INTERNATIONALIZING THE COOPETITION CONSTRUCT: QUADRATIC EFFECTS ON FINANCIAL PERFORMANCE UNDER DIFFERENT DEGREES OF EXPORT INTENSITY AND AN EXPORT GEOGRAPHICAL SCOPE

ABSTRACT

Although coopetition (simultaneous cooperation and competition) is likely to enhance financial performance if effectively managed, earlier investigations have overlooked the complexities of this relationship. Most notably, understanding the impact of moderating factors can help unpack the complexity of the association between coopetition and performance. Therefore, grounded in resource-based theory and the relational view, this current study focuses on the quadratic relationship between coopetition and financial performance under different degrees of export intensity and an export geographical scope. Using survey responses from 101 wine producers in New Zealand, the empirical results showed that coopetition has a non-linear (inverted U-shaped) relationship with financial performance. Furthermore, export intensity and an export geographical scope positively moderate this quadratic association. As such, **for** under-resourced firms **with overseas market potential**, decision-makers should consider the merits of combining the benefits of coopetition with those from an internationalized business model. This **can** help them to navigate these potentially paradoxical forces, assuming they engage with trustworthy and complementary rivals in coopetition partnerships.

KEYWORDS

Coopetition, internationalization, financial performance, resource-based theory, relational view.

INTRODUCTION

Coopetition is a “paradoxical relationship between two or more actors, regardless of whether they are involved in horizontal or vertical relationships, simultaneously in cooperative and competitive interactions” (Bengtsson and Kock 2014, p. 180). Since coopetition strategies are intended to equip **under-resourced** companies with new tangible and intangible assets, as well as different opportunities, it is not surprising that a volume of research has been published on the positive relationship between these activities (**alternatively**, similar notions, like inter-firm cooperation **or** alliances) and various measures of company performance (see Rindfleisch and Moorman 2003; Ritala 2012; Le Roy and Czakon 2016; Estrada and Dong 2020).

The relationship between coopetition and financial performance has **sometimes** been conceptualized (and evaluated) in **rather** simplistic terms, such as being linear and lacking moderating factors as part of investigations **leading to calls for further research** (see Shu et al., 2017; Crick, 2019; Czakon et al. 2020). This is important because it is currently unclear how **decision-makers** can best-navigate the interplay between cooperation and competition, so that **they** can collaborate with their rivals to enhance their performance, but not to the extent that these inter-firm partnerships become counter-productive. Consequently, there is a need for work to be undertaken in the area of exploring the complexities of this relationship to assist companies to effectively manage these paradoxical forces that surround coopetition **activities** (see Park et al. 2014; Mattsson and Tidstrom 2015).

Table 1 summarizes key earlier studies regarding how certain internationalizing firms cooperate with their competitors to enhance performance within their **overseas** markets. **This current study focuses on coopetition practices among small, under-resourced exporting firms in comparison to other researchers that have examined how businesses participating in formal alliances together with multinational corporations engage in these strategies to create value for their customers, develop efficient and effective supply chains, and expand their product lines** (Luo 2004; Luo and Tung

2007; Bello et al. 2010; Crick and Crick 2020). Much of the earlier coopetition research has focused on domestic arenas which is a somewhat limited perspective, since the decision to internationalize is a fundamental consideration for many owner-managers as it can expand the size of their market despite strategies often being resource intensive (Lu and Beamish 2001; Nemkova et al. 2015; Crick and Crick 2016; Ahi et al. 2017; Yang and Gabrielson 2018; Hagen et al. 2019). In fact, it is widely recognized that internationalized firms behave differently to those competing in predominately domestic markets, like having to adapt their offerings to varied cultures, languages, and traditions (Calof and Beamish 1995; Hitt et al. 2006; Cadogan et al. 2012). Prior experiences may result in decision-makers not following a forward moving internationalization path and instead entering and exiting overseas markets (Crick et al. 2020) or amending modes of market entry (Elia et al. 2019). However, if managed effectively, the mutual benefits of sharing resources/capabilities potentially reduce costs and the level of rivalry between firms in a coopetition relationship (Felzensztein et al. 2014; 2019).

[Insert Table 1 about here]

Thus, grounded in two complementary perspectives, namely, resource-based theory and the relational view (Lavie 2006; Barney 2018; Dyer et al. 2018), the objective of this current investigation is to evaluate the quadratic relationship between coopetition and financial performance under different degrees of export intensity and an export geographical scope. By achieving this research objective, two contributions are made to enhance the international marketing literature.

First, the underlying mechanisms of the coopetition-performance relationship are examined through the potential for quadratic and moderating effects (responding to Shu et al. 2017; Hoffmann et al. 2018; Czakon et al. 2020). These complexities are designed to challenge certain earlier assumptions pertaining to coopetition having a linear (positive) link with financial performance (Bengtsson and Kock 2000; Ritala 2012; Hannah and Eisenhardt 2018).

Second, new insights emerge on how organizations can combine the benefits of collaborating with their competitors with those from an internationalized business model (measured via export intensity and an export geographical scope) to illustrate how these companies can manage the interplay between cooperation and competition across overseas markets (following Chetty and Wilson 2003; Luo 2007; Ryan et al. 2019).

To make these **two** contributions, this article is divided as follows. First, the underpinning theories are **outlined** to develop the components of the conceptual framework. Second, the adopted methodology is described **involving** collecting survey responses from 101 wine producers in New Zealand. Third, the key results reveal that coopetition has a quadratic link with financial performance, but is positively moderated by export intensity and an export geographical scope. Fourth, these results are discussed in relation to the existing international marketing literature. Fifth, the paper ends with some actionable practitioner implications and recommendations, as well as several limitations and avenues for future research.

THEORY AND HYPOTHESES

Facets of Resource-Based Theory

Resource-based **theory** focuses on the **relationship** between organizational **resources/capabilities** and company performance (**Barney 1991**; Hunt and Morgan 1995; Nason and Wiklund 2018).

Barney (1991) noted that the value, rarity, inimitability, and non-substitutability (VRIN) framework can be utilized to assess the extent to which firms' tangible and intangible assets lead to sustainable competitive advantages. **A** sustainable competitive advantage is where businesses have outperformed their competitors over an extended period of time, while managing the volatility of their markets (Oliver 1997). In this current study, financial performance served as the outcome variable (following Vorhies and Morgan 2005; Morgan et al. 2009) to investigate the benefits and drawbacks of collaborating with competitors in an international arena.

