

Source: own elaboration

Next, the respondents were asked to characterize the cooperation between their company and their partner, and a list of 52 relationship quality descriptions was given. The results were again measured on the Likert-type scale from 1 (absolutely disagree) to 5 (absolutely agree); replies stating that a given statement was inapplicable to the respondent's cooperation with their partner were encoded as 6 and subsequently classified as 'failing' responses. As only one side of the cooperation was interviewed, the questions reflected its perspective (i.e. questions about competencies were limited only to the respondents' perception of the competencies of their partners' employees), but many questions were also related to the respondents' perception of the partner's perspective (i.e. the statement that cooperation involves a high risk for their partner). Moreover, the questions about flexibility concerned supplier's flexibility, hence the questions to importers differed from those to exporters. This research design is cursed with subjective cooperation assessment; however, the respondent's assessment of cooperation is an indicator of "real" cooperation quality.

The items that are components of barriers and relationship quality scales are presented in Table 4.

In order to examine the internal consistency of the applied scales, Cronbach's alpha was calculated. An acceptable alpha should be between 0.50 and 0.60 (Nunnally, 1967), or even over 0.70 (Nunnally, 1978). In the case of groups of barriers the coefficient was too low (under 0.6) for the

internal barriers, this is why the exploratory factor analysis was conducted to explore the data and to determine the number and the nature of underlying factors (constructs). The Oblimin rotation with Kaiser normalization was applied ( $KMO = 0.784$ ;  $\chi^2(136) = 1031.25$ ;  $p < 0,001$ ). The factor analysis allowed to determine two underlying groups of barriers, which explains 35.07% of the variance. The first factor comprises barriers related to distance and internal barriers, and the second one the barriers connected with fears about the relationship (see Table 3). The reliability of these two factors is high (see Table 4).

The reliability of the scales applied to measure the relationship quality was acceptable (information flow, similarity, perceived risk, competencies, conflicts, forced cooperation /dependence and flexibility scales) or good (atmosphere/commitment and fulfillment of obligations scales) with the exception of the trust scale (see Table 4). As the literature points out, trust is one of the most important constructs of relationship quality, perceiving the partner to be trustworthy (the first item) was taken into consideration in the further analysis as a single variable measuring trust.

Table 3  
Rotated factor matrix – barriers to establishing international cooperation

	<b>Distance and internal barriers</b>	<b>Fears related to relationship</b>
Technological barrier	0.6	
Different level of economic development	0.584	
Political differences	0.558	
Different way of conducting business in partner's country	0.548	
Legal system differences	0.534	
High cooperation costs	0.531	
The necessity to adapt to the partner's needs	0.525	
Distance (geographical)	0.513	
Lack of employees who could coordinate the international cooperation	0.509	
Limited experience of the partner's country	0.474	
Language barrier	0.458	
Lack of government and government agencies' support for the international cooperation	0.356	
Fear of losing own identity and of undue subordination to the partner		-0.821
Fear of being eliminated from the market because of the partner's activities		-0.769
Fear of becoming dependent on the partner		-0.704
Fear that the partner can take over our staff		-0.65
Fear of having our know-how copied		-0.644

Rotation converged in 5 iterations.

Source: Danik, 2015

Table 4  
Items and Cronbach's alpha values for individual scales

Indicator	Items	Exp. / imp. to / from China		Exp. / imp. to / from Germany	
<b>Barriers</b>					
Distance and internal barriers	Distance (geographical) Technological barrier Language barrier Different way of conducting business in partner's country Limited experience of the partner's country The necessity to adapt to the partner's needs High cooperation costs Lack of employees who could coordinate the international cooperation Lack of government and government agencies' support for the international cooperation Different level of economic development Political differences Legal system differences	0.713	0.779	0.728	0.767
Fear related to relationship	Fear of becoming dependent on partner Fear of having our know-how copied Fear of being eliminated from the market because of the partner's activities Fear of losing own identity and of undue subordination to the partner Fear that partner can take over our staff	0.756	0.693	0.832	0.822
<b>Relationship quality factors</b>					
Information flow	We never conceal information from our partner Our partner never conceals information from us Information flow between our partner and ourselves is efficient Together with our partner we have developed information relaying procedures Information is relayed in a previously-agreed way Misunderstandings occur in our dealings with our partner (reverse scale) Our partner understands our enterprise's needs	0.630	0.714	0.675	0.583
Similarity	The way in which our enterprise conducts business decidedly differs from the way our partner conducts business The way business is conducted in our partner's country decidedly differs from the way business is conducted in Poland	0.593	0.879	0.754	0.676
Perceived risk	Cooperation involves a high risk for our enterprise Cooperation involves a high risk for our partner	0.517	0.542	0.888	0.748

