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**The two sides of cooperation in export relationships:
When more is not better**

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The two sides of cooperation in export relationships: When more is not better

Abstract

Studies have questioned the beneficial effects of exporter–importer cooperation by showing, without explaining, that it may not have a positive effect on performance. We contend that cooperation carries the genes of its own demise. We develop a model drawing insights from exchange theory and the dark-side perspective of social relationships, which we then test using two consecutive data collection efforts with exporters. Results suggest the influence of cooperation on exporter market performance has an inverted U shape; at high levels, the effect of cooperation on performance fades and becomes negative. Further, this effect is indirect. Cooperation must first influence the importer’s behavior, via its specific investments, to improve the exporter’s market performance. Moreover, we find that lower levels of interdependence increase the effect of low to moderate levels of cooperation on importer’s specific investments, and that the effect of cooperation on investments is impervious to psychic distance. Our results caution that more cooperation with foreign distributors is not always better and can hurt export performance. Indeed, export managers should not expect a simple, systematically positive, and direct relationship between cooperation and exporter market performance.

Keywords: cooperation; export performance; interdependence; nonlinear effects; PLS; psychic distance; specific investments

The two sides of cooperation in export relationships:

When more is not better

INTRODUCTION

Scholars have long acknowledged the importance of cooperation in international distribution relationships between exporters and importers (Leonidou, Samiee, Aykol, & Talias, 2014).

Cooperation is defined as a bilateral expectation of both parties for shared work, mutual assistance, and the realization of each other's objectives (Obadia, Vida, & Pla-Barber, 2017).

While the exporting literature considers cooperation a key antecedent of performance, an inspection of empirical work suggests uncertainty (for a detailed literature review, see Web Appendix 1). First, only seven studies examine the performance relevance of cooperation, all hypothesizing a positive linear impact. Barnes, Yen, and Zhou (2011) and Solberg (2002) observe no effect, and Matanda and Freeman (2009) find that cooperation has a negative link to export performance and attribute this to their Zimbabwean context. Despite this evidence, the dark side of exporter–importer cooperation remains unexamined. Enduring close relationships are viewed as a panacea for confronting exporters' difficulties (Samiee, Chabowski, & Hult, 2015), not as an extra source of difficulties (Grayson and Ambler, 1999).

Second, a direct link between cooperation and performance is not supported by theory predicting behavioral responses to relational phenomena (Styles, Patterson, & Ahmed, 2008). Previous exporting studies have not captured behavioral mediators of cooperation to performance links, or moderators of such links. The cross-sectional research designs in past studies have inhibited studying mechanisms that shape cooperation's impact on performance.

How can firms that cooperate for the good of the partnership suffer bad performance? To answer this question, we developed a model that draws on exchange theory (Ring & Van de Ven, 1994) and work exploring the dark side of social relationships (Villena, Revilla, & Choi, 2011). Exchange theory suggests that cooperation reduces partners' anxiety about

building the relationship over time, but its effect on value-generating behavior and performance is contingent on the closeness of the exchange partnership (Ring & Van de Ven, 1994; Turner, 1987). Dark-side work has explicated how the same features of close cooperation that secure its effectiveness at moderate levels can bring about its downfall at higher levels (Anderson & Jap, 2005). We conducted two consecutive data collection efforts among exporters, separated by two years, to test our hypotheses using structural models, the MEDCURVE macro (Hayes & Preacher, 2010), and the extension of the Johnson-Neyman technique to models with curvilinear effects (Miller, Stromeyer, & Schwieterman, 2013).

Our study advances exporting theory in two main ways. First, we break with the quasi-consensus that cooperative exporter–importer relationships are uniformly positive. We offer a novel, dark-side perspective on the effects of cooperation, asserting that more is not always better. Our results reveal that cooperation has an inverted U-shaped influence on exporter market performance and a contingent nonlinear relationship with importer’s specific investments. The positive effect of cooperation on performance diminishes and becomes negative when the level of cooperation increases beyond a certain threshold. Our findings, which uncover a ‘gray zone’ of nonperforming partnerships, respond to Couper, Reuber, and Prashantham’s (2019) call to examine stalled international business relationships.

Second, by showing that the cooperation to exporter market performance link is mediated by the importer’s specific investments, we advance the idea that relational phenomena affect export performance only if they foster an importer’s productive behaviors. Our research responds to Aykol and Leonidou (2018, p. 1018), who urge that “the mediating mechanism that transforms behavioral interactions into financial and market success needs to be identified.” By establishing specific investments as a mediator with direct performance relevance, we add to work that has moved beyond the usual position of theorizing investments as an independent variable in partnerships (Palmatier, Dant, & Grewal, 2007). As

our study accounts for temporal dynamics of exporter–importer relationships, we advance exchange theory’s assertion that cooperative relationships build value through investments during ongoing interactional episodes (Gulati & Sytch, 2007). We also observe that the cooperation to investments link is contingent on exchange partnership closeness circumstances pertaining to interdependence, but not psychic distance.

CONCEPTUALIZING THE EFFECTS OF COOPERATION ON PERFORMANCE

Exchange theory argues that partnerships develop as a web of investments, caused by the embedding of relational roles and ties alongside formal ones (Ring & Van de Ven, 1994). Partners become accustomed to giving heightened attention to their respective role responses within a socially contrived mechanism for cooperation (i.e., relational closeness). Initial conditions pertaining to formal roles and ties stem from resource interdependence (i.e., structural closeness). It is not the level of interdependence, per se, but the jointly coordinated activities engendered by the circumstances this creates that enhance the relationship’s value-generating investments, subsequently driving actors’ performance (Gulati & Sytch, 2007). We posit that cooperation drives exporter performance in the exporter–importer relationship via its ability to motivate importer’s specific investments. Moreover, its nonlinear effect on importer’s specific investments is contingent on the circumstances of interdependence.

We suggest a similar moderating role for psychic distance (i.e., lack of cognitive closeness). Exchange theorists (Ring & Van de Ven, 1994; Turner, 1987) assert that the interactional motivation behind investment is a function of anxiety related to the expectation of being included in shared work (cooperation) but also sensing stability and predictability in others’ responses (interdependence) and feeling secure things are as they appear (psychic distance). While cooperation and interdependence are bilateral, we focus on exporter psychic

distance with respect to the import market as this sows confusion and puts strain on the relationship (Vida & Obadia, 2018).

In accordance with the dark-side of social relationships, we posit that the same phenomena that make cooperation effective undermine it at higher levels because it is impossible to keep these phenomena in balance and productive between exporters and importers over time (Grayson & Ambler, 1999). There are two sides of cooperation, referring to a change in its effects but not in its nature.¹ Figure 1 presents our model, which includes nonlinear, mediated, and moderated effects of cooperation on exporter market performance.

Figure 1 here

The Two Sides of Cooperation

Our approach to performance focuses on exporter market performance, which concerns the extent to which the exporter achieves product market-based goals (e.g., sales volume, growth) through its relationship with the importer. The positive impact of cooperation has been stressed in the exporting literature. Cooperation enables exporters and importers to work together to improve the quality of import services, ensuring the correct implementation of decisions connected to product distribution and the provision of additional services to local customers (Obadia et al., 2017). With sufficient cooperation, importers can access and use exporters' experiences to adjust and implement sales strategies that are more effective and better meet market demand. Exchange partners that develop the expectation of assisting one another would be motivated to generate relationship-specific solutions to problems arising in the competitive marketplace (Gulati & Sytch, 2007).

¹ Notably, this differs to conflict in the relationship, which has been shown to exert destructive and constructive, linear effects within exporter–importer interactions through separate functional and dysfunctional constructs (Pfajfar, Shoham, Brenčič, Koufopoulos, Katsikeas, & Mitreğa, 2019).

Yet as cooperation moves from moderate to high levels, dysfunctional phenomena can reduce cooperation's impact on market performance. Exchange partners tend to avoid difficult topics to preserve good relationships. Because issues are no longer discussed and resolved, possible ways of optimizing product-market outcomes would go unexplored. For Ring and Van de Ven (1994, p. 24), this presents a problem, as "total suppression of conflict means a relationship has lost its vitality." The interests of one party may supersede those of the other because neither dares to defend their firm's goals. Mutual goals are not always an indicator that firms are on the same path (Eshghi & Ray, 2019) and, at extremes, might suggest a constraint on high performance outcomes for one or both firms. Exporters and importers can also lose critical perspective on their interactions, undermining how their coordinated efforts achieve exporter market outcomes (Villena et al., 2011). 'Groupthink' reduces creativity in the relationship and increases the inflexibility of the shared work to changing market conditions. Existing synergies created by cooperation between the partners would become counterproductive (Obadia et al., 2017).

Hypothesis 1: The level of cooperation in an exporter–importer relationship is associated with exporter market performance in a nonlinear (inverted U-shaped) manner; the effect of cooperation is positive at low levels but becomes weaker and ultimately negative as cooperation reaches high levels.

The Indirect Effect of Cooperation via Importer's Specific Investments

Importer's specific investments consist of assets (e.g., human, material, financial) dedicated to a business relationship that lose value if they are redeployed elsewhere (Bello, Chelariu, & Zhang, 2003). The vagaries of cross-border trade and menace of disintermediation make importers anxious about making specific investments in exporters' product lines (Obadia, Bello, & Gilliland, 2015). Cooperative routines signal to the importer that the exporter shares expectations about joint work and can be counted on within a long-term relationship (Leonidou, Aykol, Fotiadis, & Christodoulides, 2017). Not only will importers perceive

lower investment risks, but the exporter's information about other markets can help the importer make better investment decisions.

The positive effect of cooperation is possible due to the frequent interaction of partners. However, when cooperation reaches high levels, dysfunctional phenomena begin to appear as interaction morphs into intrusion. Believing themselves to be 'family', some exporters no longer see a difference between the exporter's and importer's businesses and become involved in matters that do not concern them (Fites, 1996); in such cases, an exporter's opinions may be viewed as meddling. Exchange theory holds that a partner's need to cooperate can crowd out its need for a sense of identity (Turner, 1987). Masella, Meier, and Zahn (2014) show that when the principal's attempts to exert influence intrude upon the independent identity of agents, a hostile reaction can result in fewer actions in favor of the principal. It is likely that an importer will consider an excess of cooperation to be an attack on its sovereignty and react by holding back or reducing investments. Thus, cooperation can have a positive effect on importer's specific investments, but at higher levels, dysfunctional mechanisms reduce this effect and negatively influence these investments.

An exporter's market performance in a target country depends on the behavior and investments of its representative, which has a better understanding of local customers' needs. Much of the responsibility for the design and execution of marketing strategy in the host country falls on the importer (Obadia et al., 2015). The importer is the critical link between the exporter and local customers and must invest its own resources to complete this link (Leonidou, Palihawadana, Chari, & Leonidou, 2011). Through these investments, importers become more capable of adapting the exporter's products to changing market demands. This allows importers to develop offers that are more attractive than those of the competition (Palmatier et al., 2007). The importer's ability to satisfy local customers ensures customer

loyalty, allowing the exporter to benefit from repeat sales. Thus, the exporter's performance in the product-market largely depends on the importer's value-generating investments.

Hypothesis 2: There is a nonlinear indirect effect of cooperation on exporter market performance via importer's specific investments.

This indirect effect is key in assessing the mediation of importer's specific investments on the nonlinear (inverted U-shaped) effect of cooperation on exporter market performance.

