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Becoming a major hub in the distribution of wine: Hong Kong as a gate to Asian markets

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Abstract

This paper examines the conditions of emergence of a hub in the distribution of wine. We illustrate this through a detailed discussion of wine distribution in Eastern Asia and an examination of the case of Hong Kong as an emerging regional wine hub. Indeed, the Hong Kong Special Administrative Region (HKSAR) Government has imposed zero import tax on wine since June 2008. Since then, the city has attracted a large volume of wine from foreign countries and established a wine bond warehouse in the Asia-Pacific. In total, only 16% of the wine has served for local Hong Kong consumption, with 84% being transshipped to Macau and Mainland China. Well positioned at the heart of Chinese business diaspora with good global connections, Hong Kong is currently capturing important value from wine trade. But its position may be threatened by competing hubs (i.e. Singapore), if these are able to adapt to the needs of the rapidly changing market of wine. To analyze this situation, this paper uses the concept of agility, explaining how market knowledge, flexibility and responsiveness are key elements for regional competitiveness.

Keywords: Wine logistics, Supply chain, Distribution, East Asia

1. : Introduction characteristics, regions of production, main markets

1.1Wine: a very specific commodity

Wine is regarded as one of the most civilized and natural commodity which leads people to perceive it as the greatest perfection and enjoyment in their life (Hall and Mitchell, 2008, Simpson 2011a). It is purchased at both private and social occasions, and sometimes "on premises" at pubs, restaurants and other recreational arenas (Spawton,1991). In general, the dynamic nature of wine is

unique, complex and almost enigmatic product because it is (1) a provider of sustenance and a luxury item; (2) associated with healthy living, while in excess it can create healthy problems, or even death; (3) a symbol of status and a 'peasant' drink; (4) of immense religious and cultural significance and can be associated with hedonistic and debauched behavior; and (5) a fashion item, experience and commodity all in one (Hall and Mitchell, 2008). In this regard, wine becomes one of the most valuable commodities in international business.

1.2 Shifts in the international trade of wine: the emergence of new regions of production and consumption

Wine, a traditional industry, has been traded between regional wine producing and consuming countries for many centuries (Anderson, 2001)... Traditionally, the wine production and consumption was relatively localized (Hussain et al., 2007). There are only about one-tenth of global sales being across national borders, and the majority was with near neighbors (Anderson, 2001). Wine producers in distant countries were isolated from each other, and most of the world's wine drinkers consumed either local wines or imports from neighboring producers (Hall and Mitchell, 2008; Mancino and Presti, 2012; Dalmoro, 2013). The minimal cross-border interaction stimulates the significant growth of wine market in intra-European region (Hussain et al., 2007). More than three-quarters of the volume of world wine production, consumption and trade within Europe (Anderson, 2001). The four largest European wine producers, France, Italy, Spain and Germany belong to the so-called the "Old World", defined as those within Europe, have a long, uninterrupted history of wine production and consumption (Hussain et al., 2007; Flint and Golicic, 2009). As such, the Old World producers relied on their centuries of tradition and thus wine has been very much a 'European product' for a long time (Anderson, 2001; Flint and Golicic, 2009).

1.3 The drivers of growth in wine trade

Thanks to globalization, the wider and stronger levels of competition in the wine industry are being driven by following driving forces: (1) a worldwide oversupply of grapes and the incumbent pricing pressures. Production surpluses have ranged between 15 and 20 percent over the 1990s (Anderson et al, 2001; Spawton, 2001; Hussain et al., 2007; Flint and Golicic, 2009); (2) increased consolidation in all tiers of the supply chain comprising the producer, distributors and retailing sectors making it difficult for the tens of thousands of wineries to get their product onto the shelves; (3) changing consumer behavior pattern of this

product due to consumers are becoming more knowledgeable about products and brands and discerning in their choice of products. Such as, the beverage wine consumers of the 1970s are now becoming the fine wine buyers of the 1990s (Spawton, 2001; Islam and Quaddus, 2005; Hussain et al., 2007; Flint and Golicic, 2009). Like other industries, the wine industry is confronted with both old and new challenges. Among the five major emerging producers, known as the "New World" (i.e., US, Argentina, Australia, South Africa and Chile), they are located outside Europe - have prepared for the rapid invasion of their global wine markets (Hussain et al., 2007). Besides, in 2001, a report commissioned by the French Ministry of Agriculture points out that:

"Until recent years, wine was with us. We were the center, the unavoidable reference point. Today, the barbarians are at our gates: Australia, New Zealand, the USA, Chile, Argentina, South Africa". (Anderson, 2003, pp. 47)

As depicted in table 1, the global wine production of the Old World slightly decreased by 1.2%, from 13.8 billion liters in 2002 to 13.7 billion liters in 2010. It is revealed that the top four Old World producers encounter the stiff competition from their New World competitors. Accordingly, they gradually, and continuously, lost market shares within the wine industry (Hussain et al., 2007).

Table 1: Evolution of Wine Production by Country from 2002 to 2010

	2002 Production		2010 Production	
	billion liters	% of world	billion liters	% of world
		production		production
Old World				
Countries				
France	5.0	19%	4.6	16%
Italy	4.5	17%	4.6	18%
Spain	3.3	13%	3.6	14%
Germany	1.0	4%	0.9	3.8%
Total	13.8	53%	13.7	51.8%
New World				
Countries				
United	2.5	10%	2.7	11%
States				
Argentina	1.3	5%	1.6	4.6%
Australia	1.2	5%	1.0	4.4%
South	0.7	3%	0.9	3.8%

Africa				
Chile	0.6	2%	0.9	3.8%
Total	6.3	25%	7.1	27.6%
World total	26	100%	26.4	100%

Source: Wine Institute (2010)

