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**DEVELOPMENT UNCORKED:
REPUTATION ACQUISITION IN THE
NEW MARKET FOR CHILEAN WINES
IN THE UK**

Rocco Macchiavello

***DEVELOPMENT ECONOMICS,
INDUSTRIAL ORGANIZATION and
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ABSTRACT

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This paper studies learning effects in new markets using a panel of relationships between Chilean wineries and distributors in the UK. Controlling for winery, distributors and time effects, FOB prices increase by at least three percent with every additional year in a relationship while export volumes do not drop. The implied shift in demand is not explained by improvements in product quality, or by distributor, product and match-specific effects. FOB prices responses to relationship specific exogenous changes in marketing costs induced by exchange rates dynamics suggest that wineries bargaining power increases over time. Following their first relationship in the market, wineries are re-matched to distributors of higher quality. The evidence suggests that learning about wineries is an important determinant of the positive age effects on FOB prices but also that learning takes considerably long time. Policy implications are discussed.

JEL Classification: D23, F14, L14, M31 and O12

Keywords: intermediation, learning, reputation and trade costs

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Abstract

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1 Introduction

In everyday conversations a good reputation is taken to be a valuable asset: “their family business grew quickly in reputation and size” or “the firm has established a glowing reputation for high quality and reliability”, etc. When a firm enters a market, a process of reputation acquisition begins. Many recent success stories of exports

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in manufacturing from developing countries to rich countries, e.g., apparel from Sri Lanka, flowers from Kenya, wines from Chile, are prominent examples of new firms entering established markets. Especially in those contexts, where distance amplifies uncertainty and makes contracts harder to enforce, a good reputation can be a critical factor for export success. Knowing if reputation is a quantitatively relevant determinant of export performance is important for our understanding of the determinants of industrial development, international trade and, by implication, policy.

This paper studies the importance of reputation formation in new markets. The analysis is based on an original dataset of relationships between Chilean wines exporters and distributors in the UK. There are various reasons for choosing exports of wine from Chile to the UK as the setting of a case study. First, in the wine industry distributors spend time and effort to discover, develop and promote foreign wineries. The relationships between wineries and distributors are the critical junction where learning about wineries characteristics takes place. For convenience, we refer to the set of characteristics that make a winery a good supplier of wine, other than the quality and recognition of its product, as “reliability”. Second, wine is a branded good. This implies that product quality is observable by the buyers and the econometrician. Buyers ability to observe product quality implies that “reliability”, rather than product quality, is the dimension along which a good reputation can be acquired. The econometrician’s ability to observe product quality, instead, allows to separate the price effect of reputation acquisition from increased product quality in the empirical analysis. Chilean wines in the UK is an appropriate setting to study how new industries penetrate established markets. Chile started exporting wines only in the late 1980s. It quickly established itself as a major exporters of wines. Due to the lack of domestic production, the UK has historically played a central role in the international trade of wines and is an established import market.

Experience, or age, effects have been used to uncover learning and reputation effects in a variety of different settings (see, e.g., Farber and Gibbons (1996) in labour economics, Banerjee and Duflo (2000) in development). While empirical work on reputation acquisition between firms has been hindered by lack of data, export transactions are available in custom records. Detailed information on the evolution of exported volumes and FOB prices over time is, therefore, available. This allows, in principle, to uncover reputation effects by tracing the evolution of contractual terms with a firm’s age. In the context of a rapidly expanding industry, however, different cohorts of entrants could vary in unobservable ways and other unobservable shocks may hit the

industry over time. As it is well known, it is not possible to separately identify cohort, time and age effects (see, e.g., Deaton (1997)). The empirical strategy proposed in this paper overcomes these challenges by looking at the evolution of a particular contractual term, FOB prices, within relationships. It first uncovers positive age effects on FOB prices while controlling for time, winery (which includes cohort) and buyer effects in a flexible way. It then exploits detailed information on products, firms and market characteristics to provide direct evidence in support of reputation acquisition and rule out alternative explanations.

The setting of the study is described in greater detail in Section 2. The evidence, presented in Section 3, is summarized as follows. The most conservative estimates suggest that each additional year in a relationship increases FOB prices by three percent on average. This fact holds in different specifications that rely on different identification assumptions. In particular, it holds in specifications that control for winery, distributor and time effects, in specifications that controls for relationship fixed effects, and in specifications that control for relationships and time effects and identify age effects only for the first few years of a relationship. The result also holds across a variety of subsamples, e.g., during the first few years of the relationships or in relatively shorter relationships, suggesting that selection concerns are of limited importance. Across these specifications, export volumes also increase with a relationship age, although the effect is less precisely estimated. The contemporaneous increase in both export volumes and FOB prices implies that wineries face outward shifts in demand over time.

Improvements in product quality over time are a candidate explanation for the outward shift in demand. Wine is a branded good for which measures for product quality are available. This allows to control for improvements in product quality. The positive age effect on FOB prices holds true controlling for brand effects and medals awarded in wine concourses and is, therefore, not driven by improvements in product quality.

While not driven by improvements in product quality, outward shifts in demand are consistent with a variety of other effects. Learning can involve the winery, the distributor, the match between the winery and the distributor or the demand for the product itself. The increase in FOB prices takes place in relationships with established as well as new distributors. It is, therefore, unlikely to be entirely driven by learning effects involving distributors. The conditional likelihood of a relationship breakdown increases with the age of the relationship. The increase in FOB prices, therefore, is unlikely to be entirely driven by learning about the quality of the match between

the winery and the distributor. The evidence is consistent with learning about the winery. Our preferred interpretation is that distributors in the market learn about wineries reliability as supplier. To distinguish this interpretation from learning about the product, we show that the increase in FOB prices does not depend on the winery share of branded wines in total exports. It is, therefore, unlikely to be entirely driven by learning about the product.

The evidence is consistent with wineries acquiring a good reputation in the market. Further results provide direct evidence in support of this claim. We exploit exchange rates dynamics to show that the bargaining position of the winery increases over time. We combine detailed knowledge of the country of origins of other wines imported by the distributor with exchange rates of these countries to construct an exogenous measure of the distributor opportunity cost of marketing the winery's product. FOB prices respond to exogenous variations in the distributor opportunity cost. The response, however, changes asymmetrically during the course of the relationship: in the early years of the relationship FOB prices received by the winery are more sensitive to increases in marketing costs while, in later years, FOB prices are more sensitive to reductions in marketing costs. We interpret this evidence as suggestive that the bargaining position of the winery improves over the course of the relationship.

Finally, we look at re-matches and document correlation patterns that are consistent with learning about the wineries taking place in the market. Following the end of their first relationship, wineries move on to distributors that pay higher FOB prices and have longer lasting relationships. This, however, only happens if the first relationship lasted long enough. The results can be interpreted as evidence that wineries move to distributors of higher quality if they have (had the time to) acquire a good reputation in the market. If wineries and distributors quality are complements, distributors of lower quality have a relative comparative advantage in discovering new wineries that have not yet established a good name. This interpretation also explains why the conditional likelihood of a relationship breakdown increases over time. In sum, the market appears to be organized to learn about new exporters.

The evidence shows that reputation acquisition is an important determinant of FOB prices in this market. Building a reputation, however, takes time. This yields several implications. First, the initial investments required to build a reputation might represent an important component of the sunk costs associated with exporting. Small failures at early stages, combined with low FOB prices and, arguably, margins might help explain the high entry and exit rates of marginal exporters observed in the data

(see, e.g., Eaton et al. (2008) and Freund and Pierola (2009)). Exporters might require access to credit in order to develop a good name in export markets. Before a firm has acquired a good reputation, initial priors matter. The results in this paper do not identify the nature, nor the source, of these priors beliefs. It can be conjectured, however, that unsuccessful experiences with early entrants in the industry or with suppliers from similar industries in the same country, might induce pessimistic priors among buyers. This pessimism can act as a formidable barrier to entry in new markets resulting in the existence of externalities across firms in the same industry, across industries in the same country, and over time. Relative to the social optimum, firms might underinvest in customer relations. Trade patterns might fail to reflect underlying comparative advantage for long periods of time. Short-run negative shocks that destroy relationships can have medium-run effects, e.g., slow recovery, since (re-)building reputation and relationships takes time.

The facts reported in this paper should be of interested to researchers in different strands of literature in industrial development, international trade and organizational economics. There is, of course, a large theoretical literature on seller reputation (see, e.g., Bar-Isaac and Tadelis (2008) for an overview). The paucity of data on contracts and transactions between firms, however, has hindered the development of empirical work on reputation formation between firms. There are some notable exceptions, mostly from developing countries. In Vietnam, an environment characterized by the absence of formal contract enforcement, McMillan and Woodruff (1999) find evidence consistent with long term informal relationships between firms facilitating trade credit. Banerjee and Duflo (2000) infer the importance of reputation by showing that a firm's age strongly correlates with ex-ante contractual choices and ex-post renegotiation outcomes in the Indian Software industry. There are two important differences between these papers and ours. First, both McMillan and Woodruff (1999) and Banerjee and Duflo (2000) rely on cross-sectional evidence and cannot control for unobserved firm, or client, heterogeneity. Second, we focus on prices as contractual outcomes. Macchiavello and Morjaria (2009) exploit an intense episode of ethnic violence as a short-run shock to the cost function of Kenya flowers exporters. Exporters do not write enforceable contracts with foreign buyers and, at the time of the shock, prices on the spot market were higher than prices received from foreign buyers. Exporters, however, are found to prioritize shipments to foreign buyers over shipments to the spot market. The evidence suggests that exporters value maintaining a reputation for reliability with foreign buyers and complements the results in this paper. The two papers, however, differ

in how they infer the value of reputation and in their short-run versus long-run focus. Banerjee and Munshi (2004), Woodruff (1998), Andrabi et al. (2006), and Munshi (2008) provide interesting case studies of contractual relationships in a development context, but with rather different focus. Banerjee and Munshi (2004), however, study community effects in the access to credit among export oriented firms in the garment industry in Tiruppur, South India. They look at output and investment trajectories across communities over time. As in this paper, the results rely on the identification of differential age effects in the context of a growing industry, in which cohort effects might be relevant. The empirical specification, however, cannot control for both year and cohort fixed effects.

The paper is also related to a recent literature on contracts and intermediation in international trade (see, e.g., McLaren (1999, 2000), Rauch (1999, 2001), Antras (2003), Kranton and Swamy (2007), Antras and Costinot (2009) for theoretical contributions, and Bernard et al. (2009) and Blum et al. (2009) for empirical ones). This literature has paid little attention to reputational issues in export markets. Araujo and Ornelas (2007) is an interesting theoretical exception. Their paper embeds a model of reputation acquisition of a distributor into an otherwise standard Melitz (2003) model. The paper explicitly models the evolution of the informational costs faced by an exporter in foreign markets as a function of the reputation acquired by the distributor, rather than by the exporter. In our context, in which new suppliers enter an established market, it is more natural to focus on the acquisition of reputation by the exporters.¹

In the context of export markets, there is an extensive literature on whether export activity is associated with learning *by* the firm. The literature has considered firms learning by doing (see, e.g., Clerides et al. (1998)) and firms learning about export costs or demand (see, e.g., Alborno et al. (2009), Eaton et al. (2009)). The focus of that literature is quite different from ours, which emphasizes market learning *about* the firm. A recent paper by Foster et al. (2009) also studies learning about demand. They document outward shifts in demand associated with age effects in a number of homogenous product industries in the United States. Our paper, instead, exploits detailed knowledge of relationships and firms characteristics to nail down reputation acquisition as a particular source of outward shifts in demand in an industry with differentiated products.²

¹There is a substantial literature by sociologists and organizational scholars that emphasizes the role of reputation acquisition and the value of collaborative relationships with foreign buyers (see, e.g., Egan and Mody (1992) and Gereffi (1999)).

²Our findings on FOB price dynamics and responses to exchange rates shocks might also yields

Finally, a literature in labor economics infers learning about workers productivity by looking at how wages evolve with experience (see, e.g., Farber and Gibbons (1996) and Altonji and Pierret (2001) for early examples). The approach critically relies on the availability of workers characteristics that, although correlated with productivity, are observed by the econometrician but not by employers; such as certain test-scores or father's education. Given the amount of effort and time distributors invest to source wines and discover suppliers, variables of this kind are not available in our context.

The paper is organized as follows. The setting of the analysis is described in the next section. The empirical evidence is presented in Section 3. Section 4 offers some concluding remarks and discusses the policy implications of this study.

