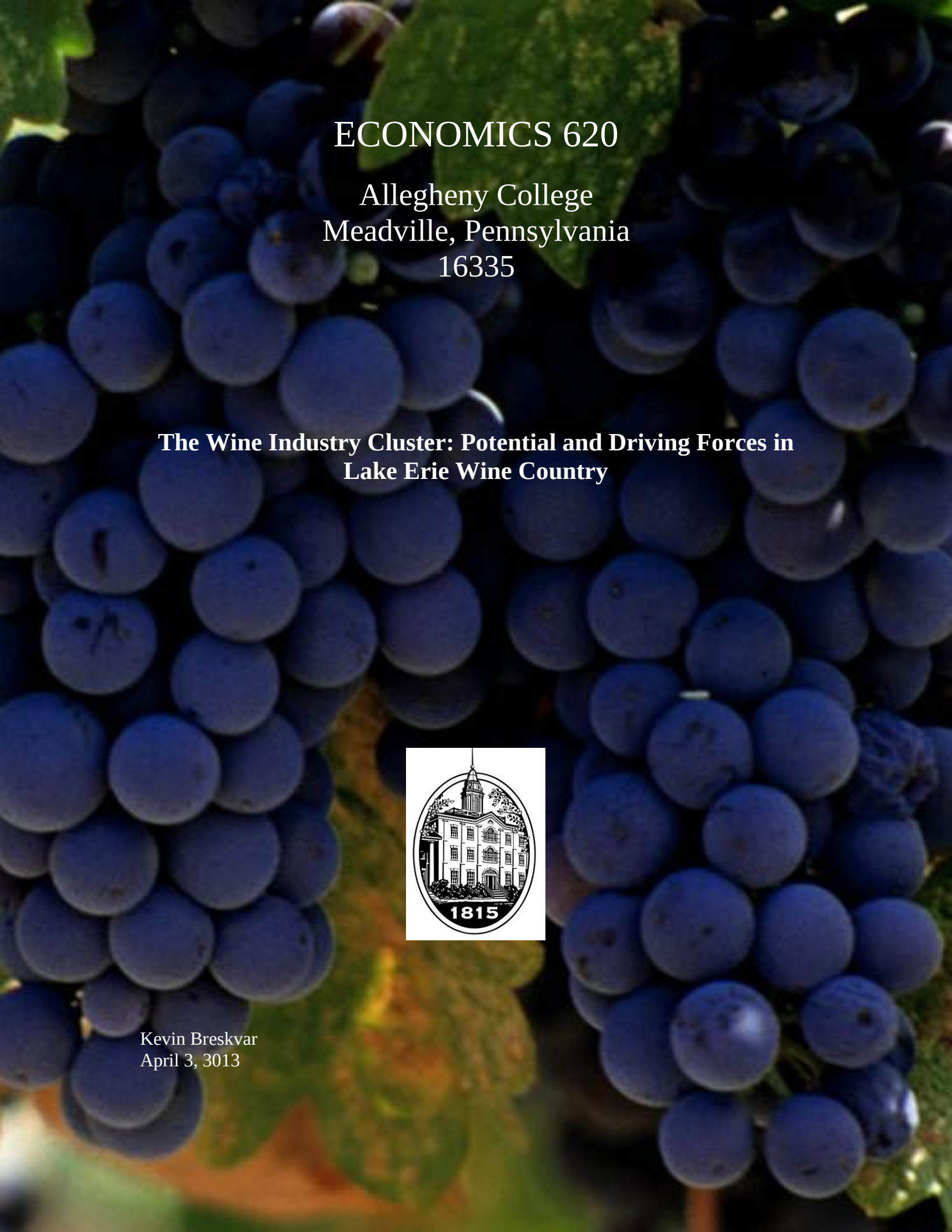


ECONOMICS 620

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The Wine Industry Cluster: Potential and Driving Forces in Lake Erie Wine Country

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April 3, 3013

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by

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Date: April 3, 2013

Cover Image Source: Trinrud, K. (2011). *An unattended vineyard*. Retrieved from http://ascendthedepths.blogspot.com/2011/10/untended-vineyard.html

I hereby recognize and pledge to fulfill my responsibilities as defined in the Honor Code and to maintain the integrity of both myself and the College as a whole.

Kevin Breskvar

Acknowledgements

I would like to thank all of my participants for their generosity in taking the time to take part in my project. I would especially like to thank Professor Robert Green of Mercyhurst North East's Culinary Arts program for all of his help in getting me started with my empirical research. I would also like to thank my academic advisor and second reader, Professor Russell Ormiston for everything that he has done for me throughout the last three years, as well as my comp advisor, Professor Don Goldstein for all of his advice (and for allowing me to all but monopolize his office hours for the last two semesters). Of course, my college experience would not have been as amazing as it was without the help of my Allegheny family (Mick Betler, Tyler Gund, Lukas Friga, Alex Perlman, Max Sosa, Seth Bishop, Ben Stewart, Keiron Stoddart, Reuben Bernstein-Goff, Zak Sprowls, Gillian Green, Gauri Joshi, Frank Triozzi and Jake Forstyk), so I would like to thank them, as well. Most importantly, though, I would like to thank my beautiful girlfriend, Jade Donahue for being so understanding and patient with me throughout the entirety of this project, as well as my parents for being the best in the world (and for making me so meticulous and anal about everything).

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Abstract

This study looks at the wine industry in the context of Michael E. Porter's "cluster" theory. Specifically, its primary objective is to determine if a wine industry cluster either exists or could potentially develop in nearby Lake Erie Wine Country. In order to do so, personal interviews of local winery owners and a local industry expert are utilized, which are based on a set of cluster component criteria obtained from the literature. It is concluded that a cluster does not currently exist in Lake Erie Wine Country, and it is highly unlikely that one would be able to develop there in the near future. The major limiting factors are determined to be the region's difficulty in growing a wide variety and consistent supply of European vinifera style wine grapes, as well as its current reputation as being a producer of primarily sweet wines. These issues are exacerbated by insufficient winery marketing budgets. Nonetheless, the possibility for a "wine country destination" does exist, which has the potential to both expand the industry and benefit local economies through an increase in tourism.

Chapter 1: Introduction

This study looks at the wine industry in the context of Michael E. Porter's "cluster" theory. Specifically, its primary objective is to determine if a wine industry cluster either exists or could develop in the nearby Lake Erie wine region. According to Porter (2000), fostering cluster formation and further cluster development can be used as key strategic components of economic development initiatives, meaning that the Lake Erie region's economy, as a whole, could potentially stand to benefit if a wine cluster were to exist there (p.26). In addition, Porter (2000) also believes that "clusters should represent an important component of state and local economic policy" (p.29). Thus, this study's findings could potentially be of interest to local and state government officials, local Chambers of Commerce, or other types of economic developers that would be seeking to help improve the region's economic well-being.

I. Background on Lake Erie Wine Country

For the purpose of this study, the Lake Erie wine region will refer to an area that has been designated as "Lake Erie Wine Country" by its primary representative trade association of the same name, which rests on the southern shore of Lake Erie and stretches from Harborcreek, Pennsylvania to Silver Creek, New York (Lake Erie Wine Country, 2013, para. 1-3). It is highlighted and labeled on the map below in Figure 1.1.

