UNDERSTANDING THE HIERARCHY GOVERNANCE OF SOME WINERIES IN BRAZIL: MORE THAN ASSET SPECIFICITY.

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ABSTRACT
This study aims to contribute towards understanding the multiple factors which influence firm's governance decisions. To identify some of these factors, we analyze three cases in the Brazilian wine industry: Don Laurindo located in Vale dos Vinhedos (RS); Miolo located in Vale dos Vinhedos and in Vale do Rio São Francisco; and ViniBrasil located in Vale do Rio São Francisco. For the most part, all three firms procure the grapes they use for their wine production in-house. By Brazilian standards it has a long tradition in these regions and it is not difficult to purchase sufficient quantity of grapes to produce wine. The wineries are concerned also about the quality of the grapes they use. Purchasing high-quality grapes is a critical issue. However, the quality of grapes is easily measured and the cost to buy in the market is cheaper than producing in-house. Furthermore, also the level of asset specificity present in the grape-grower–wine-producer transaction seems, by itself, insufficient to justify the use of hierarchical governance forms. Then, the aim of the article is to analyze the reasons why these wineries largely rely on hierarchy governance forms to procure their grape-inputs. What explains their use of hierarchy governance, given that both asset specificity and measurement problems appear to be relatively low?

Keywords: Hierarchy governance; Brazilian Wineries; Transaction Cost Theory; Rsource-Base View; Property Rights.

1. INTRODUCTION

This study aims to contribute understanding the multiple factors which influence firm's governance decisions. To identify some of those factors, we analyze three cases in the Brazilian wine industry as an example. The Brazilian wine industry is an interesting context for the purpose of this study because, currently, the Brazilian viticulture covers an area of 81 thousands hectares with vineyards from the far south to regions near the equator. Two regions stand out: Rio Grande do Sul State, where Vale dos Vinhedos is located, producing an average of 777 million kilos of grape per year, and Vale do Rio São Francisco in the Brazilian Northeastern (IBRAVIN, 2013). Although the purchase of grapes in market is feasible, some wineries are more tempted to produce grapes in-house.

The three wineries selected for this study, are located in these two regions. They are mainly organized into a hierarchy governance form, even though the production of grape is well developed in both Vale dos Vinhedos and in Vale do Rio São Francisco and it is not difficult to purchase the grapes in the market. One of the reasons is that the wineries are concerned about the quality of grapes, because that is an important issue to produce wine with good quality. This is the main incentive for wineries cultivate their own grapes in order to control and monitor all phases of production of their wine. On the other hand the quality of grapes is measurable and the cost to buy grapes in the market is less expensive than producing it in-house. Therefore, asset specificity and measurement problems appear to be not the only characteristics that explain the choice of hierarchy governance form. The question that arises is: What explains the hierarchy governance, besides the asset specificity and measurement problems? In other words, the general argument applied to the hierarchy governance is broader than just transaction cost economics. It also requires a resource based view and property rights-based explanation, both which are well connected to transaction cost economics.

This paper is organized as follows. In the next section, the three theories – transaction cost, property rights, and resourced based view are briefly described. Subsequently, we discuss the methodology used in the study. In the fourth section, the cases – Miolo, Don Laurindo, and ViniBrasil – are described and analyzed using the theories discussed. In the fifth and final section, some conclusion remarks are presented.

2 THEORETICAL FRAMEWORK

In this section we argue that each of the three theories – Transaction Cost Economics; Resource Based View - gives an incomplete picture of the factors affecting firms` governance decisions when taking in isolation. As we will explain below, in some situations each of the three theories will predict a different governance decision, while in other situations the theories will predict the same governance decision, but for different reasons. Jointly considering all three theoretical perspectives when analyzing firms' governance decisions will therefore help researchers to better predict what governance forms firms use in specific situations and why.

2.1 Transaction Cost Economics

Differently from neoclassical economic conception that considers pricing mechanism and firm as a production function that relates a firm's level of capital and labor to its productive output, transaction cost economics (TCE) describes the firm as an efficiency-inducing administrative instrument that takes into account the costs for negotiation efforts, contract design and coordination (Williamson, 1975). The notion of these costs was introduced by Coase (1937, 1960) and further developed by Williamson (1979, 1985, 1990) under the label of transaction costs. The transaction costs include ex-ante costs for negotiation efforts, contracts design, and safeguarding agreements, and ex-post costs for aligning and adapting the contract (Williamson, 1985).