2 The Setting

A Brief History

In recent decades, with worldwide consumption roughly constant, the wine industry has witnessed major supply side restructuring. The rising of new world producers (Australia, South Africa, New Zealand, California and Chile) increased the level of competition in the industry as well as the quality of wine internationally traded. Good geographical conditions (e.g., with respect to soil and climate, the so called *terroir*) are necessary, but not sufficient, for winemaking. Production and sale of good wine at competitive prices critically rely on technology, expertise and institutional arrangements that ensure quality provision at all stages in the chain, from grape growers to consumers. As a consequence, many countries have natural conditions that are suitable for winemaking yet play negligible roles in international markets.³

For a long time, Chile has been one of those countries. Favoured by ideal climatic conditions, winemaking in Chile goes back to colonial times. However, it was not until the mid-1980s that the industry started exporting wines in noticeable quantities. The take-off in exports followed the introduction of stainless steel vats and oak barrels by Miguel Torres, a Spanish wine maker, in the early-1980s. These technological improvements demonstrated the possibility of producing wines of quality suitable for export markets at low costs. Shortly after, the industry saw the entry of a number of local established producers, such as Vina Concha-y-Toro, a winery that started

implications for the literature on pass-through (see, e.g., Goldberg and Knetter (1997) and Gopinath et al. (2009)).

³For example, the earliest production of wine probably took place around today border between Georgia and Iran, 8000 years ago. In the early twentieth century, Croatia, Morocco and Algeria exported wine to France and UK.

production in 1883, went public in 1933 and is now one of the leading wine producers in the world.⁴ Today, Chile is the tenth largest producer of wine in the World, and the fifth largest exporter in both volumes and values.

British traders have historically played an important role in the development of the international wine market. The lack of domestic production implied that British traders were first in importing from traditional producing regions (e.g., Bordeaux and Port) as well as from New World regions (e.g., Commonwealth countries). The UK market has been the main destination for Chilean wines since the early years of the export boom. Currently, the UK is, alongside the United States, the main destination for Chilean wines. Chilean wines have acquired a seven percent share in the British wine market. Chile exports about ninety percent of the wine it produces.

Wine Trade and Marketing

It is said that the quality of the wine is made in the vineyards. Wineries pursue a strategy of vertical integration by investing in their own vineyards or contract-out grape growing with long-term contracts to ensure the necessary quality of the grapes. Under both organizational forms wineries intensely monitor inputs, such as irrigation and harvesting techniques. Chilean wineries exporting bottled wine in the UK source the vast majority of their grapes in either of those two ways. Wineries then crush the grapes, ferment the juice, age and bottle the wine.

The wine is exported in the foreign market in partnership with a distributor. The relationship with the foreign distributor is a key determinant of success in the export market. The following quote well illustrates the point. The quote comes from an interview given to the magazine *Wine Business* by Eduardo Guilisasti, Chief Executive Officer of Concha-y-Toro, the leading Chilean exporter:

WB: “What are your greatest strengths?”

EG: “First, we produce quality at very different price levels. People all over the world recognize that fact. Second, we have developed long-term, solid relations to our distributors. Third, we have been investing a lot in building our brands”.⁵

The quote illustrates three concepts that are particularly relevant for this paper. First, from a commercial point of view, the quality of a wine must be measured against

⁴A part from the role played by Miguel Torres, foreign direct investment and joint ventures with foreign producers have not played a significant role in the early years of the export boom (see Agosin and Bravo-Ortega (2007)).

⁵See http://www.wine-business-international.com/Interviews_Eduardo_Guilisasti_Patriarchal_Force_at_Concha_y_Toro.html

the retail price at which the wine is sold. Second, relationships with foreign distributors are a key determinant of export success. Third, reputation with final customers is embedded in a brand. Wineries strive to achieve consistency in the quality of their wines over time.⁶ For example, a Casillero del Diablo, a well-known brand by Concha-y-Toro, is meant to have the same taste and style across vintages and deliver the best “value-for-money” at a particular price point. Customers can learn the quality and value-for-money of the wine by tasting, purchase and reviews. A decent wine sold at competitive prices by a well-known brand and a reliable supplier is more valuable from a commercial point of view than a medal-winner wine delivered at uncompetitive prices by an unreliable supplier. This paper, therefore, is not concerned with wineries reputation for producing “good” wines.⁷ We are instead interested in the reputation for reliability that wineries must acquire vis à vis foreign distributors.

The Importance of Reputation

The quote also highlights the key role of developing a good relationship with distributors. The relationships between wineries and distributors are based on good reputation and trust. Original survey data collected by the author show that wineries and distributors do not write complete enforceable contracts to govern their transactions. Formal contract enforcement is unfeasible. The distance and uncertainty associated with international trade amplify the costs of monitoring the investments required from both sides. Both parties might end up being exposed to the opportunistic behavior of their partner. Developing a good reputation is therefore necessary to sustain trade.

Wineries must develop a reputation for reliability. They must undertake the investments necessary to comply with the product and delivery requirements of buyers, must be able to ensure the availability of different varieties of wines, bottled and delivered according to the requests of the final buyer, share promotion costs and price reductions when necessary, and so on. Potential distributors learn about a winery’s reliability over time. Arguably, wineries with a good reputation for being reliable suppliers of wine receives higher FOB prices, everything else equal.⁸

⁶Vintage effects, about which much is written by wine critics, are largely irrelevant for most ordinary and premium bottled wines that represent the vast majority of the trade. This is especially true for wines from New World regions, where, warmer and more stable climatic conditions, larger firm size and less stringent regulations over the origins of grapes, significantly reduce fluctuations in wine quality over time.

⁷New world producers started marketing wines according to varietal denomination (e.g., Merlot) precisely to overcome barriers to entry arising from the reputation acquired by established geographical appellations (e.g., Bordeaux, Burgundy). Varietal denomination attracted less experienced consumers that would move horizontally across (not yet well known) producers/regions.

⁸We focus on average FOB prices because these are available in export data. In principle, the value of a good reputation could be indirectly inferred from other contractual outcomes, as in Banerjee

Other Determinants of FOB Prices

There are, of course, other determinants of the FOB prices received by the wineries. Two important ones are exchange rates and product quality.⁹ Exchange rates are observable and can be controlled for in empirical specifications. Product quality is typically harder to observe and can vary dramatically in industries with high product differentiation. As noted above, however, wines of different quality are sold through different brands. Within brands, wineries strive to achieve consistency in wine quality over time. Wineries might develop more than one brand and new brands are used to market wines which are better than previously produced ones. It is not a good marketing practice to sell wines of higher quality under a brand name that final customers have associated with a previous wine of lower quality. Furthermore, medals obtained at wine concourses provide an empirical proxy that can be used to control for wine quality.

Distributors play a fundamental role in expanding demand and increasing the value of the wine in the export market. Distributors transfer knowledge to the winery about market demand, technology and, more generally, on how to improve product quality. Distributors also acquire a good reputation in the market. Distributors must, of course, acquire a good reputation vis à vis wineries, as outlined above. They must also acquire a good reputation with retailers. Distributors develop a reputation for being good specialists, e.g., by spending time and effort sourcing particular regions and building trust with producers, having well-balanced and convenient portfolios of suppliers, and so on. A good reputation vis à vis final retailers expands demand for the wines in the portfolio of the distributor. This can lead to higher FOB prices for the winery in the presence of rent sharing.

Achieving a suitable winery-distributor match is a critical determinant of export success. A textbook specialized in international marketing for wines mentions that “the greatest challenge for any exporter is to gain a compatible match of agent / distributor” (Thach and T. Matz (2004)). The ideal distributor has a portfolio of wines that complement those produced by the winery and has access to the distribution channels that best fit the product mix of the winery. Parties might learn over time the quality of their match. More positive beliefs about the quality of the match can lead to higher efforts on both sides and to a more efficient distribution of wines. This can

and Duflo (2000). Survey evidence, however, reveals that in this context most relationships are not governed by written contracts. Spencer (2005) discuss several reasons why contracts might be especially incomplete and non-linear price schemes unavailable in international transactions.

⁹Wine exports are not a major determinant of the value of the Chilean peso, which largely depends on exports of copper during the period under examination.

increase FOB prices for the winery as well.

Distributors exert effort to market and develop the brand, e.g., by engaging in promotions, pushing the brand within her portfolios of wines, and so on. This effort is hard to monitor and producers often complain that distributors do not do enough to promote the wine. The absence of formal long-term contracts implies that distributors might fail to internalize the future value generated by the development of the brand. Distributors hold portfolios of brands. Chilean wineries compete for attention against other producers in the distributor's portfolio. To limit competition, most distributors only market one Chilean winery at each point in time. Chilean wineries, therefore, face the competition of producers from other regions. All else equal, distributors exert more effort to market brands that deliver higher margins.

3 Empirical Analysis

We begin with a brief description of the data in Section 3.1, which is followed by descriptive statistics in Section 3.2. The empirical strategy and identification issues are presented in Section 3.3. Section 3.4 establishes positive age effects on both FOB prices and export volumes. These must be accounted for by outward shifts in demand. Further results in Section 3.4 show that improvements in product quality, a candidate explanation for outward shifts in demand, do not drive the increase in FOB prices. Section 3.5 lays down several hypothesis for the increase in FOB prices: winery, distributor, match-specific and product effects. It then shows that distributor, match-specific and product effects cannot fully account for the increase in FOB prices. The evidence is consistent with reputation acquisition by the winery being an important determinant of the positive age effect on FOB prices. In support of this claim, Section 3.6 exploits exchange rates movements to show that wineries bargaining power increases over the course of a relationship. Finally, Section 3.7 provides further evidence that the market structure in the industry reflects the process of learning about wineries.

3.1 Data

The analysis is based on an original dataset containing information on the relationships between Chilean wineries exporting to the UK and distributors in that market. The data have been assembled from multiple sources. Firm level data from custom records on yearly volumes and FOB values of exports to the UK have been obtained from

industry associations. The sample period for these data covers the years 1999 to 2006 inclusive, i.e., about ten years after the industry started exporting.¹⁰

The panel of relationships between wineries and their distributors, instead, tracks the complete history of Chilean wines in the UK from the mid-1980s till 2006. The dataset has been constructed from *Harpers Directory of Wine and Spirits Trade* in the UK. The directory reports in each year all the brands of wine available in the UK market and their distributors. Brand names and, consequently, distributors, have been matched with Chilean wineries in each year. All wineries and importers have been tracked over time. The relatively small number of wineries ever exporting to the UK over the period, just a few over a hundred, has made possible to cross-check information from a variety of sources, in order to minimize errors due to, e.g., changes in names, etc.¹¹ In sum, attrition and left censoring are minimal and, therefore, selection and measurement error in the age of the relationships are not a concern. This is of crucial importance since our empirical strategy relies on identifying how FOB prices, volumes and bargaining power evolve with the age of the relationships.

Distributors characteristics, such as location, size, age and geographical origin of other wines imported by the distributor, are reported in the *Harper's directory of wine and spirits trade* in the UK. Information on winery size, location, types of grape and ownership have been obtained from a directory of wineries published in Chile, the *Compendia Vitivinicola de Chile*.¹²

3.2 Descriptive Statistics

Table 1 presents some summary statistics. The dataset contains information on 114 wineries matched with 136 distributors during the sample period between 1986 and 2006. In total, there have been 288 relationships. The average relationship lasted 3.37 years. There is no left censoring in the duration of relationships. There is, however, right censoring since the end of relationships still ongoing in 2006 is not observed.

¹⁰Brand level data on export prices and volumes is available for the years 2002 to 2006 inclusive.

¹¹For example, for the years following 2000, the information contained in the *Directory* has been cross-checked using official records from *Wines of Chile*, the promotional body of the Chilean wine industry in the UK. Various industry publications, commercial catalogues and brochures, as well as wineries, agents and industry associations web pages have also been used to cross-check the relationships.

¹²Finally, we have surveyed more than 70 owners and export directors through face-to-face interviews conducted during the International Wine Fair in London in May 2007. Interviews were structured around a fairly short questionnaire and focussed on the contractual arrangement between wineries and distributors in the UK market as well as on perceptions of other exporters and distributors in the industry. In this version of the paper, the information collected has been used only to provide relevant background on marketing practices in the industry, but not in the construction of variables used in the regression analysis.

