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A network perspective of the port wine sector

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Abstract

Purpose – The paper aims to develop an understanding of the port wine sector from a relational, holistic, and dynamic perspective.

Design/methodology/approach – The research adopted a qualitative methodological approach. Primary data were collected through semi-structured interviews. The analysis focused on the relationships established among both economic and non-economic actors.

Findings – The paper offers an overview of the port wine sector on the basis of the conceptual background of the IMP (Industrial Marketing and Purchasing) Group. The study suggests that the dynamics of the sector is not solely determined by economic and technological variables, but also by interests assuming both an economic, social and political nature.

Research limitations/implications – Further research should develop and test the findings by using other cases and methodological approaches.

Practical implications – Managers must be aware that firms are embedded not only in economic systems but also in political and social networks whose dynamics cannot be neglected.

Originality/value – While most studies on the dynamics of economic systems have focused on the role played by technological factors, relatively few have addressed the importance of collective actions. In this line, the paper contributes for a better understanding of the role of collective actors created to defend the interests of their members. Moreover, since the port wine sector is not an idiosyncratic case because most of its features are also present in other wine regions, the conclusions of the paper are likely to be used for the understanding of other wine regions.

Keywords Wines, Marketing mix, Economic sectors, Portugal

Paper type Case study

Port is a fortified wine named after Porto, the second largest Portuguese city, where it has traditionally been shipped from. However, port begins its life in the Douro valley, which starts some 100 km east of Porto (or Oporto in its anglicised form) and extends as far as the Spanish border. The valley is a demarcated region where an estimated 30,000 farmers grow what is considered to be one of the great wines of the world.

Despite the intervention of tens of thousands of actors in the port value chain, they can be grouped into four main categories: farmers, wine cooperatives, shipping houses and distributors. Traditionally, grape growing and wine making were undertaken by independent farmers who sold their production to the shipping houses. These, in turn, organised the transport of the wine from the valley down the river Douro, and stored and aged it in their lodges located in the Porto suburb of Vila Nova de Gaia. Furthermore, the shippers promoted and sold the wine all over the world to hundreds of distributors.

Over the past decades some meaningful changes have occurred in this process, most of them related to the emergence of new actors. Firstly, a number of wine cooperatives have been created in the Douro region since the early 1950s. Originally, these cooperatives received the grapes from the farmers, produced the wine and then sold it to the shippers. Today, some cooperatives are also selling part of their production directly to the distributors. Secondly, most farmers, who continued to sell their production to the shippers, have closed their wineries. This means that they are



exclusively producing grapes while a major part of the wine is made by the shippers. This shift was reinforced because most shippers have also acquired large estates (called *quintas*) in the Douro valley where they grow some of the grapes they need. Finally, since the mid-1980s farmers have begun to age and bottle their wine and ship it directly from the Douro valley.

However, attempting to understand such an economic system on the basis of its value chain does not capture the major driving forces of this industry since some of the most important players are not directly involved in the production and trade processes. The objective of this paper is to develop an analysis of the port wine sector from a relational, holistic and dynamic perspective. It is divided into three sections. The first elaborates on the model developed by the IMP (Industrial/international marketing and purchasing) Group, which offers a network approach of economic systems. The second section develops a network view of the port wine sector on the basis of the conceptual framework developed by the IMP Group. The article ends with a number of conclusions and managerial implications that are likely to be extend to other wine regions.

A network approach of economic systems

Firms are not independent entities acting on their own in the market. To develop their activity, they have to interact with other firms and organisations such as governmental departments, associations or regulatory commissions. This process of interaction tends to create lasting and stable relations through which firms adjust products, production and routines. Such relations are often built over a long period since their development requires time and resources, and may involve commitments for the future. Firms' behaviour can thus be described as a cumulative process where relationships are created and developed to guarantee firms' control over the resources they need, the selling of their output, and, in general, the pursuit of their objectives. This web of interdependent organisations engaged in the production, distribution and utilisation of goods and services, forms a system where the particular position assumed by one actor affects not only its performance but also the evolution of other actors.

This vision owes much to the network approach, a model which resulted from the research developed by the IMP group. The seminal studies were carried out at the University of Uppsala and Stockholm School of Economics in early 1980s, and later developed by other research centres mainly in Europe (cf. Håkansson, 1982; Axelsson and Easton, 1992; Naudé and Turnbull, 1998; Ford *et al.*, 1998; Gadde and Håkansson, 2001; Håkansson *et al.*, 2004).

The network approach describes industrial systems in terms of three basic variables: actors, activities and resources. In industrial networks, actors are those who, being goal oriented perform activities and/or control resources. They can be individuals, firms, groups of individuals, groups of firms, or even parts of firms (Dubois, 1998). Embedded in a web of social and economic relationships, actors perform activities by using, consuming and creating heterogeneous bundles of resources which can be controlled either directly or indirectly. The difference between these two types of control is of particular interest since while the former is based on ownership, the latter is achieved through relationships. The importance of indirect control stems from the fact that when an actor establishes exchange relationships with other actors, links of dependence are created and, consequently, their resources come, at least partly, under the control of the focal actor.

