



# WPI

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## Made in Venice: Past, Present, and Future

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# Authorship

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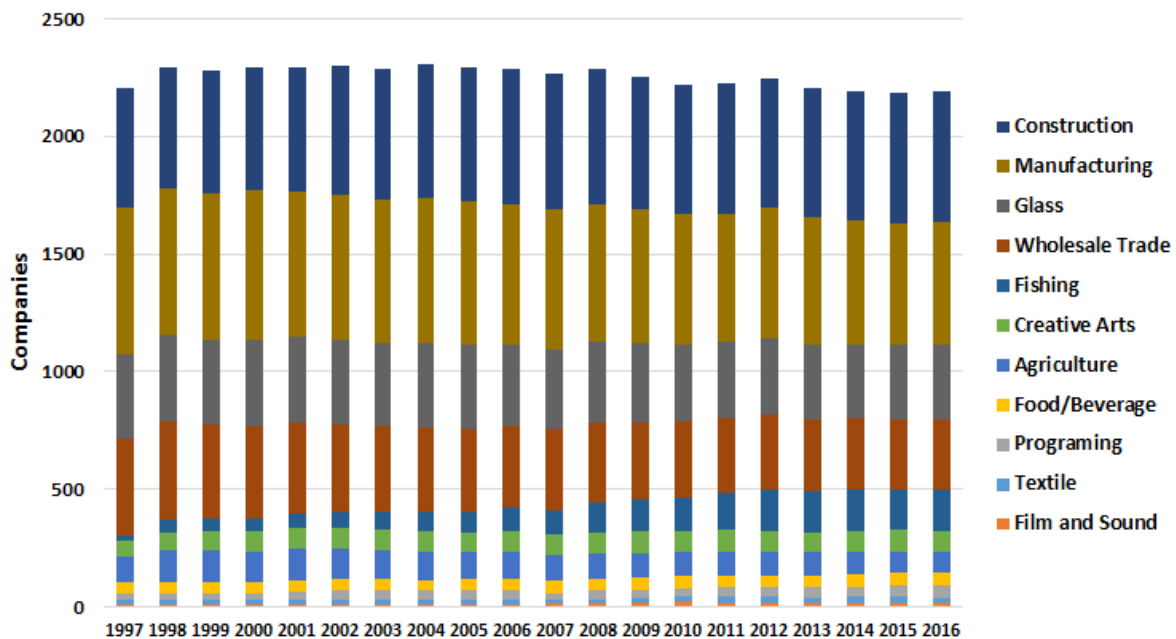
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# Abstract

Our project focused on identifying business sectors in the non-tourist industry of Venice, Italy that have the potential to flourish. Today in Venice, service companies outnumber production companies three to one. To learn more and combat this issue, we performed an analysis of Venice Chamber of Commerce data, interviewed local businesses, and researched best practices from other cities. We then developed this paper: a roadmap that guides future project groups, city officials, and business owners towards closing the gap between these industries. The goal of this paper was to give Venetians the information needed to develop initiatives to grow the production sector. This way, jobs will be created and Venetians will continue living in the Historic City for generations to come.

# Executive Summary

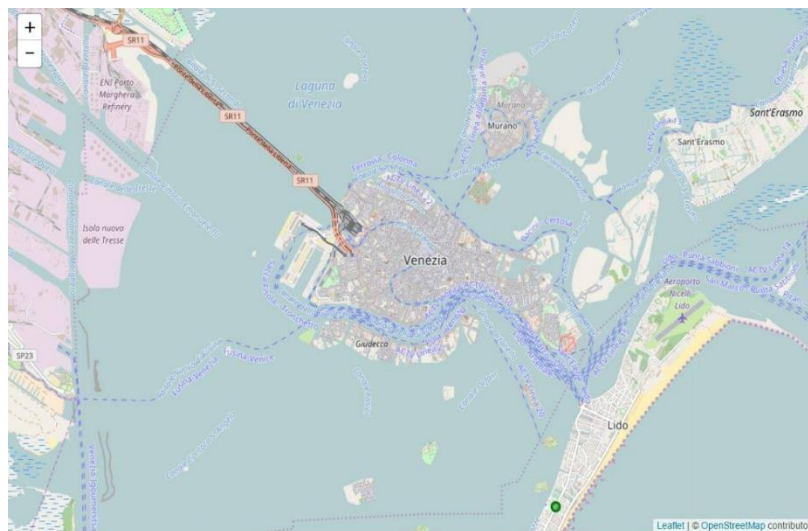
Over the past sixty-five years, Venice has had a staggering increase in the number of tourists visiting per year. As a result, a large portion of the Venetian economy has become reliant on the tourism industry. Venice has become dependent on tourism as a means of keeping its economy afloat, and the production sector of the economy has declined. The majority of the jobs available are related to tourism. Before the 1950s and the shift to tourism, the Venetian economy was supported by glass blowing, shipbuilding, production of fabrics and trade. In order to create more jobs to keep the locals in the Historical City of Venice, it is important to grow the production sectors. The current breakdown of Venice’s production industry can be seen below.