The choice of organizational governance form is seen as a central means through which management influences, monitors and enforces contractual performance (Williamson, 1975). Then, different institutional arrangements depend on transaction attributes, which are part of TCE and they are related to various dimensions of the transaction, especially asset specificity and uncertainty. According to Williamson (1979, 1985, 1991, 1996, 2005), these dimensions affect a firm's governance decision that is based on a choice between competing alternative forms: market, hybrid, and hierarchy.

The choice of a governance form is related to firm`s intentions to economize on transaction costs. The presence of these costs explains which transactions are undertaken through the market and which are internalized within the firm (Coase, 1937). Economic agents align transaction with governance forms to effect outcomes; therefore, the costs of one mode of governance is always examined in relation to alternative feasible modes (Williamson, 1996). Transaction costs arise from human behavioral assumptions that are: bounded rationality and opportunism. Hence, all contracts are incomplete (Williamson, 1996) due to asymmetric information and to the impossibility for individuals knowing the future events. Bounded rationality is defined as behavior that economic agent desires optimize, but cannot satisfy the desire. It is the inability of economic actors to anticipate properly the contingencies (Simon, 1957).

In the original TCE framework, as developed by Williamson (1985), three main attributes of the transaction were distinguished: asset specificity, uncertainty and frequency. However, `frequency` is not considered in our study, since its effect on firms` governance decisions is ambiguous (Geyskens et al., 2006; Rindfleisch, 1997).

Asset specificity refers to the degree by which the investments a party makes to support the transaction, ties it to the other party to the transaction. Williamson (1985) defines asset specific investment as "durable investment that are undertaken in support of particular transactions, the opportunity cost of which investment is much lower in best alternative uses or by alternative uses should the original transaction be prematurely terminated". In other words, a specialized investment cannot be replaced to other transaction without value loss. Specialized investment generates value named quasi-rent, which is the value difference of the assets specific investment within and out of the specific relation (Alchian, 1984); ex-post bargaining and hold-up risk are present (Klein, et al., 1978). Hence, insofar as the asset specificity is present the hold-up risk increases and the transaction costs increase. In order to reduce the hold-up risk in the transaction that involves specialized investment, the transaction parties have strong incentives to rely less on spontaneous, market-based governance forms and more on hands-on governance forms (Williamson, 1991B). This can take the form of neoclassical contracts (i.e., arbitrator mediated arrangements) for transactions involving mixed-use investments (or medium levels of asset specificity), or unified, hierarchical

governance (vertical integration) for transactions involving idiosyncratic investments (or highly specific investments) (Williamson, 1991; see also Williamson, 1975, 1979, 1985; Klein et al., 1978).

Uncertainty refers to changes in the larger industry-context and institutional environment in which transactions are embedded. Given actors` bounded rationality, they cannot (fully) anticipate these changes when entering into a transaction. As a result, actors will not be able to write contracts, which take into account all future states of the world; i.e., contracts are incomplete. Uncertainty makes transactions involving specific investments more unstable (more prone to maladaptation and hold-up problems) and more likely to be internalized even when the investments are only of a mixed-use nature (see Williamson, 1991).

2.2 Resource Based View

The Resources-based view (RBV) is largely based on the work of Wenerfelt (1984), Rumelt (1984), Barney (1991), Peteraf (1993) and Conner (1991). The RBV is relatively recent and has been developed with a specific focus on how firms manage resources or knowledge and the complex combination between different sets of resources. According to RBV theory, resources that are common to many companies or which are easily available in the market cannot provide a sustainable competitive advantage. Only strategic resources (assets, skills, knowledge) that satisfy the conditions of being valuable rare, inimitable and non-substitutable can generate such asn advantage (Barney, 1991).

Barney (1991) distinguishes three main categories of resources: (1) physical resources such as plant and equipment, (2) human resources, such as technical specialists and teams, but also company executives, and (3) organizational resources, formed by the norms and routines that coordinate the physical and human resources of the company. Hierarchical governance can help to develop and transfer tacit resources or knowledge, including shared norms and routines. Barney (1991) considers the dynamics of the process performance among the resources and their effects on the organization. Therefore, the strategic value of the resource is not only a result of the resource itself, nor for their connection with each other, but coming from the inter-relationships that exist between the whole set of resources controlled by the organization.