As Snehota (2004) stresses, this perspective contrasts with the conventional view about organisational boundaries which adopts a hierarchical (proprietary or contractual) perspective. As a consequence, it does not capture all the resources and activities that may actually affect the performance of firms. For example, the conventional view may consider as external to a firm, resources that are actually under its influence and control. This is the case of many intangible resources (e.g. knowledge, reputation and skills) which, playing often a key role in firms' effectiveness, are frequently created through relationships with other organisations.

When actors combine, develop, exchange or create resources they are performing activities. The network approach distinguishes two basic kinds of activities: transformation and transfer activities (Håkansson and Snehota, 1995). The former comprises those that, being directly controlled by one actor, change or improve resources in some way. Transfer activities are those which link transformation activities and transfer the direct control over a resource from one actor to another.

Resources, the third variable of the model, are a precondition for any activity (Mota and Castro, 2004). Resources may have an unlimited number of dimensions which allow for their utilisation in a number of different ways. Nevertheless, for the sake of simplicity, it is usual to subdivide them in three main categories: physical resources (e.g. materials, equipment or buildings), financial resources and human resources such as labour, knowledge and relationships. From a network perspective, resources can be accessed both directly (for instance, through ownership) and indirectly through relationships. This, as Araújo *et al.* (2003) stress, makes the boundaries of firms a volatile issue likely to be reconfigured on the basis of the relationships each firm establishes in each moment.

Relations established among these three basic variables (actors, activities and resources) give rise to structures that can be conceived as networks. Actors, for instance, can be bound together not only by formal arrangements but also by product and process adjustments, logistical coordination or personal ties. In the same way, activities are related to each other in accordance with, for example, technological patterns or power dependence relationships between actors. This means that the three networks are connected with each other forming an overall network of relations.

To perform activities and have access to resources, firms establish relations not only with suppliers and customers but also with other actors such as competitors, customers of customers, consultants, governmental organisations, or associations (Ritter and Ford, 2004). These relationships may give rise to various forms of dependence – e.g. technological, knowledge, social and legal. Although such bonds ensure stability, they act as well as constraints inasmuch as actors are not entirely free to dissolve relationships with other organisations (Easton and Araújo, 1992). Furthermore, dependence between the parties and the eventual complementarity of their objectives lead to a division of work within the network which makes the coordination of activities a central issue in industrial networks. However, as Johanson and Mattsson (1988, p. 291) put it, such a "... coordination is not brought about through a central plan or an organisational hierarchy, nor does it take place through the price mechanism as in the traditional market model. Instead, coordination occurs through interaction between firms in the network, where price is just one of several influencing conditions."

Relationships among actors in a network tend to be built over a long period, calling for time and resources, and involving commitments for the future. In other words, relationships, like many assets, can be conceived as the product of investment

processes. This cumulative character of market activities makes networks both stable and changing. Networks are stable exactly because of the investment nature of most relationships. In fact, the likely high cost of changing a set of relationships leads firms to favour durable and stable links (Gadde and Håkansson, 2001). However, this does not mean that networks are static. Although interaction processes take place within the existing sets of relationships, they are permanently evolving over time. This dynamic process may be the outcome of changes in the economic cycle – i.e. the way actors transform and transfer activities – as well as the result of actors attempting to reinforce their power within the network (Brito, 2001).

The long-term character of market activities makes the position of firms in the network an important issue. According to Araújo and Easton (2001), the firm's position is characterised by the role assumed by the firm when it relates, directly or indirectly, to other organisations. This concept can be analysed both at a micro- and at a macro-level. The micro-position refers to the relationships between two individual actors. It is characterised by the strength of their relationships, the role assumed by the focal actor, and its importance to the other organisation. The macro-position is a concept qualitatively different. It reflects the actor's relations to the network as a whole. It is characterised by the strength of the relationships with the other organisations, the role assumed by the focal actor and its relative importance in the context of the network, and the identity of the other organisations with which the focal actor has relationships. Mattsson (1985) has suggested that macro-positions could be perceived as aggregations of micro-positions. However, the author has later changed his point of view. In 1986, for example, Johanson and Mattsson claimed that "... the macro-position, which referring to the whole network, is not an aggregation of the micro-positions in the network." The reason for this is that while macro-positions are affected by all network interdependences, micro-positions are not.

The position assumed by any firm within the industrial network is thus a key element for understanding not only its current situation but also its potential for future development. From this perspective, corporate strategy is not confined to the actions carried out by companies aiming to influence their relations with a faceless, atomistic and competitive environment. As Snehota (2004) points out, the firm's strategic action comprises all the efforts to change or preserve its position(s) in the network(s) to which it belongs. In this sense, the position is a link between the past and the future. The past because it is the result of past activities, both performed by the focal firm and other actors; the future because it influences the strategic alternatives for the future evolution of the firm.