In order for us to make recommendations for the expansion of the Venetian production sector, it is important for us gather data on Venetian businesses, past and present. We did this by translating, organizing, and analyzing the Chamber of Commerce data and conducting interviews

with local production businesses. We then created graphics to better understand the distribution of businesses across the sectors. Along with interviews, we researched best practices from other cities to help us make recommendations for strengthening Venice’s production sector. These best practices included government policies, education programs for new business owners, and the implementation of incubators.

Our three deliverables were to create an online map to display all open and closed businesses in Venice, a recommendation sheet for business owners, and a roadmap for future project teams by means of a final paper. The first deliverable involved using the Chamber of Commerce data to create an online map. The map displays all businesses, past and present, with filters to toggle by year and sector. An image of this map interface can be seen below.



Our second deliverable was a recommendation sheet that is available for business owners who are seeking for new strategies to improve their businesses. We believe that educating owners on past business improvement strategies is very beneficial. We hope that government leaders, business owners, or even future IQP teams, will be able to reference our project to work toward growing the Venetian production sector.

Our group utilized the research we performed and the knowledge we gained over seven weeks to come up with a set of recommendations bolster the production sector of Venice. We suggested repurposing an incubator we feel has the potential to be a successful. We also observed that the production of immaterial goods is on the rise, and Venetians should take advantage of this current trend.

During our seven weeks in Venice, we had the opportunity to work alongside business owners to gain insight into the logistics and struggles of owning and maintaining a production company in Venice. We analyzed past and current Chamber of Commerce data to make connections that have the potential to help businesses. We have also set the groundwork for future students to expand upon our efforts. By completing these objectives, we are confident that our work will be beneficial in growing the production sector of the Venetian economy, creating new jobs, allowing locals to remain in the city.

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# 1.0 Introduction

As history has shown, there are instances of immense job loss in areas that are fully reliant on a single economic industry, such as Detroit, Michigan. It has been said that “Detroit rose and fell with the auto industry” during the United States’ recession and automotive crisis of 2008-2010.<sup>1</sup> Detroit’s unemployment rate reached a staggering 28.4% because most of the population had jobs related to the automotive industry.<sup>2</sup> Similar to towns dependent on the automotive industry, many coal mining towns, such as Whitesburg, Kentucky, saw economic collapse following the decreased need for coal.<sup>3</sup> Complete economic dependency on a single industry puts a city at risk; a fault in that industry could have detrimental consequences. Venice, Italy is another possible example of this, with the main industry being tourism. For example, if a natural disaster (such as an extreme flood) impacted the ability of tourists to arrive, or tourism decreased, the economy of Venice could suffer greatly. Relying too much on one industry is dangerous for long-term economic prosperity. It also has the potential to affect cultural and intellectual diversity by restricting growth and creativity.

Venice’s popularity among tourists has caused an increase in the number of visitors since 1950.<sup>4</sup> The Venetian economy has become so reliant on the tourism industry that, while over 20,000 people commute to work in Venice each day, jobs in non-touristic sectors are scarce.<sup>5</sup> Many

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<sup>1</sup> Sugrue, Thomas J. "From Motor City to Motor Metropolis: How the Automobile Industry Reshaped Urban America." [autolife.umd.umich.edu](http://autolife.umd.umich.edu).

<sup>2</sup> Ibid.

<sup>3</sup> Corbin, Cristina. 2016. "With Collapse of Coal Industry, Central Appalachian Towns Struggle to Survive." Fox News U.S., April 8.

<sup>4</sup> Mosto, Jane Da. 2009. *The Venice Report* The Venice in Peril Fund

<sup>5</sup> Pisani, Bob. "Venice: Symbol of Italy's Never Ending Struggles." CNBC., last modified 2014-09-05T09:18:46-0400, accessed September 5, 2016uq

Venetian jobs are in the service industry, which provides accommodations for the numerous tourists that visit the city each day. This has led to a decrease in exports and the unavailability of jobs for educated Venetians.<sup>6</sup> This unavailability of jobs makes it difficult for local Venetians to live their daily lives. Tourism has been shown to increase the price of living.<sup>7</sup> With fewer jobs available outside of the tourism sector, this results in locals struggling to afford the high cost of living in Venice.<sup>8</sup> As the tourism industry has become prominent, entrepreneurs looking to open businesses have been more likely to open ones targeting visitors. As a result of this dependence, the economy of Venice is vulnerable to any event that could cause the decline or destruction of the tourism industry.