This theoretical lens has largely focused on inside-the-firm issues, namely, how leveraging organizational resources and capabilities can boost performance (Barney 1991; Hunt and Morgan 1995). Recognition nonetheless exists that environmental-level contingencies can affect company performance (see Barney 2001; Priem and Butler 2001; Cadogan et al. 2009; Schilke 2014). In the context of coopetition, resource-based theory to some extent helps explain the mutual benefits that organizations obtain by collaborating rather than competing with their industry rivals to reduce competitive rivalry and overcome these resource-disadvantages (see, for example, Felzensztein and Deans 2013; Ritala et al. 2014; Bouncken et al. 2015; Bengtsson et al. 2016; Gnyawali and Charleton 2018). To illustrate, many firms are under-resourced, in terms of lacking funds for promotions, vital equipment, tools, information, and skilled employees that allow them to innovate and deliver value to their customers. It follows that relational factors are often highly-important in cooperative interactions between two or more organizations (Hunt and Derozier 2004); hence, Barney (2018) recommended that resource-based theory should account for a stakeholder perspective. By integrating resource-based theory with the relational view (see Dyer and Singh 1998; Lavie 2006; Dyer et al. 2018), researchers can explore how businesses have the potential to combine their own assets with those from their coopetition partners. At the same time, appreciating that decision-makers must carefully manage the coopetition paradox to minimize the possibility of there being conflict, power imbalances, and opportunistic behaviors (following Raza-Ullah et al. 2014; Tidstrom 2014).

To emphasize, the notion of being ‘under-resourced’ does not just apply to smaller-sized firms (as per Rusko 2011; Felzensztein et al. 2018; Granata et al. 2018), but has implications for larger corporations outside of the scope of this current study that cooperate with certain rivals due to lacking key assets (Luo 2004; Gnyawali and Park 2011; Crick and Crick 2020). An example of large-scale coopetition is prominent within the airline sector, which includes various strategic alliances (like Star Alliance and Sky Team). These are comprised of rival carriers that collaborate

in some areas, like offering **the benefits of frequent flyer** membership schemes, but compete in other ways, not least of which being financially responsible for their own profits (Lazzarini 2007).

Conceptual Framework

Grounded in the two previously-described theoretical lenses (Lavie 2006; **Barney 2018**; Dyer et al. 2018), this current study's conceptual framework (Figure 1) included three research hypotheses and three main control paths (**endnote 1**). First, it was expected that coopetition has a quadratic relationship with financial performance (Luo et al. 2007; Crick and Crick 2021). Second, export intensity and an export geographical scope were anticipated to positively moderate this non-linear (inverted U-shaped) association (Chetty and Wilson 2003; Felzensztein et al. 2019). Third, the outcome variable (namely, financial performance) was controlled for firm size, firm age, and competitive intensity, as additional factors that might explain its variance (Vorhies et al. 2011; Leonidou et al. 2013; Crick et al. 2020). Fourth, several procedural control variables were modelled to test these complex paths, namely, the non-linear (inverted U-shaped) and interaction effects (Cadogan et al. 2009).

[Insert Figure 1 about here]

The Quadratic Association between Coopetition and Financial Performance

Decision-makers engage in coopetition to equip **their firms** with new assets (**resources/capabilities**) and opportunities that they could not obtain if they were to operate under an individualistic business model (Rusko 2011; Ritala 2012). For example, guided by an infusion of resource-based theory and the relational view, Crick and Crick (2020) provided **illustrations regarding** how various organizations (from **different** sectors and countries) have been implementing coopetition strategies in response to the COVID-19 pandemic. They argued that due to the economic and health-related shocks that this novel Coronavirus has caused, various firms (small and large) have found that it is beneficial to work with their rivals to access vital equipment and information, as well as sharing certain risks **and** costs that might be the difference between surviving and failing within these

volatile circumstances. Although motives for engaging in coopetition activities vary, the underlying issue is to obtain mutually beneficial outcomes in comparison to employing an individualistic business model (linking with Bengtsson and Kock 2014; Hannah and Eisenhardt 2018; Felzensztein et al. 2019). Nonetheless, the management of coopetition relationships is likely to be complex, in terms of there being competitive forces that might limit the performance outcomes of these inter-firm partnerships (Park et al. 2014; Mattsson and Tidstrom 2015).

Consequently, particular studies indicate that it can be potentially dangerous for decision-makers to engage in “too little” or “too much” coopetition (see Luo et al. 2007; Crick 2019). For instance, “cooperation with competitors needs to be carefully considered and judiciously executed because an over-reliance on highly-intensive competitor alliances may be just as harmful as under-using such alliances. Excessive cooperation [with rivals] may lead to free-riding and opportunistic exploitation, a potential loss of proprietary, technological, and marketing capabilities, and a possible dulling of a firm’s incentives to stay customer-focused” (Luo et al. 2007, p. 81). With “too little” coopetition, decision-makers may experience difficulties operating within their markets, since resource constraints might prevent them from creating value for their customers (Gnyawali and Charleton 2018). Even so, engaging in “excessive” coopetition could result in several problematic side-effects, like experiencing tensions (conflict, power imbalances, and opportunistic behaviors), losing critical intellectual property, and having their points-of-difference diluted (Ritala and Hurmelinna-Laukkanen 2013; Tidstrom 2014; Crick and Crick 2021). It follows that the coopetition paradox is a somewhat fragile notion, whereby, it is often difficult for companies to judge how to best-navigate these activities (Czakoń and Czernek 2016; Hoffmann et al. 2018; Czakoń et al. 2020). Consequently, it is likely that:

H1: A quadratic relationship exists between coopetition and financial performance.

The Moderating Role of Export Intensity

In an international context, the export intensity (or ratio) refers to the extent to which organizations export their products overseas (Cadogan et al. 2009). There have been various investigations that have highlighted the benefits of exporting, as opposed to concentrating on domestic markets. These advantages include developing a first-mover status and having access to new opportunities, like a larger portfolio of customers and supply chain network members (see Bell et al. 1998; McDougall and Oviatt 2000; Knight and Cavusgil 2004; Kuivalainen et al. 2007; Hagen et al. 2019). In fact, some domestic markets are very small, meaning that if firms do not export, they limit their scalability due to only being able to reach a finite number of customers (Ojala and Tyrvainen 2007; Crick and Crick 2016; Kahiya 2020). Exporting can help decision-makers to achieve their short-term and long-term goals, including yielding higher-levels of sales and lowering their operating costs, leading to increased profits (Cavusgil and Zou 1994; Spence and Crick 2006; Sousa et al. 2010). Hence, through exporting (including working with network partners like investors and government support providers plus intermediaries such as agents and distributors), firms can improve their performance (Katsikeas et al. 2000; Spence and Crick 2001; Leonidou et al. 2002; Crick et al. 2020; Sraha et al. 2021).