Figure1.1
Lake Erie Wine Country



Source: Lake Erie Wine Country (2013). *Relax, Refresh, Unwind…* Retrieved from http://www.lakeeriewinecountry.org/

A. Grapes: Lake Erie Wine Country's Most Precious Natural Resource

As to be expected, Lake Erie Wine Country exists primarily due to its thriving and highly interconnected grape growing industry. It is an area that is home to upwards of 30,000 acres of grape vineyards, whose prevalence have come as a result of glacial ridges that formed on the southern shore of the lake during the Ice Age (Lake Erie Wine Country, 2013, Our Heritage section, para. 1-2). In those ridges lie fertile, well-draining soils that when combined with "the moderating effect of the lake on spring and fall temperatures," create an optimal environment for growing grapes (Lake Erie Wine Country, 2013, Our Heritage section, para. 3). In addition, the air circulation patterns caused by the presence of both the lake, to the north, and the Allegheny Escarpment, to the south, creates a drying effect on the grapes and vine foliage, which in turn prevents them from developing fungal diseases (Dahlberg, 1961, p. 152). Such ideal physical (soil and climate) conditions for growing grapes, and subsequently for producing wine, are referred to as the region's "terroir" (Lake Erie Wine Country, 2013, Our Heritage section, para. 3). However, as will soon become apparent, it will be the types of grapes that are able to thrive

in this environment, and subsequently the types of wines that are able to be produced from them, that will be of utmost importance to this study.

By far, the most prevalent grape variety grown in the region is that of the Concord, a member of the native labrusca family that is often used to produce juices, jellies, soft drinks and other related products (Dahlberg, 1961, p. 150). Welch Foods, Inc. actually got much of its start in the Lake Erie region and still maintains a facility in North East, Pennsylvania for this very reason. More relevant to this case, though, is the fact that Concord grapes are also used to produce a fruity, sweet type of wine that is aptly referred to as Concord wine (Lake Erie Wine Country, 2013, Learn more about our wineries section, para. 2). Similarly, the region also produces a significant quantity of Niagara grapes, which come from the same family as the Concord and also make for a wine that possesses a sweet and fruity taste (Lake Erie Wine Country, 2013, Learn more about our wineries section, para. 2). It is believed, then, that as a result of the predominance of these two types of wines, the region has developed a (not necessarily accurate) reputation for simply being a producer of sweet and semi-sweet types of wine, as opposed to one of more traditional, dryer types, such as Merlot or Chardonnay. This will prove to be a huge issue later on in the study when the topic of the region's perceived overall wine "quality" will be discussed. A key that distinguishes some of the different types of wine grapes that are grown in the region and their respective families (and taste profiles) is included below in Table 1.1.

Table 1.1
List of Wine Grape Varieties that are Grown in Lake Erie Wine Country

French-Hybrid Varietal Wines (Semi-Sweet to Semi-Dry Tasting):
Made from Seyval, Vidal, Chambourcin, Chancellor and Marechal Foch grapes.

European Vinifera Wines (Dryer Tasting):
Made from the traditional Riesling, Chardonnay, Merlot, Cabernet Franc, and Cabernet Sauvignon grapes.

Native Labrusca Wines (Sweeter Tasting):
Made from American grapes such as Concord, Ives, Niagara, Catawba, and Delaware.

Source: Lake Erie Wine Country (2013). *Learn more about our wineries*. Retrieved from http://www.lakeeriewinecountry.org/wineries

B. Lake Erie Wine Country Today

Lake Erie Wine Country currently consists of 23 small wineries that have come to exist as a result of the Pennsylvania Limited Winery Act of 1968 and the New York Farm Winery Act of 1976 (Lake Erie Wine Country, 2013, Our Heritage section, para. 1-4). Collectively, these wineries record retail sales of approximately $17.5 million per year and have approximately 30,000 visitors per year, according to a 2007 study conducted by the Lake Erie Concord Grape Belt Heritage Association (LECGBHA) (p.1). A summary of these findings, in addition to several others regarding the total economic impact of the local grape industry to the region is provided below in Table 1.2.

Table 1.2
The Total Economic Impact of the Lake Erie Region's Local Grape Industry

Jobs Supported: 1,923
Total Economic Impact: $340 million*
Wages Paid: $54 million
Number of Producers: 800
Bearing Acres: 30,000+
Retail Value of Juice Sales: $208 million
Retail Value of Wine Sales: $17.5 million
Wine-Related Tourist Visits: 35,000
* Total Economic Impact is the total value of sales generated by juice processors, growers and other businesses from whom they purchase.

Source: Lake Erie Concord Grape Belt Heritage Association, Inc. (2007). *The Economic Impact of the Grape Juice and Winery Sectors of the Lake Erie Concord Grape Belt*. Retrieved from http://www.concordgrapebelt.org/wp-content/uploads/Grape_Ec_Impact_Study.pdf

However, Lake Erie Wine Country consists of more than just the vineyards and wineries, themselves. It also contains a heavy concentration of firms in directly related or supporting industries, as well. Most notable are the 27 hotels, motels, inns and bed & breakfasts (which are often considered to be the quintessential final stop on a wine tour) that are conveniently located within it (Lake Erie Wine Country, 2013, Lodging section, para.1). Some of them are actually repurposed Victorian mansions that were built in the late 1800's (Lake Erie Wine Country, 2013, Lodging section, para.1). In addition, there are five transportation and limousine services operating in the region, as well as a wide variety of restaurants, gift shops and other attractions (Lake Erie Wine Country, 2013, Transportation section, para. 1, Dining section, para. 1, Other Attractions section, para. 1).

So, Lake Erie Wine Country has a heavy concentration of wineries, vineyards, and firms in related industries, which, as will soon be made apparent, could be indicative of the presence of a wine "cluster." But, does the region actually constitute one, and if not, what are its missing pieces? Could it conceivably acquire them, and how might it do so? What would this mean for

the individual winery, as well as for the region, as a whole? These are the questions that the remainder of this study will seek to address.

II. Layout of the Study

The next chapter (Chapter 2), a literature review, will begin by explaining Porter's "cluster" theory. It will reveal what a cluster is composed of and how one might form. It will then describe how several "new world" wine clusters have developed over time. From there, the key factors in the formation of a wine cluster will be derived and then presented in the context of a relevant example study. In Chapter 3, the empirical section, those factors will be presented as interview questions that were asked to several Lake Erie region winery owners, as well as a local industry expert. Their answers will then be compared and contrasted. Finally, in Chapter 4, the study's empirical results will be analyzed, and a final conclusion will be drawn as to whether a wine cluster currently exists in the Lake Erie region, or if not, if one could conceivably develop there, as well as what that would mean for both the individual winery and for the region, as a whole.

Chapter 2: Literature Review

In *Clusters and the New Economics of Competition*, Michael E. Porter (1998) defines a "cluster" as "a geographic concentration of interconnected companies and institutions in a particular field" (p. 78). They often include "linked industries," "suppliers of specialized inputs," and "providers of specialized infrastructure" (Porter, 1998, p. 78). A cluster may also contain specific groups of customers and "manufacturers of complementary products" (Porter, 1998, p. 78). In addition, "governmental and other institutions- such as universities, standards-setting agencies, think tanks, vocational training providers, and trade associations- that provide specialized training, education, information, research, and technical support" often represent integral components of successful industry clusters (Porter, 1998, p. 78). According to Porter (1998), clusters typically have indefinite boundaries (p. 79). They also promote cooperation in addition to competition, as rival firms that are located in close proximity to one another are often able to learn from each other (Porter, 1998, p. 79). In that sense, they "represent a robust organizational form that offers advantages in efficiency, effectiveness and flexibility" (Porter, 1998, p. 80). Thus, clusters benefit each firm that they consist of in that they bring necessary resources, institutional support, distribution channels and know-how (among other things) right to its finger tips.

I. How do Clusters Form?

According to Porter's same piece (1998), clusters can form from several factors. The first is from "historical circumstances," such as in the case of Massachusetts, where several clusters were able to develop due to the presence of MIT and Harvard, two institutions renowned for their long histories of conducting cutting-edge research (p. 84). The second is from "unusual, sophisticated, or stringent local demand" (Porter, 1998, p. 84). Such was the case in regard to

Finland's environmental cluster, which developed as a result of excessive local pollution (Porter, 1998, p. 84). A third factor may be the "prior existence of supplier industries, related industries, or even entire related clusters" (Porter, 1998, p. 84). This is what led to the formation of San Diego's golf equipment cluster, which emerged from the technologies and expertise present in the local aerospace cluster (Porter, 1998, p. 84). Finally, a fourth possible factor is a "chance event," such as in the case of the telemarketing cluster of Omaha, Nebraska, which benefitted tremendously from the U.S. Air Force's decision to locate its Strategic Air Command Center there (Porter, 1998, p. 84). Porter (1998) then goes on to describe a "self-reinforcing cycle" of specialized talent, suppliers, public and private institutions, and other infrastructural components that begins to develop once a cluster starts to form (p. 84-85). In this sense, then, the factors of cluster formation actually begin to interact with one another. Finally, he states that "cluster development is often particularly vibrant at the intersection of clusters, where insights, skills, and technologies from various fields merge, sparking innovation and new businesses" (Porter, 1998, p. 85).