Table 4, cont.

Competencies	Our partner's employees are competent	x	x	x	x
Atmosphere/ commitment	We are content with our cooperation with our partner Our partner does not want to let us down We do not want to let our partner down The cooperation conditions are negotiable Unexpectedly and without explanation our partner has demanded renegotiation of the cooperation conditions (reverse scale) Our cooperation with our partner is efficient Our partner is very committed to cooperating with us We are very committed to cooperating with our partner We strive to maintain good relations with our partner Our partner strives to maintain good relations with us Relations with our partner are based on mutual trust Relations with our partner are based on mutual control (reverse scale) Relations with our partner are based on the fulfilment of contractual obligations	0.823	0.848	0.815	0.845
Conflicts	Conflicts occur frequently during cooperation with our partner Together with our partner we have developed procedures for resolving conflicts When conflicts occur we use specified procedures Conflicts with our partner are resolved by compromise and negotiation	0.639	0.607	0.665	0.682
Fulfillment of obligations	Our partner fulfills his/her obligations well Our partner meets deadlines Our enterprise meets deadlines	0.807	0.684	0.813	0.752
Forced cooperation/ dependence	Cooperation with this partner would be hard to replace by cooperation with another enterprise Our partner would have trouble in finding an enterprise to replace ours Our partner makes use of his leverage in dealings with us We make use of our leverage in dealings with our partner The termination of cooperation with this partner would incur serious costs for us Most of our exports/imports are connected with our cooperation with this partner Cooperation with this partner is of key importance to our enterprise If we were seeking a cooperation partner, we would choose this enterprise We incurred high costs to launch cooperation with this partner	0.667	0.580	0.755	0.619

Table 4, cont.

Trust	Our partner is trustworthy We have trusted our partner from the outset of our cooperation We developed trust in our partner in the course of our cooperation, when we realized that he/she could be trusted	0.819	0.503	0.455	0.469
Flexibility	<u>Exporters:</u> We continuously upgrade our technology to keep abreast of the latest achievements in hi-tech In changed conditions we offer new technological solutions to our partner We are always open to our partner's suggestions regarding technological improvement We introduce organizational changes when required to by our partner We are able to combine a broad variety of technologies if required by our partner <u>Importers:</u> Our partner continuously upgrades his/her technology to keep abreast of the latest achievements in hi-tech In changed conditions our partner offers new technological solutions to us Our partner is open to our suggestions regarding technological improvement Our partner introduces organizational changes when required by us Our partner is able to combine a broad variety of technologies if required by us	0.679	0.716	0.739	0.520

Source: own elaboration

### 4.3. Results

The results of the analysis (independent sample *t* test) indicate significant differences in the perception of barriers hampering the establishing of cooperation with partners from China and Germany, both in the case of internal and distance related barriers and perceiving fears related to relationship as a barrier (hypotheses H1 and H2 were supported). However, a more detailed analysis of the barriers comprising these two groups indicates that many of them did not differ significantly depending on the country.

Moreover, all the barriers under study were perceived to be higher in the case of cooperation with China than with Germany (with the exception of the lack of employees who could coordinate the international cooperation

and the fear that the partner can take over their staff, in which case the indicator was higher for Germany; however, the difference between Germany and China was not significant in these cases).