The Moderating Effect of Interdependence

Interdependence pertains to situations in which both parties depend on the exchange relationship for valuable resources not available from alternative partners (Katsikeas, Skarmeas, & Bello, 2009). Given the difficulty of finding adequate export (import) partners (Bello et al., 2003), interdependence can bring needed economic realism and stability to exchange relationships (Gulati & Sytch, 2007). Here, we theorize that cooperation has a more positive effect on importer's specific investments when there is low interdependence, while high cooperation has a less negative effect when there is high interdependence.

Krishnan, Martin, and Noorderhaven (2006) contend that interdependent partners are concerned about each other's behaviors as their resources and outcomes are intertwined. While cooperation is essential in interdependent relationships due to shared expectations of socially contrived behaviors, it is not 'counted on' when interdependence is low. In this context, attempts to increase the level of cooperation (e.g., by helping a partner meet its own objectives) are appreciated more because they were not expected. When there is a moderate level of cooperation, an importer may feel less threatened by possible disintermediation and perceive reduced investment risk. Therefore, for low levels of interdependence, low levels of cooperation have a stronger positive effect on importer's specific investments.

We also posit that high interdependence mitigates the counterproductive effects of high cooperation. With high interdependence comes prudence. An interdependent exporter is less likely to make the mistake of becoming overly familiar with a key partner. Each partner fears undermining the valuable exchange relationship and expects the other to share this caution (Katsikeas et al., 2009). Moreover, mutual dependence fosters tolerance of a partner's meddling (Krishnan et al., 2006). This is crucial in a cross-border setting, in which mistakes are almost inevitable. Further, the interaction of interdependence with cooperation at high levels is a signal to the importer that the relationship is long term and that the importer will likely recoup its investments (Obadia et al., 2015). Thus, when interdependence is high, the negative effect of high levels of cooperation on an importer's specific investments is weaker.

Hypothesis 3: Interdependence moderates the inverted U-shaped relationship between cooperation and importer's specific investments. At low levels of cooperation, lower levels of interdependence will strengthen the positive effect of cooperation on importer's specific investments, and at high levels of cooperation, higher levels of interdependence will weaken the negative effect of cooperation on importer's specific investments.

The Moderating Effect of Psychic Distance

Exporter psychic distance refers to perceived cultural issues and problems in the business environment and with practices, making it difficult for a firm to understand a foreign market and operate there (Obadia et al., 2015). When exporters feel uncertain that things are as they seem in the foreign market, it may or may not stymie the cooperative, value-creating behaviors of the importer (Bello et al., 2003). We posit that high levels of psychic distance reduce the negative influence of high levels of cooperation on importer's specific investments. However, at low levels of cooperation, high psychic distance reduces the positive effect of cooperation.

Fostering close cooperation in the face of cultural differences signifies the strength of cross-border business ties. As Zhang, Cavusgil, and Roath (2003) note, the more distant the cultures, the greater the effort the two organizations must exert to bridge the gap and the greater the reliance on relational bonds to improve outcomes. When exporters and importers work to ensconce strongly cooperative routines, despite high psychic distance, they rely heavily on these routines to make their relationship work. Given the daunting prospect of starting again, it is worthwhile for the importer to cultivate productive behaviors within the current relationship. Further, an exporter with psychic distance issues might misunderstand its intrusions. Such instances would feed the parties' willingness to understand each other's differences, which would slow the importer's impulse to reduce specialized investments. Thus, when psychic distance is high, the negative impact of high levels of cooperation on importer's specific investments is weaker.

Partnerships with low levels of cooperation lack the social glue that transforms psychic distance into a booster of cooperation's effectiveness. Here, psychic distance creates confusion in the cognitive mechanisms of the partners. "High distance hinders actors' ability to understand situational factors associated with disappointing outcomes and so they are attributed to failings of the partner" (Couper et al., 2019, p. 1). In the resulting blame game, critical information is misunderstood and coordination becomes less effective. A willing importer may find it more difficult to perform its role because it is not always clear what the exporter expects. When psychic distance is high, poor cognition erodes the ability to decipher, which is required for importers to understand incipient cooperation for what it is and perceive reduced investment risks. Thus, when distance is high, the positive influence of low levels of cooperation on an importer's specific investments is weaker.

Hypothesis 4: Psychic distance moderates the inverted U-shaped relationship between cooperation and importer's specific investments. At high levels of cooperation, higher levels of psychic distance will weaken the negative effect of

cooperation on importer's specific investments, and at low levels of cooperation, higher levels of psychic distance will weaken the positive effect of cooperation on importer's specific investments.

METHOD²

We analyzed data from two consecutive surveys of French exporters using PLS structural equation modeling and the MEDCURVE macro (Hayes & Preacher, 2010). Hair, Sarstedt, Ringle, and Gudergan (2017) indicate that PLS produces more accurate parameters than covariance-based structural equation modeling when the sample size is between 100 and 250. Moreover, we took advantage of the flexibility of PLS to easily specify both formative and reflective measures, while using full information for each manifest indicator to measure the latent constructs (Hair et al., 2017). PLS produces scores for latent variables that enable us to assess the endogeneity of the explanatory variables with Gaussian copulas (Park & Gupta, 2012). We assessed the nonlinear indirect effect of cooperation by introducing these scores in the MEDCURVE macro (Hayes & Preacher, 2010), which calculates 'instantaneous indirect effects'. We also applied Miller et al.'s (2013) extension of the Johnson-Neyman technique to models with curvilinear effects to assess the moderating effect of interdependence.

Data

We used three secondary data sets and collected four primary data sets.³ The first two secondary data sets include demographic information of the responding firms, names of managers in charge of exporting, and countries to which they exported. We also used the International Monetary Fund (2019) database to extract the gross domestic product (GDP) growth of the import country (at T2). In a pretest ($n = 67$), we assessed the unidimensionality

² A much extended, full version of our Method and Results is available in Web Appendix 2.

³ We collected a small dyadic data set for a post hoc study (see Web Appendix 2).

of the reflective scales. Then, we collected data in two consecutive surveys of exporters ($n = 283$, $n = 144$). The same exporters provided two responses pertaining to the same importer relationship. In the first year (T1), we collected data on cooperation. Two years later (T2), we collected data assessing importer specific investments and exporter market performance. We chose the two-year time lag based on the literature (Palmatier et al., 2007) and suggestions of pretest informants that cooperation needs two years to produce its full effects.

For the primary data collection, we extracted a random sample of 1,500 firms using a systematic method from a database comprising 32,500 exporters of France. We selected 1,036 industrial firms with more than ten employees that exported at least 10% of their total revenue to more than three countries and used independent foreign distributors (i.e., importers). Managers in charge of exporting based their answers on a business relationship with one of their foreign distributors. We established respondents' competence in several ways, including a test, based on Morgan, Kaleka, and Katsikeas (2004), that evaluated respondent competency to provide answers about the focal relationships.

The first data set included 283 questionnaires from 278 firms (response rate = 26.8%), as five firms answered about two business relationships. Two years later, we invited these same respondents to participate in the follow-up survey; 144 firms completed the second survey (response rate = 51.8%, or 13.9% of the original sample). However, only 122 responded about a continuing relationship. We used the scores of these 122 responses in the analysis. We established negligible nonresponse bias using three procedures for both surveys.

In the final sample, firms belonged to 16 of the 21 industrial categories recorded in France. Of these, 86% were small- or medium-sized enterprises with fewer than 250 employees, and exports generated an average of 38.4% of their revenues. Of the respondents, 94% were top management in their firm (51% export managers, 24% general managers, 19% marketing managers) and 6% were export area managers. Respondents had been responsible

for the focal business relationship for an average of 8.5 years. The distribution of importers in the focal relationships is as follows: the EU (57%), the rest of Europe (8%), the Americas (5%), Asia and the Middle East (15%), and the rest of the world (15%).

Measures

We measured cooperation using the scale developed by Obadia (2008). To assess importer's specific investments, we adapted items from Anderson and Weitz (1992) to an export setting. We assessed exporter market performance using items from Bello and Gilliland (1997). We measured interdependence using Gilliland and Bello's (2002) approach. We collected scores for exporter and importer dependence and determined interdependence values by adding parallel items regarding perceived exporter dependence on the importer and vice versa. Finally, we measured exporter psychic distance with the latent formative instrument from Obadia et al. (2015), which assesses perceived issues caused by cultural and business practices in the importer's country. We validated this instrument based on Diamantopoulos and Winklhofer's (2001) recommendations.

The reflective scales went through multiple pretests. Table 1 in Web Appendix 2, which reports our measures, details the loading of each indicator, composite reliability index (ρ_f), and average variance extracted (ρ_{vc}). Each scale obtains indices higher than benchmark values ($\rho_f = 0.6$, $\rho_{vc} = 0.5$). We ensured the discriminant validity of each scale using three methods. Correlations between the constructs appear in Table 2 of Web Appendix 2.

Common Method Bias

Because we collected scores for the dependent variables two years after cooperation, the potential for common method variance problems is limited. Further, quadratic effects and cross-products are mostly impervious to common method bias. Nevertheless, we took several

steps to mitigate this issue in the questionnaire design (Podsakoff, MacKenzie, & Podsakoff, 2012). We also ran statistical tests to evaluate the impact of common method variance on our findings. The results suggest that method bias does not affect the findings.

Endogeneity

We tested the endogeneity of the explanatory variables using Gaussian copulas (Park & Gupta, 2012) that enable us to directly model the link between an endogenous variable and the regression error term with a copula. This method is effective when no well-recognized instrumental variable is available. We used the REndo package in R (Gui, 2019) to calculate Gaussian copulas for cooperation, cooperation², and cooperation² × interdependence in five models (see Appendix 1 of Web Appendix 2). Nonsignificant results for the copulas confirm that these three variables are not endogenous.

Control Variables

We measured trust using Morgan and Hunt's (1994) scale. We measured exporter market performance at T1 using items from Bello and Gilliland (1997). The duration of the relationship indicates the number of years since the beginning of the exchanges between the exporter and importer. We measured psychic distance with Obadia et al.'s (2015) latent formative instrument. We also included GDP growth in the foreign country, measured with data from the International Monetary Fund (2019). The coefficients for the control variables appear in Table 1.

RESULTS

We tested our first, third, and fourth hypotheses with PLS. For Hypothesis 2, we calculated coefficients for the indirect relationship with the MEDCURVE macro (Hayes & Preacher,

2010). Table 1 summarizes the results of the PLS analyses. For the four models, we calculated the standardized root mean square residual (SRMR) fit index.⁴ Values of 0.071, 0.076, 0.076, and 0.073 are considered a good fit (Hair et al., 2017). Because PLS and MEDCURVE are nonparametric methods, we obtained *p*-values and confidence intervals by bootstrapping with 5,000 samples.

Table 1 here

We specified a first model of the total effect of cooperation on exporter market performance at T2. The quadratic effect of cooperation (cooperation²) was negative and significant (-0.24 , $p = 0.017$, confidence interval $[-0.45, -0.07]$, $f^2 = 0.05$). We took the partial derivative of the model equation ($Y = -0.24X^2 - 0.23X + \text{Controls}$), set the result equal to 0, and solved for X . The value (-0.48) is within our data range (PLS latent score). These results show that cooperation is associated with exporter market performance in an inverted U-shaped manner, in line with Hypothesis 1.