Within this perspective, the essence of the firm is its ability to create, transfer, assemble, integrate and exploit these resources. Considering that these resources are used differently in each organization, according to the perceptions of managers, then the firms are heterogenic and, consequently, there is different profitability among them. This conception of heterogeneity comes from the assumption that admits the nature of competition determined by establishing barriers to imitation and constant innovations. In RBV, not all features and capabilities have elastic supply, even for that, to be developed; some of them require a long period of time. This inelasticity of supply implies that firms possessing valuable resources can gain sustainable competitive advantage (PETERAF, 1993). In this sense, the deduction is that the main sources of profitability differences between firms in the balance arise from rents in Ricardian sense (return higher than the opportunity cost). In other words, it is assumed that economic rents for efficient firms derive from scarce sources and are made possible by the imperfections of market factors. Imperfections arise from managerial ability, the unique language used inside the firm and its specific organizational culture. They also arise from physical assets and innovations protected by patents or organizational competence, and even

intangible assets such as consumer confidence, brand image and reputational capital. Barney and Arikan (2001) argue that these factors of production are perfectly inelastic, since their quantities offered are fixed (they are unique) and do not respond to changes in prices. From this perspective, what makes it a valuable resource is the peculiar way it is used by the firm (Teece and Pisano 1994). However, there are authors that expand the notion of resources, assuming that its value, at least in part, depends on conditions from the environment (Barney, 2001; Foss and Foss, 2005).

Foss and Foss (2005) argue in their study that also the property rights aspects of resources should be considered, especially that the social environment should also be seen as a source of resource value, not only in a restrictive manner. The way how property rights are restricted under law, agreements or norms, influences the value that an owner of any resource can create and how much can be appropriated from that resource (Foss and Foss, 2005). For Kim and Mahoney (2007), if the property rights of the resource with the potential for value creation are not fully guaranteed in a business context in which multiple partners are involved, value creation cannot happen (Barney and Hansen, 1994; Kim and Mahoney, 2002). Similar difficulties may arise within firms, where multiple agents that provide inputs are producing economic value jointly (teamwork, Alchian and Demsetz, 1972; Holmstrom, 1982). Kim and Mahoney (2007) argue that historical examples show that in some sectors the potential economic value creation (and rents) does not guarantee the effective creation of economic value.

2.3 Property rights

Besides TCE, also Property Rights theory attempts to understand firm boundaries and their choice of institutional arrangement. Demsetz (1967) discussed property rights, using the neoclassical support to understand how property rights for specific transactions arise. According to Demsetz, property rights arise with the internalization of beneficial and harmful effects (externalities), when the gains of internalization become larger than the cost of internalization. For Demsetz (1967), the property rights are exchanged in a transaction. Then, the value of the rights determines the value of the exchange. The problem that resulted of untradeable property rights is known as common-resource problem, public-goods problem, free-rider problem, and the tragedy of the commons (Milgron and Roberts, 1992). According to Milgron and Roberts (1992), "… when many people have the right to use a single shared resource, there is an incentive for the resource be overused …". Considering the asset investment, if the residual returns of it are widely shared, no one has a sufficient interest to bear the cost of maintaining and increasing the value. For economic analysis, the "owning an asset" interpretation means the residual rights of control, which is the right to make any decisions concerning the asset's use that are not explicitly controlled by law or assigned to by another contract. If ownership means having residual control, then its importance must derive from the difficulty of writing contracts that specify all the control rights. Then, concentrating the ownership rights might be the efficient way; consequently, the hierarchy form prevails.

Although TCE and property rights have developed along different lines, both of them focus on the role of ownership as way to avoid hold-up problems (Araujo et al., 2003). Then, the emergence of the firm becomes a response to hold-up problems combined with the intrinsic opportunistic nature of human actors and the specialized assets required for efficient production.