In *Homegrown Solutions: Fostering Cluster Formation*, Mayann P. Feldman and Johanna L. Francis (2004) both echo and expand on the work of Porter. They, however, argue that the key underlying component of cluster formation is the presence of local entrepreneurs with extensive ties to their local communities who decide to start small firms there (Feldman & Francis, 2004, p. 132). They then go on to provide an extremely useful model entitled "The Three Stages of Cluster Formation" (Feldman & Francis, 2004, p. 129). The first factor listed in the model is that of an "exogenous shock" that incentivizes "active entrepreneurship," which can be something as simple as a reduction in capital gains taxes (Feldman & Francis, 2004, p. 129). The second and third stages, then, appear to reiterate Porter's "self-reinforcing cycle" that was

mentioned previously. In the second stage, Feldman and Francis (2004) believe that more entrepreneurs enter the industry and begin to interact both cooperatively and competitively with one another (p. 129). It is during this time that they believe that education and training facilities, public and private institutions, and other infrastructural components are constructed (Feldman & Francis, 2004, p. 129). The third and final stage, then, is marked by "the establishment of a critical mass of resources," which tends to be primarily financed by an influx of outside capital (Feldman & Francis, 2004, p. 130). However, although much of their work seems to support that of Porter, they do offer one distinct critique of it, which will be discussed in the following section.

II. Critiques of Porter's Work

Yasuyuki Motoyama (2008) lists several distinct critiques of Porter's theory. The first is the issue of indefinite geographical boundaries, which can make it difficult to completely and individually analyze a cluster (Motoyama, 2008, p. 358-359). The second is the lack of an adequate way to measure the interconnectedness of an industry, meaning that it is difficult to tell what effects its various components have on one another (Motoyama, 2008, p. 358-359). More importantly, though, Motoyama (2008) argues that Porter's theory seems to only take into account how successful clusters are currently organized, not how they reached that point (p. 359-360). That is, it ignores historical developments and events, as well as the path-dependency of technologies and expertise, which is the concern that was echoed by Feldman and Francis (2004, p. 132-134). It is with this critique in mind, then, that the following section on "new world" wine cluster development will be structured.

III. How have some Successful "New World" Wine Clusters Developed?

This section will provide brief histories of the "new world" wine clusters of California, Australia and Chile. A "new world" wine cluster is essentially one that has developed in the last few centuries, as opposed to the traditional European powerhouses of France and Italy that constitute the "old world" (Aylward & Glynn, 2006, p. 44). The section will begin with that of California, as it seems to be a reoccurring example in Porter's work.

A. California

According to Porter and his colleague, Gregory C. Bond (1999), the wine industry of California began with Spanish missionaries cultivating grapes there for religious purposes during the 1700's (p. 2). A century later, in the 1830's and 40's, settlers came in during the gold rush and started opening commercial vineyards (Porter & Bond, 1999, p. 2). Most came from the eastern United States, but others were foreigners from either Holland or France (Geraci, 2004, p. 441). Soon after, in 1860, the phylloxera pest epidemic found its way to the U.S. via ship from Europe (Porter & Bond, 1999, p. 2). It "reached California in the late 1870's," which led "to the opening of the Viticulture and Enology Department at the University of California at Davis" (Porter & Bond, 1999, p. 2). With the help of this research institution, California soon passed Ohio as the nation's leading wine producer (Porter & Bond, 1999, p. 2). However, several decades later came Prohibition, which put a tremendous damper on U.S. winemaking, with many vintners simply switching to making grape juice, instead (Porter & Bond, 1999, p. 2). Much of this juice was actually sent to the East Coast, where many enthusiasts there were attempting to make their own homemade wine in order to circumvent the new bans placed on the sale of alcoholic beverages (Geraci, 2004, p. 448). Other producers, however, opted to sell off their remaining inventories at fractions of their original cost (Geraci, 2004, p. 448). The California

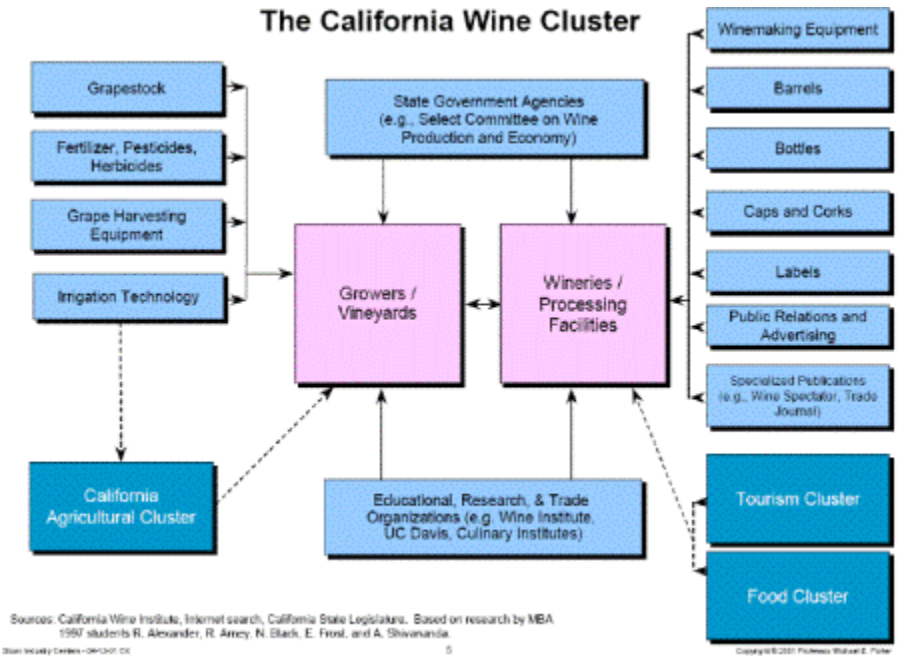
wine industry immediately began to rebound, though, following Prohibition's repeal in 1934, namely due to the founding of The Wine Institute, a San Francisco-based trade association that played "an active role in lobbying at the state and federal levels" (Porter & Bond, 1999, p. 2). One of its early victories was in the passing of the 1937 California Agricultural Marketing Act, which allowed winemakers to be referred to as "winegrowers," thereby granting them agricultural status and subsequently more freedom in regards to the production and distribution of their products (Geraci, 2004, p. 450).

The 1960's, then, saw the industry grow even more as a result of the "of the Earth" image of wine that was attracting younger customers and subsequently opening a new market for California wine (Porter & Bond, 1999, p. 2). However, the decade's most substantial event regarding the wine industry occurred in 1966, when an entrepreneur named Robert Mondavi founded his self-titled Robert Mondavi Winery (Porter & Bond, 1999, p. 2). The Mondavi Winery was seen as the nation's first commercial "premium" winery and sought to end the pre-existing trend of California wineries primarily producing generically-blended "jug" wines, which were thought to be of lower quality and to cater to less-sophisticated tastes (Porter & Bond, 1999, p. 2). Around this same time, California winemakers also began gaining substantial ground on some of the "old world" European ones, which was mainly attributed to a number of advances in science and technology that came as a result of UC Davis research (Porter & Bond, 1999, p. 2).