There are 134 relationships active in 2006, with an average age of 4.2 years. Although the vast majority of relationships lasted for less than seven years, few relationships have been lasting for more than ten years, the maximum being seventeen.

On average, wineries entered in the market in 1997, i.e., approximately half way from the beginning of the industry and the last year in the data, 2006. Many wineries only had one brand, though the largest winery was exporting wines under 11 different brands in the early 2000s. On average, each winery has had 2.52 relationships during its presence in the market.

Distributors vary widely with respect to their experience in the market, proxied by the year of creation of the distributor, their size, proxied by the number of different brands imported, and the geographical composition of their portfolios, proxied by the share of wines from New World regions. On average, distributors have had 1.68 relationships during the sample period.

At any point in time, most matches are one-to-one. For instance, the 110 wineries exporting in 2006 had an average of 1.22 distributors in that year. Similarly, the 95 distributors importing in that same year had an average of 1.42 suppliers. Since most distributors operate at the national level, wineries tend not to “hire” multiple distributors covering the same market, unless they produce a wide range of different wines marketed towards different types of consumers, e.g., “on-trade” versus “off-trade”. Distributors tend not to market multiple wineries from Chile. This is done to limit “within-portfolio” competition between Chilean wines that are not perceived to be highly differentiated. This is consistent with survey evidence. Interviews with export directors reveal that exclusivity clauses are often the only contractual provisions explicitly mentioned in the written contract, so called “carta de compromiso”, if one is written at all. Common agency theory (see, e.g., Barnheim and Whinston (1998)) suggests that exclusivity clauses are adopted in the presence of incomplete contracts on distributors marketing effort to limit the negative effects of “within-portfolio” competition on marketing effort.¹³

3.3 Empirical Strategy and Identification Issues

Experience, or age, effects have been used to uncover learning and reputation effects in a variety of different settings (see, e.g., Banerjee and Duflo (2000) for contractual

¹³Consistently with this interpretation, matches tended to be even more one-to-one in earlier years when, presumably, Chilean wines were perceived to be even less differentiated. Furthermore, one-to-one matches appear to be less prevalent for wines imported from more established countries/regions (e.g., Australia and Burgundy).

terms in a cross-section of firms, Farber and Gibbons (1996) in labor economics). We are interested in uncovering learning about the wineries in the market by studying how FOB prices change with experience. The literature in labor economics relies on the availability of variables that are correlated with a worker’s talent and are observed by the econometrician but not by potential employers (such as certain test-scores). This kind of variables is unlikely to be available in our setting in which buyers incur high costs to search, test and screen potential suppliers before starting a relationship. Our strategy to identify learning about the wineries, therefore, relies on two steps. First, we document age effects in the form of outward shifts in the demand faced by the wineries. Then, we use detailed institutional knowledge of the industry to show that other candidate explanations cannot fully account for the outward shifts in demand.

The first step relies on the identification of age or experience effects. In general, identifying age or experience effects is a challenging statistical problem, even with panel data, if the underlying environment is changing. In particular, it is well understood that it is not possible to separate time effects, cohort effects and (the linear component of) experience, or age, effects (see, e.g., Deaton (1997), Rockoff (2004)). This limitation is particularly severe in a context like ours, which looks at exports in a growing industry. First, firms entering the market at different points in time are likely to be different in ways that affect FOB prices, i.e., there are cohort effects. For example, it is possible that relatively larger wineries exporting large volumes of ordinary wines entered the industry first and were followed in later years by smaller “boutique” wineries specializing in production of superpremium wines. If that was the case, and cohort effects are not controlled for, the data would reveal a negative correlation between experience and FOB prices, simply because older firms specialize in wines marketed at lower price points. Controlling for cohort effects through the inclusion of year of entry fixed effects, however, would rule out the possibility of controlling for time effects. This is also problematic since exchange rates or aggregate demand shocks in the export market are likely to affect FOB prices. For instance, if demand for Chilean wines decreases over time due to aggregate economic recession or entry of foreign competitors in the market, the data will reveal a negative correlation between experience of the winery in the market and FOB prices simply because less favorable conditions happen in later years, i.e., when experience is higher.¹⁴

The proposed empirical strategy controls for both time and cohort effects by ex-

¹⁴The quantitative importance of these effects in our sample is illustrated in Figure A1. The Figure shows how failing to control for both cohort *and* time effects significantly biases the estimates of the age effects.

exploiting changes in relationships between wineries and distributors over time. It identifies experience effects by studying how FOB prices and volumes evolve with the age of the relationship between wineries and distributors, rather than with the experience of the winery in the market. The basic regression we estimate, therefore, takes the following form

$$y_{twd} = \beta_1 AGE_{wdt} + \eta_w + \mu_t + \psi X_{wd} + \varepsilon_{wdt}. \quad (1)$$

Here, y_{twd} is either volumes or FOB prices in year t , between winery w and distributor d , AGE_{wdt} is the age of the relationship between winery w and distributor d in year t , X_{wd} are time invariant characteristics of the relationship between winery w and distributor d , and ε_{wdt} is a mean-zero disturbance term which collects all the exogenous idiosyncratic shocks that the relationship receives over time. The variation in the data allows to control for several fixed effects. First, we include winery fixed effects, η_w , that control for all characteristics of the wineries that do not vary over time. In particular, winery fixed effects control for cohort effects, i.e., the fact that early entrants might have higher or lower prices than later entrants for reasons unrelated to experience. Second, we can include time fixed effects, μ_t , which control, in a flexible way, for all time varying shocks that affect all relationships in the industry, e.g., exchange rates and aggregate demand shocks. As noted above, at any point in time, the vast majority of matches between wineries and distributors are one-to-one. This prevents the inclusion of distributor-specific time effects.

The specification above controls for time and winery effects and, therefore, the identification is obtained from switches across relationships. If wineries change relationships in anticipation of lower (resp. higher) demand or prices, the age of the relationship effect would be biased upward (resp. downward). Obviously, the same logic described above implies that it is not possible to separately identify the age of the relationship effect from time effects and cohort effects in the formation of relationships. Furthermore, the specification could suffer from the fact that relationships in which wineries are paid low (resp. high) FOB prices might selectively breakdown, implying an upward (resp. downward) bias in the estimated age effect. We therefore report results from a variety of robustness checks as well as two other empirical specifications that rely on very different identification assumptions.

First, we always control for time invariant characteristics of the relationships, X_{wd} . In particular, we control for the exchange rate between the Chilean Peso and the British Pound at the time the relationship was started, e_{wd} , a potential determinant of relationships cohort effects, as well as other characteristics, such as the number of

previous relationships for the winery. Second, we report results that exclude the first and last years of each relationships. This reduces the concerns that results are driven by specific shocks associated with changes in relationships. Third, we present results that only includes the first years of a relationships as well as relationships that lasted only for a few years to limit concerns about selection. Fourth, we include in the specification in (1) distributor fixed effects, ϕ_d , which control for time invariant distributor characteristics that affect the demand faced by the winery. For example, if successful wineries get “promoted” to distributors that pay higher FOB prices, controlling for distributor fixed effects reduces concerns about the resulting bias in the estimated age effects.

We also report results from two alternative specifications which rely on completely different identification assumptions. The first alternative specification considered is

$$y_{twd} = \beta_2 AGE_{wdt} + \eta_{wd} + e_t + \varepsilon_{wdt}; \quad (2)$$

which includes both relationships fixed effects and exchange rates as time controls. The relationship fixed effects, η_{wd} , control, in a flexible way, for characteristics of the relationships that do not change over time. As mentioned above, an important example is given by relationships cohort effects, i.e., the possibility that relationships started in different years by the same firm differ in outcome variables in ways which correlate with the age effect. Relationship fixed effects also control for winery-specific and distributor-specific time invariant characteristics in a flexible way. Since the specification controls for relationships fixed effects FOB prices are compared within relationships and over time and, therefore, the selection issues discussed above are not a concern. However, selection could still be a concern in the presence of heterogeneity in the FOB price-age profiles across relationships. We report additional results that show how the estimated effects are robust in more balanced samples that exclude relationships that lasted longer or focuses on the first years in the relationships.

Finally, in the specification (2) the inclusion of relationship fixed effects precludes the inclusion of time effects, μ_t . The specification controls for exchange rates at time t , e_t , an important determinant of FOB prices. In order to estimate age effects including both relationships and years fixed effects, we also report results from the following specification

$$y_{twd} = \beta_3 \overline{AGE}_{wdt} + \eta_{wd} + \mu_t + \varepsilon_{wdt}; \quad (3)$$

where \overline{AGE}_{wdt} is defined as

$$\overline{AGE}_{wdt} = \begin{cases} AGE_{wdt} & \text{if } AGE_{wdt} < T, \\ T & \text{if } AGE_{wdt} \geq T. \end{cases}$$

In other words, the identification assumption in (3) is that the age effect on FOB prices vanishes after T years in the relationship. Under this assumption, year fixed effects are identified from relationships that lasted more than T years, cohort effects are absorbed by the relationships fixed effects, and the age effect is recovered for the first T years of the relationships. We present results with different choices of T .

Note that the outcome variables that are of primary interest to us, yearly volumes and FOB prices, display significant time variation across all relationships in the sample. This allows to control for relationships fixed effects without having to rely on a subsample of relationships for identification.¹⁵

3.4 Age Effects: Outward Shifts in Demand

The main empirical finding of this Section is illustrated in Figure 1. The Figure plots on the horizontal axis export volumes. FOB prices are plotted on the vertical axis. To control for time effects, both volumes and FOB prices are in deviations from year-averages. For illustrative purposes, observations have been assigned different colors depending on whether they are from years one and two, three and four, or later, in any given relationship. Linear fits across the different age groups are reported. Linear fits shift out in a parallel way with the age of the relationship. In other words, Figure 1 shows that, as relationships with distributors unfold, wineries face outward shifts in demand.

Tables 2 and 3 confirm the evidence presented in Figure 1. Table 2 reports regression analysis results of age effects in FOB prices. Column I reports results from the baseline specification in equation (1). The specification controls for firm fixed effects, year fixed effects and exchange rates at the beginning of the relationship. FOB prices increase with the age of the relationship. On average, each additional year in a relationship increases FOB prices by five percent. The inclusion of firm fixed effects implies that the identified age effect is not driven by time invariant firm characteris-

¹⁵All the specifications report results in which standard errors are clustered at the relationship level to allow for arbitrary serial autocorrelation in the error term during a relationship lifetime. Specifications that estimate non-nested clustered standard errors at the relationship and distributor-year level (see Cameron et al. (2009)) allow for arbitrary correlation patterns across wineries within a distributor portfolio. Unreported results show that these specification deliver significantly smaller standard errors.

tics, including cohort effects. For example, firm fixed effects control for the fact that small “boutique” wineries, which tend to be family owned, might be associated with both more stable relationships and higher FOB prices. Year fixed effects control for common, time-varying, shocks that can affect FOB prices. For example, year fixed effects control for movements in the exchange rates between the Chilean Peso and the British Pound which affect the profitability of Chilean wines in the UK market. Year fixed effects also control for other common shocks, such as aggregate demand fluctuations in the UK market. Exchange rates at the beginning of the relationship control for cohort effects in the formation of relationships. Relationships formed in more favorable times, i.e., when the value of the Chilean Peso was low relative to the British Pound, might be worse and have shorter life. If worse relationships pay lower FOB prices, age effects could be biased upward. Alternatively, relationships started in more favorable times might have afforded initially higher prices. If the (implicit) contract between the winery and the distributor displays memory, e.g., prices in previous years are used as reference points for price setting, the age effect could be biased downward. The (unreported) estimated coefficient implies an elasticity of 0.4 between the Chilean Pesos per Pound exchange rate at the beginning of the relationship and the average FOB price during the relationship. This effect is in addition to other contemporaneous exchange rates effects absorbed in year fixed effects.¹⁶

The age effect in Column I is identified out of switches across relationships. If wineries change relationships at times of, or in anticipation of, lower (resp. higher) demand, the estimation of the age effect could be biased upward (resp. downward). For example, FOB prices might be lower in the first years of a relationship if either relationships break down when demand is lower or exchange rates are less favorable, or if FOB prices are initially lower because of incentive considerations. This would lead to upward bias in the estimate of the age effect. Alternatively, wineries might switch partners after finding better matches in the market. Re-sorting of this kind would lead to a downward bias in the age effect.