In this context, the position in the network does not only act as a limitation – it can also be regarded as a development potential (Wilkinson and Young, 2001). As mentioned before, the position assumed by each actor in the network depends on the set of exchange relationships it has with other actors. However, there will be, probably, a great number of relationships not yet developed. This means that if an actor builds new relations and finds new partners, its position is being used as a way of changing its strategic position in the network. Such a strategic action may aim not only to reinforce its position in the network but also to get involved in new networks – for example, those in which its counterparts are also involved.

This perspective on network positions leads us to regard the firm's strategic action as a way of relating with the network rather than as a mere adaptation to the environment. In fact, since positions of different actors in a network are partly interdependent, firms are not entirely free to choose the best strategic alternative in

each moment. Their action does not depend only on what they think to be the best strategy but also on the way other firms act and react.

These concepts of network position and strategic action contrast with the perspective adopted by most corporate strategy writers who stress the competitive nature of firms rather than their complementarity. According to this perspective, the firm's position refers to the place assumed by its products in the market. In this context, the objective of any firm would be to seek out a target market segment where its skills and resources could be fully utilised to build a competitive advantage (Day, 1990). The network approach provides a different picture. Firstly, the market is perceived as a system where interdependence amongst firms is characterised not only by competitive but also by complementary activities. Secondly, in the industrial networks model the unit of analysis is not the firm and its resources, but the relationships established among actors, activities and resources. In sum, relationships, rather than resources, are the major strategic tool firms can use (Gadde *et al.*, 2003).

The port wine case

The network approach developed by the IMP Group describes economic systems in terms of three basic variables: actors, activities and resources. For each variable, the relations established amongst its elements create a structure that can be conceived as a network. Furthermore, interdependences among these networks give rise to an overall network of relations, which binds together the three basic variables. This section aims to offer a holistic and relational perspective of the port wine sector on the basis of the network approach. The most significant actors, activities and resources involved in the port wine business are identified as well as the main relations among them.

Port categories

The three most popular styles of port are ruby, tawny and white. The first is a young wine, somewhat full-bodied and fruity, with an open red colour. It is usually bottled after three years' ageing in wood and it is ready for drinking immediately. It is usually consumed after-dinner as a dessert wine. Tawny is also a red wine but is aged longer than ruby. The wine becomes smoother, and acquires a brownish and lighter style. Tawny is considered the most versatile of ports: it can be appreciated both as a dessert wine and as an aperitif. White port is, as its name suggests, made only with white grapes, and can be sweet or dry. After ageing usually 3-5 years in concrete vats, it is consumed chilled as an aperitif or summer drink. A good example is Portonic, a long drink made up of equal parts of white port and tonic water, served over ice with a slice of lemon.

In addition to these basic types, there are several special categories which correspond to the premium wines. Vintage, late bottled vintage and port with an indication of age are some of the best categories of port. The aristocrat of the wines is vintage port since it is produced with grapes of an outstanding year. It is bottled two years after the harvest and it matures in the bottle thereafter. Ten years is generally the absolute minimum, but 15 or 20 years might be needed. Late bottled vintage (LBV) is also port of a single year but with a lower quality than vintage. It is bottled between the fourth and the sixth year after the harvest. New-style LBVs (which are becoming the majority) are filtered before bottling, and do not need further maturation in bottle. Port with an indication of age can be 10, 20, 30 years old or, rarely, over 40 years old. These ages, it should be noted, are average ages, and the old wines in the blend gain

enormously from being refreshed by the addition of younger wine. These wines are aged in cask and should not be further aged in the bottle.

Port value chain

Producing such a complex wine is a long process (Figure 1). Everything starts in the demarcated region of the Douro valley, which covers an area of 250,000 ha comprising approximately 85,000 vineyards. The valley is a rugged territory with rather peculiar climatic and geological characteristics. The hills of Serra do *Marão* in the west end of the Douro valley, and of Serra de Montemuro in the south, protect the vineyards from the more temperate Atlantic winds. This makes for a dry climate with cold winters and scorching summers. The soil, in turn, is mainly schistous. This characteristic, coupled with steep hills, required the building of the famous terraces for the cultivation of vines. For this reason, the yield per vine is one of the lowest in the world, but the grapes have a rather singular character.

At harvest time, which usually occurs in September or October, grapes are picked and taken to wineries. In the past, wine making was a very traditional process since grapes were trodden in granite troughs called *lagares*. However, although the human foot is still considered the ideal treading device because it pulps without crushing the pips, very few port grapes are trodden today. In general, they are crushed in enclosed stainless steel tanks designated autovinificators which look like giant coffee percolators. With either method, the mix of skins, pips and pulp produces a grape juice called *mosto* which, soon after, begins to ferment – i.e. to convert grape sugar into alcohol. When this reaches a certain level, the *mosto* is run off into vats where it is fortified with grape brandy named *aguardente*, at a ratio of 440 l of *mosto* to 110 litres of *aguardente*. This arrests fermentation and gives rise to a sweet wine with approximately 19 per cent of alcohol by volume.