In the property rights approach, the firm is regarded as a set of assets under common ownership and control is equated with ownership. For Araujo et. al (2004), this view is only able to provide an answer to where the boundaries of the firm should lie, because the boundaries are related to the decision about physical asset ownership. These authors include the capabilities perspective to discuss the boundaries of firm. According to them, vertical integration leads to the development of in-house capabilities. Another view of property rights exchange perspective, Barzel (1982, 2001, 2002) developed the Measurement Cost Theory and considered the transactions decomposed into different dimensions. Each transaction dimension represents a property right exchange and can be identified by a measurement cost. This cost brings a specific value to agents involved in the transaction. According to Zylbersztajn (2005), the specific value in the transaction can be dispersed if the property rights are not well defined, what can be difficult to measure, hence it can become difficult to contract specific attribute of transaction. Barzel (1997) considers the concept of property rights closely related to that of transaction costs. Transaction costs are defined by Barzel (1997, p.2) as "the costs associated with the transfer, capture, and protection of rights". Barzel (2002) considers the easier are the measurement and verification of contract stipulations, the more readily can the contract be enforced. In other words, if the property rights can be well-defined, the transaction will be performed by formal contract. Insofar as it is difficult to measure the attributes, the transactions will be performed by agreements and extrajudicial mechanisms to protect property rights. In other perspective related to the measurement cost decrease, the agents will rely on contracts more than on vertical integration.

According to Zylbersztajn (2005), although both transaction cost economics and measurement cost theory share similarities, they differ in internal logic, explicit assumptions, and key measurable variables, leading to methodological implications. Therefore, the difference between the transaction cost and the measurement cost theories deals with the empirical evidence of each theory to offer explanatory motives and testable hypotheses to determine alternative institutional arrangements. Based on Barzel (1997, 2002), the property rights structure is based on formal institutions, related to legal rights and the use of contracts; and the property rights defined by informal norms related to economic rights that prevail in the agreements. According to Zylbersztajn (2010), there are always aspects of property rights, which are unprotected; therefore, part of the value is subject to capture. It can be difficult to measure the transaction attributes and the contract might therefore not be executed.

The transaction is the principal analysis unit, where property rights are negotiated. The transactions occur within the institutional environment that impact the process of property rights exchange. As is the case with transaction cost theory, property rights theory assumes that the contracts are incomplete. Considering the residual control, the notion of residual returns that Milgron and Roberts (1992) take into account is closely linked to contractual incompleteness. If the contracts were complete, the division of the wealth in each eventuality would be contractually, and there would be no economic returns that could be thought of as residual. These two aspects of ownership – residual control and residual return – provide incentives for the owner to maintain and increase an asset's value. The clearance and enforceable property rights that cannot be transferred easily or the information asymmetry denote the inefficiency in the transaction under market or contractual relation. If property rights are neither tradable nor secure, then owners will not invest great amounts in assets that they may lose with no compensation, or they may protect the specific assets under their own control without sharing or transacting. Then, the ownership rights should be structured with a concern to minimize the distortion in investment decision caused by the hold-up problem.

2.4 Theoretical Predictions

- Transaction Cost Economics: As the level of asset specificity increases in the grape-growers-winery transaction, the likelihood that hierarchical forms are used to govern the transaction increases;
- Property rights: As the level information asymmetry between the grape-grower and winery increases, the likelihood that hierarchical forms are used to govern the transaction increases;
- Resource Based View: As the need to learn about (changes in) grape production methods increases, and the required knowledge becomes more tacit, the likelihood that hierarchical forms are used to govern the transaction increases.

3 METHODOLOGY

The research design is a multiple case study, chosen to make comparison between different real cases, thus providing more consistent insights than a single case study. The purpose of the case study method is theoretical generalization rather than statistical generalization (Yin, 1989; De Vaus, 2001). The objective of this study is to understand the characteristics of production that lead to the choice of hierarchy governance in organizations in the process of transforming grapes into wine. Three wineries were selected to understand, the multiple factors that influence their governance decisions. Data was gathered by means of personal interviews, using a semi-structured research instrument. Secondary data was collected from Brazilian wine sector, such as IBRAVIN – Instituto Brasileiro do Vinho, is used as well. The three wineries are located in Vale dos Vinhedos and Vale do Rio são Francisco: Don Laurindo is located in Vale dos Vinhedos (RS); Miolo is in Vale dos Vinhedos and in Vale do Rio São Francisco; and ViniBrasil is in Vale do Rio São Francisco.