In the 1970's, the development of other industries, such as organic food, further benefitted the California wine industry through an increase in consumption and demand for complementary goods (Porter & Bond, 1999, p. 3). Wine country tourism also began to increase during that time, along "with the appearance of hotels, bed and breakfasts, and high-end

restaurants" (Porter & Bond, 1999, p. 3). In 1979, *The Wine Spectator* industry publication was started, which sparked even further demand for California wine (Porter & Bond, 1999, p. 3). This increase in demand soon began drawing larger corporations into the industry, which led to a large influx of new capital in the late 1970's and early 1980's (Porter & Bond, 1999, p. 3). Such corporations included food and beverage companies like Nestlé and Coca-Cola, but also distillers, such as Seagrams (Geraci, 2004, p. 451-452). Not surprisingly, higher-quality wine production also increased during that same time period (Porter & Bond, 1999, p. 3). In more recent years, following a short decline in the 1990's, there has been yet another increase in demand due to the health benefits associated with the consumption of red wine (Porter & Bond, 1999, p. 3). A convenient diagram of the California Wine Cluster, as it stands today, is included below in Figure 2.1.

Figure 2.1
The California Wine Cluster



Source: Based on research by Harvard M.B.A. students R. Alexander, R. Arney, E. Frost, and A. Shivanda (1997). Retrieved from http://www.dilanchian.com.au/index.php?option=com_content&view=article&id=287:industry-clusters-build-competitive-advantage&catid=23:ip&Itemid=114

B. Australia

According to Aylward and Glynn (2006), wine grapes were introduced to Australia while it was still a British colony under Governor Phillip in the late 1790's (p. 45). However, their plantings were somewhat sporadic until the arrival of James Busby, an immigrant and entrepreneur who "undertook serious plantings in the Hunter Valley" (Aylward & Glynn, 2006, p. 45). The industry continued to suffer, though, until Australia's federation in 1901, due to the lack of a significant domestic market and its inability to access international ones due to the colony's poor reputation (Aylward & Glynn, 2006, p.45). However, federation brought about "the removal of debilitating trade barriers between states," which led to a newfound sense of

hope for the industry, in that it finally allowed a substantial domestic market to emerge (Aylward & Glynn, 2006, p.45).

Despite the opportunities that federation offered, though, Australia's wine industry continued to suffer until the 1980's due to its international reputation as being a producer of primarily "bulk wines," which was similar to the issue that California had faced several decades earlier (Aylward & Glynn, 2006, p. 45-46). However, it was at that time that more Europeans began immigrating into Australia and brining additional sources of capital (as well as driving up demand) (Porter & Bond, 1999, p. 14). This new capital was put to good use, allowing for advances in viticulture and winemaking technology that were able to combat the issue of scarce water resources that was also plaguing the industry during that same time period (Porter & Bond, 1999, p. 14). Thus, this represented a situation similar to that of the phylloxera epidemic that had occurred in California, in that the industry, as a whole, was able to benefit from an increase in research and development that came in response to a significant, widespread issue.

As a result of this new-found emphasis placed on research and development, Australia has since become world renowned for its "high-tech approach to wine making" (Aylward, 2010, p. 354). The institutions that are responsible for conducting the majority of this research are the Australian Wine Institute (AWRI), the Cooperative Research Centre for Viticulture (CRCV), and the Grape and Wine Research and Development Corporation (GWRDC), with the AWRI being the largest contributor (Aylward & Glynn, 2006, p.48). However, these and other industry sources of research, education and training are heavily concentrated in the South Australian region, which has led to an insufficient "diffusion of research and development" to the rest of the country (Aylward, 2002, p. 351).

C. Chile

Wine has been produced in Chile since 1551, when "a Spanish conqueror managed to make wine at a location 500 kilometers north of Santiago" (Visser, 2004, p. 15). After that, as was traditionally the case, it was used primarily for religious purposes throughout much of the colonial period (Visser, 2004, p. 15). However, during the 1800's, French (European) varietals were planted in response to the demand of wealthy families, which later allowed the emerging industry to benefit when it was discovered that Chilean grape vines were immune to the phylloxera pest (Porter & Bond, 1999, p. 15). This subsequently led to a surge in exports of "high-quality" wines when the epidemic hit some of the world's more predominant industries (Visser, 2004, p. 15).

Wine production slowed, though, during the early 1900's, as a result of strict, unfavorable macroeconomic policies (Visser, 2004, p. 15). However, in 1974, the industry was de-regulated by the Pinochet government (Porter & Bond, 1999, p. 15). Soon after, then, Spanish entrepreneur and winemaker, Miguel Torres began investing in imported technologies and experts from the U.S. and Europe (Porter & Bond, 1999, p. 15). Other foreign companies and investors soon followed suit, and this led to the production and exporting of higher-quality wines, which sought to counteract the same negative stigma that had also plagued both the California and Australian wine industries in previous years (Visser, 2004, p. 25).

The industry has since seen the emergence of two trade associations, the Viñas de Chile and Chilevid, but has suffered from a lack of cooperation between the two (Visser, 2004, p. 35-36). This is an issue that is actually indicative of the industry, as a whole, which is also said to lack a sense of professional "trust" among winemakers (Visser, 2004, p. 33-34). More recently, though, the Catholic University, the University of Chile and the University of Talca have all

begun conducting industry research of their own, which could prove promising, given the way in which university support has benefitted the other "new world" wine industries (Visser, 2004, p. 37). Also, on another positive note, the Chilean government has recently begun taking more pro-active steps in helping to support the industry, itself, thereby seeking to further improve upon the aforementioned laissez-faire approach that was initially taken by the Pinochet government (Porter & Bond, 1999, p. 16).

IV. What are the Key Factors of "New World" Wine Cluster Development?

This section seeks to determine the key factors driving wine cluster development. First and foremost, it appears that a thriving grape-growing environment is an absolute must, being that wine clusters are said to be "natural resource-based" (Aylward & Glynn, 2006 p. 42). This involves having favorable soil and climate conditions, or "terroir," as was mentioned back in Chapter 1. However, as will soon be discussed, the specific types of grapes that are able to grow well in those conditions are an absolutely critical component that must be considered. Next is a group of local entrepreneurs that are willing to cooperate, in addition to competing with one another, which is often reflected in the presence of an industry trade association. However, their respective firms must still be highly competitive, which, according to Aylward and Glynn (2006), is often indicated by a strong "desire to export" (p. 44). From there, the presence of universities and other education, training and research programs is critical, as R&D has been crucial to the development of most "new world" wine clusters (Aylward & Glynn, 2006, p. 44). In addition, firms must also have strong relationships with their local suppliers and growers (Aylward & Glynn, 2006, p. 44). After that, having an effective marketing strategy and a reputation for producing high-quality wines for more "sophisticated" tastes are also very important (Aylward & Glynn, p. 44). It is important to note here, though, that "high-quality

wines" typically refer primarily to those that come from grapes who are members of the European vinifera family, of which several were listed in Table 1.1. They are usually more traditional, dryer types, such as Chardonnay, Merlot or Cabernet Sauvignon. It is because of the production of these types of wines (which began at different points throughout their respective histories) that California, Australia and Chile were able to export their products and eventually compete with the "old world" wineries of France and Italy. Finally, although not necessarily critical initially, having favorable government policies and regulations can also be greatly beneficial to the development of a wine cluster.

A. The New York Hudson River Valley Wine Industry: An Example Study

Arthur L. Centonze (2010) provides a relevant example case study of the New York Hudson River Valley wine region, which is currently in the process of transitioning "from an agricultural cluster to a wine cluster" (p. 251). He bases his analysis on Porter's "diamond of competitive advantage," which takes into account factor and local demand conditions, related and supporting industries, and firm strategy and rivalry (Centonze, 2010, p. 252). In addition, Centonze states that he utilized "personal in-depth interviews" to conduct his study, although examples were unfortunately not published along with the article (Centonze, 2010, p. 251). For these reasons, Centonze's work serves as a good, relevant example for the following empirical chapter of this study. His findings will now be summarized in terms of the key wine cluster development factors that were listed in the previous section.