This young fortified wine remains in vats until the spring following the vintage. Then it is almost entirely transported to an entrepôt located in the Porto suburb of Vila Nova de Gaia for maturation. On arrival, the wine is fortified with more brandy, and then matures for at least three years before commercialisation is legally permitted. The reason why port is traditionally not matured in the Douro region has to do with its climate. Indeed, the region is very hot in summer and freezing cold in winter. This

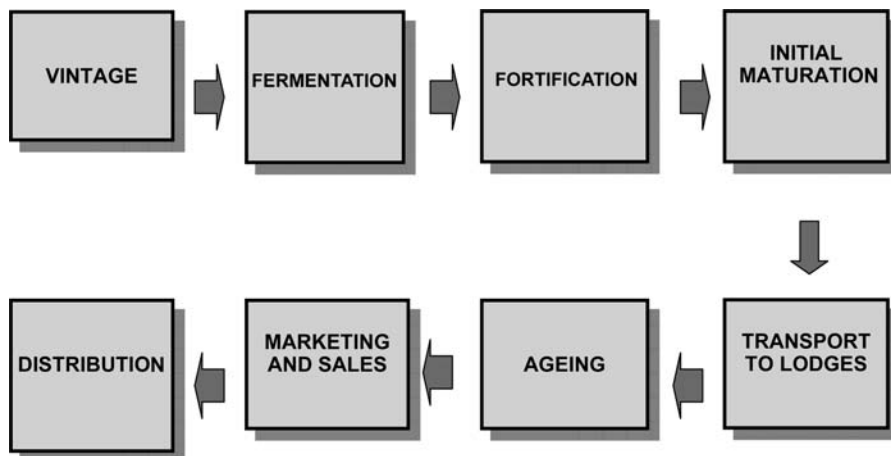


Figure 1.
Port value chain

makes it a very unsuitable place for ageing port because this needs a more stable climatic pattern. On the contrary, since Vila Nova de Gaia is located nearby the sea, its temperate climate is considered to be the best for long periods of storage.

The port wine network

Despite the intervention of tens of thousands of actors in the whole process described before, there are only four main categories of actors: farmers, wine cooperative societies, shippers and distributors. Traditionally, grape growing and port making were undertaken by independent farmers who sold their wine to the shipping houses. These, in turn, organised the transport of the wine from the Douro valley down the river, and stored and aged it in their lodges located in Vila Nova de Gaia. Furthermore, the shippers promoted and sold the wine all over the world to hundreds of distributors.

Figure 2 represents diagrammatically the main actors involved in the port wine network and the most significant relationships among them. It makes clear the existence of two basic nets of relationships. One is connected with the production of port in the Douro valley. It includes not only the farmers and wine cooperatives but

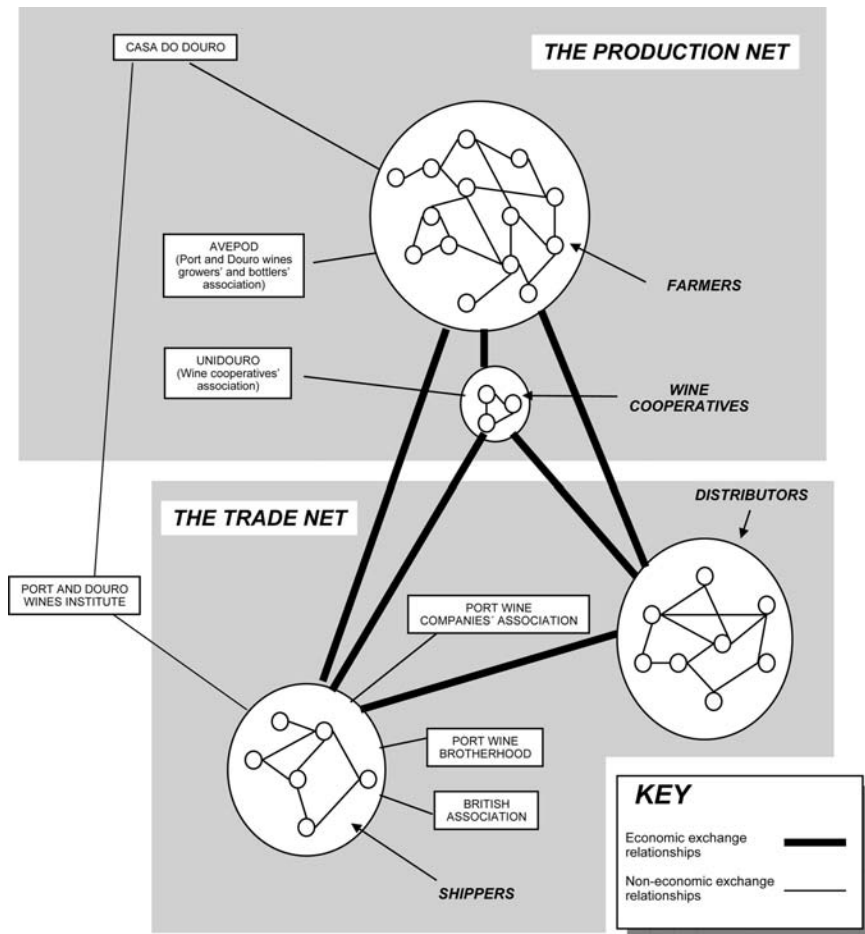


Figure 2.
The port wine network

also a number of associations such as the Casa do Douro, AVEPOD (the Port and Douro Wines Growers' and Bottlers' Association) and UNIDOURO (the Wine Cooperative Societies' Association). The second net is centred on the trade of port. It includes the shippers as well as collective organisations such as the Port Wine Companies' Association and the British Association. The Douro valley net and the trade net are connected by both economic and non-economic links. The former involves essentially the farmer–shipper relationship intermediated or not by the wine cooperatives. The latter encompasses the relationships established with and through the both governmental bodies (e.g. the Port and Douro Wines Institute) and private collectivities.