Specifications in Columns II to X perform a battery of robustness checks. Column II includes dummies for the first year and for the last year in the relationship. These dummies isolate specific conditions that might affect FOB prices in the first and last year of a relationship. The estimated coefficient for the age effect is almost four percent, slightly lower than in Column I, but still statistically significant at conventional levels.

¹⁶The coefficient is consistent with implicit contracts between wineries and distributors displaying memory. Accordingly, unreported results confirm that omitting to control for exchange rates at the beginning of the relationship results in lower estimates of the age effect.

This is consistent with some upward bias in the estimation of the age effect in Column I. The coefficient for the first year dummy is negative. Although it is not statistically significant, the coefficient implies that first year FOB prices are almost five percent lower than in other years. This effect comes on top of the effect associated with exchange rates at the time the relationship was started. The dummy for the last year is close to zero, and far from being statistical significant.

The estimated age effect could be biased upward (resp. downward) if relationships in which wineries are paid low (resp. high) FOB prices selectively breakdown.¹⁷ Columns III and IV provide evidence that the positive age effect on FOB prices is not driven by relationships paying higher FOB prices lasting longer. Column III reports results estimated only on the first four years of the relationships. The estimated coefficient is similar to the one estimated in Column I. Column IV, instead, focuses on relationships that lasted at most four years and finds a slightly higher estimate than Columns I and III. The two checks deal with selection concerns in very different ways and it is, therefore, reassuring that both suggest at most a small downward bias in the estimated age effect.

Column V includes distributors fixed effects that control for time invariant characteristics such as location, specialization in distribution channels and sourcing regions. The coefficient of interest is stable and similar in magnitude to the estimates in Columns II-IV. Most relationships are one-on-one at any point in time, and many distributors have had only one Chilean partner during the sample period. Nevertheless, the coefficient is not estimated with significantly lower precision.

Column VI presents results from the specification in equation (2). The specification includes relationship fixed effects. Including relationship fixed effects implies that year fixed effects cannot be included. The specification, however, includes exchange rates as time-varying common shocks to FOB prices. Relationship fixed effects control for several factors that affect FOB prices in a flexible way. Relationship fixed effects control for winery characteristics, distributor characteristics as well as match-specific characteristics, such as relationship cohort effects, that do not vary over time. The estimated coefficient is statistically significant, close to the estimates in Columns II and III, and implies an average age effect of about three percent on FOB prices. (Unreported) Results show an elasticity of -0.7 between FOB prices and the Chilean

¹⁷Low (resp. high) FOB prices make the winery (resp. the distributor) more willing to separate, everything else equal. The likelihood of breakdown will depend on the distribution of bargaining power. The sign of the selection effect is, therefore, a priori ambiguous. Table 5 provides evidence consistent with bargaining power shifting away from the distributor and to the winery during the course of the relationship.

Peso per British Pound exchange rate.

Columns VII and VIII repeat the exercise in Columns III and IV. Since the specification controls for relationships fixed effects FOB prices are compared within relationships and over time and, therefore, the selection issues discussed in Columns III and IV are not a concern. However, selection could still be a concern in the presence of heterogeneity in the FOB price-age profiles across relationships. The results are extremely robust to restricting attention to a more homogenous sample of periods, i.e., the first four years in a relationship, as well as relationships, i.e., those lasting no more than four years. In both cases, the estimated age effects on FOB prices are larger than the corresponding estimates in Column VI.

Finally, Columns IX and X present results from specification (3). The specification includes both relationships and years fixed effects and age effects are identified under the assumption that they vanish after four and seven years respectively in the two columns. The estimated coefficients are remarkably robust and similar to those estimated in Column VI.

In sum, the evidence in Table 2 suggests that positive age effects on FOB prices are remarkably robust across a range of empirical specifications relying on different identification assumptions and samples. The implied age effects are illustrated non-parametrically in Figure 2. The Figure reports the estimated coefficients on age of relationship dummies for the three main specifications (1), in Column I, (2) in Column VI, and (3) in Column X of Table 2. The Figure shows that after seven years, FOB prices are on average 20-35% higher depending on the specification. While the age effects estimated with specifications (1) and (2) might suffer from selection and inflate the estimated age effect for later years, the Figure also suggests that age effects are not just large, they also slowly build up over several years.

No Upward Shifts in Wineries Supply Curve

The results in Table 2 show that FOB prices increase with the age of the relationship. The most conservative estimates suggest that, on average, FOB prices increase by three percent with each additional year in a relationship. Table 3 considers two prominent explanations for the increase in FOB Prices over time: upward shifts in wineries supply curves (Columns I-III) and increases in product quality (Columns IV-VI).

FOB prices could increase with relationship's age if wineries supply curves shift upward over time. The remarkable success of the industry spurred intensive vineyards planting and upgrading investments in Chile. *Prima facie*, upward shifts in supply curves in a growing industry run against intuition. However, it takes approximately

three to five years for a new vineyard to produce grapes. Supply curves might be relatively inelastic in the short-run. Furthermore, successful wineries with longer relationships might try to expand in other markets as well. This could induce a selection effect that implies a reduction in the supply of wines available for the UK market as the relationships with distributors age.

If supply curves shift upward over time, the data should reveal *negative* age effects on export volumes. Columns I-III in Table 3 show that this is not the case. Columns I, II and III reproduce the specifications in Columns I, VI and X in Table 2 respectively with export volumes as dependent variable. If anything, the specifications show positive and, in Column III close to marginally statistically significant, age effects on export volumes. The most conservative estimate suggests that each additional year in the relationship is associated with half percent increase in export volumes. The increase in volumes is consistent with downward shifts in the supply curve of wineries due to, e.g., investments in capacity, or learning. Downward shifts in supply, obviously, cannot account for higher FOB prices.

Product Quality

The available evidence is not consistent with upward shifts in the supply curve of wineries. Positive age effects in FOB prices, therefore, must be explained by shifts in the demand curve faced by the wineries. Improvements in product quality are a candidate explanation for positive age effects on FOB prices. Distributors transfer knowledge to the wineries about product characteristics valued by consumers in the market. This facilitates product adaptation to local demand conditions. Distributors have relationships with exporters from other regions. This facilitates the acquisition and dissemination of knowledge about new technologies and inputs.

To control for improvements in product quality we take advantage of two features of the wine industry. First, wines are marketed under brand names and data on FOB prices by brand are available.¹⁸ Second, other measures of product quality, e.g., medals won in wine competitions, are also available. These two features of the industry allow to control for the quality of the wine.

Within brands, producers strive to achieve consistency in the quality of the wines over time. Wineries producing wines at different price points, e.g., “entry/ordinary” versus “premium” wines, market those wines under different brands. It is not a good marketing practice to sell a better wine under the same brand name used to market

¹⁸The data at the brand level are available for a shorter period covering 2002 to 2006. For this reason they are not used in the baseline analysis.

a previously produced wine of lower quality. Consumers can easily recognize wines according to their grapes and brand names. Consumers can also purchase reviews about specific wines and brands. The availability of brand-level data allows to control for product quality as perceived by the final customer.

Columns IV-VI in Table 3 report age effects in FOB prices using brand-level data. The specifications include distributors fixed effects as in Column V in Table 2, with brand fixed effects replacing winery fixed effects. The coefficient of interest is positive and statistically significant. The estimate implies that one additional year in the relationship increases the FOB price received on a particular brand by five percent.

Measures of the quality of wines are also available.¹⁹ Many producers submit their wines to (often blind) tasting at international concourses. Some wines also receive ratings from a variety of well-respected sources, e.g., Robert Parker, Wine Spectator in the US and Decanter, Jancis Robinson in the UK. Using these measures to control for the quality of wines is complicated because of limited comparability, small coverage and, potentially, selection. Comparability issues arise because different sources use different systems. For example, while Americans such as Robert Parker tend to use a 100 points scale, Jancis Robinson in the UK prefers a 20 points scale, with half-points. The *Decanter*, still another prestigious source for the UK market, uses a scale based on five stars. There is no consensus on how to compare these measures. Problems of small coverage arise because most of this sources rate a large number of different wines produced by a relatively smaller number of producers. Finally, the set of wineries receiving attention of established raters is unlikely to be a random subset of the sample. For example, distributors might bring those wineries with whom they have more successful relationships to the attention of established raters in the market.

The number of medals won at wine exhibitions organized by the promotional body of Chilean wines in London between 2003 and 2006 is used as a proxy for the quality of wines marketed under a given brand. These data offer a comparable measure of product quality for the entire sample of wineries and a subset of years in my analysis. The sample covers all established exporters of Chilean wines in the UK. All these exporters participate to the annual exhibition of Chilean wines in London. Each producer is automatically invited to submit a limited number of wines for tasting. Gold, silver and bronze medals are awarded. We use the number of medals as well as a dummy for whether any medal has been awarded in a given year to the brand as a measure for

¹⁹See, for example, Crozet et al. (2009) for an application to international trade of Champagne wines.

the quality of the wines.²⁰

Columns V and VI in Table 3 show that (the number of) medals awarded to the brand have a positive effect on the average FOB price. The estimate of the age effect on FOB prices is positive, statistically significant, and very similar in magnitude to the estimate in Column IV. The available evidence suggests that improvements in product quality cannot fully account for the positive age effect on FOB prices.

3.5 Competing Explanations

Positive age effects on FOB prices not driven by improvements in product quality are consistent with a variety of learning effects. We distinguish four different types of learning effects:

H1 Winery Effects: (Potential) Distributors learn about winery “reliability”. A good reputation for reliability is a valuable asset. As wineries acquire a good reputation for reliability they are able to negotiate higher FOB prices.

H2 Distributor Effects: Distributors acquire a good reputation among retailers and/or “learn-by-selling” how to best market wines. A share of the resulting increase in prices paid by retailers / reduction in marketing costs is passed to the wineries through bargaining in the form of higher FOB prices.

H3 Product Effects: Demand for wineries products is discovered over time. As a winery product acquires recognition among retailers and final customers, wineries are able to negotiate higher FOB prices threatening to “walk away” with the product.

H4 Match-Specific Effects: Wineries and distributors learn the quality of their match over time. As beliefs are positively updated, wineries and distributors increase effort leading to a more efficient distribution of wines and, through bargaining, higher FOB prices.

Table 3 presents evidence that H2, H3 and H4 cannot fully account for positive age effects in FOB prices. The evidence is consistent with H1 playing a substantial role in explaining positive age effects in FOB prices. Direct evidence in support of this claim is presented in the following Section.

H2 Distributor Learning Effects

²⁰Other classifications yield qualitatively similar results.

Positive age effects on FOB prices could be due to learning *about* or *by* distributors. Distributors might acquire a good reputation in the retail market over time. Retailers might be willing to pay higher prices for the wines marketed by the distributor. Distributors might also learn over time how to distribute wines more effectively. This can also lead to higher prices paid by retailers and / or lower marketing costs. Through bargaining, both type of gains might be shared with wineries in the form of higher FOB prices.

In contrast to transactions between wineries and distributors, which are observable, data on transactions between distributors and retailers further down the chain are not observable. This limits the options available to directly control for learning effects *by* or *about* distributors. We conjecture that learning effects should be less important for more established distributors. Under this assumption, we can take advantage of across distributors variation in experience in the market to assess the importance of learning by or about distributors. Some distributors in the sample were established long before Chile started exporting wines to the UK. For instance, the median distributor in the sample was established in 1985, just a few years before Chilean wines took-off in the UK market. About a quarter of distributors in the sample were established before 1965, and a few others have imported wines for more than a century.²¹

Columns I-II in Table 4 repeat the specifications in Columns I and VI in Table 2 respectively. The specifications include the interaction between the age of the relationship and a dummy taking value equal to one if the distributor was established after 1985. The dummy is included as further control in Column I to saturate the equation. The main coefficient on the age of the relationship confirms the magnitude of the positive age effect on FOB prices found in Columns I and VI in Table 2. The interaction between the dummy variable and the age of the relationship is positive, but small and far from being statistically significant. The positive age effect on FOB prices does not happen disproportionately in relationships involving less established distributors. The evidence suggests that the age effect on FOB prices is not entirely driven by learning effects involving distributors.²²

H3 Product Learning Effects

²¹Distributors hold portfolios of wines and are unlikely to acquire reputations strongly tied to particular regions. Even if that was the case, the proposed strategy is correct if established distributors do not acquire a better reputation in sourcing from Chile than less established distributors.

²²Results are robust to the use of alternative definitions of the dummy for established distributors. Information on the evolution of distributors sales over time is available in the *Directory* for some distributors. The data are, however, not very precise and turnover figures, when available, are often reported in intervals. Nevertheless, age effects on FOB prices do not depend on measures of distributor turnover growth.