4 THE CASE OF WINE PRODUCERS IN BRASIL

By the end of 1980s, medium and large companies, and cooperatives dominated the wine industry. The grape growers supplied the wineries and only produced the grapes for the market (Schmidt, 2012). In terms of technology, improvement occurred in the industrial field, but it did not happen the same in the viticulture sector. In the late 1980s and early 1990s, the large wineries have gone through economic and financial crises, and were affected by the opening of the market in the 1990s, which provided an environment for the increase of wine imported from 13% in 1992 to 32% in 1994 (Mello, 1995). Moreover, the Mercosul and the high level of tax motivated the farmers to new decisions and strategies. Thus dozens of small wineries arose in rural area. These wineries were characterized by the industrialization of wine production, which resulted in the improvement of the Brazilian fine wines quality (Falcade, 2004).

An important event for the winery sector in Vale dos Vinhedos was the recognition as a geographical indication in 2002. This recognition allows the wines have a seal of Origin Indication (IP) if they are produced in the Vale dos Vinhedos under the standard set by Aprovale. In 2012, the Vale dos Vinhedos was recognized as Denomination of Origin (DO); and the products must conform to more specific rules regarding the production of grapes and winemaking. The wine in Brazil is regulated since 1988 with the Law n. 7678 and amended

with the Law 10970 in 2004, which provides regulation for production, distribution and marketing of wine and the grape. However, according to Tonietto and Falcade (2003), the use of geographical names to refer to wine production in Brazil is not regulated.

4.1 CASES STUDIES ANALYSIS

4.1.1 Miolo Wine Group

Although the winery Miolo was founded in 1989 by three brothers of Miolo's family, the company existed prior to that date, when the Miolo's family arrived in Brazil in 1897 (Dolabella; Bittencourt, 2012). Before the foundation of the company they were only grape growers to supply wineries around their farm. The decision to start the production of wine took place because of the crisis in the Brazilian wine industry when the grapes started to have the same value as the American and hybrid grapes (Dolabella, 2006). Since 1995, sales began to grow too much, which led the company to be the leader in the fine wine market national (MIOLO, 2013).

The Miolo, which began producing wines from their own grapes and bottling them, also bought grapes from other 80 producers, called outgrowers, in the Vale dos Vinhedos (Dolabella, 2006). Although there is no formal contract between the Miolo and their outgrowers, the company supplied them with seeds and discounted the value of these over time and monitored the production. In the year of 2000, the Miolo acquired 81 acres of land in the city named Bage (500 km from Bento Gonçalves). The production itself in the lands of Bage enabled the company to reduce the number of outgrowers to 20, and the selection of these outgrowers was according to the quality, volume and adoption of planting grape in trellises. In 2006, the Miolo changed its name to Miolo Wine Group, and acquired the winery Ouro Verde in Petrolina, Vale do Rio São Francisco, where produces sparkling named Terra Nova. Grapes out of own production are used sporadically for the production of sparkling base. In case of purchase of grapes in the market, this is due to the opportunity offered by the market, when the grapes are not exported, have good quality and can be purchased at a price below the cost of production own, according to Miolo (2013).

A TCE perspective: motives for vertical integration

According to the respondent of our interview, although Miolo buys the grapes from these known 20 outgrowers, if they decide no longer work with the Miolo, it would not be relevant, because the quantity purchased of them is small, around 500 tons / year, which represents 4% of the total. Because of the asset specificity (Williamson, 1991), such as temporal specificity, locational specificity, brand name capital, efficiency of production presented in the hierarchy arrangement justifies the preference of Miolo. The company maintains relationships with 20 selected outgrowers at that time because they were able to adapt to Miolo's requirements. Miolo offers full support for the 20 outgrowers supplying the seeds and technical assistance throughout the production process in order to obtain grapes with quality required. There is a social aspect that Miolo and these outgrowers built a trust relation, what allow a relation without a written contract. In terms of ECT, as the reputation

has been built between the parties, there is no need for all the specifications in the contract, which the ink costs decrease.