The production net

Farmers have typically been the most important group of actors in the Douro valley. They can be divided into three categories. The first comprises thousands of small or very small growers, some of them producing just a few baskets of grapes (70 kg per basket). In general, these farmers sell their production in the grape form since they do not own facilities for vinification. The second category is made up of medium or large-scale farmers. Several of them make the wine in their own wineries. The third category comprises absentee landlords, most of them Portuguese businessmen living in Porto or Lisbon.

More than 50 per cent of the farmers sell their production to the shippers. Most of them, especially the smallest ones, sell only grapes. In this case, the transaction is usually established through an intermediary called *ajuntador* (collector) who collects the grapes and organises their transport to the shippers' vinification centres. In other cases, the farmers vinify the grapes and sell their production in the form of mosto. In this case, the shippers use to send a *feitor* (steward) who inspects the farmers' installations before the vintage, provides the brandy to be added to the mosto, and supervises wine making.

Over the past 50 years a number of wine cooperative societies have been established in the Douro valley. Their creation was, in most cases, encouraged by the Portuguese government which supplied loans at particularly low interest rates. From the point of view of the farmers, the advantages of these cooperatives are twofold. Firstly, they have benefited from economies of scale and from the use of more efficient wine making facilities. Secondly, farmers have increased their bargaining power *vis-à-vis* the shippers.

Originally, cooperatives aimed solely at producing wine. This was later sold to the shipping houses which took in their hands the whole process of trading port. However, cooperatives are now maturing and trading a small part of their production. Nowadays there are 23 cooperatives with 13,000 members which account for 40 per cent of all port produced.

Over the past few decades there has been an increasing number of large estates owned by shippers in the Douro valley. In many cases, they are rather like *châteaux* in the Bordeaux region. Despite the fact that only a limited quantity of port is produced there (approximately 10 per cent) these estates are producing first-class wines.

Since these investments in new estates are not likely to be returned in the short run, their purpose appears to be mainly long-term and strategic in nature. The control of the whole production process allows shippers to produce better and more distinctive wines. This internalisation of activities creates the conditions for increasing asset specificity of the resources and activities involved in port production. Furthermore,

these well-groomed estates are also used to accommodate guests – very frequently customers – and constitute a visible symbol of the shipper's status.

The trade net

Although port is produced in the Douro valley, only a very small amount is shipped from there. In fact, almost all port produced in the valley is transported during the spring following the vintage to Porto where shippers' lodges are located. On arriving there, the wine is analysed in laboratories, tasted and classified. Then it matures for at least three years before being ready for commercialisation.

There are some dozens of shipping houses. Some of them are descendants of old British families established in Porto in the early 18th century. Croft, Warre and Taylor, Fladgate Yeatman are examples of firms three hundred years old. Alongside the houses owned by the British families, there are important Portuguese owned companies such as Real Companhia Velha and Ferreira. Some multinationals related to the drinks business have also taken a position in the sector. This is the case of Gran Cruz, owned by the multinational Martiniquaise, and Cockburn, owned by Allied Lyons.

Although port is shipped to more than 100 countries, its sales are highly concentrated in just a few markets. The top three (France, Portugal, and the UK) account for more than 50 per cent of total sales (Table I). Each market has its own characteristics, and it is interesting to note that those three countries are representative of distinct patterns of consumer behaviour.

Traditionally, nationality differences have been connected with distinct market orientations. In general, the Portuguese sector has dominated the home market along with very strong positions in France and Belgium. On the other hand, the British shippers have dominated the after-dinner segment, where quality and brand prestige are important factors in consumers' preferences. The UK is the largest market for premium ports, though in recent years this segment has grown considerably in some other countries such as the USA and Canada.

Within this context, the role played by the shippers, regardless of their national origin, has always been crucial. Indeed, they have acted as linking pins connecting

Markets	10 ³ euros	Sales %	Price Euros/litre
France	92,525	23.1	3.50
Portugal	62,476	15.6	4.82
UK	55,270	13.8	5.14
The Netherlands	50,624	12.7	3.31
Belgium	39,694	9.9	3.68
USA	29,861	7.5	7.88
Canada	18,986	4.7	8.39
Germany	9,822	2.5	3.75
Denmark	6,846	1.7	4.82
Spain	5,672	1.4	4.45
Others	28,248	7.1	4.51
Total	400,024	100.0	4.31

Table I.
Port trade in 2004

Source: Port and Douro Wines Institute

thousands of growers and other actors operating in the Douro valley, with the distribution system which includes hundreds of actors spread throughout dozens of countries. In fact, the shippers have not only organised the transport of the wine from the Douro valley to Vila Nova de Gaia, and stored and aged it in their lodges. They have also promoted it and sold it all over the world. This technical and marketing knowledge along with their financial resources confers on them a central role within the overall port network.