Positive age effects on FOB prices could be due to learning about demand for the winery’s product, rather than winery’s “reliability”. Over time the customer base of wineries products expands. Wineries and distributors do not write long-term contracts. As wines acquire recognition in the market, wineries might be able to negotiate higher FOB prices by threatening to take their products to other distributors. We conjecture that the resulting increase in the negotiating power acquired by the winery is stronger for branded wines than for unbranded wines. Under this assumption, we can take advantage of variation across wineries in the share of exported wines that are branded to assess the importance of this effect. Successful wineries might be able to negotiate with distributors higher shares of branded wines. This kind of selection would over-estimate the age effect in FOB price due to learning about product and under-estimate the residual age effect due to learning about a winery’s reliability. To limit these concerns, we use the share of branded wines for 2002, the earliest year for which we can compute this measure.

Columns III-IV in Table 4 repeat the specifications in Columns I and VI in Table 2 respectively. The specifications include the interaction between the age of the relationship and a dummy taking value equal to one if the winery only exported branded wines in 2002. The main coefficient on the age of the relationship is positive and statistically significant age effect on FOB prices, although slightly smaller than estimated in Columns I and VI in Table 2. The interaction between the dummy variable and the age of the relationship is positive, small and almost statistically significant at conventional levels. There is some evidence that the positive age effect on FOB prices is stronger for wineries that brand all the wines they export to the UK. The magnitude of this effect, however, is not large enough to fully account for the age effect on FOB prices.²³

H4 Match-Specific Learning Effects

Positive age effects on FOB prices could be due to learning about the quality of match-specific characteristics over time. For example, parties might learn the fit between the winery products and other wines in the distributor’s portfolio. As beliefs about match-specific characteristics are updated, wineries and distributors might increase investment and effort leading to a more efficient distribution of wines. The resulting increase in surplus could be shared in the form of higher FOB prices. Relationships in which there is a positive update of beliefs last longer and might have

²³Distributors might specialize in “off-trade” (i.e., supermarkets and high street retail) or “on-trade” (i.e., restaurants and pubs). Some information in this respect is provided in the *Directory*. Age effects do not appear to vary according to the specialization of the distributor.

higher FOB prices, thereby explaining the age effects on FOB prices. A specification that includes relationships fixed effects, such as in Column VI of Table 2, controls for match-specific characteristics that are fixed over time and, therefore, does not control for the evolution of beliefs about those characteristics.

Learning of this kind necessarily implies that the conditional likelihood of breakdown in the relationship should be non-increasing in the age of the relationship. If parties become more optimistic about the value generated by their match, they are less likely to separate. This is not necessarily the case if parties learn about the quality of one of the parties involved in the relationship, rather than match-specific quality. As beliefs about, e.g., wineries, are positively updated, the conditional likelihood of relationship breakdown might increase if wineries can be rematched with better distributors and there are complementarities in production.

Columns V and VI in Table 4 estimate conditional hazard rate of the likelihood of breakdown in the relationship.²⁴ The two columns replicate the baseline specification, but Column IV excludes relationships that last only one year. The main result is that, after the first year, the conditional likelihood of breakdown *increases* with the age of the relationship. If parties learn over time about match-specific attributes, Bayesian updating would imply that the longer parties have been together, the less likely the relationship is to break down. Column II in Table 2 and Figure 2 showed that the positive age effect on FOB price continues after the first year in the relationship. The evidence suggests that learning about match-specific characteristics cannot account for the positive age effect on FOB prices.

3.6 Age Effects in Price Responses to Distributors Marketing Costs

Distributor, Product and Match-Specific (learning) effects do not seem to account for the positive age effect on FOB prices. Our preferred hypothesis is that wineries acquire a reputation for “reliability” in the market, i.e., the set of distributors in the market learns about a winery’s reliability as supplier. A reputation for reliability brings the winery to the attention of other potential distributors attracted by the prospects of forming a relationship with a reliable partner. These expanded opportunities in the market, and the lack of long term contracts, improve the winery’s outside option in negotiations with its current distributor. The stronger bargaining position allows the winery to extract a larger share of the surplus available in the relationship and obtain higher FOB prices. Furthermore, as potential distributors learn about a winery’s

²⁴Note that, since these regressions only rely on information about the relationships, the sample period covers the entire history of Chilean wines exports to the UK.

reliability, the set of available matches for the winery expands. This can lead to an increase in the likelihood of separation over time, as documented in the previous Section.

This Section provides direct support to the hypothesis that wineries bargaining power increases over time. To test for increases in wineries bargaining power over time we look at how FOB prices react to exogenous changes in the opportunity costs of marketing Chilean wines for the distributor. The logic of the test is as follows. When the opportunity costs of marketing increase (resp. decrease) FOB prices should decrease (resp. increase) so that the profit margins earned by the distributor and her effort adjust to the new marketing costs. The magnitude of the response of FOB prices to changes in marketing costs depends on the distribution of bargaining power, everything else equal. If the distributor has most of the bargaining power, FOB prices will decrease following an increase in marketing costs but might not increase following a decrease in marketing costs. If, instead, the winery has most of the bargaining power, FOB prices will increase following a reduction in marketing costs but might not decrease following an increase in marketing costs. Shifts in the distribution of bargaining power over time, therefore, can be inferred from asymmetric changes in the response of FOB prices to movements in the marketing costs.²⁵

The starting point to test for these effects is to construct a measure of the opportunity cost of marketing Chilean wines. A key preoccupation of export directors is to gain sufficient attention from distributors. Distributors must spend significant time and resources to market Chilean wines. Chilean wineries compete for attention against wine producers from other countries that belong to the portfolio of their distributor. Profit margins earned on wines imported from other countries, therefore, determine distributors opportunity cost of dedicating time and resources to market Chilean wines.

Exchange rates are important determinants of the margins earned by distributors on the wines in their portfolios. First, FOB prices are sensitive to exchange rates movements. The discussion of the results in Column VI in Table 2 showed evidence for Chilean wines which plausibly also holds for wines imported from other countries. Second, there is a significant amount of evidence that exchange rates are not completely passed-through to wholesale or retail prices (see, e.g., Goldberg and Knetter (1997)). As a consequence, the opportunity cost of marketing Chilean wines depend on exchange rates of *other* countries. For instance, an appreciation (depreciation) of

²⁵The response of FOB prices might not fully compensate for the change in marketing costs to allow for adjustments in (non-contractible) effort as well. If effort becomes less sensitive to marketing costs over time, e.g., because the brand is established, it is possible that the effect of changes in marketing costs on FOB prices decreases over time.

the South African rand, implies that margins earned on South African wines will be lower (higher). This in turn lowers (raises) the opportunity cost of exerting effort and committing resources to promote Chilean wines.

There is substantial variation in the geographical origin of wines across distributors portfolios. This cross-sectional variation can be combined with time variation in exchange rates dynamics to obtain an exogenous measure of the (opportunity) costs of marketing Chilean wines. For example, in a given year, changes in the value of the South African rand impact Chilean wineries matched with distributors that import wines from South Africa, but not wineries that are matched with distributors that do not.

The measure of the opportunity costs of marketing Chilean wines is constructed as follows. For each distributor d , denote with sh_{dc} the share of brands imported from country c in the distributor's portfolio in the year in which the relationship was formed. Wine producers from New World Regions are the main competitors of Chilean producers. For this reason, brands from Australia, New Zealand, South Africa and United States alone are considered. Brands from Old World regions (i.e., France, Italy, Spain, Germany and Portugal) are not considered close competitors of Chilean wines and are, therefore, excluded. Distributors could adjust the composition of their portfolios in response to exchange rates movements or to the evolution of the relationship with the Chilean supplier. While it takes time to build new relationships and, therefore, these adjustments might not be available in the short run, to minimize endogeneity concerns the shares sh_{dc} are computed at the time at which the relationship was started.

Denote by e_{ct} the (average) exchange rate between country c and the British Pound in year t . Denote by e_{cwd} the (average) exchange rate between country c and the British Pound in the year in which distributor d and winery w started their relationship. The portfolio adjusted exchange rate is given by

$$e_{wdt}^* = \sum_{c \in NW} sh_{dc} \times \left(\frac{e_{ct}}{e_{cwd}} \right).$$

The variable e_{wdt}^* gives an exogenous measure of the (opportunity) cost of marketing Chilean wines which is both time-varying and relationship-specific.

Figure 3 illustrates the time variation in the exchange rates as well as in the average measure of the opportunity costs of marketing over the sample period. The Figure shows that, while exchange rates dynamics display significant variation both across countries and over time, the average opportunity cost of marketing across relationships

is quite stable over time.²⁶ The identification of the effect of marketing costs on FOB prices, therefore, genuinely reflects idiosyncratic shocks to the relationships and is not simply picking up trends in other relevant variables.

Table 5 reports the results. Column I adds e_{wdt}^* in the baseline specification in the corresponding Column in Table 2. The opportunity cost of marketing has a negative impact on FOB prices. The coefficient implies that a ten percent depreciation in the exchange rates of a country present in the distributor portfolio translates into a reduction in FOB prices of almost four percent times the share of that country in the distributor portfolio. This effect is in addition to the overall effect induced by exchange rates dynamics from, e.g., aggregate demand effects, which is absorbed in the year fixed effects.

Column II in Table 5 adds the interaction between the opportunity cost of marketing and the age of the relationship. If effort becomes less sensitive to marketing costs over time, e.g., because the appropriate marketing channels and brand for the product have been established, the effect of changes in marketing costs on FOB prices might decrease over time. The interaction coefficient is positive, but not statistically significant. However, the overall effect of changes in marketing costs after four years in the relationship is no longer statistically significant at conventional levels. The evidence lends some support to the idea that FOB prices become relatively more insulated from shocks to marketing costs over time. The overall age effect on FOB prices similar in magnitude to the estimates in Column I.

Column III in Table 5 considers whether reactions of FOB prices to increases and reductions in the opportunity costs of marketing are symmetric. The opportunity cost of marketing e_{wdt}^* is split up into two variables, e_{wdt}^+ and e_{wdt}^- , depending on whether it is higher or lower than in the previous year. The two variables e_{wdt}^+ and e_{wdt}^- are defined as

$$\begin{aligned} e_{wdt}^+ &= e_{wdt}^* \times \mathbf{I}[e_{wdt}^* > e_{wdt-1}^*], \\ e_{wdt}^- &= e_{wdt}^* \times \mathbf{I}[e_{wdt}^* < e_{wdt-1}^*]; \end{aligned}$$

where $\mathbf{I}[z]$ is an indicator taking value equal to one if z is true, and zero otherwise. The coefficients are similar in magnitude to the estimates in Column I, although they are slightly less precisely estimated. There is no evidence that, on average, FOB prices

²⁶Note that exchange rates have been normalized for their values in 1999. The opportunity cost of marketing, instead, is normalized to be equal to one at the beginning of the relationship. For this reason, its mean value is not equal to one in 1999.

respond asymmetrically to higher or lower marketing costs.

As argued above, however, the test for shifts in bargaining power relies on asymmetric changes in the effects of marketing costs on FOB prices. Column IV in Table 5 looks at whether the reduced responsiveness documented in Column II is asymmetric between increases and reductions in the opportunity costs of marketing. The specification interacts the variables e_{wdt}^+ and e_{wdt}^- with a dummy taking value equal to one if the relationship is in its fourth year or beyond and zero otherwise. The interaction between increases in the opportunity costs of marketing and the age dummy is positive and statistically significant. The sum of the two coefficients involving increases in the opportunity cost of marketing is still statistically different from zero at the ten percent level. The interaction between reductions in the opportunity costs of marketing and the age dummy is negative, large and statistically significant. The sum of the two coefficients involving reductions in the opportunity costs of marketing, therefore, still is negative and statistically significant.

The Table also reports F-tests for the equality of effects of increases and reductions in marketing costs on FOB prices over time. The results suggest that in the early years of the relationship, FOB prices are more responsive to increases than reductions in marketing costs. After four years, however, FOB prices are more responsive to reductions than to increases in marketing costs.