1.4 The development of a new huge market for wine in China

The increased global trade provides opportunities to wine business in the contemporary business environment for wine. On average, a quarter of the wine produced the world is traded internationally in the past two decades (Anderson, 2001; Hall and Mitchell, 2008). Decreasing tariffs, reducing logistics cost and the removing certain trade barriers foster wine producers the opportunity to sell their products outside of their own regions and shifts in wine consumption patterns. In 2001, five 'New World' countries, namely Australia, Canada, Chile, New Zealand and the US, joined forces to "diminish barriers by reducing regulatory burdens faced by winemakers" by signing the Mutual Acceptance Agreement on Oenological Practices. In order to enlarge their market share and encounter keen competition from the New World, the Old World countries expanded their new target markets to Asian countries, like China and India (Hussain et al., 2007). It followed that there had been a growing trend that the demand in Europe was declining and grew much more slowly in the US. The wine consumption pattern is expected to shift in one distinct growth area – Asia (Hong Kong Trade Development Council, 2010). China is one of emerging wine market in Asian region. According to *The International Wine and Spirit Research*, it stated that Chinese people have consumed about 2.1 billion billion liters of wine. The total value of wine has accumulated to RMB 46.3 billion dollars (Xinhua net, 2013). It is especially in the first-tier cities, such as, Guangzhou, Shenzhen, Beijing and Shanghai have a regular wine consumption pattern. Additionally, some festivals including Lunar New Year, Labor Day, National Day and Christmas have reached the peak demand for wine. China wine consumption will be expected to increase by 40% and ranked the first in the world in 2020 (China Daily.com, 2013). In general, China wine market consumption consists of 75% or more of red wine and 25% or less of the others like white wine, sparkling wine, and fortified wine (i.e., snow lee wine). Wine tasting and learning are mostly middle class women. In the value of wine, it could be classified into commercial wine / everyday wine (i.e., around RMB 100); the mid-range of price (i.e., ranged from RMB 200 to RMB 500); and fine wine (i.e., ranged from RMB 600 to over RMB 1,000). The majority of Chinese are expected to purchase in fine wine due to a high level of quality assurance (Hong Kong Sea Transport and Logistics Association, BUD Project 2013).

1.4 How the international trade of wine is analyzed and how it could be from the point of view of strategic management

Despite the significant contribution of wine in international trade, a review of the scholarly work on wine identifies that the existant literature is either limited to operational research (for instance, Giuliani, 2007; Ferrer et al., 2008; Bohle et al., 2010) or predominantly descriptive (for instance, Spawton, 1991; Hussain et al., 2007; Flint and Golicic, 2009), rather than looking at the industry from the perspective of strategic management. Moreover, research studies examining the wine industry in Hong Kong remain very scarce, thus leaving a large research gap yet to be filled. Understanding such, this study investigates how the Hong Kong wine industry utilizes their inherent resources and enhances their capabilities to compete with neighboring competitors in the dynamic and challengeable environment. The resources are defined as heterogeneity, rare, imperfectly mobile, imitable and non-substitutable (Peteraf, 1993). The critical resources can either tangible like infrastructure, facilities and configuration, or intangible like individual expertise and skills, know-how, reputation and custom particle that the Hong Kong wine industry owns, controls and access to on a semi-permanent basis (Valentin, 2001; Helfat and Peteraf, 2003; Lai, 2004). On the other hand, the capacity is related to the competences and capabilities of the Hong Kong wine industry to perform a coordinated set of tasks to build, integrate and reconfigure the internal and external resources and capabilities so as to appropriately match the opportunities in the environment (Teece et al., 1997; Helfat and Peteraf, 2003).

Based on that, it can help the Hong Kong wine industry to differentiate from their competitors on providing a wide variety of wine service and promote Hong Kong as Asia's wine trading and distribution centre. The rest of the paper is structured as follows. Section 2 will examine the external environment of the Hong Kong wine industry. After then, Section 3 will investigate wine logistics firms into their wine logistics operations. Next, Section 4 will discuss the possible directions for the Hong Kong wine industry so as to sustain the city's competitive advantage and enhance regional competitiveness in Asia region. Before the conclusion in Section 6, Section 5 will discuss how the Hong Kong experience can provide valuable lessons to other countries and regions in developing themselves as the global/regional hub for wine trade and distribution.

2. Contemporary Issues: How Hong Kong is improving its position in the trade network of wine?

2.1 The development of a wine market in Hong Kong

In the past decades, Hong Kong residents generally consumed Chinese tea or soft drinks (Hall and Mitchell, 2008). It was unusual for them to consume wine. Indeed, as a British colony (until 1997), the colonial government indicated slackness and a complacent attitude towards Hong Kong wine industry by imposing a very high wine tax (60-80%). Hence, until recently, it was not surprising that wine played a peripheral role of international trade in Hong Kong (Dewald, 2003), Conversely, Hussain et al. (2007) noted that Hong Kong people increasing awareness of the health benefits of wine produces an emerging pattern in Hong Kong from consuming Chinese tea and brandy to drinking wine. Hong Kong's domestic wine consumption had grown steadily at 10% and 13% in value and volume, respectively, between 2000 and 2006. In the same way, its import value has experienced a compound average growth rate (CAGR) of 22% between 2003 and 2006 (Hong Kong Trade Development Council, 2010). Accordingly, the rising popularity of wine consumption in Hong Kong and the soaring Asian demand stimulated public interest about the role of Hong Kong in the international wine market. Towards the end of the last century, it seemed that the development of Hong Kong as East Asia's wine trading and distribution centre became inevitable (Dewald, 2003). The HKSAR Government recognized that wine investment is a high value-added business which would bring incremental benefits to the economy, forecasting from more than HK\$1 billion in 2012 to almost HK\$3 billion in 2017, while it would also create thousands of new jobs. Indeed, the development of wine-related business is considered to be one of the prerequisites for brining tremendous economic and intangible benefits in the contemporary business environment (Hong Kong Trade Development Council, 2010).