Hypothesis 2 predicts a nonlinear indirect relationship between cooperation and exporter market performance via importer's specific investments. Unlike with linear relationships, it is not possible to calculate an indirect link by multiplying the coefficients of the two legs. Thus, we used the latent scores of the variables in the model to evaluate this nonlinear indirect relationship with the MEDCURVE macro (Hayes & Preacher, 2010). We specified a mediated model identical to the one estimated with PLS that included the same control variables. The MEDCURVE macro calculates instantaneous indirect effects, or Thetas.⁵ They correspond to the rate at which a change in the independent variable (cooperation) changes the dependent variable (exporter market performance) through changes in the mediating variable (importer's specific investments). Thetas are estimated as the

⁴ Hair et al. (2017) recommend caution in interpreting PLS fit indices.

⁵ The MEDCURVE macro does not calculate *p*-values for Thetas.

product of the partial derivative of the function of the mediating variable with respect to the independent variable and the first derivative of the function of the dependent variable with respect to the mediating variable. Thetas are calculated at three values of cooperation: -1 SD (standard deviation), mean, and $+1$ SD. The only bias-corrected bootstrap confidence interval for instantaneous effect that did not include 0 is that for Theta at -1 SD (0.26, standard error = 0.13, confidence interval [0.07, 0.51]), indicating a positive indirect effect of cooperation at low levels of the independent variable. These results support Hypothesis 2 (at low levels of cooperation). The quadratic effect of cooperation on market performance that was significant in the direct model became nonsignificant in the mediated model ($-.10, p = .155$), indicating full mediation by importer's specific investments.

To evaluate the moderating effect of interdependence (Hypothesis 3), we added three variables to the mediated model: interdependence and the two cross-products (interdependence \times cooperation² and interdependence \times cooperation). Concomitantly, we specified their respective links with importer's specific investments. The statistics for the path coefficient of the cross-product interdependence \times cooperation² indicate, at most, a marginally significant effect (0.24, $p = 0.103$; $f^2 = 0.03$). However, the bias-corrected confidence interval is [0.01, 0.57]. It does not include zero, indicating a significant effect at $p \leq 0.05$. Following Henseler, Ringle, and Sinkovics (2009), we ignored the p -value and relied on the bias-corrected confidence interval to determine the significance of the cross-product path coefficient. Therefore, the results support Hypothesis 3. To facilitate interpretation, we applied the extension of the Johnson-Neyman technique to models with curvilinear effects (Miller et al., 2013) to calculate the significance region of the effect of cooperation on importer's specific investments across values of interdependence. When cooperation is held at -1 SD and interdependence is allowed to vary across the range of its values in the data set, the significance region corresponds to values of interdependence less than -0.08 (PLS latent

score). Thus, when cooperation is fixed at -1 SD and interdependence is less than -0.08 , an increase of cooperation has a significant, positive impact on importer's specific investments. We repeated the same analysis with mean (zero) and high ($+1$ SD) values of cooperation. When cooperation is held at zero, it has a significant, positive effect on importer's specific investments when interdependence is less than -0.48 (PLS latent score). However, when cooperation is $+1$ SD, it has no effect on importer's specific investments regardless of the value of interdependence. Thus, low to moderate levels of interdependence increase the effect of cooperation on specific investments when cooperation is low to moderate.

The path coefficient of psychic distance \times cooperation² is not significant (-0.00 , $p = 0.495$). Thus, Hypothesis 4 is not supported. Finally, we performed a series of robustness checks to support our assumptions and findings (see Web Appendix 2).⁶ In conclusion, the results verify three of our four hypotheses. Table 2 summarizes the results.

Table 2 here

DISCUSSION

Our study resolves inconsistent (positive, null, and negative) results in the exporting literature for the effect of cooperation on performance (Barnes et al., 2011) by showing the need for understanding the effect's mechanisms. We advance knowledge in two main ways. First, we show that more is not always better, and relationships with extreme levels of cooperation have counterproductive effects on exporter market performance. This effect⁷ has an inverted U shape: it is positive at lower levels of cooperation, null at higher levels, and negative at very high levels. The results mimic those in the collective literature and clarify unexplained

⁶ For example, we used the profit item of the Bello and Gilliland (1997) scale to test the effect of our model on financial performance. Unsurprisingly, given the high correlation of this item with the three (market) performance items of the scale we use in our study, the results are similar.

⁷ The total effect of cooperation on market performance.

outcomes, thus encouraging researchers to abandon the unquestioned optimism observed in studies of relational variables in exporting (Katsikeas et al., 2009).

Second, scholars should not assume a direct and unconditional relationship between cooperation and performance (Leonidou et al., 2014). Unlike the studies in our literature review, we show that the effect is indirect via importer's specific investments. We reinforce Palmatier et al.'s (2007) findings that relationship quality (represented here by cooperation) and specific investments are the main drivers of performance. Unlike Palmatier et al., who observe partial mediation, we find that specific investments fully mediate the effect of cooperation on performance at low levels of cooperation. We attribute the difference in our findings to differences in our respective models (e.g., nonlinear vs. linear effects).

Previous exporting work has considered specific investments an antecedent of relational phenomena (Katsikeas et al., 2009). Yet exchange theory suggests that relational embeddedness boosts the value generated in the partnership (Ring & Van de Ven, 1994). In the current setting, much of this value is produced by the importer, to which the exporter commonly delegates the design and implementation of local marketing policy (Leonidou et al., 2011). Our novel findings show that as cooperative routines develop, the importer exposes itself to risk by making investments during episodes of the relationship.

Our 'more is not better' thesis in export social relationships is reinforced by the interdependence moderation findings. The quadratic-by-linear interaction we assess represents unexplored territory. Even if part of our prediction is not verified, the results confirm our study's central message—excessive closeness between two exchange partners is counterproductive. When interdependence is high, high levels of cooperation have no effect on specific investments. When cooperation is low or moderate, low or moderate levels of interdependence increase cooperation's positive effects. These findings are significant, given that good partners with irreplaceable resources are difficult to find in international settings

(Robson, Katsikeas, & Bello, 2008). Further, the imperviousness of cooperation effects to psychic distance underscores the importance of cooperation as a tool for managing export relationships. Such a finding appears to qualify our exchange theory view (Turner, 1987) that motivating a firm's investments is a function of its need to be included in shared work with the partner (cooperation), but also to sense stability in partner responses (interdependence) 'and' feel secure things are as they appear with them (psychic distance). The exporter's cognitive understanding does not act as a security reinforcer of cooperation effects, for importers that may be familiar with intercultural exchanges and psychic distance conditions.

From a methodological perspective, our study adds to the discussion on the importance of longitudinal designs in capturing cross-border exchange outcomes (Hoppner & Griffith, 2011). By investigating effects of existing levels of cooperation on specific investments and performance over a two-year period and ruling out the endogeneity of cooperation variables, we allow for the full deployment of the effects of exporter–importer cooperation and enhance understanding of relationships between the study constructs. The two-year temporal lag and control for endogeneity bring us closer to providing evidence of a causal link between cooperation and performance. Our approach is a significant improvement on the cross-sectional research designs used in previous export cooperation studies.

At reasonable levels, cooperation is productive. However, contrary to what managers have been told for the past 24 years,⁸ more cooperation is not always better and can hurt export performance. Over 50% of the exporters in our sample reached a level of cooperation with their foreign distributors that was associated with lower market performance. Thus, our recommendation to export managers is to remain mindful that foreign distributors are independent firms. Managers must refrain from interfering with sovereign decisions of their

⁸ Since Johnson and Raven (1996). See Web Appendix 1.

representatives. Moreover, they should perform periodic reviews of performance with their closest representatives so as not to become blinded by their appreciation of these firms.

The study highlights the role of specific investments in export relationships. We urge researchers to add complexity by investigating different facets of this phenomenon (e.g., financial and human investments) (Bello et al., 2003). Our dependent variable focused on exporter market performance alone. As per Katsikeas, Morgan, Leonidou, and Hult (2016), scholars extending our work should examine other aspects of performance (e.g., financial and customer performance) and capture the importer's perspective. Our nonsignificant psychic distance findings imply that researchers should examine exporter–importer exchanges (outside the EU) that may be more exposed to psychic distance. Finally, we investigate export relationships with distributors. Studies might consider the nonlinear effects of cooperation within other export modes.

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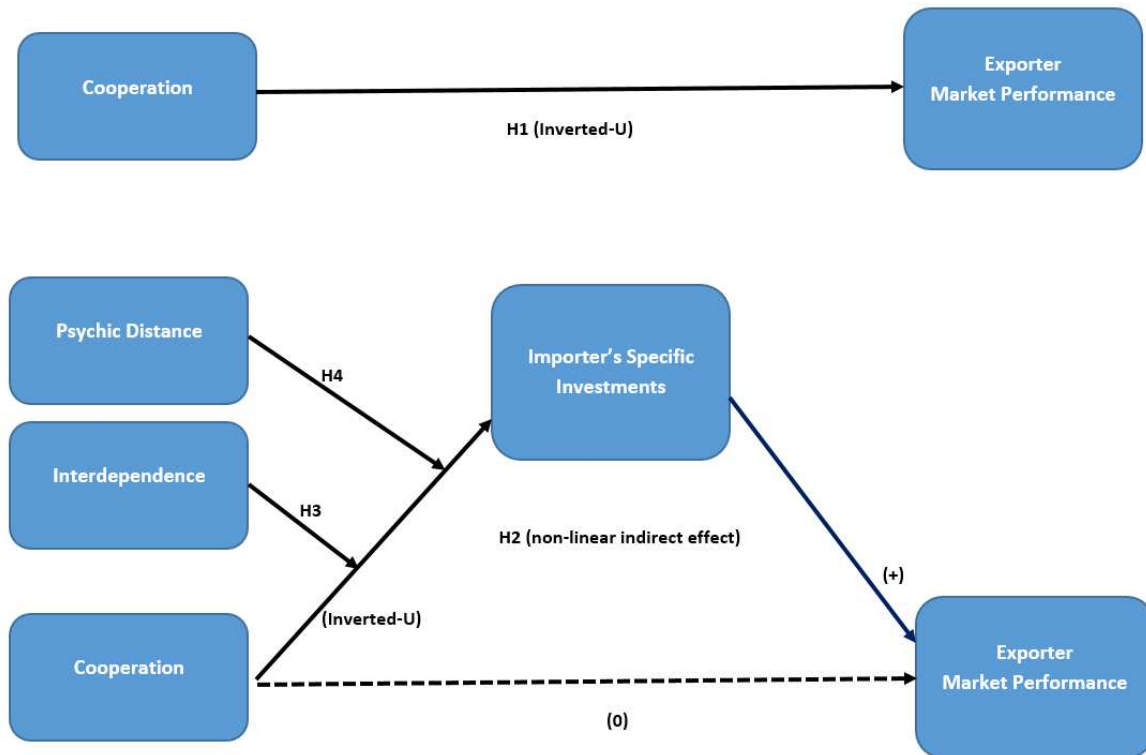
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Figure 1 Conceptual model of the nonlinear effect of cooperation on performance



CONTROL VARIABLES: Trust, Exporter Market Performance (T1), Psychic Distance, Duration of Relationship, GDP Growth in Foreign Market (T2)