The resulting effect of the opportunity cost of marketing on FOB prices is illustrated in Figure 4. The x-axis reports the opportunity cost of marketing, e_{wdt}^* , relative to its value in the previous year, e_{wdt-1}^* . The y-axis reports FOB prices. The slopes of the lines represent the estimated coefficients. The Figure illustrates three facts. First, FOB prices decrease with the opportunity cost of marketing, i.e., all lines are negative. Wineries suffer from more intense “within-distributor” competition. Second, the overall slope becomes somewhat flatter as relationships grow older. FOB prices responsiveness to changes in the opportunity costs of marketing slightly decreases with the age of the relationship. Third, the adjustment is asymmetric. The responsiveness of FOB prices to increases in the opportunity cost of marketing decreases, while the responsiveness of FOB prices to reductions in the opportunity cost of marketing increases.

It is worth considering alternative explanations for the facts reported in Column IV of Table 5. First, the results are unlikely to reflect insurance considerations. Distributors import several brands of wines and are more diversified than Chilean wineries, especially at the beginning of the relationship. If anything, distributors should pro-

vide insurance against negative shocks to marketing costs at the beginning of the relationship, rather than later. The evidence, therefore, is unlikely to reflect insurance considerations. Second, results could reflect changes in the optimal level of marketing effort by the distributor during the course of the relationship. In response to changes in marketing costs, effort might not be adjusted downward but might be adjusted upward early on in the relationship and vice versa later on. FOB prices would reflect the corresponding (lack of) adjustment. This could happen, for example, if the combination of current profit margins and future value of the relationship for the distributor in the beginning of the relationship is not sufficient to induce the optimal amount of effort. The evidence would still be consistent with the winery having to incur costs at the beginning of the relationship to acquire a good reputation, but the interpretation would be different from increase in bargaining power.

3.7 Market Structure

The evidence in the previous sections shows that the positive age effect on FOB prices cannot be fully accounted by product, distributors or match-specific learning effects. The evidence is consistent with learning about winery characteristics in the market. The acquisition of a good reputation increases wineries outside option and bargaining power. Wineries become able to negotiate higher FOB prices and become insulated from negative shocks to the opportunity cost of marketing.

The proposed interpretation also offers a candidate explanation for the fact that the conditional likelihood of a relationship breakdown increases over time. Suppose distributors in the market are vertically differentiated: there are “good” and “bad” distributors. For example, “good” distributors have established relationships with larger and more consistent retailers, e.g., large supermarkets or pub chains, while “bad” distributors are confined to less profitable segments in the market. This implies that “good” distributors have a higher opportunity costs of experimenting new suppliers. Consequently, “bad” distributors have a relative comparative advantage in starting relationships with new, less established, wineries. When a winery enters the market, it is more likely to be matched with a “bad” distributor. As the winery acquires a good reputation, the incentives of breaking the relationship and moving to a better distributor increase. The likelihood of a relationship breakdown, therefore, increases with the age of the relationship.

This Section presents evidence consistent with this interpretation. The hypothesis discussed in the previous paragraph implies that “second-match” distributors are bet-

ter than “first-match” distributors, at least if there has been enough time to positively learn about the winery. The evidence, therefore, relies in documenting systematic differences in the quality of distributors between first and second relationships for the winery in the market. We consider two different measures of the quality of a distributor.

A first measure of a distributor quality is given by distributor fixed effects estimated on FOB prices from the specification in Column V of Table 2. Columns I, II and III in Table 6 report the results. Column I shows that the distributor involved in the second relationship pays, on average, almost seven percent higher FOB prices than the distributor with whom the winery had her first relationship. This effect is in addition to winery, year, and age effects since these are controlled for in the estimation of distributor fixed effects. The effect, however, is not statistically significant at conventional levels.

A winery first relationship, however, might be too short for the winery to acquire a good reputation. For example, early poor performance might lead to the breakdown of the first relationship and the winery being rematched to another low quality agent.²⁷ Column II interacts the second relationship dummy with an indicator for whether the first relationship of the winery lasted less than three years. The results show that the distributor involved in the second relationship with the winery pays twelve percent higher FOB prices than the distributor in the first relationship if the first relationship of the winery lasted more than three years, and pays ten percent lower FOB prices otherwise. The evidence, therefore, is consistent with the hypothesis that wineries that have had the time to build a good reputation end up being re-matched with distributors of higher quality. Finally, Column III shows that these results are robust to the inclusion of distributor characteristics as controls.

The inclusion of winery fixed effects in the specification in Column V of Table 2 precludes the estimation of fixed effects for distributors that are involved in relationships in which both parties have had only one partner. There are twenty three such relationships in the data. This can induce selection bias in the set of distributors considered. The second measure of a distributor quality is the share of relationships in the brand portfolio that are five or more years older at the time the relationship was started. While this is a less direct measure of distributor quality than estimated distributor fixed effects in the FOB prices equation, the measure does not suffer from the potential selection bias described above. Columns IV, V and VI in Table 6 reports the

²⁷Note that this will be the case even when the market cannot attribute the poor performance to either the winery or the distributor.

results. The pattern emerging from the exercise is very consistent with the evidence obtained with distributor fixed effects on FOB prices as dependent variable. In particular, the distributor involved in the second relationship of the winery has a higher share of long lasting relationships than the distributor involved in the first relationship only if the first relationship lasted more than three years. While other interpretations are certainly possible, e.g., sorting based on product characteristics and compatibility of marketing channels, the correlation patterns in Table 6 are nevertheless consistent with a market organized to learn about new wineries.

4 Conclusions

In this paper we set out to look for evidence that reputation acquisition matters in export markets and used Chilean wineries in the UK as a case study. Using an original dataset of relationships between exporters and their distributors in the foreign market we have documented evidence that reputation is an important determinant of the FOB price received by exporters. In particular, we have shown that i) wineries face an outward shift in demand over time; ii) the outward shift in demand, which cannot be accounted by product, distributor and match-specific effects, is consistent with learning about the winery in the market; iii) consistently, we have documented that wineries bargaining power increases over time and that the market appears to be organized to learn about new suppliers. Learning appears to have a large effect (on average, each year increases FOB prices by at least three percent) and takes considerable time (there is no evidence of the positive age effect to vanish after a few years).

This evidence yields several implications. First, reputation acquisition is a form of investment: when an exporter enters a new market, there is an initial phase in which the exporter will potentially make losses to build a good name (see, e.g., Shapiro (1983) for an early theoretical treatment). This implies that deep pockets, or good access to trade finance, can enormously facilitate access to export markets.

The fact that building a reputation takes time implies that, at least for a while, prior beliefs matter. This also has important implications. First, in the case of the specific market under consideration, prior beliefs of low differentiation across Chilean wineries might explain why distributors do not market more than one Chilean winery at the time. This, in turn, might create significant barriers to entry for other wineries which might either not find an agent, or might have to chose from a small pool of low quality agents.²⁸

²⁸Some support to this argument is given by the important marketing efforts made in recent years

Second, prior beliefs might be determined, at least in part, by the country reputation. A part from potentially providing a rationale for common marketing efforts promotion at the country/industry level, the logic also points to the critical role of “pioneers”, i.e., early entrants. Perhaps Chile has been “lucky” in having a good pool of early entrants that established a good reputation for themselves and for the industry as a whole, opening up the market for subsequent cohorts of entrants. There is some anecdotal evidence in support of this view. During a survey of export directors conducted at the International Wine Fair in London in May 2007, we asked respondents to name other Chilean wineries that, in their view, had acquired a particularly good reputation in the market. An overwhelming majority of answers clustered on two very early entrants. A respondent from a small “boutique winery” specializing in high quality wines noted that if it had not been for the efforts of these early entrants, she “would have not been (t)here”. The view was shared by several other respondents. But perhaps Chile wasn’t just lucky: in a country in which markets do not allocate resources to the most efficient firms, those with better “connections” end up being more likely to export. Pioneers will then not be the most efficient firms and might fail to be the catalyst for further industry expansion.²⁹

This paper presented evidence from a specific market, Chilean wines in the UK, and the external validity of its findings cannot be taken for granted. With this caveat in mind, the facts documented in this paper should be of interest to a larger set of researchers in international trade. A better understanding of the importance of trust and reputation in export transactions has the potential to enhance our understanding of the role of intermediaries in international markets, the nature of trade costs, the transmission of international shocks and the pass-through of exchange rate fluctuations to domestic prices. Before the insights from this paper can be fruitfully applied to the formulation of micro-founded models, however, further micro studies should confirm the quantitative importance of trust and reputation in international transactions. We see this as a priority for future research.

by the industry association to advertise grape and regional differentiation within Chile.

²⁹Hausmann and Rodrick (2003) self-discovery approach also points to the importance of early entrants in promoting export growth. The logic is however quite different from one based on reputation. Exploring the connections between the two approaches is a promising avenue for future research.

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TABLE 1: SUMMARY STATISTICS

Variable	N. Obs.	Mean	Std. Dev.	Min.	Max.
<i>Relationships</i>					
Length	288	3.37	2.97	1	17
Length in 2006	134	4.2	3.79	1	17
<i>Wineries</i>					
Year of Entry	114	1997	5.01	1986	2006
Number of Brands in 2006	114	1.46	1.13	1	11
Number of Relationships	114	2.52	1.37	1	7
Average FOB Price per case, in \$, in 2006	110	41.22	30.89	6.03	176.9
Export Volumes, in Liters, in 2006	110	15278.8	57132.5	40	461392
Number of Agents in 2006	110	1.22	0.44	1	3
<i>Distributors</i>					
Year of Creation	136	1957	66.65	1705	2005
Number of Relationships	136	2.11	1.13	1	8
Number of Brands Imported in 2006	94	31.42	30.62	1	159
Share of New World Wines in 2006	94	0.53	0.29	0	1
Number of Relationships in 2006	94	1.42	0.86	1	4

Relationship Length and Relationship Length in 2006 are from author calculations from the *Harpers Directory of Wine and Spirit in the UK*, various issues. Winery year of entry is from *Harpers Directory*. Number of Brands is from *Harpers Directory* and *Nuevos Mundos*. Number of relationships is from author calculation from *Harpers Directory*. Average FOB prices per case (in US Dollars) and Export Volumes are from *Wines of Chile* and *Chilevid*. The Number of agents is from author calculation from *Harpers Directory*. All figures for distributors is from the *Harpers Directory* and author calculations.

TABLE 2: AGE EFFECTS ON FOB PRICES

Dependent Variable:	FOB Prices									
	I	II	III	IV	V	VI	VII	VIII	IX	X
Relationship's Age	0.051*** [0.019]	0.037** [0.018]	0.054** [0.028]	0.065** [0.033]	0.039** [0.019]	0.036** [0.018]	0.087* [0.043]	0.06* [0.033]	0.033* [0.018]	0.034** [0.015]
First Year Dummy		-0.048 [0.032]								
Last Year Dummy		0.014 [0.029]								
Fixed Effects, Controls, Sample and Identification										
Year Fixed Effects	Yes	yes	yes	yes	yes	no	no	no	yes	yes
Winery Fixed Effect	Yes	yes	yes	yes	yes	--	--	--	--	--
Distributor Fixed effects	no	no	no	no	yes	--	--	--	--	--
Relationship Fixed Effect	no	no	no	no	no	Yes	yes	yes	yes	yes
Initial Exchange Rates	yes	yes	yes	--	yes	--	--	--	--	--
Exchange Rates	--	--	--	yes	--	yes	yes	yes	--	--
Only First 4 Years	no	no	yes	no	no	no	yes	no	no	no
Short Relationships Only	no	no	no	yes	no	no	no	yes	no	no
Non-Linear Age Effects	no	no	no	no	no	no	no	no	yes	yes
Sample Years	1999-2006	1999-2006	1999-2006	1999-2006	1999-2006	1999-2006	1999-2006	1999-2006	1999-2006	1999-2006
R-squared	0.88	0.88	0.89	0.91	0.94	0.94	0.98	0.97	0.95	0.95
Number of Observations	565	565	398	273	565	565	398	273	565	565

***, ** and * mean statistically significant at 1%, 5% and 10% respectively. Average FOB Prices are in logs (Sources: *Chilevid*, *Wines of Chile*, *NuevosMundos*). Average FOB Prices are in US Dollars. Relationships age is in years (Source: author calculations from *Harpers Directory*). Initial Exchange Rates are logs of the average exchange rates between British Pound and US Dollar and between US Dollar and Chilean Peso in the year the relationship was started. Exchange Rates are analogously defined for the year the observation refers to. The specifications in Columns IX and X respectively assume that age effects vanish after the 4th and 7th years respectively in a relationship. [--] denotes fixed effects or controls absorbed by other fixed effects included in the specification. Robust standard errors clustered at the relationship level are reported in parenthesis.