2.2 How can Hong Kong could improve its position as a major player in globalwine trade?

Globalization and driving forces will continue to create the pressure and strong competition in the wine industry. The Hong Kong wine industry encounters neighboring pressure in Asia. Other regions could play a similar role. For instance, Singapore has developed its homegrown strategy "Wine for Asia" targeting international traders and wealthy Asian buyers. The Chinese mainland also reduced their wine import tariff to 14% in 2004 (Trade Development Council press release, 2010). Therefore, the notion of regional competitiveness encourages the Hong Kong wine industry to encounter a competitive market in Asia region. In this paper, the authors follow the definition of the European Commission (1999) on 'regional competitiveness', which is:

"The ability to produce goods and services which meet the test of international markets, whilst at the same time maintaining high and

sustainable levels of income, or more generally, the ability of regions to generate, while being exposed to external competitions, relatively high incomes and employment levels." (European Commission, 1999, pp. 10

The regional competitiveness creates the Hong Kong wine industry to attain a sustained competitive advantage. Indeed, Porter and Kramer (2006, p.78) proposed that sustained competitive advantage is "an inescapable priority for business leaders in every country". The sustainable competitive advantage is related to the Hong Kong wine industry implements value creating strategy which is not able to duplicate and difficult to implement or imitate by the neighboring rivals in a longer period (Dierickx and Cool, 1989; Barney, 1991; Oliver, 1997). The nature of wine industry is fundamentally heterogeneity that they have differential advantages and disadvantages in the dynamic environmental circumstances (Barney, 1991; Peteraf, 1993; Flint et al., 2009). Ghemawat (1986) points out that there are three effective strategies that we can create the sustainable competitive advantage as required by the Hong Kong wine industry. They are (1) the size in the targeted market, (2) superior access to resources or customers and (3) restrictions on competitors' options. As a result, they will exploit their inherent strength and weakness as well as responding to opportunities and threaten others (Barney, 1991; Valentin, 2001).

3. The Concept of Agility: an analytical framework to understand the strategies of firms involved in wine trade

In this century, agility plays a significant role in fundamental and irreversible changes of the so-called "First World" economics (Sharp et al., 1999; Gavetti and Levinthal, 2000). In this regard, agility can also foster the wine market growth through responding quickly of customer-based valuing of products or services in the unpredictable changing market (Yusuf et al., 1999). The concept of agility has discussed about the firms have the ability to be react quickly and proactive to a customer demand fluctuations and market unpredictable changes in turbulence and uncertainty macro-environment (Christopher, 2000; Hult et al., 2002; Lee, 2004; Lin et al., 2006; Ketchen and Hult, 2007). In this regard, Lin et al. (2006) argued that agility required firms to enlarge their capabilities so as to keep pace with the ever-changing, and uncertain, environment. In their study, it identified four key elements pertaining to (1) responsiveness to identify changes and reactively to respond quickly from the dynamic business market; (2) competency to achieve business objectives efficiently and effectively; (3) flexibility to reach different objectives and goals with the same facilities in the networks; (4)

quickness execute tasks and operations as short as possible. In order to increase agility capabilities, there are four critical variables, notably, technology, innovation, organization, and people are interactive and operate interdependently to respond changes proactively (Zhang and Sharifi, 2000).

New and emerging technology can facilitate the innovative and a quality of service to provide reliability and capacity availability in the wine industry. Indeed, thanks to technological innovation, it can increase the accessibility to create new markets, new customers, and new opportunities (Hult et al., 2002; Hult et al., 2003). Extensively usage of information technology (IT), notably, electronic commerce and mobile technology fosters to trace and track in real time (Booth, 1996; Gunasekaran, 1999; Cagliano et al., 2004; Zhou et al., 2006). In this regard, e-commerce plays significant roles in coordinating with different parties in the same platform (24/48 h deliveries from HK to everywhere in Asia?, follow the example of Amazon?). Through ecommerce, it attracts virtual and physical wine inventories to Hong Kong and allows access to support services. Hence, it encourages industry cooperation to provide shared services for ordering, tracking and payment processing through the internet and other electronic means (Hong Kong Trade Development Council, 2010). Furthermore, the wine industry has organized a variety of research and innovative activities to sustain their competitive position in the stage of crisis and turn the threats into new business opportunity (Lee, 2004). To support the growth of wine culture in Hong Kong, many hotels and restaurants promote wine appreciation; hosting wellattended wine tasting dinners and deluxe hotel wine cellars bulge with vintage collections; offering wine tasting events (Dewald, 2003; Hong Kong Trade Development Council, 2010).

In the contemporary environment, most of the wine trading firms require a high tolerance, and indeed resilience, of risk, and be proactive to environmental changes so that they can reconfigure themselves rapidly and adhocracy make changes to explore the new market opportunities (Hult et al., 2002; Zhou et al., 2006). This is true for a lot of economic activities. From the strategic management perspective, the top management plays a significant role in the appropriate business strategies to align and adjust key systems, processes, decisions within the firm, information systems, organizational structure, and performance measurements with organizational goals and objectives (Das and Joshi, 2007). Indeed, the wine market and industry is a highly risky business (Hussain et al., 2007; Flint and Golicic, 2009). Hence, developing the performance measurements promote the firms in response to make changes and meet changing goals flexibility in a high volatile markets (Gunasekaran, 1999). The provision of crystal clear instructions to all levels of employees on its operating system and developing

conflict resolution management, i.e., employees who make decisions and resolve conflicts based on the firm interest (Hult et al., 2003; Robbins and Coulter, 2005).