According to Martell and Long, "winemaking in the U.S. began in the Hudson Valley," and the Jacques Brothers Winery, which is now known as the Brotherhood Winery, still operates there today (as cited in Centonze, 2010, p. 256). Thus, the region has an extensive historical presence on its side. However, due to some of its difficult weather conditions, it suffers from a

low-supply of local, high-quality grapes, meaning that winemakers are often forced to have them shipped from elsewhere in the state (Centonze, 2010, p. 257). As a result, the important grower-winemaker relationship that was espoused earlier is undermined. Other issues include a lack of emphasis on exporting, and, thus, a subsequent lack of winery competition; a lack of a sophisticated customer base (even outside New York City, due to over-inflated prices) that would demand more "high-quality" wines, resulting in a poor reputation for the industry's wine quality; and a lack of local technology, infrastructure, and specialized suppliers (Centonze, 2010, p. 257). The industry also suffers from having two major trade associations, whose marketing strategies often fail to coalesce (Centonze, 2010, p. 257).

The region does benefit, though, from a number of factors. First and foremost, is the presence of Cornell University, which serves as a "research, training, and networking facility," despite being located somewhat far away from the region, itself (Centonze, 2010, p. 256). In addition, it has the Hudson Valley Wine and Grape Association, which has worked extensively with the state government to benefit the industry through the de-regulation of its interstate distribution channels (Centonze, 2010, p. 255). Also, although it is wrapped in with its "agritourism" business, the region does conduct an extensive number of wine tours each year, which could have the potential to expose new customers (maybe even those from out-of-state) to its products, and could subsequently work to stimulate further demand in the future (Centonze, 2010, p. 257). Thus, although the Hudson Valley's wine cluster is in the early stages of its development, it does possess a number of promising factors that could lead to its future success.

The following empirical chapter will take a similar approach, but will use the aforementioned list of "new world" wine cluster development factors as a set of criteria for

eventually determining if a wine cluster either currently exists in Lake Erie Wine Country or if one could potentially develop there.

Chapter 3: Empirical Study & Results

For the empirical section of this study, eight interviews were conducted. Six were with the owners of Pennsylvania wineries, one was with the owner of a New York winery, and one was with a local industry expert. All but one of the wineries was a member of the Lake Erie Wine Country trade association, however the other was still deemed relevant to include due to its extensive involvement in the local industry. The reason for the predominance of Pennsylvania wineries, though, was primarily for logistical purposes, in that in-person interviews were preferred over phone ones. This subsequently allowed more interviews to be conducted and a greater sample size to be attained, given the time constraints of the project.

The interviews were structured around a list of questions that was generated from the key factors of "new world" wine cluster development that were discussed near the end of the previous chapter. The list was not provided ahead of time, and the questions were asked in the order in which they are listed below in Table 3.1. There was, however, some occasional carryover in participants' responses from one question to another, but for the most part, each was discussed one at a time.

Table 3.1
List of Interview Questions

1. What types of grapes grow well in the region, and how does this translate to the types of wine that you're able to produce?

2. How would you describe the competitive environment of the local wineries, and are there times when you cooperate with your competitors?

3. Are you a member of any trade associations? If so, are you satisfied with those which you're a part of?

4. Have you had any success in selling your products in other states, or do your state's laws restrict/prohibit this?

5. What type of skilled workforce do you seek out, and where do they receive their skills/training? Is there currently an adequate supply in the region?

6. Do you benefit from the presence of any local universities and/or research institutions?

7. Where are your growers and other major suppliers located, and how would you describe your relationship with them? How long have they been supplying you, and in what ongoing ways do you work with them?

8. How would you describe the perception and reputation of your products, as well as those from the region, as a whole?

9. How do you market your products?

10. How are you affected by your state's laws regarding the sale of alcoholic beverages?

11. What is the demand like for your products? Which ones sell the best, and who is typically buying them?

12. What do you perceive as the next vital step(s) in the growth and expansion of the local wine industry?

The remainder of this chapter will consist of the participants' responses to these questions, during which they will be compared and contrasted in order to form a general consensus opinion for each of them. If possible, relationships among questions will also be discussed.

I. What types of grapes grow well in the region, and how does this translate to the types of wine that you're able to produce?

All participants seemed to agree that members of the native labrusca family (shown in Table 1.1) were the most common grapes grown in the region. These consist of Concords, Niagaras, Catawbas, Fredonias and Delawares, with Concords and Niagaras being the most prevalent. The predominance of these varieties subsequently results in the production of a great deal of sweeter, fruitier types of wine, as was mentioned back in Chapter 1.

In addition, though, a number of more traditional European vinifera types of grapes also grow well in the Lake Erie region. Of these, Riesling, Cabernet Franc and to a lesser extent, Chardonnay seem to fare the best in that they tend to be the "hardiest" in their ability to withstand the colder temperatures and shorter growing season that the region's climate presents. However, there were some discrepancies in this aspect, in that several participants added Cabernet Sauvignon, Merlot and Pinot Noir to the list, while others strongly disagreed with them, presumably out of personal experience in attempting to either grow them, themselves, or purchase them from local suppliers. The way one winery owner put it was that "late season reds (such as these) can be more of a challenge due to the shorter growing season here." As was discussed previously, vinifera types of grapes are generally used to produce dryer, more traditional types of wine, although their taste can be slightly different coming from this region, given its unique terroir. Nonetheless, several participants stated that some (especially Riesling) are actually quite competitive, even at the national level.

There were also several French-American hybrids that were discussed. The most common of these seemed to be Chambourcin, Vidal and Seyval, although Chancellor, Vignoles and several newer varieties that have been developed by Cornell University were also mentioned.

One participant stated that hybrids such as these are often used for producing semi-sweet or semi-dry types of wine.

Thus, it appears that Lake Erie Wine Country is home to a number of varieties of wine grapes, in addition to the Concords and Niagaras that it is primarily known for (which was also revealed back in Table 1.1). Such other types (namely the viniferas) could potentially be used to produce the "high-quality," traditional wines that were discussed in the previous chapters and deemed necessary for the formation of a wine cluster. The issue, though, seems to be the region's climate, given its colder temperatures, shorter growing season, and higher amounts of precipitation, along with the fact that vinifera grapes "need to be grafted in order to survive" (which is primarily due to their susceptibility to pests and disease). As a result, it can be difficult to grow a consistent supply of them. Nonetheless, the consensus seemed to be that local growers are currently in the process of rapidly expanding their knowledge and improving their techniques, meaning that the local supply of viniferas (as well as different types of hybrids) will most likely be expanding in the coming years. However, one additional issue that must be considered is that of the minimal amount of available vineyard land remaining, although this is being remedied at least to some extent by a current practice described by a local industry expert of replacing certain Concord and Niagara juice grape crops with more traditional wine grape ones.

II. How would you describe the competitive environment of the local wineries, and are there times when you cooperate with your competitors?

The general consensus seemed to be that the region's competitive environment was actually highly cooperative in nature, and it was even described by one participant as a "co-opetition." Most winery owners stated that they often lent each other equipment or other supplies in times of need and were also apt to give each other advice. The reason for this is

primarily due to the concept of the "wine tour," where the goal is to attract as many out-of-town visitors to the region as possible by having as many proficient wineries as possible. The idea is that more visitors will come to one winery if there are others that they can also visit during the same day or trip. Subsequently, as a local wine industry expert put it, "one bad winery affects them all," so it behooves them all to help each other for the good of the whole. In addition, this brings more people to the region, which helps to stimulate the local economy. One winery owner provided a good example in terms of liquor store shelf space, as well, in which he explained that if one were to look at the "local wines" (Pennsylvania and New York) section of a Pennsylvania state Wine & Spirits store, which is relatively small compared to those dedicated to wines of other states and countries, it would be clear that the vast majority of the competition is actually coming from outside of this region.