In summary, the pivotal role assumed by the shippers revolves partly around their ability to straddle across and connect the Douro valley net and the trade net. They have to deal with both growers and associations in the Douro valley, and complex networks of distribution channels. In doing so, they have also to cope with the cultural distance that separates them from the Douro communities since life is totally different in the Douro valley and in the Porto area. The former has been one of the most isolated wine regions in Europe with a low standard of living. The latter is an urban centre, the head of an industrialised region. In short, it is the rural and backward district versus the cosmopolitan city.

The institutional arrangement

The institutional arrangement is mainly centred on the *Instituto dos Vinhos do Douro e Porto* (the Port and Douro Wines Institute), an organisation with a strong influence over the evolution of the port business as well as the structure of the overall network. The Port and Douro Wines Institute, initially named Port Wine Institute, is a government funded and sponsored body created in the early 1930s aiming to harmonise the interests of the actors involved in port production and trade. As a matter of fact, the institute performs the critical task of conciliating the objectives and interests of farmers, cooperatives, and shippers – which are often conflicting in the short run – within the legislative and regulatory framework established by the Portuguese government.

In this context, the main purposes of the institute are to regulate the entire production process, to control the quality of port, and to protect its denomination of origin both in Portugal and abroad. To achieve these ends, the institute performs a number of functions related to the regulation of not only the quality but also the quantities of port produced and traded. One of its most important functions has to do with the definition of *beneficio* – i.e. how much Douro's wine may be turned into port each year. This amount depends on several factors such as the climatic conditions, the evolution of the market and the level of stocks. Such an administrative definition of the quantity of port to be produced aims to prevent radical oscillations of the market price and to ensure a stable environment for growers, cooperatives and shippers.

Another function performed by the institute has to do with the application and enforcement of the so-called *Lei do Terço* (one-third law). This law establishes that no shipper is allowed to export in the course of one year more than one-third of the stock held at the beginning of that year. Although subject to several criticisms, this law aims to ensure that the wine is properly matured, and that the actors that ship port have a responsible interest in stocking it. In addition, this rule also acts as a barrier to entry. By raising substantially, the investment required to start up a business, the law protects to some extent, the incumbent traders from new entrants.

The administrative definition of each vintage's size and the one-third law were partly designed to ensure a minimum level of quality of all port produced and traded. In addition to this, the institute also performs a vital quality control activity over each

shipment in its modern laboratories. In fact, the Institute alone is authorised to issue the *Certificado de Origem* (certificate of origin), which means that it has the power to certify the quality and the origin of the wine, without which port is not port. Furthermore, the institute also issues the *Selo de Garantia* (guarantee seal) for all port bottled in Portugal, which reduces the possibilities of further adulteration.

In summary, the Port and Douro Wines Institute acts as a regulator of the business system as well as a self-appointed representative body of the interests of a significant number of actors involved in the port network. Moreover, it mediates conflict and attempts to conciliate different objectives as well as to promote dialogue, trust and cooperation. In doing so, the institute is a good example of an organisation engaged in promoting and shaping collective strategies.

Along with the Port and Douro Wines Institute, both production and trade have their own interest and representative bodies. The most important association operating in the Douro region is the *Casa do Douro*, the Farmers' and Wine Growers' Federation, created in 1932 during the governmental reorganisation undertaken by the prime-minister António Salazar. Its headquarters are located at Régua, the capital of the producing region. The Casa was (and still partly is) a typical corporatist organisation. Formed mainly through governmental intervention, it is empowered by law to administer and control some of the most vital activities connected to the initial stages of production. Furthermore, all grape growers have to register as members.

One of the most important activities performed by the Casa do Douro is the classification of vineyards. To maintain the balance between supply and demand, the Portuguese government establishes each year the total amount of port to be produced. Then, the Casa issues production quotas for each property once the decision has been taken. The central piece of this system is the *cadastro* (register) whose purpose is to ensure that port is produced with the best quality grapes available each year. The register is an official record held and updated by the Casa that classifies all vineyards according to their quality. It is then on the basis of this classification that the Casa determines the production quota for each vineyard. For this reason, the register plays obviously a vital role in the region since it regulates the proportion each farmer can make into port. This means that the register can be considered an instrument of power inasmuch as the organisation responsible for it has the power to control the most important basis for the distribution of revenue in the region.

Furthermore, the Casa do Douro also acts as a broker on behalf of the government, buying and storing wine in years of plenty, and releasing it during years of low production. This aims at ensuring stability and security to all grape growers in the region. In addition, the Casa controls the amounts of port stocks held by every grower, cooperative or shipper within the demarcated region.