Table 1 Results of the PLS analyses

	Coefficients (<i>p</i> -values ^a , <i>f</i> ²)		
	Direct Model	Mediated Model	Moderated Model
Cooperation ² → Exporter Performance T2	-0.24 (0.017, 0.05)	-0.10 (0.155, 0.02)	-0.10 (0.155, 0.02)
Cooperation → Exporter Performance T2	-0.23 (0.059, 0.03)	-0.34 (0.002, 0.11)	-0.34 (0.002, 0.11)
Cooperation ² → Importer's Specific Investments T2		-0.21 (0.066, 0.04)	0.02 (0.43, 0.00)
Cooperation → Importer's Specific Investments T2		0.23 (0.025, 0.04)	0.10 (0.20, 0.00)
Importer's Specific Investments T2 → Exporter Performance T2		0.62 (0.000, 0.62)	0.61 (0.000, 0.62)
Cooperation ² x Interdependence → Importer's Specific Investments T2			0.24 (0.10, 0.00)
Cooperation x Interdependence → Importer's Specific Investments T2			-0.04 (0.36, 0.00)
Interdependence → Importer's Specific Investments T2			0.41 (0.00, 0.00)
Cooperation ² x Psychic Distance → Importer's Specific Investments T2			
Cooperation x Psychic Distance → Importer's Specific Investments T2			
Psychic Distance → Importer's Specific Investments T2			
Control			
Trust → Exporter Performance T2	0.17 (0.118, 0.02)	0.12 (0.146, 0.01)	0.12 (0.146, 0.01)
Export Performance T1 → Exporter Performance T2	0.19 (0.095, 0.04)	0.09 (0.183, 0.01)	0.09 (0.183, 0.01)
Psychic Distance → Exporter Performance T2	-0.29 (0.023, 0.07)	-0.31 (0.009, 0.13)	-0.31 (0.009, 0.13)
Duration → Exporter Performance T2	-0.15 (0.082, 0.05)	-0.15 (0.028, 0.04)	-0.15 (0.028, 0.04)
GDP Growth → Exporter Performance T2	0.14 (0.062, 0.02)	0.21 (0.006, 0.06)	0.21 (0.006, 0.06)
R²			
Exporter Market Performance T2	0.21	0.51	0.51
Importer's Specific Investments T2		0.15	0.21

^a Significant if $p \leq .05$; 122 observations, 5000 bootstraps.

TABLE 2 Summary of the results

Hypothesis 1	Supported	Cooperation has a nonlinear (inverted U-shaped) influence on exporter market performance. At low levels, cooperation has a positive influence on performance. However, at higher levels, the effect of cooperation fades and even turns negative.
Hypothesis 2	Supported	The nonlinear effect of cooperation on performance is indirect via importer's specific investments. At lower levels, cooperation has a positive indirect effect on performance. However, at higher levels, the effect of cooperation fades. Importer's specific investments fully mediate the effect of cooperation on performance.
Hypothesis 3	Supported	The level of interdependence moderates the inverted U-shaped relationship between cooperation and importer's specific investments. A limited increase of interdependence increases the effect of low to moderate levels of cooperation on importer specific investments.
Hypothesis 4	Not supported	The level of psychic distance does not affect the inverted U-shaped relationship between cooperation and importer's specific investments.

WEB APPENDIX 1

The two sides of cooperation in export relationships:

When more is not better

THE EXPORT LITERATURE ON COOPERATION

Literature on interfirm cooperation in export relationships is scarce, with only seven studies investigating the link between cooperation and performance. Moreover, the results of these studies are incoherent, as three of the seven observe no relationship or a negative effect. The current critical review accounts for this by analyzing problems with multiple conceptualizations of the construct and the atheoretic specification of the linkage from cooperation to performance. We summarize the empirical literature in two tables: Table 1 focuses on exporter–importer studies that have theorized a link between cooperation and performance, and Table 2 gathers additional cooperation studies in export settings that do not theorize a link.

Table 1 here

Table 2 here

There is frequently a disconnect between the definition and operationalization of cooperation. Most studies on the impact of cooperation on export performance conceptualize cooperation using Anderson and Narus's (1990) definition: the importer and exporter work together to achieve common goals. Some studies operationalize cooperation by listing activities the exporter and importer collaborate on, including marketing strategies (Ambler, Styles, & Xiucun, 1999), information sharing (Racela, Chaikittisilpa, & Thoumrungroje, 2007), conflict resolution (Solberg, 2002), and goal achievement (Ha, Karande, & Singhapakdi, 2004). However, Payan and Svensson (2007) note that shared activities do not necessarily entail a spirit of cooperation. Indeed, these activities can be imposed by the dominant actor in the partnership.

The approach of Leonidou, Katsikeas, and Hadjimarcou (2002), who evaluate the team and collaborative spirit in the importer–exporter dyad, is better equipped to reflect cooperation in which both parties are voluntarily invested. Leonidou, Palihawadana, Chari, and Leonidou (2011) go further with this bilateral approach to cooperation by defining it as both parties' desire to achieve common goals, collaborate, and have balanced interactions. Unfortunately, their operationalization does not support this bilateral approach in that it is geared toward evaluating the behavior and attitudes of one actor, the exporter. Obadia (2008) follows through with the bilateral approach by defining and operationalizing cooperation as a bilateral behavioral norm. A cooperation norm is evident when both trade partners expect shared work, mutual assistance, and the realization of each party's goals. In this context, cooperation is a social bond that regulates how the parties interact and thus is reflected in the importer's and the exporter's expectations about their business relationship. The bilateral, normative approach was later adopted by Jean, Sinkovics, and Cavusgil (2010) and Obadia, Vida, and Pla-Barber (2017).

Almost all the research on the impact of cooperation on export performance posits a direct link between cooperation and performance. Nevertheless, authors have justified this effect through intermediary phenomena such as knowledge and skill sharing (Matanda & Freeman, 2009), conflict reduction (Ambler et al., 1999; Johnson & Raven, 1996), the implementation of marketing strategy (Ambler et al., 1999) and, in a more general sense, the behavior of the business partners (Racela et al., 2007). Such approaches add credence to the view that there is no clear theoretical base for a direct link between cooperation and export performance (Styles, Patterson, & Ahmed, 2008). Further, Jean et al. (2010) hypothesize a direct effect as well as a link between cooperation and innovation, which then influences performance. Leonidou et al. (2011) do not hypothesize a direct link but rather posit that cooperation enables relational

adaptation, which then directly influences performance. Jean et al. (2010) and Leonidou et al. (2011) neither hypothesize an indirect effect of cooperation on performance through innovation or adaptation nor test for mediation.

All the studies on the direct influence of cooperation on performance hypothesize a positive impact, as is evident in Leonidou, Samiee, Aykol, and Talias's (2014) meta-analysis. At the same time, Barnes, Yen, and Zhou (2011) and Solberg (2002) find no significant effect. More surprisingly, Matanda and Freeman (2009) demonstrate that cooperation can have a negative effect on export performance and attribute this to the context of their study (Zimbabwe). Export theory seemingly ignores the dark side of socially bonded business relationships that has been identified in studies of business-to-business trade (Selnes & Sallis, 2003). Anderson and Jap (2005) find that trust-based relationships provide fertile ground for opportunistic activities meant to cheat a partner, while Grayson and Ambler (1999) show that the positive effects of trust are attenuated over time.

To the best of our knowledge, no study has examined nonlinear effects of cooperation on performance. The literature has ignored anecdotal evidence of potential negative effects of cooperation. For example, Caterpillar's⁹ relationships with dealers all over the world used to be considered the epitome of close interfirm cooperation (Fites, 1996). However, over time Caterpillar has become so dissatisfied with their dealers' performance that it has threatened the termination of numerous contracts (Kelleher, 2014). A close examination of cooperation *à la* Caterpillar may provide an explanation. Among other things, Caterpillar's management insists on 'helping' organize the succession of owners of dealerships and promotes its own candidates

⁹ Caterpillar Inc. is an American *Fortune* 100 corporation that designs, develops, engineers, manufactures, markets, and sells machinery, engines, financial products, and insurance to customers via a worldwide dealer network. It is the world's largest construction equipment manufacturer.

over the families' choices (Fites, 1996). On the pretext of benevolence, Caterpillar's cooperation includes multiple infringements on dealers' sovereignty, and this may have been a trigger in the dealers' refusal to invest in Caterpillar's new policies and to the deterioration of performance.

The various conceptualizations of cooperation and the inadequate specification of performance models could explain the contradictory results regarding the impact of cooperation on performance. Further, it is surprising that no moderator of the cooperation–performance link has been tested. Finally, the absence of studies incorporating the dark side of relationships and taking into account the temporal dynamic of export relationships only increases doubt about export research on the cooperation–performance link.

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Table 1 The effect of cooperation on performance in exporter–importer studies

Reference <i>Sample</i>	Definition of cooperation <i>Underlying theory</i>	<i>Dependent variable</i> Facets of performance assessed	Direct/ mediated effect	Hypothesized effect/result	Moderators
Ambler, Styles, & Xiucun (1999) <i>Chinese exporters</i> <i>Cross-sectional</i>	When exporters and importers work together to accomplish certain tasks <i>Relational paradigm</i>	<i>Export performance</i> Market performance	Direct	Positive/supported	No
Barnes, Yen, & Zhou (2011) <i>Taiwanese importers</i> <i>Cross-sectional</i>	The similar or complementary actions taken by exchange parties to achieve mutual or singular outcomes <i>Social network theory</i>	<i>Performance</i> Financial and market performance	Direct	Positive/ not supported: nonsignificant	No
Jean, Sinkovics, & Cavusgil (2010) <i>Taiwanese exporters</i> <i>Cross-sectional</i>	Same as Obadia (2008) See Table 2 <i>Resource based view and</i> <i>Transaction costs economics</i>	<i>Supplier market</i> <i>performance</i> Financial and market performance	Direct	Positive/ supported	No
Johnson & Raven (1996) <i>American importers</i> <i>Cross-sectional</i>	When two companies work together to attain shared objectives <i>Relational paradigm</i>	<i>Performance</i> Financial and market performance	Direct	Positive/ supported	No
Matanda & Freeman (2009) <i>Zimbabwean exporters</i> <i>Cross-sectional</i>	The willingness of the members of a logistics chain to coordinate their activities and help all members achieve their objectives <i>Resource based view and</i> <i>Relational paradigm</i>	<i>Export performance</i> <i>improvement</i> Financial Performance	Direct	Positive/ not supported: negative	No
Racela, Chaikittisilpa, & Thoumrungroje (2006) <i>Thai exporters</i> <i>Cross-sectional</i>	Both parties' expectations of the shared work and the realization of shared objectives <i>Relational paradigm</i>	<i>Export performance</i> Financial and market performance	Direct	Positive/ supported	No
Solberg (2002) <i>Norwegian exporters</i> <i>Cross-sectional</i>	When partners make decisions that promote mutual benefit <i>Not specified</i>	<i>Export performance</i> Financial and market performance	Direct	Positive/ not supported: nonsignificant	No

Note: We do not take into account studies in which cooperation is used as a first-order variable to measure other phenomena like relational quality.