Table 5

Differences in the perception of barriers hampering establishing cooperation with partners from China and Germany

Barriers	China		Germany		Difference
	M	SE	M	SE	
Distance and internal barriers	2.158	0.051	1.934	0.051	.224*
Distance (geographical distance)	2.186	0.051	1.912	0.051	.274*
Technological barrier	1.791	0.083	1.669	0.083	.122
Language barrier	2.164	0.098	1.722	0.099	.442*
Different way of conducting business in partner's country	2.291	0.100	1.880	0.100	.411*
Different level of economic development	2.022	0.099	1.970	0.099	.052
Political differences	1.754	0.083	1.496	0.083	.257*
Legal system differences	2.254	0.112	2.165	0.112	.088
Limited experience of the partner's country	2.090	0.097	1.782	0.097	.308*
The necessity to adapt to the partner's needs	2.463	0.102	2.105	0.102	.357*
High cooperation costs	2.470	0.106	2.180	0.106	.29
Lack of employees who could coordinate the international cooperation	1.746	0.096	1.850	0.096	-.103
Lack of government and government agencies' support for the international cooperation	2.664	0.122	2.474	0.123	.19
Fears related to relationship	1.900	0.063	1.642	0.063	.258*
Fear of becoming dependent on partner	1.933	0.085	1.684	0.085	.249*
Fear of having our know-how copied	2.328	0.099	1.609	0.100	.719*
Fear of being eliminated from the market because of the partner's activities	2.119	0.096	1.782	0.097	.337*
Fear of losing own identity and of undue subordination to the partner	1.739	0.088	1.654	0.088	.085
Fear that partner can take over our staff	1.381	0.066	1.481	0.066	-.101

\* $p < 0.05$

Source: own elaboration

A model of perceived international cooperation barriers and the perceived relationship quality was constructed and analysed in order to verify the hypotheses concerning the relationship of barriers and relationship quality. The final model comprises only the significant relationships (hypothesis H5, H6, H7, H9, H10, H15, H16, H17, H19, H20 were not supported). Structural equation modelling analysis (AMOS, the estimation method of generalized

least squares, GLS, was applied) proved that, both in the group of companies cooperating with partners from Germany and China, the model fits the data:

- Germany:  $\chi^2(1) = 3.82$ ;  $p = 0.051$ ;  $CMIN/DF = 3.82$ ;  $CFI = 0.95$ ;  $RMSEA = 0.146$ ,
- China:  $\chi^2(1) = 0.94$ ;  $p = 0.331$ ;  $CMIN/DF = 0.94$ ;  $CFI = 1.00$ ;  $RMSEA = 0.000$ .

Moreover, the model was subject to bootstrapping (10,000 iterations). The Bollen-Stine bootstrap p-values ranked  $p = 0.048$  in the group of companies cooperating with German partners (in 9545 cases a model was obtained that was better fitting the data) and  $p = 0.392$  in the group of companies cooperating with Chinese partners (in 6077 cases a model was obtained that was better fitting the data).

The final model is presented in Figure 1.