In short, the Casa do Douro is a collective actor which operates as a regulator of the business system. Firstly, it defines who is inside or outside the grape growing net – i.e. who is qualified or not to be considered an actor in that system. Secondly, it aims at ensuring predictability, stability and security to all grape growers in the region.

Besides the Casa do Douro, there are other collective actors operating in the Douro valley. However, in contrast to the Casa, most of them are typical bottom-up collectivities since they are emergent forms of cooperation amongst actors, which result in the creation of associations acting as representative bodies of special groups of interests. What follows is a brief description of two of these interest associations.

AVEPOD – *Associação de Viticultores Engarrafadores dos Vinhos do Porto e Douro* (the Port and Douro Wines Growers' and Bottlers' Association) is an association created in the aftermath of the legislation issued in May 1986, which allows producers to export directly from the Douro valley. Founded by some well-known producers such as Luís Roseira of Quinta do Infantado and Miguel Champalimaud of Quinta do Côtto, this association comprises a number of growers and wine producers with bottling facilities. Its main objective is to promote and increase the exports of port directly from the Douro valley.

UNIDOURO – *União das Adegas Cooperativas da Região Demarcada do Douro* (the Wine Cooperative Societies' Association) is made up of 23 wine cooperatives operating in the region. It has two main objectives: to coordinate the economic activity amongst its members, and to defend the common interests of its membership. More recently, this association has been particularly involved in the struggle for the enlargement of the participation of cooperatives in the port trade. Indeed, as stated before, though cooperatives account for a large amount of the total port production, they only represent a very small proportion of total exports.

A number of associations, representing different forms of cooperation amongst shippers, are directly connected with port trade. The most important is the *Associação de Empresas de Vinho do Porto* (the Port wine companies' association), a trade association which includes the great majority of shippers. Its main objective is the promotion and development of port trade all over the world. It is a very strong representative body, created to uphold the interests of the shippers, with a relevant role in lobbying. It also performs important publicity and public relations functions on behalf of its membership.

Other organisations with either strong links to shippers or formed as a result of cooperation among shippers are the British Association and the *Confraria do Vinho do Porto*. The former is made up of British port shippers, their partners, and individual directors – men only. Its chairman, known as treasurer, is appointed annually from its membership on a rota basis. Since 1814 the headquarters of this association are located at the Factory House, an imposing granite building made by the English factors. Acting mostly as a British club for those in the port business, the Wednesday lunch at the Factory House is one of the most famous and traditional events in the sector. Every week most members and their guests, who frequently include bankers and lawyers, meet together at lunchtime. Talks often concern business problems and opportunities, or political and social events. Because of this, the weekly lunch performs an important function in terms of diffusing information, social norms, beliefs and expectations amongst individual actors involved in the business.

The *Confraria do Vinho do Porto* (the Port Wine Brotherhood) is an organisation created in 1982 whose members, called *confrades*, are managers, owners, or people who in one way or another are connected with port. According to its status, its main objective is the diffusion, promotion and consolidation of the worldwide reputation of port wine. Acting as guardian of traditions and rites connected with production and trade of port, the brotherhood undertakes a number of initiatives such as solemn enthronements of new members and blind vintage tasting.

In contrast to the associations in the Douro valley, the associations formed by the shippers represent more strategic and formal attempts to defend their members' interests. Their foundations are more secure than those of the associations described in relation to the actors in the Douro valley, and tend to be more permanent in character. Their clear orientation towards the economic issues related to port trade provides a

strong contrast to the farmers' associations which are more concerned, in general, with vague and diffuse defence of interests frequently not shared or perceived by all their membership. Moreover, the strength of the associations made up of shippers is apparently much greater than their fragmented and fragile counterparts in the Douro valley net.

Conclusion

The port wine sector is characterised by a number of important features. Firstly, it is the product of an evolutionary process, which has much to do with the dichotomy between stability and change. Indeed, on the one hand, the port wine sector is a sound example of stability. Most of its features are mainly long-term in nature – e.g. the lasting relationships between most farmers and shippers – or result from events which took place dozens or hundreds of years ago such as the state intervention. On the other hand, despite stability, the port wine sector is far from being static as it is apparent from the analysis developed in this article. It is exactly because changes have always occurred that the sector has survived for so long.

The second characteristic has to do with the existence of a significant number of collective actors such as the Casa do Douro and the Port Wine Companies' Association. Most of them can be regarded as attempts to influence the shape of the network inasmuch as they have contributed to the creation of rule systems that have guided and regulated business practices, upheld common values, and, in general, tended to reinforce the strategic position of their members in the network. In other words, these collectivities have concerned themselves with defining, advancing and promoting their members' interests across a broad spectrum of issues as well as attempting to prevent instability and disorder in their dealings with other groups of actors.

This means that different types of actors in the network have used different forms of both economic and non-economic relationships in their efforts to rewrite the scripts of interaction, change (or preserve) the rules that have governed business and social practice, and reverse balances of power. In other words, the motives and dynamics underlying the formation and persistence of these coalitions of actors as well as their role are critical to the understanding of change in the port wine sector.