Competition does finally come in, though, once visitors actually begin their tastings and tours, when having the most sales and returning customers is the goal. This role that consumers play in terms of stimulating competition among firms is actually very important to the vibrancy of most industry clusters. However, the overall level of firm rivalry and competition that exists in the Lake Erie region simply does not appear to be at anywhere near that which would be present in most traditional cases.

III. Are you a member of any trade associations? If so, are you satisfied with those which you're a part of?

As was mentioned previously, all but one of the winery owners that were interviewed stated that that his winery is a member of Lake Erie Wine Country (LEWC), the marketing trade association that also constitutes this project's region of study. All six of the Pennsylvania winery owners said that his winery is also a member of the Pennsylvania Winery Association (PWA), which is responsible for lobbying at the state level. Similarly, the New York winery owner

claimed to be a member of the New York Wine & Grape Foundation (NYWGF) that serves essentially the same purpose as the PWA in his state. In addition, two participating wineries are members of the "nearly defunct" Lake Erie Quality Wine Alliance (LEQWA); two are members of the Pennsylvania Quality Wine Alliance (PQA), which primarily exists to support Pennsylvania winery owners in the growth and utilization of vinifera style grapes; and two are members of Wine America, which "lobbies for smaller wineries at the national level." One Pennsylvania winery owner is also on the Pennsylvania Wine Marketing and Research Board (PWMRB), which is sponsored by the Pennsylvania Department of Agriculture; one is a member of the American Society of Enologists; and one is a member of the Cornell Winemakers' Roundtable.

Most seemed satisfied with the PWA, but it also seemed like many either didn't really expect much of it or weren't particularly interested in it. Similarly, the member of the NYWGF seemed to also share this apparent lack of enthusiasm for his state's industry lobbying trade association. As for LEWC, all but one was satisfied with it, and many are actually officers or are otherwise highly active within it. With regard to some of the less common ones, it sounds as if Wine America and the PWMRB are touted relatively highly, while the PQWA may be overly-focused on the southeastern part of the state.

Thus, it appears that there are several trade associations that Lake Erie region wineries are a part of. It seems as if those on the marketing side (namely LEWC) are relatively strong, at least according to the participants of this study. However, on the lobbying side (whose aim is to influence state government policy, as will soon be discussed), there appears to be a general lack of enthusiasm, which would suggest an area of potential weakness in terms of the key factors that were deemed necessary for "new world" wine cluster development.

IV. Have you had any success in selling your products in other states, or do your state's laws restrict/prohibit this?

Of the winery owners that were interviewed, three stated that they had not attempted to sell their products in other states; three said that they did sell in other states, but only on a "direct-to-consumer" basis; and one said that he actually sold in stores in other states, as well as directly to consumers (surely not by coincidence, this one also seemed to be one of the more advanced in terms of both its facility impressiveness and its wine product quality). In addition, one said that he sold in another state via a separate winery location he had set-up there. The three that responded that they have not taken upon any out-of-state initiatives all mentioned that they felt that their wineries were too small to afford the licenses and distributors (in the case of New York and Ohio) that are required for them to do so.

All four that responded that they shipped directly to consumers stated that they would only ship to select states that would not impose heavy fees and/or regulations on them that would render their efforts either unprofitable or too inefficient. Two of them reported using a shipping and distribution company known as Vinoshipper, a Californian firm that allows them to remain "cost-effective" when shipping directly to consumers.

Interestingly enough, every single participant made it clear that the main barriers to selling their products in other states were actually issues among the states regarding the sale of alcoholic beverages, rather than one state or another being overly restrictive. Such issues include discrepancies in state laws regarding alcohol, import tariffs and sin taxes. Almost all of the participants had very strong opinions on these matters and spoke very passionately about them, often referencing the repeal of Prohibition and states' rights. Their frustration is understandable, too, given that these regulations and inefficiencies end up imposing heavy costs on them, in at least some form, and are ones that they simply cannot afford due to their smaller sizes, relative to

those in the Finger Lakes region or California. Thus, it would appear that the "desire to export" factor discussed in the previous chapter is currently being undermined by issues regarding the interstate sale and distribution of alcohol, which is likely to be adversely affecting a local wine cluster's potential existence or emergence.

V. What type of skilled workforce do you seek out, and where do they receive their skills/training? Is there currently an adequate supply in the region?

The demand for skilled workers was surprisingly low, among nearly all of the winery owners that were interviewed. One of the main reasons for this is that many are "family owned and staffed," as the local industry expert put it, meaning that there is a great deal of on-the-job training taking place. With that being said, though, four of the winery owners said that their winemakers either had degrees in enology or related sciences, with two being from Penn State University (PSU). Two also mentioned having office staff members with degrees in either accounting or marketing, with one having been educated at a local institution. In addition, two claimed to have an assistant winemaker with a degree from PSU, and two had "cellar masters" with no formal training, but a wealth of practical experience in the food processing industry.

Due to this relatively low demand for skilled workers (and extremely high retention rate), all but one seemed satisfied with the local talent pool. Thus, it would appear, at least in the eyes of the winery owners, that this region can currently supply the skilled labor that a local wine cluster would require in order to function.

VI. Do you benefit from the presence of any local universities and/or research institutions?

Every participant touted the value of both Cornell University and Penn State University. From a research standpoint, Cornell seems to be an invaluable resource to the local industry, especially since it has a viticulture and enology research lab located in nearby Fredonia, New York. Much of its research, as was mentioned earlier, deals with developing hybrid wine grape

varieties that grow well in the Lake Erie region's unique climate, as well as coming up with techniques for growing a larger, more consistent supply of viniferas. The two universities also have a joint Cooperative Extension program that offers various types of seminars, workshops and "sensory classes" that local winery owners and winemakers can attend. In addition, Pennsylvania's state enologist, Denise Gardner, works out of PSU's research lab in North East, Pennsylvania.

In terms of education, then, three participants mentioned the "HACC program," a two-year, online course offered by Harrisburg Area Community College that is directed by Professor Bob Green of Mercyhurst North East's Culinary & Wine Institute (which was also briefly mentioned by one participant). Thus, it appears that Lake Erie Wine Country most certainly has the local university support (especially in the form of local research labs and extension offices) that would most likely be necessary for a wine cluster to exist or develop within it.

VII. Where are your growers and other major suppliers located, and how would you describe your relationship with them? How long have they been supplying you, and in what ongoing ways do you work with them?

Each winery owner that was interviewed stated that he acquires the vast majority of his grapes from growers who are located within several miles of his winery. Of those, three said that they actually grew most of their own grapes. Their explanations were all basically that since grapes are the quintessential component of their products, it is important to have consistent contact and dialogue with their growers, especially for the purposes of troubleshooting and special requests. One participant mentioned that he often walks the fields with his growers and samples wine with them, while another stated that he simply liked "to keep an eye on them." Of those who do not grow their own grapes, two stated that they have growers who they have been buying from for over thirty years, while one said that he has been buying from several of his for

over fifty years! Thus, not surprisingly, each winery owner described an extremely close relationship with the majority of his grape suppliers.

Compared to grapes, most winery owners claimed to do a great deal more "shopping around" when it came to their suppliers of other inputs. However, five of them stated that they received their bottles from Waterloo Container of the New York Finger Lakes region. As for other inputs, such as corks and tanks, their sources seemed more scattered about the county (and sometimes even the world), although two mentioned receiving their barrels from Keystone Cooperage of Jefferson, Pennsylvania (near Pittsburgh), and four claimed to purchase their labels from either Erie, Pennsylvania or Rochester, New York. Four stated that they liked to pretty much stick with their same suppliers, though, for the sake of quality, service and convenience. Still, it appeared that the general consensus was that there was not an adequate presence of local suppliers, and that winery owners were much more price-sensitive when it came to inputs other than grapes. One even said "I buy a lot off E-Bay." Thus, while Lake Erie winery owners seem to have strong ties to local grape growers, there does not appear to be the opportunity for such relationships with their other major suppliers. This does not seem to be the case in successful wine clusters, such as that of California, where as one participant noted, "everything is made local (within the cluster, itself)." Therefore, this could represent another area of weakness in the potential existence or development of a local wine cluster.