There have been many attempts to quell Venice's overall dependence on the tourism industry, such as the use of local incubators and university support from Worcester Polytechnic Institute through the Venice Project Center.<sup>9</sup> An incubator is a business that financially and logistically supports startups as they manage initial costs and develop their networks. Such a strategy could be very useful in fostering the growth of startups, but requires support from other groups and the community.<sup>10</sup> These are some of the strategies that have been implemented Venice to help shift the economy.

Venice's economic focus on tourism and services results in little emphasis on industries that locally produced goods. Exporting more goods outside of Venice is a way to diversify, expand, and grow the economy. It is also important for citizens to spend money at local shops, as this

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<sup>6</sup> Mosto, Jane Da. 2009. *The Venice Report* The Venice in Peril Fund

<sup>7</sup> Kreg, Glenn. 2001. "The Impacts of Tourism." .

<sup>8</sup> Ross, Winston. "The Death of Venice: Corrupt Officials, Mass Tourism and Soaring Property Prices have Stifled Life in the City." Independent., last modified May 14,

<sup>9</sup> Comune di Venezia. "Acceleratore D'Impresa Herion."

<sup>10</sup> Bush, Joe and Nick Bold. "Worcester Clean Tech Incubator & Technocopia."10/05/16.

ensures that more of that money remains local, boosting the economy.<sup>11</sup> There is a lack of data and research that pinpoints the reasons for minimal business growth outside of tourism. As previously stated, there have been many attempts to create businesses and foster their growth including incubators, such as Herion, and consortiums for specific industries such as the Murano Glass Consortium. These groups work to foster growth and collaboration among companies and artisans. In contrast, why some businesses are struggling and why some are successful is not entirely clear. It is important to investigate these areas where there is a lack of research available, in order to determine what it takes to make a business in Venice successful. Knowledge of the Venetian business sector could be valuable in helping existing and new businesses be more successful.

Our goal is to identify types of businesses that could flourish in Venice--in addition to tourism--and ways to foster job creation in these sectors. The eventual creation of jobs could, over time, address the depopulation of Venice. We will investigate ways other cities have successfully promoted the growth of businesses, and to determine ways the city of Venice could implement these strategies. We will determine the intricacies of owning and operating a business in Venice. By creating a roadmap for success in the form of this report, we can educate locals and suggest ways the city can encourage the growth of locally-owned businesses. Focusing on the production of material goods, such as glass, and immaterial goods, such as technology, will allow locals to play more of a role in their city's economy. This will give them a reason to continue living in Venice. While tourism is an important source of income for Venice, it is important to diversify the city's economy to improve its overall stability.

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<sup>11</sup> Schwartz, Judith. 2009. "Buying Local: How it Boosts the Economy." *Time Magazine*, Jun 11.



## 2.0 Background

The city of Venice has existed for nearly sixteen centuries, and for most of its modern lifetime, it has been known as a place full of prosperity, beauty, and history. The city has been involved in many industries that have flourished, such as trade, glass blowing, shipbuilding, and silk production. However, since the 1950s, Venice's economy has shifted to focus on the tourism industry. This shift in the economy has resulted in more low paying jobs and less production jobs.<sup>12</sup> This is caused by the increase in tourist related companies, due to the rising number of tourists visiting Venice. In this section we describe how Venice's economy has changed over time, as well as where its economy stands today. We then analyze strategies that have been successful in facilitating the growth of local production businesses.

### 2.1 Economic History of Venice

Venice was economically strong and self-sufficient during the fifteenth and sixteenth centuries, when it became one of the world's most distinguished seaports for trading.<sup>13</sup> Due to its convenient location on the Adriatic Sea, Venice was one of the major centers of commerce for Europe in the trading of luxury goods, including but not limited to Chinese silk, Indian cottons, Chinese rhubarb, and precious stones. It also held a large market share of the shipbuilding industry, producing ships for private merchants and the Venetian Republic's military between 1300 and

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<sup>12</sup> Ross, Winston. "The Death of Venice: Corrupt Officials, Mass Tourism and Soaring Property Prices have Stifled Life in the City." Independent

<sup>13</sup> North, Douglass C. and Robert Paul Thomas. 1973. *The Rise of the Western World; a New Economic History*. Cambridge [Eng.]: University Press. Pg 109

1500.<sup>14</sup> This industry created jobs for ten percent of the Venetian population at the time.<sup>15</sup> Such dominance in a production industry would benefit modern day Venice as well, creating jobs, revenue, and power in the global market. Producing goods similar to the 1500s, could allow the city to increase exports and return to a place of control in the trading industry.