Similarity, the wine trading firms can catch up the new market opportunities through acquiring professionally knowledgeable and multi-skilled people to manage, innovate, and initiate environmental change (Naman and Slevin, 1993). The continuous improvement can be achieved through the development of professional training and development systems, as well as, evolving appropriate human resource management programs (Slater and Narver, 1995; Gunasekaran, 1999; Sharp et al., 1999; Yusuf et al., 1999; Zhou et al., 2006). Underinvestment in continuous training and education, the actors' skills and core competence should be reverted, and upgraded, so as to respond to customer requirements quickly and effectively (Yusuf et al., 1999). In this regard, Hong Kong has a high level of wine knowledge and appreciation to gain immediate response and survival from the unprecedented threats in the dynamic business environment.. For instance, Hong Kong wine logistics industry has set up advanced technological tools including cold chain management, EPC barcode or Radio-frequency identification (RFID) (i.e., used for real time inventory management and security in wine warehouse); anti-counterfeiting technology (such as smart phones application security labels with bar code or QR code use) (Booth, 1996; Zhang and Sharifi, 2000; Hoek et al., 2001).

4. Wine Logistics Service Providers

Logistics is an important component in modern supply chains (Tang and Lau, 2013; Green et al., 2008). The Council of Supply Chain Management Professionals (2007) defines logistics management as:

"That part of supply chain management that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customers' requirements." (The Council of Supply Chain Management Professionals, 2007)

Logistics is the concept of the right material, in the right place, at the right moment, and in the right condition. It includes a wide range of activities pertaining to inventory management, warehousing, materials handling, secondary assembly, information-related service (notably, cargo track and trace) and distribution (Aguirre et al., 2010), and a part of corporate strategy to manage the organization and facilitate the flow of relevant information between inter-

organization and intra-organization (Chan et al., 2012). The objectives are to serve the needs of firm to attain cost and service advantages (Lai et al., 2004). In the wine industry, wine logistics starts from growing, harvesting, processing, manufacturing to consumption. The objectives are to handle, process and deliver right wine to the right customer with the right quantity, in the right conditions at the right time (Shamsuzzoha and Helo, 2010). It also aims to cost reduction and flexibility for available wine. The whole process of continuous improvement is to eliminate non-value added activities or waste (Perez et al., 2010). The right wine indicates their salability, grade, freshness, texture, origin, appearance, size, weight, flavor, color, vintage, temperature or any other requirements specified by customers.

In the logistics industry, users (i.e., retailers and producers) and service providers (i.e., third party logistics, or 3PL) are two main categories. Thanks to the globalization and the increase in competitive pressures, many firms develop logistics as a key strategy to attain cost minimization and service maximization (Lun et al., 2006). Hence, there are more and more users which tend to outsource their logistics activities to 3PL providers. Recently, wine has played a significant role in Hong Kong's trading volume leads to a sustainable development in related and supporting industries, notably, logistics industry. A wine logistics service provider demonstrates four major dimensions for wine logistics service management including logistics facilities, a global network of partners, information technology and quality assurance. In order to explore wine logistics management, wine logistics service providers are examined in the study.

How the French wine is shipped from France to Eastern Asia merchants buy wine in France?

What role Hong Kong (could) play in the network?

4.1. Information System Management

Under the inevitable trend of globalization, firms encounter multiple pressures including market expansion, keen competition, and increasing customer expectations in a dynamic business environment. This motivates firms to minimize total cost and maximize customer service level through upgrading their capabilities. Thus, firms develop strategies on IT to overcome the complexity existed in global business (Chan et al., 2012). Wine logistics service providers illustrate IT or information systems to integrate wine logistics activities, such as, collecting, processing, retrieving, reporting and storing of data to achieve a competitive edge (Lun et al., 2006). In order to enhance its capacity in intercepting suspected counterfeit wine and verify wine authenticity, Hong Kong wine logistics industry has established a wide

variety of advanced technological tools including cold chain management, EPC barcode or

Radio-frequency identification (RFID) (i.e., used for real time inventory management and security in wine warehouse); anti-counterfeiting technology (such as smart phones application security labels with bar code or QR code use).

4.2. Transportation Management

In transportation management, we need to balance the key elements (i.e., transport time, wine safety and quality) so as to facilitate the effective transport of wine. Most of wine logistics service providers prefer to deliver the wine through sea transport and road transport due to low transport cost and a large number of bond warehouses have set up around sea ports. In designing wine delivery routing in China, wine logistics service providers consider to use Hong Kong as a transshipment port. Mainland customs trust goods from Hong Kong and hence, it could enhance customs facilitation measures. Also, Hong Kong wine industry has entered into a Closer Economic Partnership Agreement (CEPA) with the mainland Chinese government in 1 January 2006. Under CEPA, Hong Kong is able to enjoy tariff-free treatment and establish a cost-effective and convenient distribution hub to store their investment-grade wines for delivery to their markets on-demand. Non-Hong Kong made wine is subject to tariff rates of up to 20% when entering the mainland (HKTDC, 2013). The suggested wine logistics route planning in China has been illustrated in Table 2. During transportation, wine logistics service providers consider either wrapping air cushion inside wine bottle or equipping wine bottle inside wooden board for protection. Wine logistics service providers also require adding insulation layer into wine bottle in order to keep tight temperature control.

Table 2: Suggested Wine Logistics Route Planning in China

Mode of	Route	
Transport		
Sea	Hong K on Nansha/Lianhuashan/Huangpu →	
	other cities in Guangdong province	
	Hong Kong→ Yantian/Shekou/Chiwan→	
	other cities in southern part of China	
	Hong Kong Humen→	

	other cities in Pearl River Delta		
	Overseas winery Hong Kong—Pudong —		
	Other cities in northern part of China		
	Overseas winer → Hong Kong—Tianjin →		
	Other cities in northern part of China		
Road	Hong Kong→ Man Kam To/Huanggang→		
	Guangdong province		
Rail	Hong Kong Beijing		

Source: Hong Kong Sea Transport and Logistics Association, BUD Project (2013) What about air routes for urgent deliveries?