Turning to coopetition, resource-based theory and the relational view highlight that it is important to manage high-quality inter-firm partnerships, so that resources and capabilities can be effectively leveraged, alongside fostering professional and amicable networks (Lavie 2006; Dyer et al. 2018). If firms are competing for predominately domestic markets, it may be challenging to manage the coopetition paradox (Felzensztein et al. 2019; Crick and Crick 2021). As an illustration, if firms sell their products to domestic establishments (such as restaurants, hotels, and bars), there is likely to be a limited number of customers. This domestically-focused strategy might amplify the competitiveness that underpins coopetition activities – potentially out-weighting the degree of collaboration. However, by internationalizing (via higher-levels of export intensity), firms can

increase their presence in certain **overseas** countries, which might reduce the degree of rivalry that would exist if they were to compete mostly on a domestic basis (building upon Kock et al. 2010). Put another way, these new opportunities can overcome some of the challenges of coopetition strategies, not least of which lessening the risk of inter-firm tensions (extending Luo et al. 2007; Raza-Ullah et al. 2014). Consequently, it is expected that:

H₂: Export intensity positively moderates the quadratic relationship between coopetition and financial performance.

The Moderating Role of an Export Geographical Scope

Different ways exist to measure respective firms' degree of internationalization (Crick and Crick 2014). In addition to export intensity, an export geographical scope is a different metric that describes the degree to which companies take a concentrated versus spreading (diversified) approach to their exporting practices; **this** would likely be assessed through the number of countries that firms export their products to (Piercy 1981; Tallman and Li 1996). Export intensity and an export geographical scope do not always go hand-in-hand. As an example, a business might export almost all of its products overseas (a very high export ratio), but only focus on one **or a small number of** international markets, perhaps due to it (**or them**) being culturally and/or economically-similar (**Piercy 1981**; Katsikeas and Leonidou 1996). Moreover, there has been a long-lasting debate among international marketing scholars about whether it is preferable to concentrate on a single (or a few) export market(s), or diversify (spread) to numerous countries (see Leonidou and Katsikeas 1996; D'Angelo et al. 2013). Each of these strategies has various benefits and drawbacks, like there being a huge risk if one market fails, through to the difficulties in adapting to different cultures, regimes, economies, and languages (Piercy 1981; Piercy et al. 1998).

Following the latter perspective, by spreading to different export markets, firms can diversify their risk between these countries (Lu and Beamish 2004; Oliveira et al. 2018). Put another way, higher-levels of an export geographical scope can **potentially** assist organizations to avoid losing large

amounts of income (and reputational factors) if one of these countries becomes unprofitable due to an unforeseen political event, a geographic disaster, changing consumer preferences, higher taxes, or losing contracts with agents and distributors (Piercy 1981; Olmos and Diez-Vial 2015). Linking with coopetition, as already mentioned, firms might suffer if they restrict their operations to predominately domestic markets – due to having a finite number of customers (Ojala and Tyrvaenen 2007; Crick and Crick 2016). Yet, if companies increase their export geographical scope, it stands to reason that they may obtain more opportunities (via new customers and supply chains) that would not exist in these domestic arenas (Piercy 1981; Piercy et al. 1998). In doing so, by obtaining a larger presence overseas, this might reduce the degree of rivalry among domestic competitors (like those within a certain cluster) to reduce the harmful effects of coopetition, such as losing vital knowledge (expanding Ritala and Hurmelinna-Laukkanen 2013; Czakon and Czernek 2016; Bouncken et al. 2018). This could be another form of internationalization (other than export intensity) that stabilizes the risks of coopetition. Consequently:

H₃: Export geographical scope positively moderates the quadratic relationship between coopetition and financial performance.

Control Variables

The outcome variable (namely, financial performance) was controlled for firm size, firm age, and competitive intensity. First, larger businesses are more likely to out-perform smaller rivals due to possessing a greater volume of assets (Barney 1991; Hunt and Morgan 1995). Thus, firm size was modelled as a control variable. Second, there are various ways that organizations can succeed within their markets other than through their size and scale (Barney 2001; Nason and Wiklund 2018). As an illustration, older companies can potentially leverage their heritage and experience within their markets in ways that younger firms might struggle to achieve (Vorhies et al. 2011). Accordingly, firm age featured as a control path. Third, as mentioned earlier, the competitive business environment is a prominent issue within the chosen theoretical lenses, as certain market-

level forces can help or hinder company performance (see Priem and Butler 2001; Leonidou et al. 2013; Schilke 2014). For this reason, the outcome variable was controlled for competitive intensity. Fourth, several procedural controls were added to the model for statistical purposes – to evaluate the non-linear (inverted U-shaped) and interaction effects. The adopted methodology follows in the next section.

METHODS

Population of Interest

An ideal empirical context for coopetition-based research is a sector that is both highly-cooperative and highly-competitive (as **per** Bengtsson and Raza-Ullah 2016; Hannah and Eisenhardt 2018; Crick and Crick 2020). For instance, earlier coopetition-oriented work has been conducted in high-tech firms (Gnyawali and Park 2011), automotive manufacturers (Akpınar and Vincze 2016), tourism services (Czakon and Czernek 2016), agricultural growers (Felzensztein and Deans 2013), and alcohol producers (Mathias et al. 2018). **A**uthors have typically selected one industry (in one country) to assess the propensity of coopetition strategies (see Rusko 2011; Ryan et al. 2019). In this current study, the New Zealand wine industry featured as the empirical context, as it hosts these collaborative and rivalrous forces (Felzensztein et al. 2014) (**endnote 2**).

In fact, wine producers (around the world) are well-known for engaging in several forms of coopetition, such as informal resource and capability-sharing activities, as well as engaging in alliances through contractually-binding agreements (Felzensztein et al. 2014; Granata et al. 2018). Moreover, wine producers are typically involved in varying degrees of internationalization, especially exporting, but including other **product-market strategies**, such as selling their produce to foreign customers in a wine tourism capacity (Crick and Crick 2015; Felzensztein et al. 2019). Although wine is a consumer good, **producers** are typically involved in **augmented operations** like cafes, restaurants, gift shops, etc., in addition to core wine sales that may be via distributors in business-to-business relationships (Crick and Crick 2015). Yet, due to the international themes of

this current investigation, the research team focused on the core products sold, namely, bottled wine. Later, some profiling variables are presented to show how the final sample was comprised of wine producers located throughout the country context of this study, that were involved in different degrees of coopetition and internationalization.