TABLE 3: SUPPLY SHIFTS AND PRODUCT QUALITY

Dependent Variable:	Export Volumes			FOB Prices		
	I	II	III	IV	V	VI
Relationship's Age	0.005 [0.066]	0.029 [0.064]	0.105 [0.070]	0.049* [0.026]	0.049* [0.028]	0.052** [0.027]
Any Medal Awarded to the Brand (0-1 Dummy)					0.064* [0.036]	
Medals Awarded to the Brand (#)						0.017 [0.013]
Fixed Effects						
Year Fixed Effects	yes	no	yes	yes	yes	yes
Winery Fixed Effect	yes	--	--	--	--	--
Distributor Fixed effects	no	--	yes	yes	yes	yes
Relationship FE Effect	no	yes	yes	no	no	no
Brand Fixed Effects	--	--	--	yes	yes	yes
Controls						
Initial Exchange Rates	yes	--	--	--	yes	--
Exchange Rates	--	yes	--	yes	--	yes
Brand Level Data	no	no	no	yes	yes	yes
Sample Years	1999-2006	1999-2006	1999-2006	2002-2006	2002-2006	2002-2006
R-squared	0.89	0.95	0.95	0.92	0.92	0.92
Number of Observations	565	565	565	691	691	691

***, ** and * mean statistically significant at 1%, 5% and 10% respectively. Average FOB Prices and Export Volumes are in logs (Sources: *Chilevid*, *Wines of Chile*, *NuevosMundos*). Average FOB Prices are in US Dollars. Relationships age is in years (Source: author calculations from *Harpers Directory*). Number of Medals refers to awards received by the brand at the Wines of Chile Exhibitions between 2002 and 2006 (Source: author calculations from *Wines of Chile*). Initial Exchange Rates are logs of the average exchange rates between British Pound and US Dollar and between US Dollar and Chilean Peso in the year the relationship was started. The specification in Column III assumes that age effects vanish after the 7th year in a relationship. [--] denotes fixed effects or controls absorbed by other fixed effects included in the specification. Exchange Rates are analogously defined for the year the observation refers to. Robust standard errors clustered at the relationship level are reported in parenthesis.

TABLE 4: COMPETING EXPLANATIONS: DISTRIBUTOR, PRODUCT AND MATCH-SPECIFIC EFFECTS

Dependent Variable:	FOB Prices				Relationship's Breakdown	
	I	II	III	IV	V	VI
Relationship's Age	0.042** [0.020]	0.031* [0.017]	0.045*** [0.018]	0.029* [0.017]	-0.300*** [0.128]	0.450*** [0.153]
Relationship's Age x Recent Distributor	0.012 [0.011]	0.008 [0.010]				
Recent Distributor	-0.027 [0.024]	--				
Relationship's Age x Branded Wines (in 2002)			0.015 [0.011]	0.010 [0.007]		
Fixed Effects						
Year Fixed Effects	yes	--	yes	--	yes	yes
Winery Fixed Effect	yes	--	yes	--	yes	yes
Distributor Fixed effects	no	--	no	--	no	no
Relationship Fixed Effect	no	yes	no	yes	no	no
Controls						
Initial Exchange Rates	yes	--	yes	--	yes	yes
Exchange Rates	--	yes	--	yes	--	--
Sample Years	1999-2006	1999-2006	1999-2006	1999-2006	1986-2006	1986-2006
R-squared	0.88	0.94	0.89	0.95	0.04	0.05
Number of Observations	565	565	565	565	932	867

***, ** and * mean statistically significant at 1%, 5% and 10% respectively. Average FOB Prices are in logs (Sources: *Chilevid, Wines of Chile, NuevosMundos*). Average FOB Prices are in US Dollars. Relationship's Breakdown takes value equal 1 in the last year of the relationship and zero otherwise. Columns V and VI estimate Logit models. Pseudo R-Squared are reported for Columns V and VI. Column VI excludes relationships that lasted only one year. Relationships age is in years in Columns I, II, III, IV; and in logs in Columns V and VI (Source: author calculations from *Harpers Directory*). Recent distributor takes value equal to one if the distributors has been established after 1985 and zero otherwise (Source: *Harpers Directory*). Branded wines takes value equal to 1 if the winery only exported bottled branded wine in the UK in 2002 (Source: author's calculation from *NuevosMundos*). Initial Exchange Rates are logs of the average exchange rates between British Pound and US Dollar and between US Dollar and Chilean Peso in the year the relationship was started. Exchange Rates are analogously defined for the year the observation refers to. [-] denotes fixed effects or controls absorbed by other fixed effects included in the specification. Robust standard errors clustered at the relationship level are reported in parenthesis.

TABLE 5: AGE EFFECTS IN FOB PRICE RESPONSE TO DISTRIBUTORS MARKETING COSTS

Dependent Variable: FOB Prices	I	II	III	IV
Relationship's Age	0.058*** [0.021]	0.058* [0.022]	0.062*** [0.021]	0.068*** [0.023]
Opportunity Cost of Marketing	-0.389* [0.230]	-0.469* [0.293]		
Opportunity Cost of Marketing [Positive Changes]			-0.309 [0.237]	-0.496** [0.255]
Opportunity Cost of Marketing [Negative Changes]			-0.271 [0.245]	-0.438* [0.259]
Opportunity Cost of Marketing x I[Relationship's Age >4]		0.124 [0.272]		
Opportunity Cost of Marketing [Positive Changes] x I[Relationship's Age >4]				0.073** [0.037]
Opportunity Cost of Marketing [Negative Changes] x I[Relationship's Age >4]				-0.133*** [0.044]
F-Tests	Equality of Response at the Beginning of the Relationship:			Prob > F = 0.051**
	Equality of Response After Year Four in the Relationship:			Prob > F = 0.002***
Year Fixed Effects	yes	yes	yes	yes
Winery Fixed Effect	yes	yes	yes	yes
Initial Exchange Rates	yes	yes	yes	yes
R-squared	0.89	0.89	0.89	0.89
Number of Observations	565	565	565	565

***, ** and * mean statistically significant at 1%, 5% and 10% respectively. Average FOB Prices (in US Dollars) are in logs (Sources: *Chilevid*, *Wines of Chile*, *NuevosMundos*). Opportunity Cost of Marketing is a distributor-specific weighted-average of exchange rates with Australia, New Zealand, South Africa and US. The weights are given by the share of brands in the distributor portfolio at the time the relationship was started. The corresponding exchange rates are normalized relative to the time in which the relationship was started (Sources: author calculations from *Harpers Directory*). Opportunity Cost of Marketing [Positive Changes] is equal to the Opportunity Cost of Marketing if this variable is higher than in the previous year, and to zero otherwise. Opportunity Cost of Marketing [Negative Changes] is defined accordingly. See main text for details. [--] denotes fixed effects or controls absorbed by other fixed effects included in the specification. Robust standard errors clustered at the relationship level are reported in parenthesis.

TABLE 6: COMPARISON OF FIRST AND SECOND DISTRIBUTORS

Dependent Variable:	Distributor FE, on FOB Prices			% Relationships 5+ years longer in Portfolio		
	I	II	III	IV	V	VI
2nd Relationship	0.068 [0.055]	0.121* [0.067]	0.141** [0.072]	0.078** [0.036]	0.112*** [0.041]	0.091** [0.040]
First Relationship < 3 years		0.016 [0.113]	0.081 [0.129]		-0.035 [0.048]	-0.073 [0.052]
First Relationship < 3 years x 2nd Relationship		-0.237* [0.125]	-0.376*** [0.128]		-0.178*** [0.068]	-0.155** [0.074]
Controls	no	no	yes	no	no	yes
R-squared	0.01	0.03	0.13	0.04	0.13	0.21
Number of Observations	125	125	125	148	148	148

***, ** and * mean statistically significant at 1%, 5% and 10% respectively. Distributor Fixed Effects estimated in Column V of Table 2 are the dependent variable in Columns I, II and III. The dependent variable in Columns IV, V and VI is the % of Relationships 5+ years longer in Portfolio is the share of relationships older than four years in the distributor portfolio at the time the relationship was started. Regressions are at the relationship level. Only first and second relationships for the wineries are considered. Second relationship dummy is defined accordingly. First Relationship <3 years takes value equal to one if the first relationship of the winery in the market lasted either one or two years and zero otherwise. Controls are included in Columns III and VI. Controls are distributor turnover, location, share of brands from Australia, South Africa, New Zealand and US and a measure of firm size. Robust standard errors clustered at the winery level are reported in parenthesis.

FIGURE 1: OUTWARD SHIFTS IN DEMAND

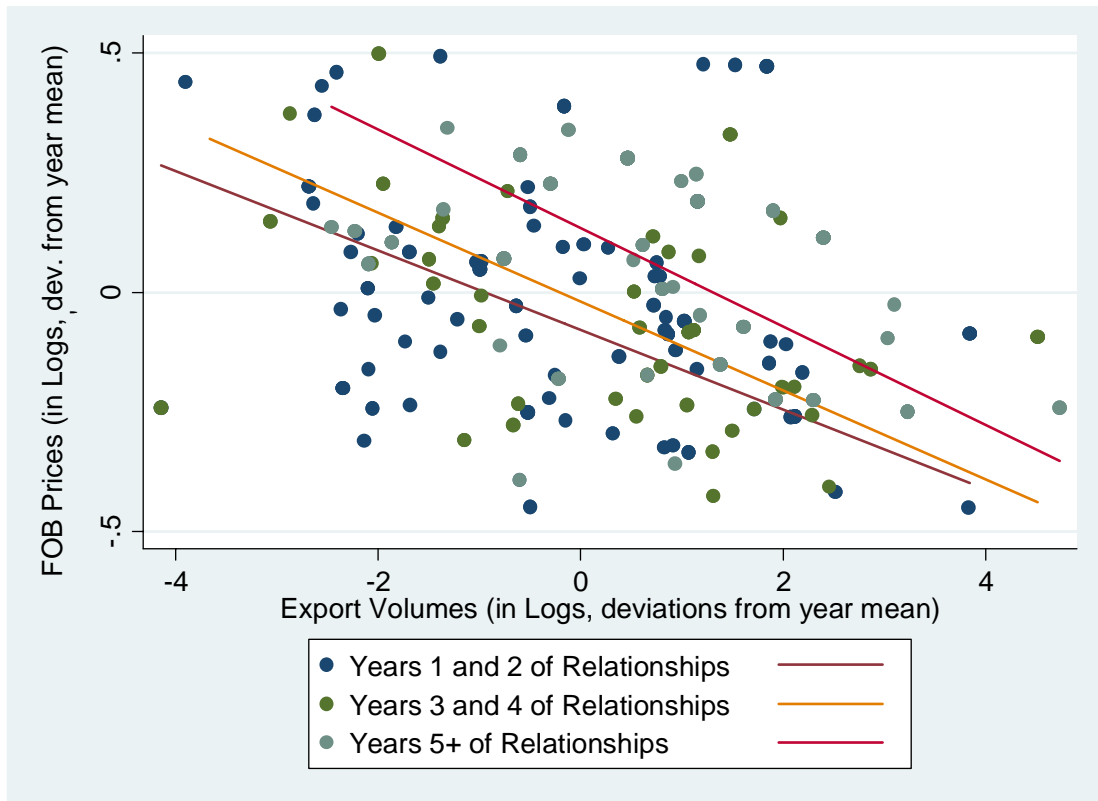


Figure 1 reports on the vertical axis FOB prices (in logs) and on the horizontal axis Export Volumes (in logs). Both Prices and Volumes are in deviations from year averages. Linear fits are reported for observations in years 1 and 2, 3 and 4 and 5 and above of the relationships.