Table 2 Other exporter–importer studies on cooperation

Reference <i>Sample</i>	Definition of cooperation <i>Underlying theory</i>	Main findings
Ha, Karande, & Singhapakdi (2003) <i>Korean importers</i> <i>Cross-sectional</i>	When importers and exporters make a joint effort, help each other, and have good working relationships <i>Relational paradigm.</i>	Cooperation promotes satisfaction with the relationship. No moderating effect of cultural similarity.
Leonidou, Aykol, Fotiadis, & Christodoulides (2017) <i>Greek exporters</i> <i>Cross-sectional</i>	The desire of the exporter and importer to achieve common goals, collaborate, and have balanced exchanges <i>Relational paradigm</i>	Cooperation reduces importer' infidelity.
Leonidou, Katsikeas, & Hadjimarcou (2002) <i>American exporters</i> <i>Cross-sectional</i>	Team and collaborative spirit shared by the importer and the exporter <i>Relational paradigm</i>	Cooperation is higher in harmonious business relationships.
Leonidou, Paliawadana, Chari, & Leonidou (2011) <i>British importers</i> <i>Cross-sectional</i>	The desire of the exporter and importer to achieve common goals, collaborate, and have balanced exchanges <i>Transactional and relational paradigms</i>	Cooperation makes it more likely that the importer will adapt to the exporter.
Mehta, Larsen, Rosenbloom, & Ganitsky (2006) <i>American exporters</i> <i>Cross-sectional</i>	Interdependence and joint achievements <i>Relational paradigm</i>	Cooperation is higher when cultural distance is low.
Obadia (2008) <i>French exporters</i> <i>Cross-sectional</i>	Bilateral behavior norm that can be seen in the two trade partners' expectations regarding joint work, mutual assistance, and the attainment of each partner's goals. <i>Relational paradigm</i>	Cooperation promotes importer role performance (IRP). Past performance moderates the link between cooperation and IRP.
Obadia, Vida, & Pla-Barber (2017) <i>European exporters</i> <i>Two consecutive data collections</i>	Same as Obadia (2008) <i>Relational exchange theory</i>	Cooperation reduces foreign distributor opportunism and improves IRP.

Note: IRP refers to how the importer carries out the responsibilities delegated by the exporter.

WEB APPENDIX 2

The two sides of cooperation in export relationships:

When more is not better

METHOD

We analyzed the data of two consecutive surveys of exporters located in a large European Union (EU) country using PLS structural equation modeling and the MEDCURVE macro (Hayes & Preacher, 2010). Reinartz, Haenlein, and Henseler (2009) show that PLS produces more accurate parameters than covariance-based structural equation modeling when the sample size is between 100 and 250. Moreover, we took advantage of the flexibility of PLS to easily specify both formative and reflective measures, while using the full information available for each manifest indicator to measure the latent constructs (Hair, Sarstedt, Ringle, & Mena, 2012). PLS produces scores for the latent variables that enabled us to assess the endogeneity of the explanatory variables with Gaussian copulas (Park & Gupta, 2012). In addition, we assessed the nonlinear indirect effect of cooperation by introducing these scores in the MEDCURVE macro (Hayes & Preacher, 2010), which calculates ‘instantaneous indirect effects’. We also applied the extension of the Johnson-Neyman technique to models with curvilinear effects developed by Miller et al. (2013a) to assess the moderating effect of interdependence. Finally, we check the robustness of our results using an ordinary least squares (OLS) estimator to assess our models. The hypotheses are summarized in Figure 1.

Figure 1 here

Data

For this study, we used three secondary data sets and collected four primary data sets. The first two secondary data sets include demographic information of the responding firms, the

names of their managers in charge of exporting, and the countries to which they exported. We also used the International Monetary Fund (2019) database to extract the real gross domestic product (GDP) growth of the import country (at T2).

In a pretest ($n = 67$), we assessed the unidimensionality of the reflective scales. To test our hypotheses, we used G*Power (Faul, Erdfelder, Buchner, & Lang, 2009) to calculate the sample size needed to achieve enough statistical power to detect small effects in our complex model. The required number of observations is 101. Then, we collected the data in two consecutive surveys of exporters ($n = 283$, $n = 144$) who reported on a business relationship with one of their foreign resellers. Thus, the same exporters provided, two years apart, responses pertaining to the same business relationship with an importer. In the first year (T1), we collected data on cooperation. Two years later (T2), we collected data from the same exporters, this time assessing importer's specific investments and exporters' market performance.

For interorganizational research, Palmatier et al. (2007) suggest that one year may be too short of a time frame to allow for the development of interorganizational phenomena. Further, informants in one of the pretests (see our substantive validity test, p.6) validated this notion, suggesting that interfirm cooperation needs approximately two years to produce its full effects. Thus, a two-year time lag seemed more appropriate in the case of our study.

Advantages of temporal data include the following:

1. Precedence of the predictor over the dependent variable and certainty about the direction of the effect,
2. A mitigation of common method bias, and
3. The possibility to reflect the time lag necessary for the effect of a variable to occur.

Finally, we collected a small ($n = 38$) but rare dyadic data set, including responses from pairs of suppliers (exporters that had responded to our survey) and resellers. We used this data set for a post hoc study to assess the quality of our measure of cooperation.

For the main primary data collection, we extracted a random sample of 1,500 firms using a systematic method from a database comprising 32,500 exporters of France. This database was built by the association of local chambers of commerce and is updated twice a year. We selected 1,036 industrial firms with more than ten employees that exported at least 10% of their total revenue to more than three countries and used independent foreign distributors (i.e., importers). It was important to exclude accidental or occasional exporters from this study. Respondents were contacted by telephone. If they agreed to respond, they received an e-mail containing a link that redirected them to a website dedicated to the study. Managers in charge of exporting were asked to base their answers on a business relationship with one of their foreign distributors. To maximize variation in the responses, one-third of the respondents answered by focusing on one of their two main foreign distributors in terms of sales, one-third answered by focusing on their third or fourth most significant distributors, and one-third answered by focusing on one of their smallest overseas representatives.

We established respondents' competence in various ways. First, the database of exporters is built by export specialists in the local chambers of commerce. Because these specialists frequently provide services and advice to exporting firms in their area, they personally know the export staff of many of these companies. Second, we made a series of telephone calls to each potential respondent to confirm the information included in the database. Third, we asked managers to complete a four-question competency test. This test, based on Morgan, Kaleka, and Katsikeas (2004), evaluated the competency of the respondent to provide answers about the focal relationships. Managers assessed four statements ("I participate in the important decisions concerning this business relationship", "I am fully aware of our firm activities in this market", "I have information about the competition in this market", and "I am involved in the management of the business relationship with this distributor") on a seven-point scale. We eliminated questionnaires with a score less than 4.0

on any of the four items. In addition, we excluded questionnaires with a mean score less than 5.0 on the four items. In total, for the first survey, we eliminated three questionnaires because of low scores on the respondent competency test. For the second survey (T2), we repeated the procedure and noted that nine of the respondents had changed. We checked to ensure that they were in charge of the business relationship with same distributor as was the case at T1 and that they passed the respondent competency test.

The first data set included 283 questionnaires from 278 firms (for a response rate of 26.8%), as five firms answered about two different business relationships. Two years later, we invited these same respondents to participate in the follow-up survey. A total of 144 firms completed the second survey (for a response rate of 51.8%, or 13.9% of the original sample). However, only 122 responded about a continuing relationship. We used the scores of these 122 responses in the analysis. The size of this sample provides sufficient statistical power to detect small effects in our complex model (see our G*Power analysis above). The number of observations is well above the requirements for analyses with nonparametric methods such as PLS (Reinartz et al., 2009) and the MEDCURVE macro (Hayes & Preacher, 2010).

In the final sample, firms belonged to 16 of the 21 industrial categories recorded in the country. The main industries are food and beverage (24%), machinery and equipment (15%), metal working industries (11%), chemical industries (8%), and plastics (5%). Of these firms, 86% were small or medium-sized enterprises with fewer than 250 employees (EU definition), and exports generated an average of 38.4% of their revenues. Of the respondents, 94% were top management in their respective firm (51% were export managers, 24% were general managers, and 19% were marketing managers), and 6% were export area managers. Respondents had been personally responsible for the focal business relationship for an average of 8.5 years. The distribution of importers in the focal relationships is as follows: the

EU (57%), the rest of Europe (8%), the Americas (5%), Asia and the Middle East (15%), and the rest of the world 15%.

We assessed nonresponse bias with three different procedures for both surveys (T1 and T2). First, we compared early and late respondents with regard to the study constructs and found no significant differences between the two groups. Second, we compared respondents and nonrespondents on demographics (size, international experience, number of countries to which they exported) and again found no significant difference. Finally, we performed Mentzer, Flint, and Hult's (2001) test and contacted a random sample of 50 nonrespondents to ask them to answer questions corresponding to one item of each of the scales. When we tried to administer such a test on the phone the first time, we realized that seven-point answers were unmanageable. Thus, we collected phone responses using five-point answers. Then, we followed the linear stretched method developed by Hull (1922) to transform both five-point (from the phone survey) and seven-point (from our data set) items into 0–10 answers to perform a comparison. The *t*-tests of group means revealed no differences between the nonrespondents and the respondents. Thus, nonresponse bias was not a problem in these two surveys.

Measures

We measured cooperation as a norm using the scale developed by Obadia (2008) and Obadia et al. (2017), which was based on Cannon and Perreault's (1999) instrument. To assess importer's specific investments, we adapted items from Anderson and Weitz (1992) to an export setting. We assessed exporter market performance using items from Bello and Gilliland (1997). We measured interdependence using Gilliland and Bello's (2002) approach. We collected scores for exporter dependence and importer dependence. Then, we determined

interdependence values by adding parallel items regarding perceived exporter dependence on the importer and importer dependence on the exporter.

Finally, we measured psychic distance with the latent formative instrument from Obadia et al. (2015). This instrument assesses the perceived issues caused by cultural and business practices in the importer's country. We validated the psychic distance scale in accordance with Diamantopoulos and Winklhofer's (2001) recommendations. First, we checked the collinearity of the formative indicators by examining their variance inflation factor (VIF) and their condition index (see Table 1). At the same time, we assessed the external validity of the instrument by regressing its respective indicators on one item that reflected the perception of psychic distance. Then, we calculated the weight of each indicator. Two of the items' coefficients, language and environment, were not significant. We believe that in these exporter–importer relationships, in which English is used by both parties, problems caused by language differences are attenuated. As for the environment, it is less likely to present a problem in a sample in which 57% of the business relationships are between members of the EU.

As for the reflective scales, we first assessed the scales' reflective indicators' substantive validity (Anderson & Gerbing, 1991) by asking six marketing academics and 14 export executives to examine each item and to assign it to a corresponding concept. We computed two indexes to identify indicators that were difficult to assign; this procedure also enabled us to resolve minor problems with respondents' comprehension. Next, we pretested the scales and established their unidimensionality with an exploratory factor analysis. For each reflective scale, Table 1 details the loading of each indicator, composite reliability index (ρ_f), and average variance extracted (ρ_{vc}). All the constructs obtain indices higher than the benchmark values ($\rho_f = 0.6$, $\rho_{vc} = 0.5$). We tested the discriminant validity of each instrument using three methods (see Table 2). We first checked that no indicator contributed

to a scale other than its own. We then applied Fornell and Larcker's (1981) criteria and checked that the variance extracted in each reflective variable was higher than the square of its correlations with other constructs. Finally, we calculated the heterotrait–monotrait (HTMT) ratio (Hair, Sarstedt, Ringle, & Gudergan, 2017) for each pair of latent constructs and verified that it was under the benchmark value of 0.90. Henseler, Ringle, and Sartstedt (2015) demonstrate that the HTMT criterion is the most reliable detector of a lack of discriminant validity.

Table 1 here

Table 2 here

To check for multicollinearity, we calculated VIFs for the variables in each regression model. The VIF scores ranged from 1.12 to 2.06, far below the recommended ceiling of 10 for this metric. Finally, we examined the presence of outliers to reduce the possibility that a small number of extreme values might overly influence the results. We calculated Cook's distance values for all cases; the maximum value was 0.50, below the recommended maximum value of 1.