VIII. How would you describe the perception and reputation of your products, as well as those from the region, as a whole?

Not surprisingly, all participants who addressed the former part of the question claimed to have received a great deal of positive feedback from their customers regarding the quality of their products. However, two reported having actually won awards for their products, with one

having won several in competitions at the national level. Responses to the latter part, though, were much more informative.

Four echoed the sentiment that was touched on back in Chapter 1 of the region being known as simply a producer of sweet wines. They felt that this was a major limiting factor to the expansion of the industry and that they needed to do a better job of marketing and publicizing some of their "high-quality," vinifera wines (especially Riesling), which were mentioned earlier in the chapter. Interestingly, two others believed that the industry must be progressing rather well, given the greater number of visitors coming to the region for wine tours in recent years (even those from Rochester, who could also go rather easily to the Finger Lakes region). Thus, it would appear that although Lake Erie Wine Country's products may not yet have the reputation for "quality" (in the traditional sense) that successful wine clusters have developed, wine tourism is still on the rise, which could potentially be somewhat of a positive sign (similar to the situation in the New York Hudson Valley region discussed at the end of the previous chapter).

IX. How do you market your products?

Most of the winery owners that were interviewed claimed to have a relatively small budget for marketing. Thus, they tend to rely heavily on the LEWC trade association (which all but one is a part of), as well as local events, such as North East, Pennsylvania's "Wine Fest" and Erie, Pennsylvania's "Wine on the Lake." Aside from that, three winery owners claimed to utilize social media, as well as select local publications for advertising. Three also stated that they conduct periodic "liquor store tastings" that allow potential customers to be exposed to their products prior to purchasing them. In addition, one winery owner claimed to rely solely on festivals, trade shows and competitions, which he said are "the cheapest forms of advertising a small winery can do."

Thus, it would appear that the marketing capabilities of these firms are somewhat limited. Nonetheless, the LEWC might be able to make up for it at least to some extent, in that it has access to additional resources, as well as input from the wineries that it represents.

X. How are you affected by your state's laws regarding the sale of alcoholic beverages?

Surprisingly, three of the Pennsylvania winery owners that were interviewed reported being relatively satisfied with most of the Pennsylvania Liquor Control Board (PLCB)'s regulations regarding the sale of alcoholic beverages. This, though, was mainly because they are small, "limited" wineries and are subsequently able to sell right out of their own stores, which is where they claimed to prefer to do most (if not all) of their business, anyway. That is, at least in this aspect, they felt that the PLCB benefitted them, given their size. However, nearly all participants claimed to take at least some issue with the PLCB-run state Wine & Spirit store system, due to its perceived unfair pricing structure (mainly with regard to fees and commission charges), which as one winery owner put it, "makes it hard for small wineries to compete." Other issues with the PLCB that were discussed were its regulations on opening new winery shop locations, which are required to either be in separate buildings from other businesses or to have a separate, outside entrance from them; and its requirement of a winery to acquire a special license to ship its products out of state (in addition to complying with that state's regulations on imports). Aside from those, the other PLCB regulations that were mentioned were rather simplistic and most likely fairly easy to comply with, such as not selling to minors and maintaining certain business hours.

In addition, the local industry expert also discussed Pennsylvania's state regulations on the production side, as well. He stated that the wineries are required to report their total number of gallons sold per month to the Department of Agriculture, whereupon a 15-cent per gallon tax

is levied upon them. However, this tax is used to fund the Pennsylvania Wine Marketing and Research Program (administered by the Pennsylvania Wine Marketing and Research Board that was discussed previously), and so they are actually able to see a return on this relatively small investment. Thus, this is an area where Pennsylvania's state government is actually quite supportive of its wineries.

On the other hand, the New York winery owner that was interviewed reported that the liquor store system in his state was privatized, and that there were no "chains" permitted. He said that in New York, he is given the option of either selling directly to stores or to a distributor, who in turn sells his products to them. However, he, too, expressed at least some dissatisfaction with his state's regulation of the sale of alcohol, which he attributed to the repeal of Prohibition, and the government's attempt to "not get people drunk and get the mob out" of the industry.

Thus, at least in the eyes of this study's participants, neither Pennsylvania nor New York (nor even most other states, for that matter) offers what they would consider to be a particularly favorable regulatory environment for the wine industry. This seems to make sense, though, being that alcoholic beverages are treated so differently than most other types of goods. Nonetheless, this could potentially represent another area of weakness in terms of the development of a cluster in Lake Erie Wine Country, although it would appear that the previously discussed issue of the interstate distribution of alcohol is actually the much larger one.

XI. What is the demand like for your products? Which ones sell the best, and who is typically buying them?

Each participant seemed to agree that demand for sweeter wine was heaviest in the region, meaning that they are typically their best-sellers. The industry expert, then, actually stated that this is why he feels that the Lake Erie region has developed its reputation for simply being a producer of them. That is, its wineries are simply supplying what their customers are

demanding. Similarly, several others recited an adage that "America talks dry and drinks sweet," and they also discussed not being able to draw the stereotypical "wine snob" to their wineries. Thus, in addition to having a local supply of predominantly native grape varieties, it would appear that the region's customer base is also demanding predominantly sweet wines. Subsequently, the simple economics of this situation could be a major cause of the region's current reputation (a critical barrier to its expansion).

But, why is this the case? Several participants attempted to get into the demographics of the situation. One reoccurring trend seemed to be an increase in younger and/or less experienced wine drinkers, which is likely to have contributed quite a bit to this higher demand for sweeter wines. In addition, one winery owner stated that people who grew up in the area, and whose "grandpas made wine," were also more likely to be purchasers of them. However, four other winey owners claimed to have less definitive demographic trends, with demand for their products being "all over the place," as one put it.

Nonetheless, three winery owners reported having a relatively even distribution of dry and sweet wine sales (sweet sales were still greater, but not by a very large margin). Therefore, it would appear that some of the region's dryer wines may be starting to gain more recognition. However, in addition, one other complicating factor that was brought up was that of "ice wine," which possesses a sweet taste, but because of its uniqueness (as well as its typically extravagant price, most likely), it is in surprisingly high demand from even more experienced wine drinkers (and even the supposed "wine snob"). Still, it appears that the majority of the region's demand is for more basic, sweeter types of wine, which may in turn be one of the major causes of its current reputation (this situation is likely very similar to the lack of a "sophisticated customer

base" that proved to be an issue in the Hudson Valley region). This could subsequently represent a significant barrier to the existence or emergence of a wine industry cluster within it.

XII. What do you perceive as the next vital step(s) in the growth and expansion of the local wine industry?

As to be expected, answers to this question varied substantially. However, there were several that were discussed repeatedly. One was in needing more of a focus placed on growing more traditional, vinifera style wine grapes and less on the natives, which would require further support from Cornell and PSU research. A second was on improving the quality of certain wineries that weren't believed to be "up to standard" and could potentially be detracting from the region's overall image. A third was in needing to improve the region's marketing campaigns, which along with the previous two measures, would seek to improve its reputation. Finally, one other was in needing more of an emphasis placed on creating "a wine country destination," which would require more tours and events to be held, more involvement from firms in and expansion of ancillary industries (i.e. hotels/bed & breakfasts, restaurants, transportation services), as well as more support from local governments.

Thus, these will represent even further issues to consider in the next chapter, in which a conclusion will finally be drawn as to whether or not a cluster exists or could potentially develop in Lake Erie Wine Country.

Chapter 4: Discussion & Conclusion

In this final chapter, the empirical results discussed in the previous chapter will be compared with the theoretical components and driving forces of cluster formation that were described in Chapter 2 in order to draw a conclusion as to whether or not a cluster currently exists or could potentially develop in Lake Erie Wine Country. From there, any implications will be discussed, as well as topics and issues to consider for future research.