FIGURE 2: AGE EFFECTS ON FOB PRICES

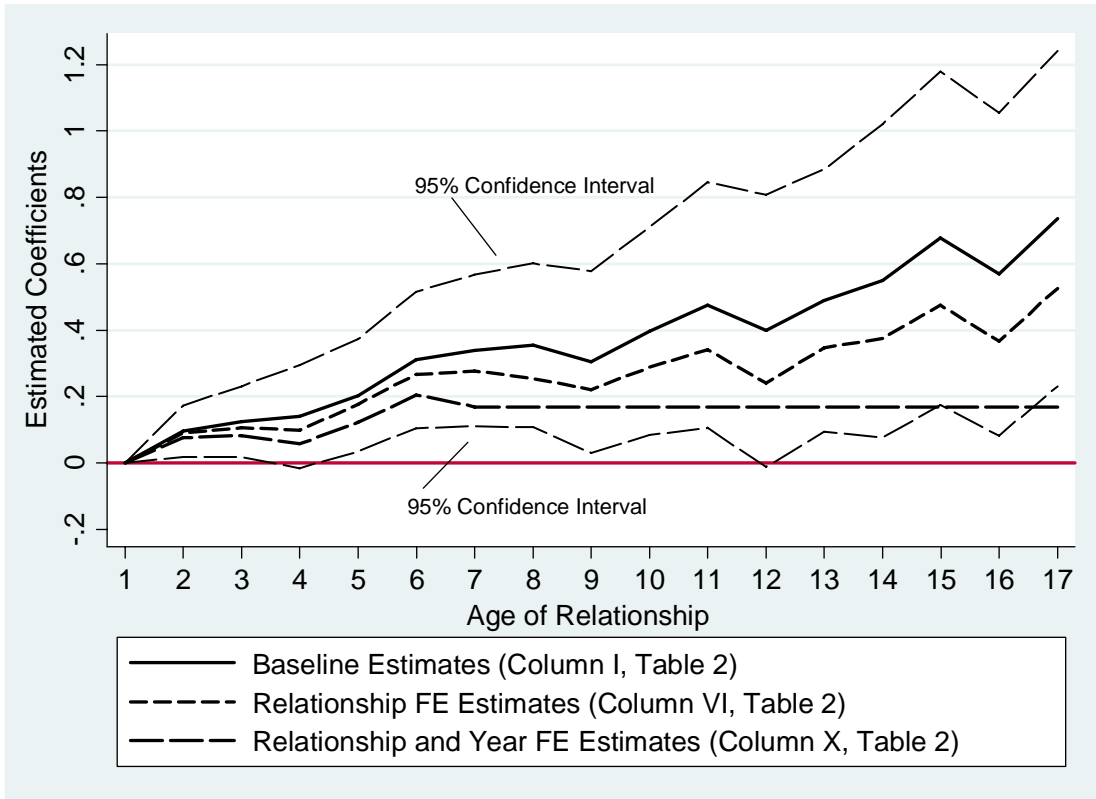


Figure 2 reports on the vertical axis estimated coefficients of year dummies (on the x-axis) on FOB prices (in logs) estimated from the specifications in Columns I, VI and X in Table 2, alongside with 95% confidence interval estimated from the specification in Column I. The specification in Column X corresponds to the estimates in the long-dashed line. To include both relationships and year fixed effects the age effect is assumed to vanish after the seventh year. Hence, the flat portion of the line represents the identification assumption.

FIGURE 3: EXCHANGE RATES AND MARKETING COST DYNAMIC

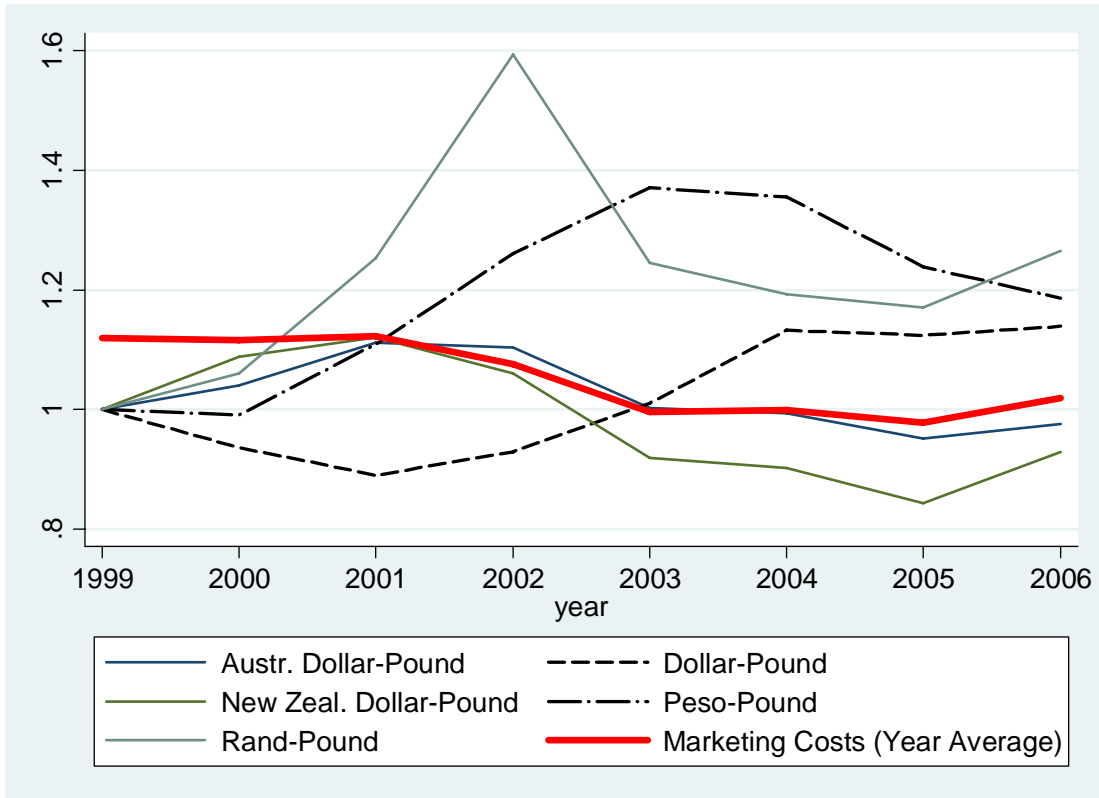


Figure 3 reports exchange rates between the British Pound and the currency of the main New World producing countries (Australia, Chile, New Zealand, South Africa and the United States) during the sample period. The value of the exchange rates is normalized to its value at the beginning of the sample period, in 1999. The Figure also reports the average opportunity cost of marketing across relationships. The measure combines cross-sectional variation in the geographical origin of wines imported by different distributors with time variation in exchange rates dynamics. To construct the measure exchange rates have been normalized for their values at the beginning of the relationship.

FIGURE 4: AGE EFFECTS IN FOB PRICES RESPONSES TO MARKETING COSTS

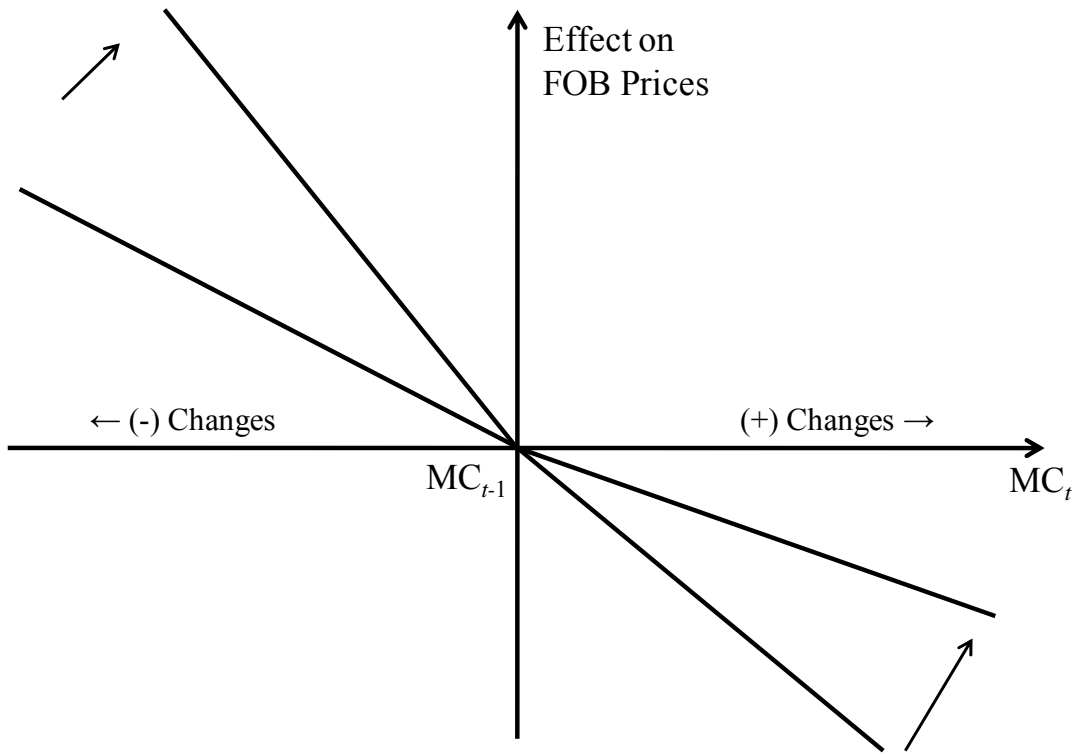
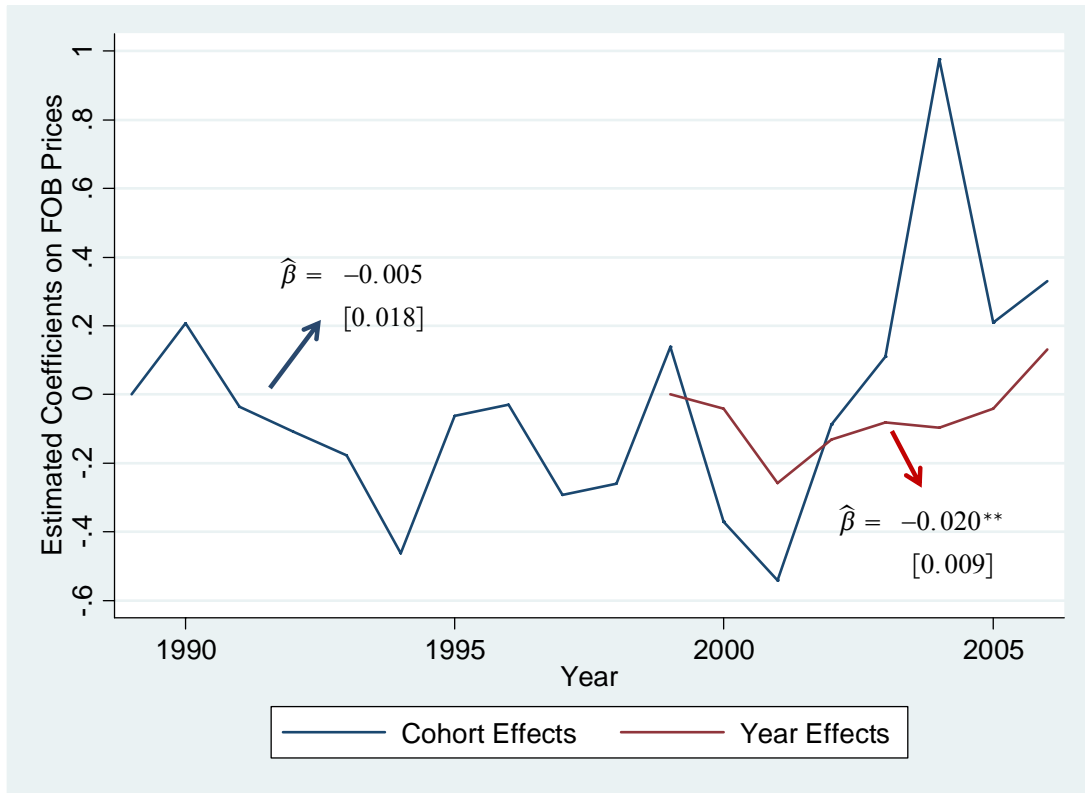


Figure 4 illustrates age effects in the responsiveness of FOB prices to changes in marketing costs as estimated in Column IV of Table 5.

FIGURE A1: COHORT, YEAR EFFECTS AND BIAS FROM THEIR OMISSION



The Figure reports estimates from two different specifications on FOB prices: a) including winery's age and winery cohort effects but not year effects, b) including winery's age and year effects, but not winery cohort effects. The cohort and time effects are reported in the Figure, alongside with the corresponding estimates in the winery age effect. The Figure shows sizeable cohort effects (ranging from about -50% to +60%) and time effects (ranging from about -20% to almost +20%) on FOB prices. The corresponding estimates of age effects on FOB prices, about -0.5% and -2% in the two specifications respectively, illustrate the significant bias induced by omitting to control for either time or cohort effects and the benefits of the empirical strategy used in the paper to identify age effects.