Common Method Bias

Because we collected scores for the dependent variables two years after cooperation, the potential for common method variance problems is limited because respondents at T2 are not likely to recall their answers two years before (at T1) and adjust the scores to impose their logic. Further, quadratic effects (the core effect in this study is the nonlinear effect of cooperation) and cross-products (calculated for moderation analyses) are mostly impervious to common method bias (Podsakoff, MacKenzie, & Podsakoff, 2012).

Nevertheless, we took several steps to mitigate this issue. Regarding questionnaire design, we advised respondents that there were no good or bad answers and that they should

answer candidly, and we scattered reflective items around the questionnaire so respondents could not identify items describing the same factor. Moreover, we changed the anchors of the questions whenever possible.

In a second phase, we ran statistical tests designed specifically for export surveys and PLS (for the detailed procedure, see Obadia, 2013) to evaluate the impact of common method variance on our findings. We first transformed each indicator of reflective constructs into a single-measure construct. Each reflective construct then becomes a second-order construct, and it is possible for this construct and the method factor to be connected at the same time to the corresponding single-indicator constructs. We modeled the second-order reflective constructs using the repeated indicators approach. With this approach, the first-order variables' manifest indicators are also used as manifest indicators for the second-order variable. As for the method factor, we used the four questions of the competency test (see the Data subsection) as its first-order indicators. These four items indicate the level at which the respondent understands the issues in the core business relationship because these indicators also reflect a respondent's propensity to impose his or her own theory on the data. The model specified is the PLS equivalent to Model 3B in Podsakoff, MacKenzie, Lee, and Podsakoff (2003). The results suggest that common method bias does not affect our findings, which is not surprising with temporal data.

Endogeneity

Endogeneity occurs when a predictor construct is correlated with the error term of the dependent construct to which it is related (Bascle, 2008). This implies that the predictor construct explains not only the dependent construct but also its error term. While endogeneity can have several roots, it mostly arises from four issues (Bascle, 2008; Jean, Deng, Kim, & Yuan, 2016):

1. Common method bias,
2. Measurement error,
3. Simultaneity (i.e., when two variables simultaneously cause each other), and
4. Omitted constructs that correlate with one predictor construct and with the dependent constructs in the structural model.

The lack of common method variance is an indicator of a reduced risk of endogeneity due to measurement error (Sande & Ghosh, 2018). Moreover, PLS structural equation modelling uses latent variables that assess measurement errors and mitigate the biasing effect of error in measurement (Ullah, Aktar, & Zaefarian, 2018). Third, the temporal design of our data collection, with a two-year difference between the collection of the scores for cooperation and for importer specific investments and exporter market performance, enables us to rule out simultaneity issues for the core variable of the model—namely, cooperation. Fourth, we added four key control variables that could explain the effect of cooperation on performance: trust, psychic distance, exporter market performance at T1, and duration of the relationship. Trust is known to positively affect both cooperation and export performance (Leonidou et al., 2014). Psychic distance is an obstacle to the development of international social relationships, and several studies have shown its negative influence on performance (Prime et al., 2009). We also included exporter market performance at T1 because research has established the loop effect of past performance on current export performance and its antecedents (Lages, Jap, & Griffith, 2008). Finally, we added the duration of the relationship because the relational paradigm is based on the gradual development over time of social phenomena and their outcomes in business relationships (Dwyer et al., 1987). Unsurprisingly, the nonsignificant correlation between the residuals of the two regressions in the mediated model (-0.000) suggests that omitted variables do not affect our results (Allison, 2018; Sande & Ghosh, 2018).

Nonetheless, we tested the endogeneity of the explanatory variables using Gaussian copulas (Park & Gupta, 2012) that enable us to directly model the link between an endogenous variable and the regression error term with a copula. This method is particularly well suited when no well-recognized instrumental variable is available. We followed the approach prescribed in Hult et al. (2018). First, we used latent scores to assess the nonnormality of the explanatory variables by running a Kolmogorov-Smirnov test with Lilliefors correction. The Gaussian copula method can only be applied to nonnormally distributed variables. Cooperation ($p = 0.02$), cooperation-squared (cooperation^2 , $p = 0.00$), and the cross-product of $\text{cooperation}^2 \times \text{interdependence}$ ($p = 0.00$) passed the test. However, the normality of importer's specific investments ($p = 0.54$) and interdependence ($p = 0.73$) could not be ruled out. Then, we used the package REndo in R (Gui, 2019) to calculate the Gaussian copulas for cooperation, cooperation^2 , and $\text{cooperation}^2 \times \text{interdependence}$ in five different models. The nonsignificant results for the copulas (see details in Appendix 1) suggest that these three variables are not endogenous. Taken together, the aforementioned elements and the Gaussian copula tests mitigate concerns about endogeneity in our analysis.

Control Variables

The control variables belonged to two categories: (1) relationship characteristics (trust, exporter market performance at T1, duration of the relationship, psychic distance) and (2) the environment (GDP growth in the foreign market). Four of the five control variables were introduced with the main objective of mitigating endogeneity. Their justification is detailed in foregoing discussion of endogeneity. We measured trust with five items from Morgan and Hunt's (1994) scale. We measured exporter market performance at T1 using Bello and Gilliland's (1997) instrument. The duration of the relationship indicates the number of years since the beginning of the exchanges between the exporter and importer. We measured

psychic distance with the latent formative instrument from Obadia et al. (2015). We included GDP growth in the foreign country as an additional control variable because it has been deemed to be a determinant of the performance of the exporter in that country (Cavusgil & Zou, 1994). We used the International Monetary Fund (2019) database to extract the real GDP growth in each import country at T2. The coefficients for the control variables appear in Table 3.

RESULTS

We tested our first, third, and fourth hypotheses with a PLS analysis. For the second hypothesis, PLS provided us with coefficients for each leg of the indirect nonlinear relationship. Then, we used the latent variable scores to calculate the coefficients for the indirect relationship with the MEDCURVE macro (Hayes & Preacher, 2010). Table 3 summarizes the results of the PLS analyses. For the four models, we calculated the standardized root mean square residual (SRMR) fit index.¹⁰ The SRMR is defined as the difference between the observed correlation matrix and the model implied correlation matrix. Thus, it allows us to assess the average magnitude of the discrepancies between observed and expected correlations as an absolute measure of (model) fit. Values of 0.071, 0.076, 0.076, and 0.073 are considered a good fit (Henseler et al., 2014). Because PLS and MEDCURVE are nonparametric methods, we obtained *p*-values and confidence intervals by bootstrapping with 5,000 samples.

Table 3 here

We specified a first model of the total effect of cooperation on exporter market performance at T2. The quadratic effect of cooperation (cooperation²) was negative and significant ($-0.24, p = 0.017$, confidence interval $[-0.45, -0.07]$, $f^2 = 0.05$). It is difficult to

¹⁰ Hair et al. (2017) recommend caution in interpreting PLS fit indices.

compare the strength of this effect with other studies of export relationships. Indeed, most studies do not display this information, and very few have used temporal data. Further, to the best of our knowledge, this is the first study in this field to assess the level of endogeneity of its core variables. Therefore, it is likely that cross-sectional designs and endogeneity have affected past studies by inflating their regression coefficients and the strengths of these links. Given this situation, we can only refer to Cohen (1988), who posits that an f^2 of 0.05 indicates a weak effect, which is not surprising given the number of additional antecedents of export performance. Yet we can highlight that this f^2 is the second in size (after psychic distance) in the model we specified (see Table 3). We then calculated the curve vortex. We took the partial derivative of the model equation: $Y = -0.24X^2 - 0.23X + \text{Controls}$, set the result equal to 0, and solved for X . The value (-0.50) is within our data range (PLS latent scores). These results show that cooperation is associated with exporter market performance according to an inverted U-shaped relationship, in support of Hypothesis 1.

Hypothesis 2 predicts a nonlinear indirect relationship between cooperation and exporter market performance via importer's specific investments. To test this, we used PLS to calculate the coefficients for the quadratic effect of cooperation (cooperation^2) and importer's specific investments ($0.21, p = 0.070, f^2 = 0.04$) and the link between importer's specific investments and exporter performance ($0.62, p = 0.000$, confidence interval $[0.48, 0.73], f^2 = 0.62$). Unlike with linear relationships, it is not possible to calculate an indirect link by multiplying the coefficients of the two legs. Thus, we used the latent scores of the variables in the model to evaluate this nonlinear indirect relationship with the MEDCURVE macro (Hayes & Preacher, 2010). We specified a mediated model identical to the one estimated with PLS that included the same control variables. The MEDCURVE macro calculates instantaneous indirect effects, or Thetas.¹¹ They correspond to the rate at which a

¹¹ The MEDCURVE macro does not calculate p values for Thetas.

change in the independent variable (cooperation) changes the dependent variable (exporter market performance) through changes in the mediating variable (importer's specific investments). Thetas are estimated as the product of the partial derivative of the function of the mediating variable with respect to the independent variable and the first derivative of the function of the dependent variable with respect to the mediating variable. Thetas are calculated at three different values of cooperation: -1 SD (standard deviation), mean, and $+1$ SD. The results were, respectively, 0.26, SE (standard error) = 0.13, confidence interval [0.07, 0.51]; 0.09, SE = 0.08, confidence interval $[-0.04, 0.23]$; and -0.07 , SE = 0.18, confidence interval $[-0.38, 0.21]$. The only bias-corrected bootstrap confidence interval for instantaneous effect that did not include 0 is the one for Theta at -1 SD, indicating a positive indirect effect of cooperation at low levels of the independent variable. These results support Hypothesis 2 (at low levels of cooperation). Moreover, the quadratic effect of cooperation on exporter market performance that was significant in the direct model became nonsignificant in the mediated model (-0.10 , $p = .155$), thus indicating a full mediation of importer's specific investments.

To evaluate the moderating effect of interdependence (Hypothesis 3), we added three variables to the mediated model: interdependence and the two cross-products (interdependence \times cooperation² and interdependence \times cooperation). Concomitantly, we specified their respective links with importer's specific investments. The results appear in Table 3. The statistics for the path coefficient of the cross-product interdependence \times cooperation² indicate, at most, a marginally significant effect, with 0.24 ($p = 0.103$) and $f^2 = 0.03$. However, the bias-corrected confidence interval is [0.01, 0.57]. It does not include zero, indicating a significant effect at $p \leq 0.05$. This kind of discrepancy occurs when the distribution of the coefficients generated by the bootstrapping procedure is not normal. Yet "this [normal] distribution is essential for performing the test since it provides the basis for

determining the p -value” (Henseler, Ringle & Sinkovics 2009, p. 306). In our analysis, the distribution of the cross-product path coefficients is skewed, and therefore the p coefficients are biased. “The bias-corrected bootstrap confidence interval ... provides a basis to account for the aforementioned problem and, thus, can be used as an appropriate means to test the significance of PLS-estimated path coefficients” (Henseler et al., 2009, p. 307). Thus, we need to ignore the p -value and rely on the bias-corrected confidence interval to determine the significance of the cross-product path coefficient. Therefore, the results support Hypothesis 3.¹² To facilitate interpretation, we applied the extension of the Johnson-Neyman technique to models with curvilinear effects (Miller et al., 2013a) to calculate the significance region of the effect of cooperation on importer specific investments across the values of interdependence. Figure 2 shows the simple slope of cooperation on efficiency when cooperation is held at -1 SD and interdependence is allowed to vary across the range of its values in the data set. The significance region corresponds to values of interdependence less than -0.08 (PLS latent score). Thus, when cooperation is fixed at -1 SD and interdependence is less than -0.08 , an increase of cooperation has a significant, positive impact on importer specific investments. We repeated the same analysis with average (0) and high ($+1$ SD) values of cooperation. When cooperation is held at 0 (mean), it has a positive, significant effect on importer specific investments when interdependence is less than -0.48 . However, when cooperation is high ($+1$ SD), it has no effect on importer specific investments regardless of the value of interdependence. Thus, low to moderate levels of interdependence increase the effect of cooperation on specific investments when cooperation is low to moderate.