Data Collection

The research team accessed a sampling frame of 726 New Zealand wine producers with their contact details (endnote 3). The New Zealand wine industry (as well as its equivalent in certain other countries) is comprised of mostly smaller-sized businesses (Crick and Crick 2015; Granata et al. 2018). Coopetition is normally studied from the perspective of owner-managers, as these individuals typically possess the authority to decide on the magnitude of their coopetition activities (following Felzensztein and Deans 2013; Bengtsson and Raza-Ullah 2016). Therefore, owner-managers served as the key informants.

The research team developed an electronic survey (through Qualtrics) that contained operationalizations of the key constructs. This survey was pre-tested with expert academics ($n = 10$) and practitioners ($n = 15$) to check that the questions were formatted in a clear and understandable manner (Reynolds and Diamantopoulos 1998). In the latter case, when discussing the survey with practitioners (decision-makers within the New Zealand wine sector **ranged from those in the sector's governing body through to former owner-managers**), the core focus was to ensure that the operationalizations were correctly adapted to the chosen population of interest (Hulland et al. 2018). For instance, as presented later, the selected measurement scale for the coopetition construct was originally used in the context of technologically-oriented firms in Germany (see Bouncken and Kraus 2013; Bouncken et al. 2018). Due to various industry-level and national-level factors, it was anticipated that there may have been differences between this setting and the New Zealand wine industry. Hence, care was taken to assess the appropriateness of these measurement scales to reduce the prospects of them being misunderstood by the key informants when the survey was

administered (following Katsikeas et al. 2006). This extended to clarifying that the core international-level variables (export intensity and an export geographical scope) were relevant to these organizations, whereby no such problems were encountered.

Since the pre-testing stage did not reveal any concerns, the pilot study was launched ($n = 20$).

During the pilot study (sent to actual owner-managers that work in New Zealand wine producers via a random sample), the descriptive statistics of the measurement items were checked, alongside gauging the likely response rate (Hunt et al. 1982). No changes were made to the survey and subsequently, the data for the core study were collected ($n = 81$). Owing to the fact that the operationalizations for the pilot study were the same as those utilized within the core study, these two datasets were combined (as per Morgan and Hunt 1994). For clarity, this sample did not include the data from the pre-testing stage, but rather, was comprised of responses from owner-managers across the New Zealand wine industry (20 plus 81). The final sample ($n = 101$) accounted for a 13.91% response rate, which was deemed acceptable based on similar values reported within the international marketing literature (Theodosiou and Katsikea 2013; Nemkova et al. 2015). Moreover, the statistical data were checked for non-response bias by conducting *t*-tests for each latent variable, displaying non-significant differences (following Armstrong and Overton 1977) (endnote 4). As described later, several procedural and statistical assessments were used to ensure that the final sample size was sufficient to test the research hypotheses and control paths.

Various wine producers took part in this investigation, including different numbers of employees, their export activities, years in the market, and annual sales. Survey responses were collected from across New Zealand, including the well-known wine regions, like Marlborough, Hawkes Bay, and Central Otago, through to smaller areas, such as the Wairarapa, Gisborne, and the Bay of Plenty. This meant that the statistical results were based on a national-level study, rather than being exclusive to one part of the country. Appendix A displays some profiling information about the sampled organizations, in terms of their operations, locations, and the titles of the respondents.

Operationalizations

The constructs within the conceptual framework were operationalized as follows. First, coopetition (COOP) was measured on a seven-point Likert scale, with three items, ranging from: 1 = very strongly disagree to 7 = very strongly agree (adapted from Bouncken and Kraus 2013; Bouncken et al. 2018). Coopetition has been operationalized in various ways throughout the wider marketing literature. **This includes single-indicators, archival proxies, regression-based residual techniques, and multiplication tools (for example, Ritala 2012; Bengtsson et al. 2016; Shu et al. 2017).** The adopted scale captures the propensity of such activities, or the degree to which organizations collaborate with their competitors (recommended by Bengtsson and Raza-Ullah 2016). Second, performance can be measured in various capacities, since decision-makers have particular objectives, not necessarily involving sustainable competitive advantages, such as survival at times of a crisis (see Katsikeas et al. 2016; Crick and Crick, 2020). For instance, some **decision-makers** evaluate their performance using financial metrics (see Bolton 2004; Vorhies et al. 2011). Financial performance (PERF) was measured using a seven-point interval scale, with five items, ranging from: 1 = much worse than competitors to 7 = much better than competitors (adapted from Vorhies and Morgan 2005; Morgan et al. 2009). Third, export intensity (EXPORTS) was captured by using firms' export ratios (adapted from Cadogan et al. 2009).

Fourth, an export geographical scope (SCOPE) was measured via the number of export markets that these companies operate in (Tallman and Li 1996; Oliveira et al. 2018). Fifth, firm size (SIZE) was captured by using the total number of full-time and part-time employees (Peng and Luo 2000) **(endnote 5)**. Sixth, firm age (AGE) was operationalized via the number of years since the firms had been established (Vorhies et al. 2011). Seventh, competitive intensity (COMP) was captured on a seven-point Likert scale, with five items, ranging from: 1 = very strongly disagree to 7 = very strongly agree (adapted from Jaworski and Kohli 1993). Eighth, to test for endogeneity bias (as explained later), a measure for industry experience (INDS) was included within the survey as an

instrumental variable. This construct was measured by using a sliding ratio scale regarding the number of years that they have been working in the worldwide wine sector (Crick and Crick 2021). Ninth, an informant quality tool (INQ) was operationalized using a seven-point Likert scale, with three items, ranging from: 1 = very strongly disagree to 7 = very strongly agree (see Katsikeas et al. 2006; Hultman et al. 2009). The single-items were transformed through natural logarithms to lessen their variances (Henseler et al. 2016).

Data Analysis

The quantitative data were analyzed as follows. First, through SPSS 23, the characteristics of the sampled firms were examined (Churchill Jr. 1979). Second, using SPSS 23, an exploratory factor analysis was “run” through a principal components analysis extraction and a varimax rotation (Peterson 2000). The items for coopetition, financial performance, competitive intensity, and the informant quality scale loaded onto four factors (Table 2). The Kaiser-Meyer-Olkin (KMO) test of sampling adequacy (.81) and Bartlett’s test of sphericity ($\chi^2 = 1,329.60$; $df = 120$; Sig. = .00) produced acceptable results, explaining 80.16% of the overall variance.