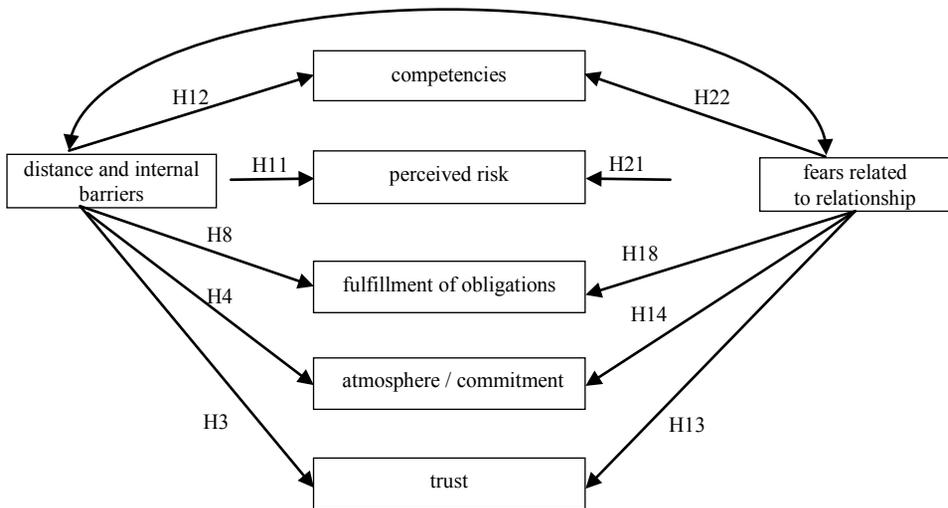


Figure 1. Perceived international cooperation barriers and the perceived relationship quality model

Source: own elaboration

In the case of the model for companies cooperating with a Chinese partner, it was revealed that internal and distance related barriers significantly influence all the analyzed relationship quality factors, with a positive relationship between perceived risk and perceived barriers and negative relationships in other cases. The Critical Ratios analysis showed that distance related and internal barriers

influence perceived risk significantly stronger than other relationship quality factors. Furthermore, the stronger were the fears related to relationship, the lower the assessment of partners competencies, but the CR values indicate that there is no basis to conclude that these barriers influence significantly stronger any of the analyzed relationship quality factors. The other relations were not significant.

A thorough analysis of the standardized estimates in the model for the companies cooperating with German partners indicated that internal and distance related barriers influence the perceived risk (positive relation), trust, atmosphere/commitment and fulfilment of obligations by partners (negative relation). The relationship between perceived barriers and competencies was not significant. Moreover, the Critical Ratios analysis showed that the influence of perceived internal and distance related barriers on trust is stronger than in the case of other relationship quality factors. Furthermore, the stronger were fears related to relationship, the lower the indicators of competencies, atmosphere/commitment and fulfillment of obligations by partners. The CR values indicated that these fears influence competencies more than trust and perceived risk. The rest of the relationships were not statistically significant.

Table 6

The values of non-standard and standard estimates and Critical Ratios for the models for the companies' cooperation with Chinese and German partners

		China				Germany				CR
		Non-st. est.	S.E.	St. est.	p	Non-st. est.	S.E.	St. est.	p	
Perceived risk	<---	0.508	0.110	0.402	0.001	0.312	0.148	0.203	0.035	-1.066
Competencies	<---	-0.237	0.123	-0.177	0.054	-0.114	0.105	-0.100	0.277	0.765
Atmosphere/commitment	<---	-0.216	0.058	-0.332	0.001	-0.159	0.060	-0.239	0.008	0.682
Fulfillment of obligations	<---	-0.360	0.089	-0.351	0.001	-0.275	0.088	-0.286	0.002	0.682
Trust	<---	-0.498	0.126	-0.349	0.001	-0.439	0.094	-0.409	0.001	0.378
Perceived risk	<---	0.026	0.089	0.025	0.770	0.117	0.119	0.095	0.325	0.614
Competencies	<---	-0.166	0.100	-0.153	0.095	-0.308	0.084	-0.337	0.001	-1.091
Atmosphere/commitment	<---	-0.013	0.047	-0.025	0.777	-0.126	0.048	-0.235	0.009	-1.670
Fulfillment of obligations	<---	-0.108	0.072	-0.131	0.131	-0.133	0.070	-0.172	0.059	-0.242
Trust	<---	-0.074	0.102	-0.064	0.468	-0.059	0.076	-0.068	0.440	0.123

Source: own elaboration

In both models, a relation between the relationship quality indicators was stated ( $p < 0.001$ ): all the relationship quality factors were correlated positively with each other with the exception of the perceived risk, which

was correlated negatively with other factors. Moreover, distance and internal barriers and fears related to relationship were also interrelated.

The difference indicators for the parameters in both models were additionally counted. It turned out that there is no basis for conclusion about differences in the strength of specific paths.

Detailed results of the analysis are presented in Table 6.