During the seventeenth and eighteenth centuries, Venice went through societal and governmental changes, causing a decline in the total amount of exports.<sup>16</sup> This led to Venice becoming a less industrial city as it shifted its focus to tourism and the provision of the services necessary to support it. However, the city retained small industries, such as cloth making, glass blowing, and bookbinding, which still exist today.<sup>17</sup> Though this era, with the fall of the Republic of Venice, saw an economic lull, the nineteenth century brought changes to the economic landscape.<sup>18</sup> The concepts of mass production and single operation machines shifted Venice to large-scale manufacturing in factories. This boosted business and increased the number of jobs available for local workers. These past economic shifts are important, as they have revitalized the Venetian economy and broadened the horizons of local workers. Such evolutions indicate that positive changes can be made to expand the Venetian economy, which could lead the city into greater success and prosperity.

The era of manufacturing continued into the 20th century. Under Austrian control, Venice industrialized.<sup>19</sup> As seen in Figure 1, by 1915 there were 130 industrial business in Venice's

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<sup>14</sup> Lanaro, Paola. 2006. *At the Centre of the Old World: Trade and Manufacturing in Venice and on the Venetian Mainland (1400-1800)*. Vol. 9 Centre for Reformation and Renaissance studies. Pg 42

<sup>15</sup> Ibid.

<sup>16</sup> Ibid.

<sup>17</sup> Ibid., 46

<sup>18</sup> North, Douglass C. and Robert Paul Thomas. 1973. *The Rise of the Western World; a New Economic History*. Cambridge [Eng.]: University Press.

<sup>19</sup> "Ruaderui Documenti Sulla Manutenzione Urbana Di Venezia." 2000. *InSuLa*, Settembre, Pg 33-40.

Historic City.<sup>20</sup> These 130 companies provided over 20,000 jobs in Venice at the time. The Arsenale was the largest companies during this time with 3,881 workers. The Arsenale was a machine shop in Castello that produced and serviced boats and ships.<sup>21</sup> Another large production company was a massive steam mill named Molino Stucky, which had 200 employees and was one of the biggest grain cleaning companies in Venice. Finally, there was the Venetian Cotton Factory. It was located in the southwest area of Dorsoduro, employed 920 Venetians, and was one of the most important factories in the city.<sup>22</sup> Then, during World War II, both the Allies and the Germans avoided attacking Venice in order to preserve it, so the city became a safe haven in Europe.<sup>23</sup> Due to this safe zone, a wave of wealthy people migrated to Venice, increasing the city's prosperity. Since Venice was one of the few cities not harmed during World War II, its historical monuments still stand and attract tourists, which has both positive and negative economic consequences. The attraction of wealthy people to the city in the 1950s began the increase in tourism that persists today, having an essential effect on the city's economy. This time period marks the peak in the local Venetian population.

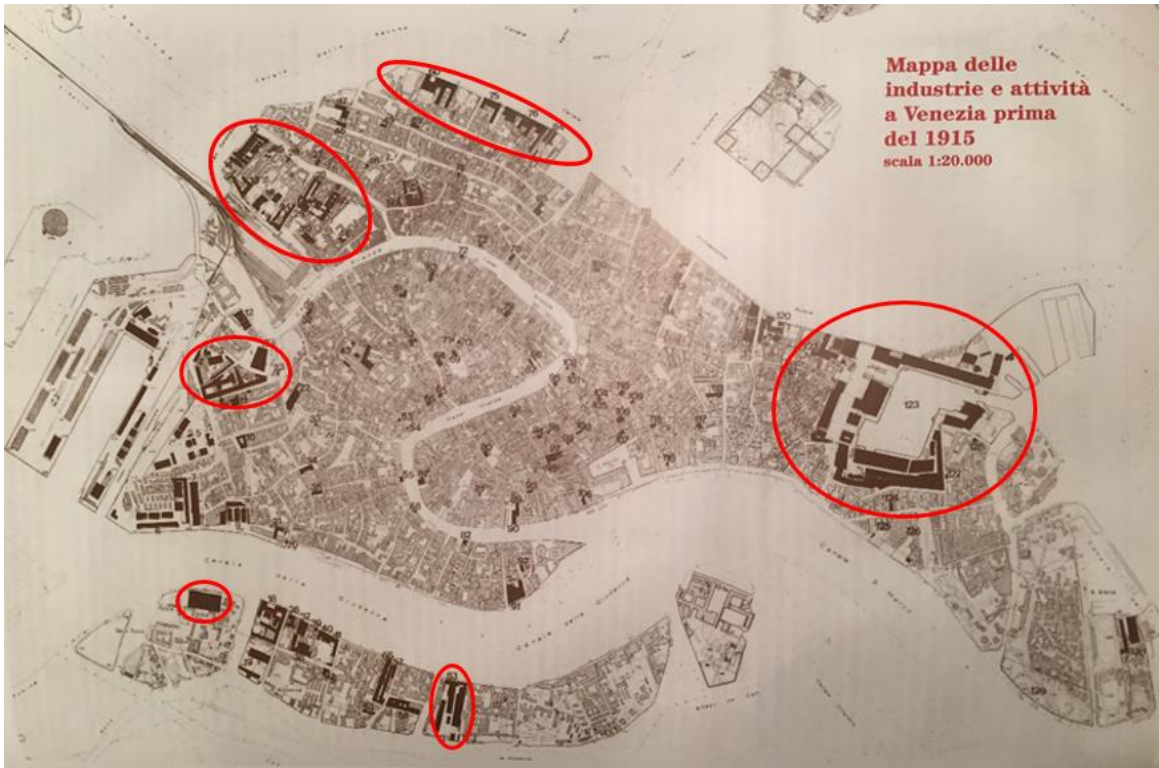
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<sup>20</sup> "Ruaderui Documenti Sulla Manutenzione Urbana Di Venezia." 2000.*InSuLa*, Settembre, Pg 33-40.