[Insert Table 2 about here]

Third, via LISREL 9.30, the measurement model was undertaken to refine the operationalizations (Cadogan et al. 2009). Specifically, indicators were deemed to be of a poor-standard if they had low standardized factor loadings, high standardized error variances, non-significant *t*-values, and other problems pertaining to the modification indices (Steenkamp and Baumgartner 2000). While a relatively low sample size had been collected, this did not prevent LISREL 9.30 being used for the confirmatory factor analysis model (see Moorman 1995). Specifically, this software package was only employed for measurement development purposes, as opposed to testing the elements of the conceptual framework. As described later, a hierarchical regression analysis was used for the model-testing stage, which was more appropriate for the sample size (following Olson et al. 2005; Morgan et al. 2009; Oliveira et al. 2018). As displayed in Table 3, the final items were satisfactory

and the fit indices met the minimum thresholds ($\chi^2 = 85.06$; $df = 73$; $\chi^2/df = 1.17$; Sig. = .16; RMSEA = .04; CFI = .98; IFI = .98; NNFI = .97; GFI = .90; SRMR = .04).

[Insert Table 3 about here]

Fourth, using SPSS 23, the research hypotheses and control paths were evaluated via a three-step hierarchical regression analysis (Morgan et al. 2009). This technique was deemed to be appropriate, since there were various independent, moderators and control variables and one outcome variable (similar to Oliveira et al. 2018), as opposed to a chain model, which would have been suitably tested via structural equation modelling (as per Steenkamp and Baumgartner 2000). In terms of the quadratic and interaction effects, “residual-centering” was employed to lessen the odds of multicollinearity concerns (see Echambadi and Hess 2007). This included creating composite variables for the purified (final) multi-item measures (Ping Jr. 1995). Furthermore, the research team recorded the unstandardized regression coefficients (β), the t -values (and their significances), the model fit summaries and their step-level changes (Olson et al. 2005). The hypothesized and control paths were assessed during the last stage, as variables were “nested” within the analysis (following Cadogan et al. 2012).

Sample Size Checks

It is acknowledged that 101 observations is a relatively small sample size. Therefore, the following checks were undertaken to ensure that enough survey responses had been collected. First, smaller sample sizes have been presented in other work throughout the marketing literature. For instance, Moorman (1995) collected 92 usable responses to evaluate a more complex conceptual framework than the one presented during this current investigation. Second, as mentioned earlier, when conducting the exploratory factor analysis model, the KMO test of sampling adequacy (.81) was in excess of the minimum threshold. This symbolized that enough survey data had been collected in this aspect of the measurement development stage (Crick and Crick 2021). Third, using G*Power 3.1.9.2., an “a-priori” test was undertaken (Faul et al. 2009). Before the hierarchical regression

analysis, the research team anticipated that a large effect size should exist (.35), since the independent variables were expected to explain a considerable proportion of the variance of the outcome variable. The power (or error probability) was set at .95 ($\alpha = .05$), with predictors (representing the number of independent variables, including the various procedural controls). The results highlighted that 88 responses were needed to observe this effect size. Collectively, these tools confirmed that 101 cases formed a satisfactory sample size.

Reliability and Validity

Reliability was checked through the Cronbach's alpha coefficients (α) of the multi-item scales before and after they were purified (internal consistency) - all exceeding the minimum benchmark of .70 (Churchill Jr. 1979). Face validity was evaluated by pre-testing the survey with an expert panel of knowledgeable academics and practitioners, revealing no problems (Reynolds and Diamantopoulos 1998). Moreover, face validity was assessed by utilizing an informant quality tool (see Katsikeas et al. 2006; Hultman et al. 2009). Content validity was assured, since the measurement scales were sourced from the extant literature (Bottger et al. 2017). Convergent validity was present, as the final operationalizations yielded composite reliabilities that were in excess of .60 and average variance extracted values that were greater than .50 (Souchon et al. 2016). Discriminant validity was tested via comparing the squared phi matrix correlations (accessed from LISREL 9.30) against the average variance extracted values for each construct (Table 4). Since the largest squared phi matrix correlation (.32) was less than the lowest average variance extracted (.70), discriminant validity should be present (Fornell and Larcker 1981).

[Insert Table 4 about here]

Common Method Variance

There are various procedural and statistical tools available to address common method variance (Chang et al. 2010). Instrumentally, the electronic survey was designed to make it interactive, relatively short, and clear for the respondents to complete (Podsakoff et al. 2003; Hulland et al.

2018). More formally, using SPSS 23, the marker variable technique was employed as follows (following Durand and Jacqueminet 2015). First, a construct that was theoretically unrelated to the other latent variables within the conceptual framework was selected, namely, the informant quality tool (adapted from Katsikeas et al. 2006; Hultman et al. 2009). Second, a bivariate correlation matrix was created, containing all latent variables. Third, a partial correlation matrix was established, with the same constructs, with the marker variable as a control. Fourth, the difference between the bivariate and partial correlation matrices was averaged. Since the mean difference was very small ($r = .01$), it is unlikely that the quantitative data were biased by a common method factor (see Lindell and Whitney 2001). Moreover, the informant quality tool yielded a considerable variance (.90), permitting its use as the marker variable.

Endogeneity Bias

Endogeneity bias was treated via the following steps. First, the conceptual framework was refined to test the association between coopetition and financial performance. Second, an instrumental variable was selected, namely, industry experience (following Crick and Crick 2021), as a construct that is likely to be directly related to coopetition, but is indirectly related to financial performance. The reason being is that if decision-makers possess knowledge surrounding how to succeed within their markets, they can use it to engage in more effective (performance-enhancing) coopetition strategies (see Bouncken and Kraus 2013; Estrada and Dong 2020). Third, through LISREL 9.30, two structural models were “run” - one examining the link between coopetition and financial performance and another that included the instrumental variable (Souchon et al. 2016). Fourth, the change statistics were calculated. Since the $\Delta\chi^2$ (11.63), relative to the Δdf (4), was non-significant (less than the critical value of 13.28), the statistical data were unaffected by endogeneity bias (Sande and Ghosh 2018). The empirical results are presented as follows.

RESULTS

The bivariate correlations (and their descriptive statistics) showed the core linkages between the key constructs (Table 5). Turning to the hierarchical regression analysis (Table 6), the pertinent results were as follows. First, coopetition yielded a quadratic and significant relationship with financial performance. As such, H_1 was supported. Second, export intensity and an export geographical scope (respectively) positively and significantly moderated this non-linear (inverted U-shaped) association. Thus, support existed for H_2 and H_3 . These interaction effects are displayed in Appendix B – showing that these international-level factors influence the shape of the quadratic effect. Third, the main (non-procedural) control variables all produced significant effects. Yet, firm size was positive, whereas, firm age and competitive intensity were negative. Fourth, the independent variables explained 52% of the variance of the outcome variable (based on the adjusted R^2). In addition, the ΔR^2 , relative to the ΔF , were significant across all stages of the model. These statistical results are discussed, with some theoretical implications, in the following section.