## 5. DISCUSSION

The barriers hampering the establishing of cooperation with partners from China and Germany perceived by Polish companies differ in strength: Polish companies report stronger barriers in establishing cooperation with Chinese than with German partners (with the exception of the lack of employees who could coordinate the international cooperation and the fear that partner can take over our staff), in line with the earlier studies referring to distance (cultural, language, etc.) as a cooperation barrier. However, in the case of some barriers (technology, economic development, legal system differences, high cooperation cost, lack of employees who could coordinate the cooperation, lack of government support, fear of losing identity and fear that the partner will take over the staff) the differences in barriers' perception regarding cooperation with Chinese and German partners were not substantial. But, although the perceived strength of these barriers is similar, one cannot exclude that their nature is different.

The biggest differences in the perception of the barriers hampering establishing cooperation with Chinese and German partners were observed for: fear of having the know-how copied (which can be explained by the peculiar attitude toward intellectual property ascribed to Chinese companies), the different way of conducting business in the partner's country and the language barrier (which indicates how important a knowledge of the partners' language and a similar way of conducting business are).

Some similarities between companies cooperating with partners from China and Germany were also observed: both groups perceive a lack of the government and government agencies' support for international cooperation to be the strongest barrier hampering the establishing of cooperation with foreign partners, which leads to practical conclusions about the necessary changes in the way the Polish government supports Polish companies. The second important barrier for both groups were high cooperation costs. This barrier can also be idiosyncratic for Polish companies that continue to lack financial assets.

The earlier analysis (Danik, Duliniec, 2014), showed only slight differences between the relationship quality indicators in cases of cooperation with Chinese and German partners, so the partners' country of origin should not be considered as a strong determinant of cooperation quality. In this study a new significant determinant was identified. The barriers observed by an international cooperation decision-maker influence the following aspects of the further cooperation: perceived risk, perceived partners competencies, atmosphere/commitment, fulfillment of partners' obligations and perceiving the partner to be trustworthy. As the respondents were the international cooperation decision-makers, one can suppose that their perception of barriers influences their attitude towards the partner, which in turn has an impact on the relationship quality. This remains in line with Danik's (2015) study which shows that companies seeing more barriers are choosing partners more carefully. However, the mechanism of this relation should be a subject of further research. The analysis conducted separately for cooperation with Chinese and German partners did not show some of the relationships indicated in the general model. The perception of the internal and distance related barriers was significantly related to perceived partners competencies only regarding cooperation with Chinese partners. The fears concerning the relationships were related to the perceived competencies, atmosphere/commitment and fulfillment of obligations in the case of cooperation with German partners and the competencies in the case of cooperation with Chinese partners. These differences should also be explained in future studies.

## 6. LIMITATIONS

Although the study refers to crucial theoretical and practical problems and sheds light on the relationship quality determinants describing a model of dependence of the perceived relationship quality from the perceived international cooperation barriers, it still has some shortcomings. One of the limitations of the study is the low reliability of the scales measuring internal barriers, and as a result, analyzing both the internal and distance related barriers as one group of barriers revealed in the factor analysis. Some of the relationship quality factors scales should also be refined in order to achieve higher reliability. The next limitation is questioning only one of the cooperating partners and (as a consequence) taking their perspective into consideration. Future researchers on this subject should make every effort to study both parts of the cooperation in order to get a more objective view of relationship quality. Such a study would probably also prove the asymmetrical perception of barriers.

## CONCLUSIONS

This study provides evidence that the perception of barriers hampering establishing international cooperation varies depending on the partner's country of origin. Most of the barriers reported by Polish companies are higher in the case of cooperation with Chinese partners than with German ones, however not all the observed differences are statistically significant.

The perception of the internal and distance related barriers, and perceiving the fears concerning the relationships to be a barrier are related to the following indicators of international cooperation quality: perceived risk, perceived partners competencies, atmosphere/commitment, fulfillment of partners' obligations and perceiving the partner to be trustworthy. Such a relationship was not observed for: information flow, forced cooperation/dependence, flexibility, similarity and conflicts. The model proposed in this study should be treated as a preliminary model, providing a starting point for further research.

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