<sup>21</sup> Ibid.

<sup>22</sup> Ibid.

<sup>23</sup> Freyberg, Annabel. 2013. "Venice: Wartime Haven on the Grand Canal." *The Telegraph*



**Figure 1:** 1915 Industrial map of Venice. Shown above in dark brown and circled in red are the 130 industrial buildings in 1915. Most of these businesses were on the outskirts of the islands to make transit of goods less complicated.<sup>24</sup>

## 2.2 Current Venetian Economy

The increase in tourism has shifted the Venetian economy greatly since the 1950s. Venice earns only eighteen percent of its province's overall gross domestic product (GDP) from exports, compared to the average of twenty-seven percent for the other provinces in Italy.<sup>25</sup> Italy has an overwhelming amount of debt in comparison to the GDP (approximately 120%), which makes it difficult to promote new jobs and business.<sup>26</sup> This statistic means that the debt is 120% of, or 20%

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<sup>24</sup> Zapalac, Laurie A. 2015. "Historic Maritime Cities as New Places for Entrepreneurs and Innovators: Lessons from Venice, Amsterdam and Boston." MIT, Pg. 90-94

<sup>25</sup> "Prometeia." Prometeia.it., 2016

<sup>26</sup> Weissmann, Jordan. 2011. "4 Reasons Why Italy's Economy is such a Disaster." *The Atlantic*, Nov 10,.

more than the GDP. Furthermore, 91.2% of Venetians are skilled workers who have higher education. These people struggle to utilize their skills, in businesses that must fight to stay afloat.<sup>27</sup> Business closure and the resulting job loss are issues which are heavily influenced by the large and constant influx of tourists that have shifted Venice's economic focus.

## 2.2.1 Effects of Tourism on Venice

Italy is the fifth most visited country in the world, giving many banks, hotels, and businesses in the service industry the opportunity to thrive.<sup>28</sup> People are drawn to Venice for its architecture, historical buildings, churches, and canals.<sup>29</sup> Because tourism is so prevalent in the Venetian economy, most of the companies, and therefore jobs, lie in the secure and booming tourist industry. This limits the amount of companies outside of the tourist sector and as a result limits the amount of jobs that appeal to educated and skilled Venetian workers. While the popularity of these tourist services and events may boost the economy, these jobs tend to be lower paying, seasonal, and offer few opportunities for advancement.<sup>30</sup>

Though Venice's economy is dominated by tourism, and depends on it for its survival, it still has its negative effects on the city.<sup>31</sup> These include higher prices of goods and fewer locals wanting to remain in the city.<sup>32</sup> The city welcomes around sixty thousand new tourists each day, which when added to the existing population, increases the existing strain on the city's

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<sup>27</sup> Leone Moressa. 2011. *Foreigners in Italy: An Economic Value for Society. Data and Considerations on a Reality in Constant Evolution.*

<sup>28</sup> UNWTO *Tourism Highlights. 2015 Edition; 2015 IIS 2970-S13.* 2015d.