[Insert Tables 5 and 6 about here]

DISCUSSION AND THEORETICAL IMPLICATIONS

Prior studies have recognized that by working with industry rivals, organizations can be equipped with new assets and opportunities that they could not access if they operated on the basis of their own assets (Rusko 2011; Bouncken and Kraus 2013; Crick and Crick 2020). **However**, a need **exists** to unpack the **coopetition-performance relationship** by accounting for the **potential** non-linear (inverted U-shaped) and moderating factors that might be at play (**see** Hoffmann et al. 2018; Czakon et al. 2020). Consequently, grounded in resource-based theory and the relational view (Lavie 2006; **Barney** 2018), this **current study** examined the quadratic relationship between coopetition and financial performance under the moderating roles of export intensity and an export geographical scope. **The** following key findings arise to enhance the **earlier** literature.

First, coopetition yielded a quadratic relationship with financial performance. This result signifies that if internationalizing firms engage in “too little” or “too much” coopetition, there can be harmful effects on their performance (reinforcing Luo et al. 2007; Crick and Crick 2021). In other words, firms risk having their resource-disadvantages exposed, so that they struggle to create value for their customers, through to sharing excessive volumes of information, knowledge, or equipment with rivals that deplete their resources and capabilities (Park et al. 2014; Gnyawali and Charleton 2018). Indeed, this quadratic relationship highlights that if firms behave in a cavalier manner in their coopetition strategies, they could experience negative outcomes that decrease their financial performance, such as tensions, losing knowledge, and having a diminished ability to develop a sustainable competitive advantage (Ritala and Hurmelinna-Laukkanen 2013; Tidstrom 2014; Czakon and Czernek 2016). Consequently, although coopetition can lead to various positive outcomes, decision-makers must be very careful when navigating these paradoxical forces (as per Raza-Ullah et al. 2014; Mattsson and Tidstrom 2015; Bengtsson et al. 2016).

Second, export intensity and an export geographical scope both positively moderated the non-linear (inverted U-shaped) link between coopetition and financial performance. These international-level variables offer new insights regarding how firms can adapt their business models to maximize the value of their coopetition strategies. Starting with export intensity, this result highlights that if companies increase their activity in their export markets (focusing their resources and capabilities away from customers within their home country), there is potential to mitigate some of the dangers that coopetition might lead to. That is, if firms operate predominately on a domestic-level, there are finite performance outcomes, not least of which due to having a limited number of customers that can be reached (Ojala and Tyrvainen 2007; Crick and Crick 2016). By internationalizing, organizations can experience a range of performance-enhancing opportunities that a domestically-oriented business model would not allow them to achieve (McDougall and Oviatt 2000; Knight and Cavusgil 2004; Kuivalainen et al. 2007; Sousa et al. 2010; Nemkova et al. 2015). Likewise, higher-

degrees of exporting suggest that companies can cooperate with their competitors and decrease the underlying potential for domestic-level inter-firm rivalry, since they are competing for a larger volume of customers overseas (building upon Kock et al. 2010; Felzensztein and Deans 2013; Vanyushyn et al. 2018).

Following this point, an export geographical scope was another international-level variable that positively impacted the performance outcomes of coopetition. This issue was conceptualized with slightly more hesitation than export intensity. The reason being was that there has been a long-lasting debate among the international marketing community about the advantages and disadvantages of a concentrated versus spreading exporting strategy (see Piercy 1981; Leonidou and Katsikeas 1996; Piercy et al. 1998; D'Angelo et al. 2013). Indeed, it has been established that there are many variables that should influence owner-managers' decisions to export to one (or a few), vis-à-vis, diversified export markets (see Piercy 1981; Olmos and Diez-Vial 2015). In this current study, the positive interaction effect from an export geographical scope could potentially be explained by the view that as organizations export to more countries, they can market their products to new customers and access other benefits, like improved supply chain networks (Olivera et al. 2018). Regarding coopetition, the interviews at the pre-testing stage indicated that a diversified exporting strategy helps firms to avoid some of the undesirable side-effects of these activities by reducing the rivalrous behaviors that could exist on a domestic basis. That is, assuming trustworthy relationships are developed across complementary product-market strategies. As such, this is another internationalization consideration that can help stabilize the coopetition paradox if managed effectively (building upon Park et al. 2014; Mattsson and Tidstrom 2015; Bengtsson et al. 2016).

Third, the main control variables produced significant results, but explained a limited proportion of the variance of financial performance. Consequently, there is more theoretical value from discussing the results from the hypothesized paths and their contributions to the international marketing literature. Fourth, as a final area of discussion, the underpinning theories were important

when unpacking the complexities of the coopetition – financial performance relationship. Put simply, while the resource-based view helps to explain how sharing resources and capabilities with competitors can impact their performance (Gnyawali and Charleton 2018; Hannah and Eisenhardt 2018), it overlooks the relational factors that are meaningful in coopetition strategies (Hunt and Derozier 2004; Barney 2018). Hence, by infusing resource-based theory with the relational view (Lavie 2006; Crick and Crick 2021), stronger insights emerge on the dynamics and performance consequences of coopetition. This included how these international-level variables (namely, export intensity and an export geographical scope) could impact the quadratic effects that might otherwise occur in respect of performance. Some actionable practitioner implications and recommendations are offered as follows.

PRACTITIONER IMPLICATIONS AND RECOMMENDATIONS

The following implications and recommendations are offered for management teams. First, while coopetition may help businesses (small and large) to be more successful, there are potential limitations to these inter-firm partnerships. Specifically:

- With “too little” coopetition, there is a chance that companies might be constrained by the under-resourced nature of their assets (resources and capabilities). This means that decision-makers might struggle to create value for their customers if they attempt to develop and execute their strategies without the assistance of certain competitors.
- With “too much” coopetition, there can be several negative outcomes, like inter-firm tensions, lost knowledge, and weakened competitive advantages. This can be just as harmful as operating under an individualistic business model.
- Decision-makers must always remember that when engaging in coopetition activities, cooperation will exist alongside a certain degree of competitiveness. This can be challenging to anticipate, so it is vital that organizations can exit their coopetition arrangements if they become damaging to their financial performance.