Despite these characteristics, the port wine sector is not an idiosyncratic case. Most of its features are also present in other wine regions, especially in Europe: the existence of many small and medium-sized economic units operating in a geographically limited area where some producers sell their production directly to distributors while others are engaged in some phases of wine making; the relationships are likely to assume a competitive as well as a cooperative character most often in the form of collective action; there is a close interdependence between the economic system and the political and social environment.

In this context, the study suggests that change in wine regions is not solely determined by economic and technological variables. Interests assuming an economic nature as well as a social and political character can also play a major role in explaining their evolution. Whereas most studies of change in networks have focused on the role played by economic and technological factors, relatively few have addressed the role of collective actors. And yet the premise that actors have interests and that those interests can be both common and conflicting leads to the conclusion that cooperation underlying collective struggles for power may be a primary source of change.

References

- Axelsson, B. and Easton, G. (Eds) (1992), *Industrial Networks: A New View of Reality*, Routledge, London.
- Araújo, L., Dubois, A. and Gadde, L.-E. (2003), "The multiple boundaries of the Firm", *Journal of Management Studies*, Vol. 40 No. 5, pp. 1255-77.
- Araújo, L. and Easton, G. (2001), "Investments, positions and strategy from a network perspective", paper prepared for Professor Lars-Gunnar Mattsson's Festschrift, Stockholm School of Economics.
- Brito, C. (2001), "Towards an institutional theory of the dynamics of industrial networks", *Journal of Business and Industrial Marketing*, Vol. 16 No. 3, pp. 150-66.
- Day, G. (1990), *Market Driven Strategy*, Free Press, New York.
- Dubois, A. (1998), *Organizing Industrial Activities across Firm Boundaries*, Routledge, London.
- Easton, G. and Araújo, L. (1992), "Non-economic exchange in industrial networks", in Axelsson, B. and Easton, G. (Eds), *Industrial Networks: A New View of Reality*, Routledge, London, pp. 62-84.
- Ford, D., Gadde, L.-E., Håkansson, H., Lundgren, A., Snehota, I., Turnbull, P. and Wilson, D. (1998), *Managing Business Relationships*, John Wiley & Sons, Chichester.
- Gadde, L.-E. and Håkansson, H. (2001), *Supply Networks Strategy*, John Wiley & Sons, Chichester.
- Gadde, L.-E., Huemer, L. and Håkansson, H. (2003), "Strategizing in industrial networks", *Industrial Marketing Management*, Vol. 32, pp. 357-64.
- Håkansson, H. (Ed.) (1982), *International Marketing and Purchasing of Industrial Goods: An Interaction Approach*, John Wiley & Sons, Chichester.
- Håkansson, H., Harrison, D. and Waluszewski, A. (Eds.) (2004), *Rethinking Marketing: Developing a New Understanding of Markets*, John Wiley & Sons, Chichester.
- Håkansson, H. and Snehota, I. (1995), *Developing Relationships in Business Networks*, Routledge, London.
- Johanson, J. and Mattsson, L.-G. (1986), Interorganisational relations in industrial systems: a network approach compared with a transaction cost approach, Working Paper, University of Uppsala, Uppsala.
- Johanson, J. and Mattsson, L.-G. (1988), "Internationalization in industrial systems – a network approach", in Hood, N. and Vahlne, J.-E. (Eds), *Strategies in Global Competition*, Croom Helm, London.
- Mattsson, L.-G. (1985), "An application of a network approach to marketing: defending and changing market positions", in Dholakia, N. and Arndt, J. (Eds), *Changing the Course of Marketing: Alternative Paradigms for Widening Market Theory* (Suppl. 2), JAI Press, Greenwich.
- Mota, J. and Castro, L. (2004), "A capabilities perspective on the evolution of firm boundaries: a comparative case example from the portuguese moulds industry", *Journal of Management Studies*, Vol. 14 No. 2, pp. 295-316.
- Naudé, P. and Turnbull, P. (1998), *Network Dynamics in International Marketing*, Pergamon, Oxford.
- Ritter, T. and Ford, D. (2004), "Interactions between suppliers and customers in business markets", in Håkansson, H., Harrison, D. and Waluszewski, A. (Eds), *Rethinking Marketing: Developing a New Understanding of Markets*, John Wiley & Sons, Chichester, pp. 99-116.
- Snehota, I. (2004), "Perspectives and theories of markets", in Håkansson, H., Harrison, D. and Waluszewski, A. (Eds), *Rethinking Marketing: Developing a New Understanding of Markets*, John Wiley & Sons, Chichester, pp. 15-32.

Wilkinson, I. and Young, L. (2001), "On cooperating: firms, relations and networks", *Journal of Business Research*, Vol. 55, pp. 123-32.

Further reading

Håkansson, H. and Waluszewski, A. (2004), "Reinterpreting the four Ps", in Håkansson, H., Harrison, D. and Waluszewski, A. (Eds), *Rethinking Marketing: Developing a New Understanding of Markets*, John Wiley & Sons, Chichester, pp. 249-262.

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