4.3. Inventory Management

Inventory management includes coordinating, planning and controlling of wine along the logistics process. The level of stock and the speed of materials flow are the major constraints on wine logistics process, and are determined by the nature of demand and supply. On the one hand, the supply of wine are mainly come from different geographical areas, wine logistics service company require to manage inventory with the objective of making available at the right time, the right products, in the right quantity at a cost-competitive manner. On the other hand, a wine logistics service firm is indebted to the many customers that they work with. The customer are from all different channels and cities across the cities - hotels and restaurants, retail shops, supermarkets, wholesalers and individual consumers who are wine lovers etc. Hence, a wine logistics service firm could establish order management system to plan the order and control the delivery process on time. Common technologies such as Electronic Data Interchange (EDI), Materials Requirement Planning (MRPII), E-Commence, Customer Relationship Management (CRM), and Enterprise Resource Planning (ERP) can be used to manage wine inventories and integrate various links along the wine logistics operations.

4.4. Warehousing

Wine is a valuable commodity which needs special care in warehouse operations. Suitable temperature and the thermostat are vital to the preservation of wine quality. Wine logistics service providers require to store the wine in an appropriate storage facilities during the time wait for inspection or customs clearance. Nowadays, Hong Kong Quality Assurance Agency

(HKQAA) requires wine logistics service provider to install Wine Storage Management Storage (WSMS). Wine logistics service providers need to fulfill HKQAA code practices and system requirements including Temperature, Humidity, LED Lights, Vibrations, Maintenance, Security, Inventory Management, Fire Systems, Hygiene and Insurance. Basically, fine wine and commercial wine have distinct storage requirement. The summary has been discussed in Table 3. It should be however noted that the main variations of temperature take place during the travel.

Table 3: Fine Wine and Commercial Wine Storage

Items	Fine Wine	Commercial
		Wine
Temperature range	11-17°C	17-22°C
Maximum temperature variation per	3°C	5°C
day		
Maximum temperature variation per	5°C	10°C
year		
Humidity	55%-80%	>50%

Source: HKQAA (2013)

Hong Kong wine logistics service provider is one of key stakeholders in Hong Kong wine industry. In order to strengthen the competitiveness of Hong Kong wine logistics service provider, the Customs and Excise Department (C&ED) of Hong Kong and the General Administration of Customs of the Chinese mainland signed the "Cooperation Arrangement on Customs Facilitation Measures for Wine Entering the Mainland through Hong Kong" on 9 February 2010. The agreement has been implemented in Shenzhen. The measures include pre-valuation of wine duty and compression of clearance time at mainland ports. C&ED also implemented comprehensive measures to tackle counterfeit wine, for examples by establishing a dedicated investigation team; forming an alliance with the industry to strengthen cooperation in intelligence collection; setting up a specialist team under the alliance; and establishing a liaison network with overseas and Chinese mainland enforcement agencies to deal with suspected counterfeit wine and verify wine authenticity (HKTDC, 2013).

In the future, Hong Kong wine logistics service providers could help Hong Kong vintners to participate in the design and operations of the Mainland wine warehouse and thus, wine warehouse performance could achieve relevant customer metrics. Since the mainland logistics service providers are

familiar with customs clearance and inspection, extensive transportation networks, strong logistics facilities support and past experience, it would be a good strategy for the Hong Kong wine logistics service providers to form a strategic partnership with the mainland logistics service providers. The mainland logistics service providers could provide "last mile" delivery service so as to facilitate wine domestic sales for the success of Hong Kong's wine logistics industry strategy. Furthermore, Hong Kong wine logistics service providers has a high level of service (i.e., using reefer to deliver the wine from time to time) and emphasized on quality and integrity. These comparative advantages could collaborate with Hong Kong vintners to jointly develop wine market in the second-tier mainland cities (i.e., Dalian, Chengdu).

5. Regional Competitiveness. Policy recommandations

Competitiveness is a universal term which is mostly applicable to the business and economic environment. It is a method of benchmarking which is used for the firm to assess themselves and compare the internal performance with their competitors. Therefore, the firm gets superior performance by ongoing improvement (Francis et al., 2002; Budd and Hirmis, 2004). According to the UK's Department of Trade and Industry,

"the competitiveness is the ability to produce the right goods and services of the right quality, at the right price and at the right time" (Department for Transport, United Kingdom, 2014).

The competitiveness is also defined as the firms has the ability to compete in the international market through the policy inputs like business environment, physical infrastructure and knowledge infrastructure as well as the essential conditions like business performance, productivity, price and cost and labor supply so as to increase efficiency and effectiveness (National Competitiveness Council, The Irish Government, 2006). In addition, the Organization for Economic Cooperation and Development (OECD) (1996) identify the national competitiveness is "the degree to which it can, under free and fair market conditions, produce goods and services which meet the test of inter-national markets, while simultaneously maintaining and expanding the real incomes of its people over the long term."

The regional competitiveness is related to how the industry competes with neighboring rivals by attracting investment from foreign, private and public capital, creating innovation environments by skilled employees, entrepreneurs and creative workers and facilitating the technological development (Porter, 2003). After the removal of alcohol duties in June 2008, wine imports surged around 80% in the first year. Compared with 2007, wine-related business has increased by over 30% and the number of employees engaged in wine-related

business increased by more than 5,000. In 2012, the imports of wine have reached at HKD 8.1 billion, a four-fold increase from 2007 (HKTDC, 2013). It follows that HKSAR government organized a wide variety of activities and implemented policies to develop Hong Kong into a wine trade and distribution centre