A RBV perspective: ability to vertically integrate

Although Miolo purchases grapes from its 20 outgrowers, the wine branded Lote 43 is produced only from the grapes of its own production. This wine is named Lote 43 because it was the land that the Miolo's family received when they arrived in the Vale dos Vinhedos. Considering the RBV, the value is created on the production of the wine Lote 43 since it cannot be imitable. This specific wine for Miolo generates a competitive advantage for Miolo (Barney, 1991). Moreover, the complex process of producing wine is related to the knowledge and skills of Miolo that is intangible assets, which are difficult to be transferred or traded. Then, the centralized control ownership into an integrated firm is justified thorough RBV theory, besides the TCE related to the asset specificity.

A Property Rights Theory perspective: measurement problems are not an issue

In terms of Property Rights Theory, if the property rights were well defined, they could be easily traded. As the Miolo has the residual control, then it is difficult to write the contract specifying all the control rights prevailing the informal contracts with its 20 outgrowers. The government (Companhia Nacional de Abastecimento - CONAB) establishes the price of each grape variety. The process to obtain the quality required for the production of a particular type of wine depends on the sugar and acidity contained in the grape that can be evaluated in the laboratory, beyond the time of harvest. However, the monitoring of grape production is complex and not easily to be transferred. As Miolo prioritizes quality of grapes, it offers financial incentives to its 20 outgrowers. The company evaluates the characteristics of the grapes received and classifies them as following: 2A, 1A, 1B, 1C. According to the classification, Miolo pays a bonus on the value of the CONAB price. This bonus varies as following: 2A – plus 100% of the value of CONAB; 1A – plus 70% of the value of CONAB; 1B – plus 30% of the value of CONAB; 1C – do not buy. In this case, the attributes of transaction are defined and the measurement costs decreases. Then, Miolo can perform contracts with its 20 outgrowers than vertical integration instead (Barzel, 1982, 2001, 2002).

4.1.2 Don Laurindo Winery

Don Laurindo is a small family company, producing both grapes and wine. It has only nine employees, all of which are members of the Brandelli family that founded the company. The company is located within the main wine production region of Rio Grande do Sul, Vale dos Vinhedos, close to the cities of Bento Gonçalves and Garibaldi. There, Don Laurindo owns 15 hectares of vineyards from which it produces 120.000 bottles of wine each year. For its wine production, the company uses only grapes from its own vineyards. The company markets its wines almost exclusively within Brazil; just 2% of its production is exported[1].

The company's history goes back to the late 19th century, when the current owners' great grandfather, Marcelino Brandelli, emigrated from Italy to Brazil. This was a period in which Rio Grande do Sul attracted many immigrants from Italy. Brazil's federal government

[1] Its main export markets are Canada, the Czech Republic and Mexico.

incentivized the immigrants to come to the state by offering them favorable terms to purchase land. The Italian were mainly offered land within the Serra Gaúcha region, where Vale dos Vinhedos is located. When Mr. Brandelli arrived there in the 1880s , he relied on substance farming to support himself. He also started to grow vineyards in order to make wine for family consumption.

Mr. Brandelli's offspring purchased additional land for commercial grape production, while continuing the patriarch's tradition of making wine for friends and family. This modus operandi, where the Brandelli family commercialized its grapes but not its wines, continued until the beginning of the 1990s. During the systemic crisis that plagued Brazilian`s wine industry in this period, the family`s main customer stopped procuring grapes while earlier several of its smaller customers had already gone bankrupt. Subsequently, the family started its own winery – Vinhos Don Laurindo LTDA. As of today, the company markets all of its grape production to its own internal winery. The winery uses the grapes to produce 90.000 liters of wine each year. Ninety percent of this is red wine, while the remaining 10 percent is white wine (including sparkling wine). A couple of its wines are certified as "Denominação de Origem Controlada".

A TCE perspective: motives for vertical integration

The transaction attributes demand uncertainty and temporal asset specificity help to explain why the company integrated into wine production. The main purpose of the company in taking this step was to guarantee its survival during adverse market conditions. This decision was more or less forced on the company because of these two TCE factors; integration helped the company to economize on transaction costs resulting from uncertainty and temporal asset specificity.