Second, despite these risks associated with coopetition, there are certain factors that firms can harness to mitigate the chances of their financial performance suffering when they collaborate with competitors. In practice, these strategy-level mechanisms surround combining the advantages of internationalization with those from coopetition **for those firms with overseas market potential**.

These are explained as follows:

- By concentrating on domestic markets, firms are more likely to experience the negative outcomes of coopetition activities, since their rivals might behave more aggressively due to fighting for a small number of (finite) customers. This **is** especially relevant in regional clusters where supply might out-weigh demand unless firms compete for different customers like via particular varieties of wine in this current study.
- Through higher-levels of exporting (measured via an export ratio), companies can attempt to secure new opportunities, such as targeting different customers and acquiring stronger supply chains. In turn, this reduces the extent to which rivalry exists between competitors similar to their domestic context.
- By exporting to a variety of countries (a diversified exporting strategy), organizations can deliver value to new customers, as well as developing stronger supply chains. At the same time, a spread of export markets can help decision-makers to limit the risks of coopetition by lessening their rivalry among domestic competitors.

Third, the results from this investigation are used to shed light on the merits of implementing coopetition strategies, alongside engaging in internationalization activities. Yet, there are certain potentially harmful side-effects to note:

- Internationalization can be expensive, in terms of being a time-consuming process (**like** developing a presence overseas), as well as probably requiring leveraging relatively large-scale resources and capabilities. Thus, firms must ensure that they can afford to internationalize and operate within their means, such as via pooling resources within coopetition partnerships.

- While it may be beneficial to diversify to different export markets (concerning the prior-mentioned links with coopetition), this can be difficult to execute in practice due to it being challenging for certain firms to adapt their practices across various export markets – based on cultural, religious, economic, and political factors. Depending on the nature of perceived opportunities, owner-managers should consider internationalizing to countries with a low psychic distance before adapting to countries with vast macro-level differences.
- Although internationalization strategies (through export intensity and an export geographical scope) can mitigate the degree of rivalry in a domestic arena, they may lead to increased competitiveness in these new countries unless effectively managed. This should influence not only **the scale and scope of internationalization**, but also, the extent to which **decision-makers** invest their resources and capabilities to market their products. Not least, with whom and the **degree** to which they enter into coopetition partnerships.

In short, these practitioner implications and recommendations are designed to help decision-makers to maximize the performance outcomes of coopetition activities, including how these international-level issues (export intensity and an export geographical scope) can reduce the drawbacks of these business-to-business marketing partnerships. Some limitations and avenues for future research are presented in the next section.

LIMITATIONS AND AVENUES FOR FUTURE RESEARCH

Although this current study has contributed to **earlier** literature, there are certain limitations that provide avenues for future research. First, although an acceptable response rate was obtained (13.91%), the sample size was relatively small ($n = 101$). In future research, academics should try to collect larger volumes of empirical data to yield generalizable results. **That said, due to the various robustness checks, it is inferred that the quantitative findings in this current study were potentially transferable to the wider population.** Second, on a related note, single-source survey data was utilized to evaluate the elements of the conceptual framework. Despite the constructs being

operationalized using established measurement scales, future studies should consider employing a combination of survey-based and archival measures. For example, **subject to gaining access**, financial performance could be captured using secondary data (including longitudinal information). Third, the empirical context was chosen because it hosts high-degrees of cooperativeness and competitiveness, as well as varied internationalization activities. However, future research should consider collecting data from different industries (and countries) to evaluate the extent to which these results vary across such settings. This could extend to certain cross-national comparisons, starting with culturally and/or economically-similar countries before proceeding to multi-country studies, involving those with larger psychic distances. In closing, these limitations were not problematic, but rather, they present some interesting directions for future research.

Endnotes

1 - To examine interaction effects, the core relationship needed explaining, including controlling the outcome variable for the linear moderating effects involving export intensity and export geographic scope respectively. The authors acknowledge an anonymous reviewer for requesting more clarity on this matter.

2 - Consistent with certain other sectors like restaurants and hotels, the wine sector tends to feature clusters of firms that collaborate as well as compete (Chaudhry and Crick 2004; Felzensztein and Deans 2013; Crick et al. 2018).

3 - Although this current study makes a contribution to the international marketing literature (through the nature of the conceptual framework), this dataset has been used elsewhere using different variables and not least featuring domestic market activities.

4 - Different ways exist to test for non-response bias, but the approach largely associated with Armstrong and Overton (1977) is widely utilized throughout the marketing domain. The authors recognize the comments of an anonymous reviewer for suggesting clarification regarding this issue.

5 - Various ways exist to operationalize firm size (De Brentani 1995; Crick et al. 2020). The research team used the pre-testing stage to determine an appropriate measurement criterion and offer thanks to an anonymous reviewer for requesting clarity on this matter.

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Figure 1. Conceptual framework.

Table 1. An overview of earlier literature surrounding the international aspects of coopetition.

Source	Publication	Paper type	Research design	Country context(s)	Description and key findings
Chetty and Wilson (2003)	International Business Review	Empirical	Mixed methods	New Zealand	Inter-firm cooperation can occur in numerous respects, such as with supply chain partners and between competitors. By cooperating with rivals, entrepreneurs can learn new ways to compete within their sectors and enter their export markets.
Luo (2004)	Journal of International Management	Conceptual	Not applicable	Not applicable	Multinational corporations can engage in coopetition activities with various organizations . This form of international-level coopetition can involve working with public sector organizations.
Luo (2005)	Journal of World Business	Conceptual	Not applicable	Not applicable	There can be varying degrees of competitiveness and competitiveness between the departmental functions of multinational corporations, as well as among the subsidiaries that are spread across the world. This depends on how resources are allocated to these divisions of such large companies.
Freeman et al. (2006)	Journal of International Marketing	Empirical	Qualitative	Australia	Smaller-sized companies have various resource constraints that limit the performance potential of their assets. By engaging in certain alliances, small businesses can obtain vital resources and capabilities that allow them to thrive within their international markets.
Luo (2007)	Journal of World Business	Conceptual	Not applicable	Not applicable	When engaging in coopetition on a global stage, changes in firms' willingness to cooperate and/or compete with their rivals can be influenced by factors within the firm, as well as at an environmental-level.
Luo and Tung (2007)	Journal of International Business Studies	Conceptual	Not applicable	Not applicable	Coopetition among globally-oriented firms can help decision-makers to survive and grow in their international markets. Coopetition is an organization-wide mind-set associated with collaborating with competitors being perceived as an important set of activities. That is, coopetition-oriented beliefs involve decision-makers assuming that it is beneficial to collaborate with rivals in various capacities.