Figure 2 here

¹² Following Efron and Tibshirani (1994), we calculate the coefficients for the link between interdependence \times cooperation² and importer specific investments with the bias-corrected bootstrap sample: 0.25 , $p = 0.047$.

To evaluate the moderating effect of psychic distance (Hypothesis 4), we added three variables to the mediated model: psychic distance and the two cross-products (psychic distance \times cooperation² and psychic distance \times cooperation). Concomitantly, we specified their respective links with importer's specific investments. The results appear in Table 3. The path coefficient of the cross-product psychic distance \times cooperation² is not significant (-0.00 , $p = 0.495$). Thus, Hypothesis 4 is not supported. This result could be due to the context of our study. Indeed, exporters and importers are specialized in international business and, on a daily basis, engage in intercultural exchanges, thus reducing their sensitivity to psychic distance (index mean score of the psychic distance instrument = 2.41/7).

However, imperviousness to psychic distance is always an interesting result when studying the effectiveness of export policies. Thus, we needed to validate the nonsignificant path coefficient. We gave particular consideration to the issue of statistical power. Indeed, statistical power ($1 - b$) is derived from the probability (b) of Type II error—that is, of failing to reject the null hypothesis when it is actually false (Cohen 1988). Cashen and Geiger (2004) recommend that when testing null hypotheses, a statistical power of at least 0.95 should be achieved. This value corresponds to a 0.05 probability of Type II error. We used G*Power (Faul et al., 2009) to calculate the statistical power achieved in the moderation regression. With five independent variables ($n = 122$) and the probability of Type I error being 0.05, the statistical power of this regression is 0.99. This result suggests that the multivariate moderation regression has sufficient statistical power to safely fail to reject the null hypothesis.

Robustness Checks

We first tested logarithmic, cubic, and exponential relationships between cooperation and exporter market performance and found no significant results. To further validate the

curvilinear relationship between cooperation and exporter market performance, we specified the same models with a different dependent variable. Satisfaction with the export venture (Zou, Taylor, & Osland, 1998) is a three-item scale (e.g., “The performance of this export venture has been very satisfactory”) that assesses the exporter’s satisfaction with the performance of an export venture. It has a ρ_f of 0.95 and a ρ_{vc} of 0.86. The link between cooperation² and satisfaction in the direct model ($-0.24, p = 0.041$, confidence interval $[-0.47, -0.03]$) becomes nonsignificant in the mediated model ($-0.13, p = 0.174$). As for the indirect relationship via importer’s specific investments, only the Theta at -1 SD for cooperation is significant ($0.30, SE = 0.11$, confidence interval $[0.11, 0.71]$). Moreover, we used the profit item of the Bello and Gilliland (1997) scale to test the effect of our model on financial performance.¹³ Unsurprisingly, given the high correlation of this item with the three (market) performance items of the scale we use in our study, the results are similar. These results are consistent with the results we obtained for exporter market performance, providing further support for Hypothesis 1 and Hypothesis 2.

Moreover, we used an OLS estimator to confirm the results obtained with PLS.¹⁴ In the direct model, cooperation² displayed a significant relationship with exporter market performance ($-0.16, SE = 0.08, p = 0.045$). In the mediated model,¹⁵ this link became nonsignificant ($-0.10, SE = 0.07, p = 0.253$). Additional results were as follows: cooperation² \rightarrow importer’s specific investments ($-0.13, SE = 0.07, p = 0.063$) and importer’s specific investments \rightarrow exporter market performance at T2 ($0.59, SE = 0.09, p = 0.000$). Finally, we replicated the moderation analyses. The cross-product cooperation² \times interdependence displayed a positive, significant coefficient ($0.25, SE = .11, p = 0.023$), and the cross-product

¹³ We thank an anonymous reviewer for this suggestion.

¹⁴ In line with Jaccard and Becker (2009), we assumed that our sample was large enough to allow OLS estimators to generate robust results with nonnormal data.

¹⁵ The results for the mediated model were provided by the MEDCURVE macro, which, in a first phase, calculates coefficients with an OLS estimator.

cooperation² × psychic distance had a nonsignificant coefficient. These results are consistent with those obtained using PLS and provide additional support for three of our hypotheses.

Post Hoc Analysis: Assessment of the Cooperation Scale Bilateralism with Dyadic Data

An essential aspect of cooperative interactions is that they are bilateral, which is not guaranteed in relational phenomena (Korsgaard, Brower, & Lester, 2015). Given the importance of bilateralism in our study and because our study is based on responses provided only by exporters, it would be interesting to obtain data from their foreign representatives to verify whether the cooperation measured was indeed a bilateral phenomenon.

Thus, we asked our respondents to provide us with contact information for the importers they based their responses on. As Leonidou et al. (2014) indicate, exporters are hesitant to provide this type of information, and indeed only 100 of them granted our request. We contacted the foreign distributors by email and telephone, asking them to respond to a brief survey on a dedicated website. In all, 38 importers in 25 different countries completed the survey, enabling us to construct a small dyadic database. The correlation between the two cooperation variables—scores from the exporters and from the importers—was especially high (0.78), confirming the similar perspective of both parties and thus the bilateral quality of the phenomenon as measured by our instrument for cooperation.

In conclusion, the results verify three of our hypotheses out of four. Table 4 summarizes the results of the study.

Table 4 here

Appendix 1 Results of the Gaussian copula

We report the regressions that we evaluated using the REndo package and the resulting coefficients for the copulas obtained with 5,000 bootstraps.¹⁶ Note that REndo does not allow all regressors in an equation to be considered endogenous. We indicate the regression coefficient, the bootstrapping standard error, and the confidence interval (95%). A confidence interval including 0 indicates a nonsignificant coefficient.

Variable codes are as follows:

- CoopT1 = Cooperation; PStar.CoopT1 = Copula Cooperation
- CoopT1² = Cooperation²; PStar.CoopT1² = Copula Cooperation²
- InterCoopT1² = Interdependence x Cooperation²; PStarInterCoopT1² = Copula Interdependence x Cooperation²
- ISIT2 = Importer's Specific Investments; PerfT2 = Exporter Market Performance
- Controls = Trust, Exporter Market Performance (T1), Psychic Distance, Duration of Relationship, GDP Growth in Foreign Market (T2)

Model 1: PerfT2 ~ CoopT1 + CoopT1² + P.Star.CoopT1 + Controls

- PStar.CoopT1 = 0.03, SE = 0.23, Confidence interval [-0.55, +0.40]

Model 2: PerfT2 ~ CoopT1 + CoopT1² + PStar.CoopT1² + Controls

- PStar.CoopT1² = -0.13, SE = 0.15, Confidence interval [-0.37, 0.21]

Model 3: ISIT2 ~ CoopT1 + CoopT1² + P.Star.CoopT1

- PStar.CoopT1 = 0.10, SE = 0.26, Confidence interval [-0.55, 0.47]

Model 4: ISIT2 ~ CoopT1 + CoopT1² + P.Star.CoopT1²

- PStar.CoopT1² = -0.09, SE = 0.16, Confidence interval [-0.31, 0.31]

Model 5: ISIT2 ~ CoopT1 + CoopT1² + InterCoopT1² + Interdependence + InterCoopT1 + PStarInterCoopT1²

- PStarInterCoopT1² = -0.19, SE = 0.18, Confidence interval [-0.44, 0.27]

¹⁶ REndo does not calculate p values

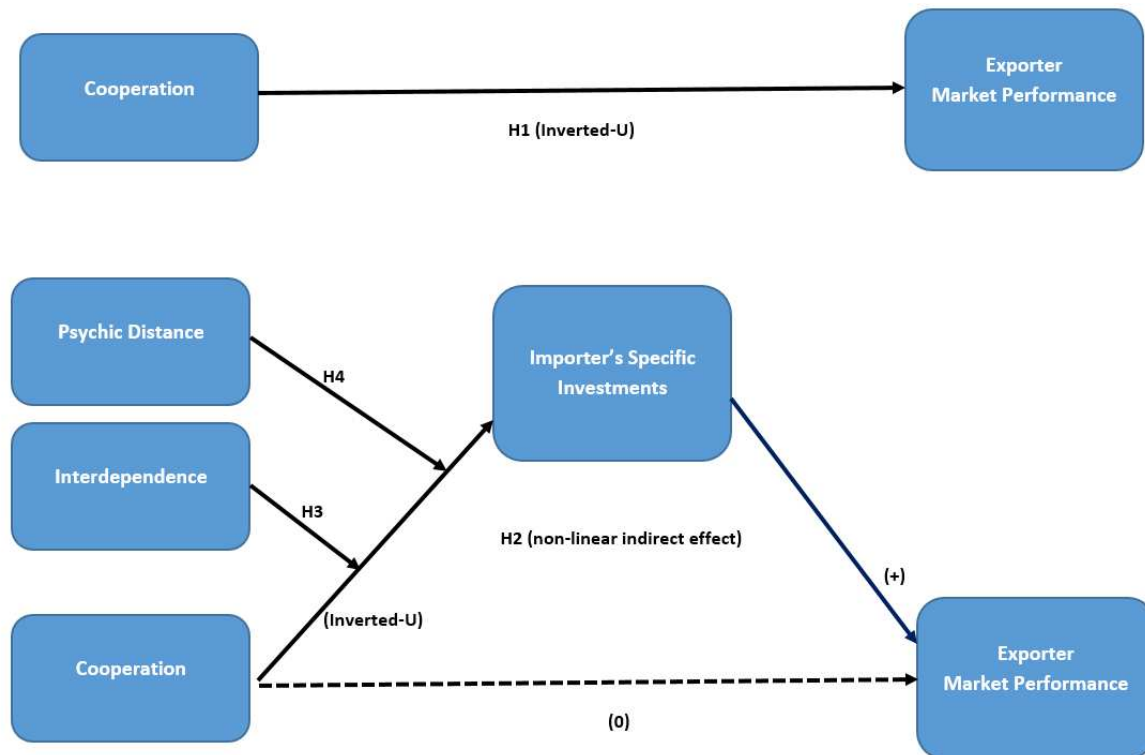
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Figure 1 Conceptual model of the nonlinear effect of cooperation on performance



CONTROL VARIABLES: Trust, Exporter Market Performance (T1), Psychic Distance, Duration of Relationship, GDP Growth in Foreign Market (T2)

Figure 2 Johnson-Neyman plot for the simple slope of cooperation on importer's specific investments across values of interdependence when cooperation is fixed at -1 standard deviation