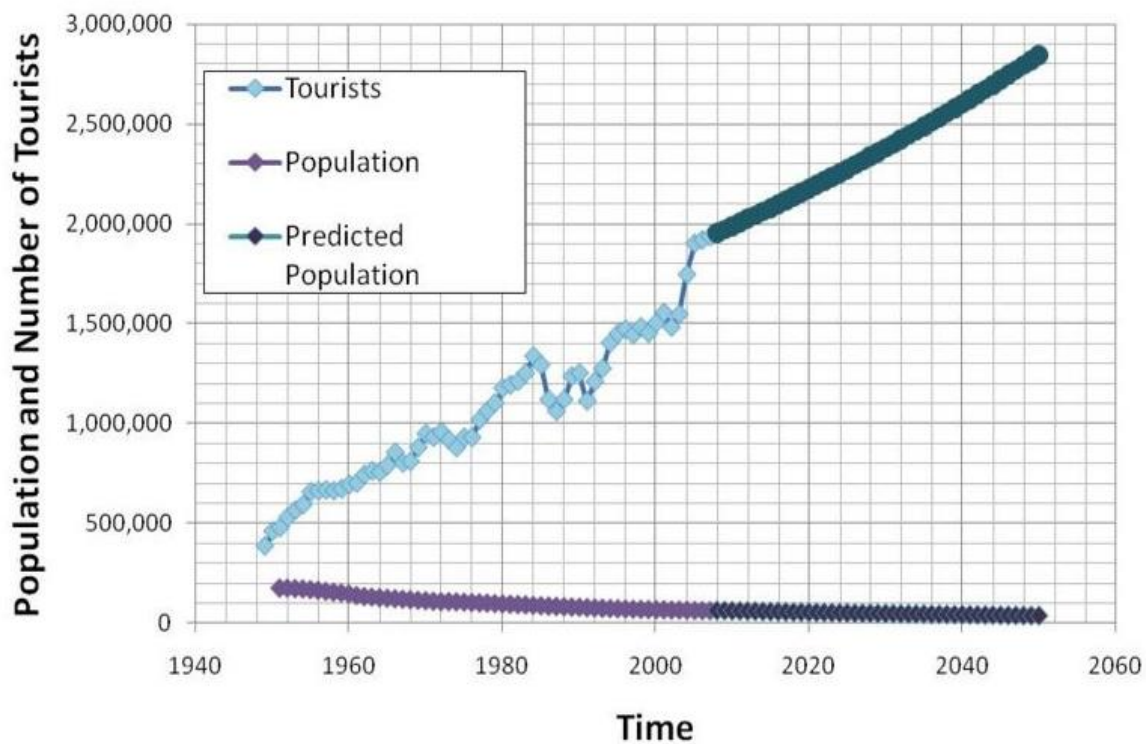
<sup>29</sup> Kolb, Bonita M. 2006. *Tourism Marketing for Cities and Towns: Using Branding and Events to Attract Tourism.* Vol. 10 Routledge.

<sup>30</sup> Pisani, Bob. "Venice: Symbol of Italy's Never Ending Struggles." CNBC., last modified 2014-09-05T09:18:46-0400

<sup>31</sup> "Economy of Venice." about Venice travel guide.,

<sup>32</sup> "Prometeia." Prometeia.it., 2016

infrastructure and resources.<sup>33 34</sup> In addition to these issues, tourism also draws jobs and revenue away from businesses producing local and artisanal goods.<sup>35</sup> Considering this issue, it is hard for these local and artisanal businesses to stay open.<sup>36</sup> As previously stated, when non-touristic businesses struggle, this causes a lack of jobs for skilled workers. This could contribute to the decline in local population, as shown in Figure 2.



**Figure 2:** The Rise of Tourism in Venice since 1950. This figure depicts the rise in the number of tourists (blue) since the year 1950, compared to the decline in the number of local residents (purple). The dark green lines show the predicted increase and decrease, respectively, for future years.<sup>37</sup>

<sup>33</sup> Ross, Winston. "The Death of Venice: Corrupt Officials, Mass Tourism and Soaring Property Prices have Stifled Life in the City." Independent

<sup>34</sup> Mack, Benjamin. "Tourism Overwhelms Vanishing Venice." Deutsche Welle., last modified September 11, 2012

<sup>35</sup> Van der Borg, Jan, Paolo Costa, and Giuseppe Gotti. 1996. "Tourism in European Heritage Cities." *Annals of Tourism Research* 23 (2): Pg 311

<sup>36</sup> Ibid.

<sup>37</sup> Venipedia."Demographics."Venipedia.,

As the number of tourists visiting Venice continues to rise, so do the prices of goods. Typical costs in popular tourist areas are nearly five times as expensive as those in local residential areas, ensuring that visitors bring in money.<sup>38</sup> An extremely low number of overnight tourists has caused hotel stays to drop by two thirds in the past 25 years.<sup>39</sup> This influx of people in the city raises prices and the demand for basic services. This causes many locals to leave the city for less expensive places to live: a tourism-induced trend experts call "the exodus".<sup>40</sup> Local people who cannot afford to live in Venice may also be unable to afford to run a business in the city. These high prices are driving locals to the mainland.

High living costs are a major contributor to the departure of local residents. The population of Venice has decreased drastically over the past 30 years from 120,000 to 55,000.<sup>41</sup> A San Francisco State University study of Belize, another major tourist destination, found that as a consequence of tourism development, the prices for locals increased by 8%.<sup>42</sup> Italy's average household income is around \$25,000, and this is not enough to sustain family life in Venice, which averages \$40,000 a year.<sup>43</sup> <sup>44</sup> While these high prices may not be problematic for tourists, they certainly are for local residents. Such a discrepancy between earnings and cost of living is much of the reason Venetians move to the mainland Italy, allowing tourist industries to continue dominating the economy.<sup>45</sup> This "Venexodus," or Venetian exodus, is causing protests throughout

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<sup>38</sup> Ross, Winston. "The Death of Venice: Corrupt Officials, Mass Tourism and Soaring Property Prices have Stifled Life in the City." Independent

<sup>39</sup> Ibid.