- ➤ Developing the first free wine port among major economies. The Hong Kong SAR Government has announced that duties on wine, beer and alcoholic beverages (except spirits) were exempted in June 2008. Abolition of wine duty will facilitate Hong Kong position as the premier wine destination in the world and encourage high-value wines to be traded and purchased in Hong Kong. To facilitate Hong Kong as the first free wine port for the region, the HKSAR government has signed cooperation agreements with 13 major wine-producing countries, such as, France (including Bordeaux and Burgundy regions), Spain, Australia, Italy, Hungary, New Zealand, the USA (i.e., Washington and Oregon States), Portugal, Chile and Germany in 2013. Through agreements, Hong Kong could take leading role in organizing wine business activities in Asia Pacific region pertaining to wine-related trade, investment and tourism and providing good business matching opportunities.
- Establishing marketing efforts. In order to promote Hong Kong as Asia's wine trading and distribution centre, The Hong Kong Trade Development Council (TDC) has organized the first Hong Kong International Wine Expo in August 2008. This provides an opportunity to create a one-stop platform for exhibitors and buyers to meet and explore business opportunities in the emerging markets of Asia and the Chinese mainland. Hence, it could create and retain Hong Kong as a cosmopolitan flair in the world. In order to increase reputation and enlarge networks in different China provinces, Hong Kong wine logistics providers have participated and collaborated with China wine exhibitors in different types of wine trade fair and exhibition per year. For instance, China Food & Drinks Fair (CFDF); China International Wine and Spirits Exhibition; China (Guangzhou) International Wine Fair; Shanghai Wine Festival; and International Exhibition of Food & Drink, Hotel, Restaurant & Food Service Equipment, Supplies & Services (HOFEX).
- ➤ Strengthening wine education. In recent years, Hong Kong has opened several wine centers, societies, clubs and schools to provide trade-qualified and accredited training. With a more formalized, professional educational system, a strong foundation and a sustainable base for a wine industry can be established. The number of wine-related professional courses grew from 21 in 2007 to 86 in 2009. The number of participants in these courses has reached over 8,500 in 2009, as well as over two times as compared with about 2,400 participants in 2007 (HKTDC, 2013). Furthermore, the Hong Kong wine industry creates innovation environment with over 2,000 knowledgeable wine liquor license holders as well as training several sommeliers, wine journalists,

- wine logistics specialists, viticulturists and other wine stakeholders. The high-skilled and well-trained labor could contribute to the sustainable development of wine industry.
- ➤ Developing wine investment tools. Hong Kong encourages the development of wine investment tools to offer competitive investment options including wine investment funds, wine futures and wine auctions for Hong Kong and Asian investors. As there is free flow of capital, it can attract enterprises do the investment in Hong Kong wine industry. In addition, Hong Kong can attract the private banks and wine auctions to offer wine investment funds. It is forecasted that the demand for wine investment by Asian investors will amount to US\$500 million by 2012 and reach at US\$970 million by 2017.

6. Conclusion

This paper discusses the development of the wine industry and wine logistics in Hong Kong. In the coming years, the development of a wine trading and distribution centre not only generate direct benefits to Hong Kong's economy, but also bring indirect benefits from higher demand of linked businesses including storage, trade shows, educational programs, tourism, advertising and promotion, management and consultant services (Hong Kong Trade Development Council, 2013). In this study, the authors apply the concept of regional competitiveness to critically assess Hong Kong's potential evolution into a world-leading centre for wine trading and distribution. To deal with this situation, the authors address some practical measures for Hong Kong wine industry to encounter the competition and grasp the feasible opportunity in the external environment. Thus, accordingly, it gives Hong Kong first mover advantage and gain sustainable competitive advantage.

This study is one of a few studies to discuss and analysis on the wine industry, particularly in Hong Kong. This paper not only explores the internal and external situation of wine industry in Hong Kong, but also applies the concept of agility to identify the key elements of strengthening the role of Hong Kong as a world-leading wine trading and distribution centre and how Hong Kong wine industry utilizes their inherent resources and enhances capabilities to compete with neighboring competitors. To supplement that idea, the authors also apply the concept of regional competitiveness to highlight some important points about how to enhance Hong Kong as a world-leading wine trading and distribution centre in the literature. Developing the first free wine port among major economies; Developing wine investment tools; Strengthening wine education; Establishing marketing efforts are the key determinants to foster Hong Kong as the well-recognized global wine trading and distribution centre. Further research may need to carry out a large-scale longitudinal study in the other countries to generalize our findings and provide a solid foundation for further studies of wine industry.

References

- Aguirre, A.B., Hennies, W.T. and Marks, A. (2010), Innovative logistics for the transportation of sand and gravel in Brazil, International Journal Logistics Systems and Management 7(4): 490-506.
- Anderson, K. (2001), Where in the World is the Wine Industry Going? Discussion Paper No. 0101, Centre for International Economic Studies, Adelaide University.
- Anderson, K., Norman, D. and Wittwer, G. (2001), Globalization and the World's Wine Markets: Overview, Discussion Paper No. 0143, Center for International Economic Studies, Adelaide University, Australia. Anderson, K. (2003), Wine's New World, Foreign Policy, May-June 47-54.
- ASEAN Secretariat (2008), Roadmap for the integration of logistics services, Jakarta, Indonesia
- Barney, J. (1991), Firm resources and sustained competitive advantage, Journal of Management 17(1): 99-120.
- Barrett, H. R., Browne, A. W., & Ilbery, B. W. (2004). From farm to supermarket: the trade in fresh horticultural produce from sub-Saharan Africa to the United Kingdom. Geographies of commodity chains, 19-38.
- Bellak, C.J. and Weiss, A. (1993), A note on the Australian diamond, Management International Review 33(2): 109-118.
- Bohle, C., Maturana, S., and Vera, J. (2010), A robust optimization approach to wine grape harvesting scheduling, European Journal of Operational Research 200(1): 245-252.
- Booth, R. (1996), Agile manufacturing, Engineering Management Journal 6(2):105-112.
- BUD Project, Upgrading and Branding Programme, Hong Kong Sea Transport and Logistics Association, 2013.
- Budd, L. and Hirmis, A.K. (2004), Conceptual framework for regional competitiveness, Regional Studies 38(9): 1015-1028.
- Cagliano, R., Caniato, F. and Spina, G. (2004), Lean, agile and traditional supply: how do they impact manufacturing performance, Journal of Purchasing and Supply Management 10(4): 151-164.
- Chan, X., Lau, Y.Y. and Ng, J.M.J. (2012), Critical evaluation of ERP implementation on firm performance: a case study of AT&T, International Journal Logistics Systems and Management 12(1): 52-69.
- China Daily.com, China will set pace for wine industry growth, http://www.chinadaily.com.cn/sunday/2013-03/10/content_16294916.htm, last accessed in 10 March 2013.
- Christopher, M. (2000), The agility supply chain: competing in volatile markets, Industrial Marketing Management 29(1): 37-44.
- Council of Supply Chain Management Professionals (2007), Supply chain management and logistics management definition,