I. Discussion

As was covered back in Chapter 2, Porter (1998), in his *Clusters and the New Economics of Competition*, lists a number of factors that often make up a cluster and provides several scenarios in which one may be able to form (p.78). Feldman and Francis (2004), then, present a model of the various stages of cluster formation in their *Homegrown Solutions: Fostering Cluster Formation* (p.129). However, the list of cluster component criteria that was provided in Aylward and Glynn's (2006) *SME Innovation within the Australian Wine Industry: A Cluster Analysis* is far more specific and relevant to the wine industry, and as such, was used to generate the interview questions listed in the previous chapter (p. 42-44). For this reason, their work will be the focus of this section, as well.

Aylward and Glynn (2006) list an environment for growing "high-quality" (vinifera) wine grapes, cooperation among rival firms, the presence of an industry trade association, having a strong "desire to export," the presence of local universities that provide research and/or education, training programs designed to create a skilled labor pool, strong firm relationships with local growers and other suppliers, effective marketing strategies, possessing a good regional reputation, having a sophisticated customer base, and (although not critical initially) a favorable regulatory environment as necessary components of a successful wine cluster (p. 42-44). On the

positive side, Lake Erie Wine Country seems to possess a substantial amount of firm cooperation, several trade associations (some better than others), a few university research labs and extension offices, several organized training programs (mainly the Mercyhurst culinary and the online "HACC" programs), a sufficient skilled labor pool, and strong firm relationships with local growers. The industry also has what at least most of its winery owners would consider to be an effective marketing program, conducted by the LEWC trade association.

However, remaining are the "desire to export," strong firm relationships with local suppliers (other than grape growers), favorable policies, sophisticated customers, an environment suitable for growing "high-quality" wine grapes, and a good regional reputation. With regard to the "desire to export," many winery owners are currently struggling to or do not even care to attempt to export outside of their own states. As such, exporting outside of the region and eventually outside of the country like those from previous successful wine clusters have is, at best, a long ways away. As for relationships with local suppliers, there does not seem to be a sufficient amount or variety of them in the region, itself. In addition, winery owners are far more price-sensitive and far less loyal when it comes to their suppliers of inputs other than grapes. With regard to the regulatory environment, there seemed to be a heavy distaste for both Pennsylvania and New York state policies among local winery owners, and an even bigger one for those affecting the distribution of wine between states. Finally, as for having a sophisticated customer base, this most certainly does not seem to be the case, with most firms selling predominantly sweeter wines, in addition to failing to attract the "wine snob" (an issue whose significance will soon become apparent).

The biggest issues that the Lake Erie region faces, though, are in growing "high-quality" wine grapes, as well as the overall reputation that it currently possesses. With regard to the

former, Lake Erie Wine Country currently seems to struggle in growing a wide variety of European vinifera style wine grapes (most notably "late-season reds"). It also faces inconsistencies in the supply of them, as well as the issue of the saturation of suitable vineyard land. However, the region does produce some very high-quality wines from viniferas, especially Riesling. So why is there still a problem?

The main underlying issue is the region's reputation as being a "sweet wine producer," which is actually the driver of most of the other aforementioned factors. For instance, having a better reputation would likely draw a more sophisticated customer base that would also most likely have a greater amount of disposable income. It would also, then, generate a greater amount of out-of-state demand, which might subsequently make it more profitable, or at least create a greater incentive, to seek out additional ways of shipping to other states. It might also make firms more competitive with one another if they did not have to worry so much about supposed "weak-links" detracting from their own economic well-being (which might bring the overall level of competition up toward that of a more traditional cluster). All of this could also bring more recognition and outside capital into the region, which might make it more profitable for additional suppliers to emerge and more likely that the Pennsylvania and New York state governments would see an opportunity to help local economies by further assisting the industry (through either additional programs or changes in policy). It might also, then, incentivize the further transitioning of Concord and Niagara vineyard space to that of viniferas and hybrids. Collectively, this would finally lead to "the establishment of a critical mass of resources" that was described by Feldman and Francis (2004, p.130).

However, it is highly unlikely that this could occur anytime in the near future. The region's wineries are simply far too small and lack the budgets necessary to conduct the

substantial marketing campaigns that would be necessary to start reversing the region's current reputation. As for the LEWC, it is highly unlikely that a trade association made up of just 23 wineries could make a big enough impact on a national level that it would take for experienced wine drinkers across the country to recognize the Lake Erie region as a producer of wines that could compete with California, the Finger Lakes, and the rest of the world on the basis of overall quality. It would need to start on a more regional level, with more local competitions, trade shows and other events, which even then would be difficult, given its relatively small size and the fact that it contains wineries in two different states (which relates to the issue of state alcohol law discrepancies that was discussed in the previous chapter).

II. Conclusion

For the reasons stated above, it can be concluded that a wine cluster does not currently exist in Lake Erie Wine Country, nor is it likely that one could potentially form there anytime soon. This is truly unfortunate, as the formation of a cluster would stand to benefit the individual wineries by increasing demand for their products and allowing more local infrastructural support to develop (leading to increases in efficiency, as were discussed by Porter); additionally, it would benefit the region, as a whole, through the emergence of related industries (which means more jobs) and increases in local commerce (which means more tax revenue and more purchases of complimentary products). However, the idea of a "wine country destination" (which was mentioned at end of the previous chapter) is still worth considering. Focusing on that would involve organizing more tours and events, which would bring more visitors to the region, where they could be exposed to the "high-quality" wines that it already produces, such as Riesling. This could definitely improve its reputation, at least to some extent, especially if local growers are able to provide a greater variety and more consistent supply of viniferas in the future, like

many of this study's participants felt that they would. However, more important to the region, overall, would be the boost to the local tourism industry, which would seek to benefit supporting industries and local economies, as a whole, in addition to the wineries, themselves. Therefore, it would behoove local winery owners, the LEWC, firms in related industries (i.e. restaurants, hotels/bed & breakfasts, and transportation services), and local governments to come together in order to make this happen. Thus, even if a traditional wine cluster cannot immediately exist, a thriving wine tourism industry might be the next best thing, especially since, theoretically, it would be based (at least initially) more on the overall social experience and less on the actual perceived "quality" or reputation of the region's wines. It might even be possible, then (although it would likely be somewhat of a stretch), for a more traditional wine cluster to develop in the future, following an extended period of focus on successfully creating a "wine country destination," which could potentially serve as a marketing tool for eventually improving the region's overall reputation and subsequently allowing its individual wineries and overall economy to reap the aforementioned benefits.

A. Implications for Future Research

Throughout the course of this project, several potential topics for further study have arisen. The first would be on the domestic (and even global) market for Riesling, and if the Lake Erie region could somehow gain a significant share of it. Such a study might involve collecting data on the best selling Rieslings, who produces them, where they come from, and how their respective producers and regions came to dominate the market. This might be useful information for Lake Erie region winery owners, winemakers, and trade associations to be aware of, especially if their Rieslings have the ability to be as competitive on a national level as participants from this study believed them to be.

Another potential research topic might be the possibility for a sweet wine cluster that could serve a particular niche market. One approach to this study might be to determine the domestic and foreign demand for sweet wines, and then to determine where most of those products are coming from. It is a very distinct possibility, then, that the Lake Erie region could be extremely competitive in this market and subsequently allow somewhat of a non-traditional wine cluster to form there.

Finally, a third potential research topic might be on the level of interconnection between the Finger Lakes, Hudson Valley and Lake Erie wine regions, in terms of their shared ideas, resources and other cluster dynamics. For instance, all three regions seem to rely heavily on and benefit highly from Cornell University research. Also, it was determined that most of the Lake Erie region's bottles (a rather critical input) come from Waterloo Container of the Finger Lakes region. If an appropriate research method were to be developed, this would most likely make for an excellent example case study on the "indefinite boundaries" of clusters that were initially described by Porter, himself (1998, p. 79).

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