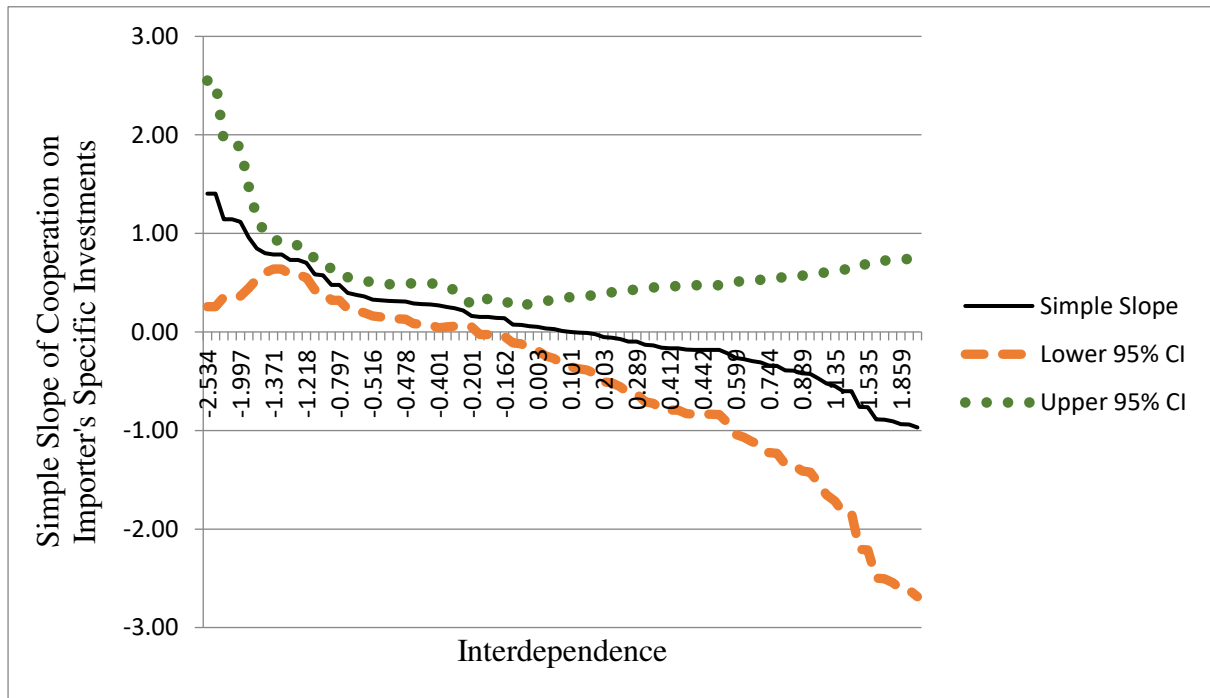


TABLE 1 Measurement characteristics

Instrument Properties and Items (<i>all items were measured with seven-point Likert scales or semantic differential scales [anchors are stated]</i>)	
Latent Reflective Instruments	Loadings
Cooperation, $\rho_{vc} = 0.81$, $\rho_f = 0.93$	
<i>In this business relationship, it is expected that...</i> (“very inaccurate description/very accurate description of this relationship”)	
No matter who is at fault, problems are joint responsibilities.	0.88
Both sides are willing to make cooperative changes.	0.88
Both firms must work together to be successful.	0.94
Exporter Market Performance (T2), $\rho_{vc} = 0.88$, $\rho_f = 0.96$	
<i>In the business relationship with this importer,</i>	
Our sales goals were attained.	0.95
Our market share goals were attained.	0.91
Our growth goals were attained.	0.95
Importer’s Specific Investments (T2), $\rho_{vc} = 0.59$, $\rho_f = 0.81$	
This importer has invested a great deal in building up the business with us.	0.79
This importer has made a substantial investment in order to market our product lines.	0.89
It would be difficult for this importer to recoup its investment in us if they switched to another supplier in this product line.	0.60
Interdependence, $\rho_{vc} = 0.74$, $\rho_f = 0.89$	
Interdependence _n = Exporter Dependence _n + Importer Dependence _n	
Interdependence values are determined by adding parallel items regarding the perceived exporter dependence on the importer and the importer dependence on the exporter.	
Interdependence ₁	0.85
Interdependence ₂	0.85
Interdependence ₃	0.88
Exporter Dependence	
1. If our relationship ended, we would have difficulty replacing the income this importer provides.	

2. We are very dependent on this importer.
3. It would be difficult for our firm to replace the sales and profits this importer generates.

Importer Dependence

1. If our relationship ended, this importer would have difficulty replacing the income they generate from our product line.
2. This importer is very dependent on us.
3. It would be difficult for this importer to replace the sales and profits generated by selling our product line.

Exporter Market Performance (T1), $\rho_{vc} = 0.79$, $\rho_f = 0.92$

In the business relationship with this importer,

Our sales goals were attained.	0.90
Our market share goals were attained.	0.84
Our growth goals were attained.	0.89

Trust, $\rho_{vc} = 0.75$, $\rho_f = 0.94$

This distributor has high integrity.	0.85
This distributor is perfectly honest and trustful.	0.78
This distributor can be trusted completely.	0.92
This distributor cannot be trusted at times. (R)	0.85
This distributor can be counted on to do what is right.	0.91

Latent Formative Instrument	Coefficient (<i>t</i> -value)
Psychic Distance, Collinearity Statistics, $1.24 \leq VIF \leq 1.85$ $1 \leq \text{Condition Index} \leq 8.70$ <i>To what extent are the following aspects of the market where your importer operates a problem for your company? ("no problem at all/a major problem")</i>	
Language	Nonsignificant
Behaviors of the people	0.38 (3.00)
Way of thinking of the people	0.39 (2.62)
How business is organized	0.31 (2.05)
Personal relationships	0.20 (1.67)
Environment, economic, political, and legal	Nonsignificant

Note: (R) = reverse-scored item.

TABLE 2 Correlations between variables and the heterotrait-monotrait (HTMT) ratio

		Mean	SD	1	2	3	4	5	6	7	8	9	10
1	Cooperation	5.84	1.18	0.81	<i>0.59</i>	<i>0.11</i>	<i>0.44</i>	<i>0.33</i>	<i>0.31</i>	-	-	<i>0.59</i>	-
2	Cooperation ²	1	1.49	-0.56	1	<i>0.20</i>	<i>0.41</i>	<i>0.32</i>	<i>0.21</i>	-	-	<i>0.36</i>	-
3	Exporter Performance (T2)	4.15	1.66	0.10	-0.20	0.88	<i>0.74</i>	<i>0.39</i>	<i>0.33</i>	-	-	<i>0.25</i>	-
4	Importer's Specific Investments	4.10	1.74	0.35	-0.34	0.60	0.59	<i>0.56</i>	<i>0.34</i>	-	-	<i>0.39</i>	-
5	Interdependence	8.76	2.77	0.28	-0.28	0.35	.43	0.74	<i>0.46</i>	-	-	<i>0.44</i>	-
6	Exporter Performance (T1)	4.63	1.64	0.29	-0.20	0.30	0.28	0.37	0.79	-	-	<i>0.46</i>	-
7	Import Country Growth	4.19	2.17	0.10	-0.05	-0.04	-0.09	-0.02	-0.07	1	-	-	-
8	Psychic Distance	2.41	1.72	-0.05	-0.08	-0.25	-0.07	-0.01	-0.19	0.51	1	-	-
9	Trust	5.51	1.32	0.53	-0.35	0.25	0.32	0.40	0.42	-0.24	-0.31	0.75	-
10	Relationship Duration	8.6	5.15	-0.12	-0.05	-0.08	0.00	0.19	-0.04	-0.19	-0.15	0.14	1

Notes: $n = 122$, correlation significant if $|r| \geq 0.15$. On the diagonal, ρ_{vc} (average variance extracted) in bold is for reflective constructs. Over the diagonal, the HTMT ratio in italics assesses reflective constructs' discriminant validity. Mean and standard deviation are calculated with summated index for reflective and formative constructs. Cooperation² data correspond to PLS score.

TABLE 3 Results of the PLS analyses

	Coefficients (<i>p</i> -values ^a , <i>f</i> ²)			
	Direct Model	Mediated Model	Moderated Model 1	Moderated Model 2
Cooperation ² → Exporter Performance T2	-0.24 (0.017, 0.05)	-0.10 (0.155, 0.02)	-0.10 (0.155, 0.02)	-0.10 (0.156, 0.02)
Cooperation → Exporter Performance T2	-0.23 (0.059, 0.03)	-0.34 (0.002, 0.11)	-0.34 (0.003, 0.11)	-0.34 (0.002, 0.10)
Cooperation ² → Importer's Specific Investments T2		-0.21 (0.066, 0.04)	0.02 (0.439, 0.00)	-0.22 (0.100, 0.04)
Cooperation → Importer's Specific Investments T2		0.23 (0.025, 0.04)	0.10 (0.207, 0.01)	0.22 (0.031, 0.04)
Importer's Specific Investments T2 → Exporter Performance T2		0.62 (0.000, 0.62)	0.61 (0.000, 0.60)	0.62 (0.000, 0.63)
Cooperation ² x Interdependence → Importer's Specific Investments T2			0.24 (0.103, 0.03)	
Cooperation x Interdependence → Importer's Specific Investments T2			-0.04 (0.369, 0.00)	
Interdependence → Importer's Specific Investments T2			0.41 (0.000, 0.18)	
Cooperation ² x Psychic Distance → Importer's Specific Investments T2				-0.00 (0.495, 0.00)
Cooperation x Psychic Distance → Importer's Specific Investments T2				-0.04 (0.391, 0.00)
Psychic Distance → Importer's Specific Investments T2				-0.08 (0.351, 0.01)
Control				
Trust → Exporter Performance T2	0.17 (0.118, 0.02)	0.12 (0.146, 0.01)	0.12 (0.142, 0.02)	0.12 (0.151, 0.02)
Export Performance T1 → Exporter Performance T2	0.19 (0.095, 0.04)	0.09 (0.183, 0.01)	0.09 (0.175, 0.01)	0.09 (0.184, 0.01)
Psychic Distance → Exporter Performance T2	-0.29 (0.023, 0.07)	-0.31 (0.009, 0.13)	-0.31 (0.009, 0.13)	-0.31 (0.006, 0.13)
Duration → Exporter Performance T2	-0.15 (0.082, 0.05)	-0.15 (0.028, 0.04)	-0.15 (0.028, 0.04)	-0.15 (0.029, 0.04)
GDP Growth → Exporter Performance T2	0.14 (0.062, 0.02)	0.21 (0.006, 0.06)	0.21 (0.008, 0.06)	0.21 (0.007, 0.06)
R²				
Exporter Market Performance T2	0.21	0.51	0.50	0.51
Importer's Specific Investments T2		0.15	0.29	0.16

^aSignificant if $p \leq .05$; 122 observations, 5000 bootstraps.

TABLE 4 Summary of the results

Hypothesis 1	Supported	Cooperation has a nonlinear (inverted U-shaped) influence on exporter market performance. At low levels, cooperation has a positive influence on performance. However, at higher levels, the effect of cooperation fades and even turns negative.
Hypothesis 2	Supported	The nonlinear effect of cooperation on performance is indirect via importer's specific investments. At lower levels, cooperation has a positive indirect effect on performance. However, at higher levels, the effect of cooperation fades. Importer's specific investments fully mediate the effect of cooperation on performance.
Hypothesis 3	Supported	The level of interdependence moderates the inverted U-shaped relationship between cooperation and importer's specific investments. A limited increase of interdependence increases the effect of low to moderate levels of cooperation on importer specific investments.
Hypothesis 4	Not supported	The level of psychic distance does not affect the inverted U-shaped relationship between cooperation and importer's specific investments.