Demand uncertainty was the main factor in the company`s decision. Market conditions can certainly be characterized as uncertain when Don Laurindo integrated into wine production. As is explained above, the Brazilian wine industry was affected by a crisis in the beginning of the 1990s. This perhaps especially affected Don Laurindo, as its main customer stopped procuring its grapes. Thus, it not only faced the prospect of low grape-prices and uncertainty about future demand, it had also lost its main marketing channel. To understand the company`s decision to make its own wine, note that the company would have been less affected by demand uncertainty as an integrated grape grower-winery operation than as an independent grape grower. Grapes have to be harvested within a certain period and cannot be stored, unlike wine. Therefore, an integrated grape grower-winery has more control over the time at which it markets its (wine) output as it can hold inventory when demand is low[2]. As an independent grape grower, Don Laurindo was not able to hold inventory. Integrated helped the company to reduce its exposure to uncertainty.

While the above-mentioned market conditions were an obvious factor in Don Laurindo's decision to start marketing its own wines, the role of asset specificity was more subtle. At present, grape grower-winery relations in the Vale dos Vinhedos region do not seem to be characterized by asset specificity related concerns. There are multiple wineries within the region and grape growers can easily switch from one winery to another as most

[2] Note that companies are not able to hold inventory if they face strong liquidity constraints (i.e., when they need to sell of inventory to generate cash). Differential liquidity constraints amongst industry participants may therefore explain why some of them were not able to withstand the crisis.

wineries use similar types of grape-inputs. However, during the crisis, temporal specificity (e.g., see Williamson, 1991) could have affected grape grower-winery transactions. Especially, wineries might have used the above-mentioned temporal constraints that affect grape production to opportunistically renegotiate transaction terms. They would certainly be in position to do this; grape growers would have had fewer alternatives to market their grapes than during normal market conditions, as several wineries faced difficulties. Forward integration into wine production reduces a grape-grower's exposure to such temporal related opportunism. While retailers may also attempt to renegotiate transaction terms, temporal constraints play a more limited role as the winery can store its output. Vertical integrated therefore also helped to reduce the company`s exposure to demand risk of opportunism, in line with TCE`s predictions.

A RBV perspective: ability to vertically integrate

The crisis not only had a downside. With various wineries now experiencing difficulties, the wine market was also less crowded than before. The company saw this as an opportunity to leverage its human resources and start marketing its own wines, using its high quality grapes and knowledge about wine-production to make exclusive wines. The company was able to forward integrate because the family honed the tacit knowledge or skill of making high quality wine over various generations. Thus, while demand uncertainty forced the company to take action, the reason it was able to start producing its wine was that the company already possessed the human resources to do it. In other words, while TCE factors helps us to understand the company`s motive to vertically integrate, RBV helps us to understand why the company was in position to do this.

RBV helps to explain not only why the company was able to integrate into wine production, but also why the company is still organized in this manner. The Brandelli family has a long tradition in the production of grapes (and wine) and this cannot be easily replicated in the market. According to the management of Don Laurindo, it is not difficult to find high-quality grape producers in Vale dos Vinhedos, as also external grape growers possess the required human and physical resources to produce high quality grapes. However, they lack the required tacit knowledge about how the produce the grapes with the specific characteristics Don Laurindo requires for its particular wines. This knowledge, embedded deeply within the norms and routines of the organization, cannot be easily codified and communicated to external grape growers.

A Property Rights Theory perspective: measurement problems are not an issue

PRT appears, at first, less relevant than the other two theories for explaining the firm`s choice of governance form. For example, according to the management of Don Laurindo, it is not difficult to measure grape quality (e.g., laboratory analysis can reveal the acid levels of the grapes). Therefore, no material information asymmetries exist between grape producers and wine producers about the quality of the grapes. If the company did use external suppliers, shirking or quality cheating by those suppliers would not be a problem; the suppliers could be paid based on the quality of the delivered grapes. For example, Don Laurindo could give the suppliers bonuses if the grapes meet or exceed its requirements (as Miolo does).

However, issues with regard to residual control rights over the production process do affect the company`s choice of procurement form. While many aspects of the production

process could be specified in advance with contracts with external grape growers (e.g., type of grapes to use, type of technology), such contracts would limit the company`s ability and rights to make adjustments to the process when it so desires. Internal procurement gives the company full control over how the production process is organized and it can make adjustments to that process whenever it wants.