Bello et al. (2010)	Journal of Marketing	Empirical	Quantitative	United Kingdom	In the context of large-scale international-level alliances, there are cooperative and competitive forces that can be fostered via the notion of accommodation. This is where the rival firms manage their self-serving needs, which amplify any aggressive behaviors that can affect their success in international markets.
Kock et al. (2010)	Competitiveness Review	Empirical	Qualitative	Finland	Coopetition-based relationships are heterogeneous and vary based on the cooperative and competitive forces that are at play. By collaborating with industry rivals, companies can learn new ways to compete within their markets to secure opportunities that would not exist under individualistic business models. Coopetition helps smaller-sized enterprises to improve their performance in their international markets.
Gnyawali and Park (2011)	Research Policy	Empirical	Quantitative	Japan and South Korea	Coopetition is driven by firm-level and industry-level factors that motivate the managers of large (internationally-oriented) corporations to collaborate with their competitors. Certain organizational capabilities can enhance (moderate) the link between coopetition strategies and their performance outcomes.
Felzensztein et al. (2014)	Journal of Business Research	Empirical	Quantitative	Australia, New Zealand, Chile, and Argentina	Inter-firm cooperation was found to be highly-effective for branding regional-level clusters and improving the individual performance of the rival firms involved. By engaging in these activities, companies can market their products and services domestically and internationally to a greater volume of customers than if they competed under individualistic business models.
Shu et al. (2017)	Journal of International Marketing	Empirical	Quantitative	China	Coopetition yields higher-levels of international joint venture performance. However, this link is positively moderated by high foreign equity share, low partner cultural compatibility, high technological turbulence, and/or high market growth. Coopetition negatively affects international joint venture performance under low-levels of foreign equity share, technological turbulence, and/or market growth, or at high-levels of partner cultural compatibility.

Vanyushyn et al. (2018)	Review of Managerial Science	Empirical	Quantitative	Sweden	Internationalization, accompanied with coopetition, can help organizations to foster their innovative capabilities to secure higher-levels of performance. This depends on the magnitude of adjustments that owner-managers make to their business models.
Felzensztein et al. (2019)	Journal of Small Business Management	Empirical	Qualitative	Argentina, Chile, and New Zealand	While collaborating with competitors can lead to higher-levels of company performance in export markets (as well as in domestic markets), it is more effective for small businesses to have access to an industry-level governing body that assists them to access customers and supply chain partners in their international markets. Therefore, coopetition-oriented behaviors, alongside industry support, can enhance firms' abilities to reach foreign markets and improve their performance in an international arena.
Ryan et al. (2019)	International Marketing Review	Empirical	Qualitative	Republic of Ireland	Smaller organizations engage in horizontal networks to enter and operate within their international markets. By engaging in these forms of international-level coopetition-oriented behaviors, small firms can acquire information about their customers, supply chain partners, and other types of competitive intelligence. If firms obtain this information from their competitors, they can quickly enter international markets and increase their performance.
Crick and Crick (2020)	Industrial Marketing Management	Conceptual	Not applicable	Not applicable	The COVID-19 pandemic has led to many organizations (small and large) engaging in coopetition. This includes rival pharmaceutical corporations (from different countries) collaborating to expedite the process of developing a vaccine. Despite these benefits of coopetition strategies (including those in an international arena), these inter-firm relationships can be challenging to manage due to the fragile nature of the coopetition paradox.
These studies are designed to provide a brief overview of how coopetition has been explored in an international arena. It is fully-acknowledged that some of these investigations have used very similar notions to coopetition, like inter-firm cooperation and alliances. Nonetheless, they demonstrate pertinent issues surrounding the internationalization of the coopetition construct.					

Table 2. Exploratory factor analysis model.

	Components			
Items	Factor 1	Factor 2	Factor 3	Factor 4
COOP_1	.74	.41	-.12	-.01
COOP_2	.88	.35	-.04	-.06
COOP_3	.83	.35	-.14	-.09
PERF_1	.25	.87	-.05	.13
PERF_2	.20	.90	-.10	-.04
PERF_3	.22	.85	-.15	-.02
PERF_4	.32	.81	-.12	.03
PERF_5	.16	.87	-.09	.09
COMP_1	-.04	-.12	.84	-.03
COMP_2	-.01	-.08	.89	-.07
COMP_3	-.33	.09	.68	.08
COMP_4	-.10	-.16	.86	.03
COMP_5	.02	-.15	.84	-.04
INQ_1	-.04	.02	-.03	.96
INQ_2	-.03	.09	.03	.93
INQ_3	-.06	.02	-.04	.94
The items presented in a bold font were utilized to measure each latent variable within the four-factor solution.				

Appendix A. Profiling information about the final sample.

Characteristics of the sampled wine producers

Characteristics	Mean	Median	Standard deviation
Number of full-time employees	13.44	5.00	27.03
Number of part-time employees	12.16	5.00	23.20
Firm age (years)	68.95	72.00	14.42
Industry experience (years)	18.39	18.40	10.37
Years in current role	12.63	12.00	7.52
Years in current organization	14.32	12.00	9.24
Export ratio (%)	27.71	19.70	26.77
Number of export markets	8.53	8.00	11.41
Annual sales (\$NZ millions)	2.34	2.20	2.52
The sampled wine producers all engaged in exporting, including ad-hoc sales. For example, some wine producers did not have any formal arrangements with agents or distributors. However, when a customer (in another country) requested a shipment of wine, they would export to these individuals even involving a single case of wine.			

Regional locations of the sampled firms

Regions	Frequency	Percent (%)
Marlborough	29	28.8
Hawkes Bay	11	10.9
Gisborne	2	2.0
Wairarapa	13	12.9
Nelson	4	3.9
Central Otago	17	16.8
Auckland	10	9.9
Canterbury	7	6.9
Waitaki Valley	2	2.0
Northland	4	3.9
Bay of Plenty	2	2.0
TOTAL	101	100.0

Managerial titles of the key informants

Managerial titles	Frequency	Percent (%)
Chief Executive Officer	17	16.8
Chief Operating Officer	3	3.0
Managing Director	33	32.7
Vineyard Director	5	5.0
Marketing Director	13	12.9
Sales Director	14	13.8
Finance Director	1	1.0
Logistics Director	1	1.0
Chief Wine-Maker	1	1.0
Wine-Maker	4	3.9
Other like Owner/Director	9	8.9
TOTAL	101	100.0

Appendix B. Graphical depictions of the key moderating effects.

The moderating role of export intensity on the quadratic relationship between coopetition and financial performance (H₂)

The moderating role of export geographical scope on the quadratic relationship between coopetition and financial performance (H₃)