<sup>40</sup> Mack, Benjamin. "Tourism Overwhelms Vanishing Venice." Deutsche Welle.

<sup>41</sup> Ibid.

<sup>42</sup> "Negative Economic Impacts of Tourism." United Nations Environment Programme.

<sup>43</sup> "OECD Better Life Index." 2015c. Journal of Education for Sustainable Development 9 (1): 118..

<sup>44</sup> International Living. 2015. "Cost of Living in Italy." International Living.

<sup>45</sup> BBC. 2016. "Venice #Venexodus Protesters Oppose Tourist Numbers." *BBC News*, Nov 12.

the city, in which locals carry suitcases and banners to fight the overwhelming influx of tourists.<sup>46</sup> The majority of those leaving are young people who cannot find jobs specific to their training and education. This is harmful to the city, as the ideas of these emigrants are essential to economic and social growth. It is for this reason, that there must be ways to foster the development of new ideas.<sup>47</sup>

## **2.2.2 Overall Effect of Tourism on Local Business**

Particularly in popular tourist areas, large retail stores can sell mass-produced goods that are imported from other countries, selling them for a low price in order to attract tourist shoppers.<sup>48</sup> This correlation between shop owners catering to tourists and the decrease in local businesses is hard to ignore, especially as locals leave the city for the mainland. Some feel that if this downward trend continues, there will be few full-time residents living in Venice by 2030.<sup>49</sup> Because a majority of the daily population is tourists, businesses producing and selling local goods can be overshadowed by the numerous souvenir stands around the city. According to the Small Business Administration, around one third of small businesses fail within the first two years of being open.<sup>50</sup> Some businesses that have existed in Venice for years are closing due to the changing economic landscape.<sup>51</sup> Without a change in the city, more residents will likely continue to leave.

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<sup>46</sup> Ibid.

<sup>47</sup> Visetti, Giampaolo. 2016. "Ritorno a Venezia La Sfida Dei Giovani "Così Salveremo La Città Che Muore". *Eddyburg*, Nov 07

<sup>48</sup> Van der Borg, Jan, Paolo Costa, and Giuseppe Gotti. 311

<sup>49</sup> Ross, Winston. "The Death of Venice: Corrupt Officials, Mass Tourism and Soaring Property Prices have Stifled Life in the City." Independent

<sup>50</sup> Meszaros, George. 2016a. *What Percentage of Businesses Fail - the Real Number*. Small Business Advice Help for Startups and Entrepreneurs.

<sup>51</sup> Pisani, Bob. "Venice: Symbol of Italy's Never Ending Struggles." CNBC., last modified 2014-09-05T09:18:46-0400



### **2.2.3 Examples of Business Relocation**

Venice's economy and infrastructure make business growth and expansion difficult. With rising costs, and tourists as the main customers in the city, some industries have moved to mainland Venice (i.e. Mestre) instead. Two examples of this would be Assicurazioni Generali and Cassa di risparmio di Venezia. Founded in Trieste in 1831, Assicurazioni Generali SpA is the largest insurance company in Italy and the fifth-largest in Europe.<sup>52</sup> In the late 1840s, they added a headquarters in Venice. This office oversaw operations in Italy and Western Europe. But in 2006, the company's headquarters relocated from Venice back to Trieste to keep up with the growth of the company. It had become too large and complex to remain on the small islands of Venice. Larger businesses tend to leave Venice for the mainland for improved access to resources, particularly when they require more infrastructure than the Historic City center can provide. Another example is Cassa di risparmio di Venezia, a former Italian regional bank based in Venice and founded in 1822, who followed a similar path. In 2000, the bank left Venice to merge with the Casse Emiliano Romagnole Group to form Cardine Banca Group, in order to gain a competitive edge and offer more services to customers.<sup>53</sup> The company felt that being located in Venice was not the best strategy for achieving these goals.<sup>54</sup>

### **2.2.4 State of Venetian Exports**

One of the main problems with the economy of Venice is the lack of exports from the city. As referenced prior, Venice earns only eighteen percent of its province's overall GDP from

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<sup>52</sup> Assicurazioni Generali SpA - Company Profile, Information, Business Description, History, Background Information on Assicurazioni Generali SpA. Reference for Business. CQ-Roll Call, Inc

<sup>53</sup> Cassa Di Risparmio Di Venezia. Intesa SanPaolo.