- www.cscmp.org/Website/AboutCSCMP/Definitions/Definitions.asp,last accessed in 1 March 2014.
- Dalmoro, M. (2013), The formation of country wineries networks for internationalization: an analysis of two new world wines regions, Journal of Wine Research 24(2): 96-111
- Das, S.R. and Joshi, M.P. (2007), Process innovativeness in technology services organizations: roles of differentiation strategy, operational autonomy and risk-taking propensity, Journal of Operations Management 25(3): 643-660.
- Department for Transport, United Kingdom's website: http://www.dft.gov.uk, last accessed in 2March 2014.
- Dewald, B.W.A. (2003), Wine consumption in Hong Kong, International Journal of Wine Marketing 15(1): 54-68.
- Dierickx, I, and Cool, K. (1989), Asset stock accumulation and sustainability of competitive advantage, Management Science 35(12):1504-1511.
- Ellram, L. (1996), The use of the case study method in logistics research, Journal of Business Logistics 17(2): 93–115.
- European Commission. (1996), Cohesion and Competitiveness: Trends in the Regions, 6th Periodic Report on Social and Economic Situation and Development of the Regions in the Community, Luxembourg: European Commission.
- European Commission. (1999), Sixth Periodic Report on the Social and Economic Situation of Regions in the EU.
- Ferrer, J.C., Cawley, A.M., Maturana, S., Toloza, S. and Vera, J.(2008), An optimization approach for scheduling wine grape harvest operations, International Journal of Production Economics 112(2): 985-999.
- Flint, D.J. and Golicic, S.L. (2009), Searching for competitive advantage through sustainability: A qualitative study in the New Zealand wine industry, International Journal of Physical Distribution and Logistics Management 39 (10): 841-860.
- Francis, G., Humphreys, I. and Fry, J. (2002), The benchmarking of airport performance, Journal of Air Transport Management 8(4): 239-247.
- Gavetti, G. and Levinthal, D. (2000), Looking forward and look backward: cognitive and experiential search, Administrative Science Quarterly 45(1):113-137.
- Gereffi, G. (2001). Shifting governance structures in global commodity chains, with special reference to the internet. American Behavioral Scientist, 44(10), 1616-1637.
- Ghemawat, P. (1986), Sustainable advantage, Harvard Business Review, 64(5): 53-58.
- Giuliani, E. (2007), The selective nature of knowledge networks in clusters: evidence from the wine industry, Journal of Economic Geography 7(2): 139-168.

- Grant, R.M. (1991), Porter's competitive advantage of nations: an assessment, Strategic Management Journal 12(7): 535-548.
- Green, K.W., JR., Whitten, D. and Inman, RA. (2008), The impact of logistics performance on organizational performance in a supply chain context, Supply Chain Management: An International Journal 13(4):317-327.
- Gunasekaran, A. (1999), Agile manufacturing: a framework for research and development, International Journal of Production Economics 62(1): 87-105.
- Hall, C.M. and Mitchell, R. (2008), Wine Marketing: A Practical Guide. Elsevier: Oxford.
- HKQAA's website: www.hkqaa.org, last accessed in 2 March 2014
- Hodgetts, R.M. (1993), Porter's diamond framework in a Mexican context, Management International Review 33(2):.41-54.
- Hoek, R.I., Harrison, A. and Christopher, M. (2001), Measuring agile capabilities in the supply chain, International Journal of Operations and Production Management 21(1): 126-147.
- Hong Kong Trade Development Council, (2010), Hong Kong as a wine trading and distribution centre: opportunity for creating a new industry, press release, Hong Kong Trade Development Council, 17 February 2010
- Hong Kong Trade Development Council (2013), Wine Industry In Hong Kong, http://hong-kong-economy-research.hktdc.com/business-news/vp-article/en/1/1X07WNW7.htm, last accessed in 4 March 2014.
- Hussain, M., Cholette, S, and Castaldi, R.M. (2007), An analysis of globalization forces in the wine industry: implications and recommendations for wineries, Journal of Global Marketing 21(1): 33-47.
- Helfat, C.E, and Peteraf, M.A. (2003), The dynamic resource-based view: capability lifecycles, Strategic Management Journal 24(10): 997-1010.
- Hult, G.T.M., Ketchen, D.J., and Nichols, E.L. (2002), An examination of cultural competitiveness and order fulfillment cycle time within supply chains, Academy of Management Journal 45(3): 577-586.
- Hult, G.T.M., Snow, C.C., and Kandemir, D. (2003), The role of entrepreneurship in building cultural competitiveness in different organizational types, Journal of Management 29(3): 401-426.
- Islam, N. and Quaddus, M. (2005), An appraisal of uncertainties in the Western Australian wine industry supply chain, 49th Annual Conference of the Australian Agricultural and Resource Economics Society, Australia.
- Ketchen, D.J. and Hult, G..T.M. (2007), Bridging organization theory and supply chain management: the case of best value supply chains, Journal of Operations Management 25(2): 573-580.
- Kumar, N., Andersson, D., and Rehme, J., (2010), Logistics of low cost country sourcing, International Journal of Logistics: Research and Applications 13(2): 143-160.
- Lai, K.H., (2004), Service capability and performance of logistics service