4.1.3 ViniBrasil (Global Wines/Dão Sul)

The ViniBrasil was founded in June 2003, started by a top Portuguese wine company, Dão Sul. It is located in the Vale do Rio São Francisco, which in itself makes an interesting story as the vast majority of wineries producing fine wines in Brazil are located in the Vale dos Vinhedos - RS. ViniBrasil grows its grapes in a challenging environment (close to the equator) using innovative management practices such as controlled irrigation and year-round harvesting (Bell; Neves; Castro; Shelman, 2010).

The company currently has a total area of 2000 hectares, with 200 hectares of grapes, as well as an experimental area for testing new varieties and combinations. The winery produces about 1 million liters of wine / year, with 84 permanent employees (Santos, 2013).

The ViniBrasil positioned itself as a winery producing differentiated wine-products in Brazil. The price for the final consumer is equivalent to the price of fine wines in the market, and even below some of the wine products from Argentina and Chile (Bell; Fava Neves; Thomé e Castro and Shelman, 2010) and its product portfolio consists of the following brands: Rio Sol, Paralelo 8 Tenants, Vinha Maria, Matuto and Adega do Vale. The Paralelo 8 is the highest quality wine of ViniBrasil.

A TCE perspective: motives for vertical integration

As well as the case of Don Laurindo, the transaction attributes demand uncertainty and temporal asset specificity help to explain the ViniBrasil`s decision to produce the grapes in-house. ViniBrasil opted to have total control of production since its foundation. Then, the company produces its own grapes in order to acquire the characteristics required for its wine production. Santos (2013) observes the fact that having its own production, the company eliminates demand problems since it controls what will produce. Currently, the company is guaranteed with a stock production for a year of sales.

Site specificity is one of the most important asset for the company, because their wine is characterized as a wine with unique qualities related to the location. The ViniBrasil invested in their brands, highlighting specific characteristics of the region and its wines. For example, the Rio Sol is a brand that blends the idea of the São Francisco River with the sun, which explains the geographical location of the winery - the border of the São Francisco River, 8 degrees south latitude. The region at this latitude is the exception to produce commercial wines, as well as being one of the new frontiers wineries in the world. Also the slogan used by the company highlights this feature, "New Latitude, New Attitude" means that produce wines overcoming technical paradigms, such as the use of irrigation in a semi-arid region (Bell; Fava Neves, Castro and Shelman, 2010, p .12).

A RBV perspective: ability to vertically integrate

ViniBrasil has invested heavily in innovation, breeding of grapes, because the company believed that it would not be easy to find suppliers of grapes in the Vale do Rio São Francisco with the same characteristics as those produced by ViniBrasil. The expertise of the production process has been developed over the years since the region has a particular climate in comparison with other producing regions in Brazil.

The workers have few job options in Vale do Rio São Francisco what make favorable for ViniBrasil and the number of permanent employees increases in the company. Some of them have been working in ViniBrasil since its foundation. This aspect is extremely important because the company has been developing its human resources over the years. It is understood that vertical integration enables the company to control the entire process and prevents it from being imitated. They have been investing for many years in grapes adapted to the Vale do Rio São Francisco, and they created an intangible asset that is difficult to be copied even switched.

A Property Rights Theory perspective: measurement problems are not an issue

The ViniBrasil wants to ensure that all the investment it has made over the years in innovation, developing grape seedlings adapted to the region, irrigation is secure and the company has an interest in appropriating the value created. Thus, for the firm, vertical integration allows the company to create value but also to keep the value created. Furthermore, the winery has the residual control rights over the production process. As well as Don Larindo, ViniBrasil can make adjustments for the production process whenever it wants. Since there are no suppliers with the ViniBrasil requirements, they need to be developed and this process of development involves knowledge transfer and higher investments in irrigation as well. Moreover, ViniBrasil would need to monitor these suppliers. On the other hands, these suppliers could require part of the residual control rights. Sharing the knowledge with the suppliers, ViniBrasil could fail to appropriate the value generated through the brand related to its location.

5 Final remarks

In this paper we studied governance decisions in the Brazilian wine industry. Especially, we examined the types of governance forms three wineries used to procure their grapes. We analyzed the governance decisions through three different theoretical lenses: TCE, PRT, and RBV. We used the cases to illustrate that, in isolation, each of the theories yields insufficient insights into the motives and ability for firms to select and use hierarchical governance forms.

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