- providers, Transportation Research Part E 40(5): 385-399.
- Lai, K.H., Cheng, T.C.E., and Yeung, A. (2004), An empirical taxonomy for logistics service providers, Maritime Economics and Logistics6: 199-219.
- Lau, Y.Y., (2009), An application of the Porter's diamond framework: the case of Hong Kong airfreight industry, Proceedings of International Forum on Shipping, Ports and Airports, Hong Kong.
- Lee, H.L. (2004), The triple a supply chain, Harvard Business Review 83(10): 102-112.
- Lin, C.T., Chiu, H. and Chu P.Y. (2006), Agility index in the supply chain, International Journal of Production Economics 100(2): 285-299.
- Lun, Y.H.V., Lai, K.H., and Cheng, T.C.E. (2006), Shipping and Transport Logistics, McGraw Hill, Singapore.
- Lun, Y.H.V., Lai, K.H, and Cheng, T.C.E. (2009), Intermodal Transport Capability, Shipping and Transport Logistics Book Series, 17-33.
- Mancino, A. and Presti, O.L. (2012), Wine tourism: a business opportunity for winemakers, International Journal of Business and Globalization 8(1):.153-169.
- Moon, H.C., Rugman, A.M, and Verbeke, A., (1998), A generalized double diamond approach to the global competitiveness of Korea and Singapore, International Business Review 7(2):135-150.
- Naman, J.L., Slevin, D.P. (1993), Entrepreneurship and the concept of fit: a model and empirical tests, Strategic Management Journal 14(2): 137-153.
- National Competitiveness Council. (2006), Annual Competitiveness Report 2006,
- Volume 1, Benchmarking Ireland's Performance, Ireland: National Competitiveness Council, The Irish Government.
- Ng, A.K.Y., and Gujar, G.C., (2009), Government policies, efficiency and competitiveness: the case of dry ports in India, Transport Policy 16(5): 232-239.
- Oliver, C., (1997), Sustainable competitive advantage: combining institutional and resource based view, Strategic Management Journal 18(9): 697-713.
- Oz, O., (2002), Assessing Porter's framework for national advantage: the case of Turkey, Journal of Business Research 55(6): 509-515.
- Perez, C., DE Castro, R., Simons, D., and Gimenez, G. (2010), Development of lean supply chains: a case study of the Catalan pork sector, Supply Chain Management: An International Journal 15(1): 55-68.
- Peteraf, M.A., (1993), The cornerstones of competitive advantage: a resource-based view, Strategic Management Journal 14(3):179-191.
- Porter, M.E., (1990), The Competitive Advantage of Nations, New York: Free Press.
- Porter, M.E., (1998), The Competitive Advantage of Nations, London: Macmillan.

- Porter, M.E., (2003), The economic performance of regions, Regional Studies 37(6-7): 549-578.
- Porter, M.E., and Kramer, M.R., (2006), Strategy and society the link between competitive advantage and corporate social responsibility, Harvard
 - Business Review December: 78-92.
- Robbins, S.P., and Coulter, M. (2005), Management, New Jersey: Pearson Prentice Hall.
- Shamsuzzoha, A.H.M., and Helo, P.T. (2010), Distributed supply chain in a global environment", International Journal Logistics Systems and Management 7(4): 393-411.
- Sharp, J.M., Irani, Z., and Desai, S. (1999), Working towards agile manufacturing in the UK industry," International Journal of Production Economics 62(2): 155-169.
- Simpson, J. (2011a). Creating Wine: The Emergence of a World Industry, 1840-1914. Princeton University Press.
- Simpson, J. (2011b). Factor endowments, markets and vertical integration. The development of commercial wine production in Argentina, Australia and California, c1870-1914. Revista de Historia Económica, 29(1), 39.
- Slater, S.F., and Narver, J.C. (1995), Market orientation and the learning organization, Journal of Marketing 59(3): 63-74
- Spawton, T., (1991), The wine marketing environment, European Journal of Marketing 25(3):12-18.
- Tang, O, and Lau, Y.Y. (2013), Logistics aspects of avian influenza pandemic in Hong Kong, International Journal Logistics Systems and Management, 14(1): 110-131.
- Teece, D.J., Pisano G., and Shuen, A., (1997), Dynamic capabilities and strategic management, Strategic Management Journal 18(7): 509-533.
- The International Wine and Spirit Research's website: http://www.iwsr.co.uk/, last accessed in 1 March 2014
- Valentin, E.K., (2001), SWOT analysis from a resource-based view, Journal of Marketing Theory and Practice 9(2): 54-69.
- Van Den Bosch, F., and Van Prooijen, A.A., (1992), The competitive advantage of European nations: the impact of national culture a missing element in Porter's analysis?" European Management Journal 10(2):173-177.
- Wine Institute, (2010), World Wine Production by Country, San Francisco: CA.
- Xinhua net, Chinese wine market consumption does not affect short-term wine prices, http://news.xinhuanet.com/food/2013-06/25/c_124905488.htm, last accessed in 25 June 2013.
- Yin, R., (1989), Case study research: Design and methods. Beverly Hills: Sage Publications.

- Yusuf, Y.Y., Sarhardi, M., and Gunasekaran, A. (1999), Agile Manufacturing: the drivers, concepts and attributes, International Journal of Production Economics 62(1): 33-43.
- Zhang, Z., and Sharifi, H. (2000), A methodology for achieving agility in manufacturing organizations, International Journal of Operations and Production Management 20(4): 496-512.
- Zhang, A. (2003). Analysis of an international air-cargo hub: the case of Hong Kong. Journal of Air Transport Management, 9(2), 123-138.
- Zhou, K.Z., Tse, D.K., and Li, J.J. (2006), Organizational changes in emerging economies: drivers and consequences, Journal of International Business Studies 37(2): 248-263.