<sup>54</sup> Ibid.

exports, compared to the average of twenty-seven percent for the other provinces in Italy.<sup>55</sup> Venice is home to many people who specialize in diverse crafts, such as glass-blowing and textiles, but are no longer using these skills to benefit the economy as done in the eighteenth century.<sup>56</sup> These arts have been present in Venice for hundreds of years, as they were the foundation of Venice's economy through the republic times. Glasswork, in particular, has transitioned from exporting large high quality pieces to smaller trinkets that cater to the current touristic economy.<sup>57</sup> This change has decreased the amount of exports from the city, but since the industry still exists, this transition could be reversed. Venice recently joined a social movement called the northeastern miracle. This movement involves cities focusing on promoting the production of high quality goods by family-owned businesses in order to help locals.<sup>58</sup> These businesses specialize in textiles, sunglasses, ski equipment, and other exportable goods.<sup>59</sup> The further application of this initiative could result in an increase in exports, as the industries that utilize the program are and have consistently been sustainable.

### **2.2.5 Sample Non-Tourist Venetian Industries**

Venice is home to more industries than just tourism. Throughout history, it has been heavily involved in the shipbuilding industry. The Arsenale of Venice, a complex of former shipyards and armories, has existed for centuries and was once the heart of naval production, which allowed Venice to control the eastern part of the Mediterranean Sea.<sup>60</sup> Fincantieri is a modern

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<sup>55</sup> "Prometeia." Prometeia.it., 2016

<sup>56</sup> Lanaro, Paola. 2006. *At the Centre of the Old World: Trade and Manufacturing in Venice and on the Venetian Mainland (1400-1800)*. Vol. 9 Centre for Reformation and Renaissance studies.

<sup>57</sup> Roberto Cessi. 2015. "Venice Italy." *Encyclopedia Britannica*.

<sup>58</sup> Ibid.

<sup>59</sup> Ibid.

<sup>60</sup> "The Arsenal of Venice."

company that builds many types of vessels, including cruise ships and large ferries, and provides repair services worldwide.<sup>61</sup> This important industry creates jobs for Venetian workers with specialized skills, and provides the critical infrastructure for the export of Venetian goods. One type of exportable Venetian good is blown glass from the lagoon island Murano. Glass is made in Murano and then exported to places such as the United States, India, China, South America, Saudi Arabia and other locations throughout the world.<sup>62</sup> These glass artifacts can range from small figurines, to artwork, dishes, and giant chandeliers. Today, glassblowing is a popular tourist attraction, even though the number of workers has decreased from 6,000 to less than 1,000 since 1990.<sup>63</sup> Pieces are often purchased as souvenirs, and visitors can watch artisans demonstrate their skills.<sup>64</sup> This interactive aspect of the glass industry, in addition to the high quality of the goods, makes it attractive to visitors, as well as suitable for export. However, cheap imitation glassware has become prevalent, and even veteran glassmakers struggle to determine what has been handmade and what has been mass-produced.<sup>65</sup>

Fishing has always been a major industry in Venice. The city's Provincial Authority, which issues fishing permits, reports that there are 33,619 fishermen in Venice, ninety-two percent of which are considered professionals.<sup>66</sup> A recent recession in the fishing industry has encouraged new regulations and management strategies. These include a ban on nighttime fishing, the definition of fishing areas, and the introduction of a labeling system to certify the product's origin,

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<sup>61</sup> "Fincantieri: Company Profile." Fincantieri.

<sup>62</sup> "The Consortium." Consorzio Promovetro Murano., accessed 12/05/, 2016,

<sup>63</sup> Hooper, John. "Glassmakers of Murano Fight to Survive Influx of Cheap Imitations."

<sup>64</sup> "Murano Glass." Venipedia.,

<sup>65</sup> Hooper, John. "Glassmakers of Murano Fight to Survive Influx of Cheap Imitations."

<sup>66</sup> Nunes, Paulo A L D, Silvia Silvestri, Michele Pellizzato, and Vasco Boatto. 2008. "Regulation of the Fishing Activities in the Lagoon of Venice, Italy: Results from a Socio-Economic Study." *Estuarine, Coastal and Shelf Science*.

to refine rules and safeguard the industry.<sup>67</sup> Overall, fishermen are very receptive to initiatives that aim to certify the origins of the products.<sup>68</sup> These small industries outside of tourism have been a part of Venice success though the domination of tourism and could be the key to revitalizing non-touristic sectors.

## **2.3 Past Policies and Strategies for Creating Businesses**

This problem of struggling businesses is one that other cities have encountered as well. Cities have worked to solve business problems for many years, and have encountered both success and failure in creating innovative businesses. These solutions are resources that can be helpful in working towards diversifying Venice's economy. In this section, we discuss ideas and strategies for encouraging new business.

### **2.3.1 Business Incubators**

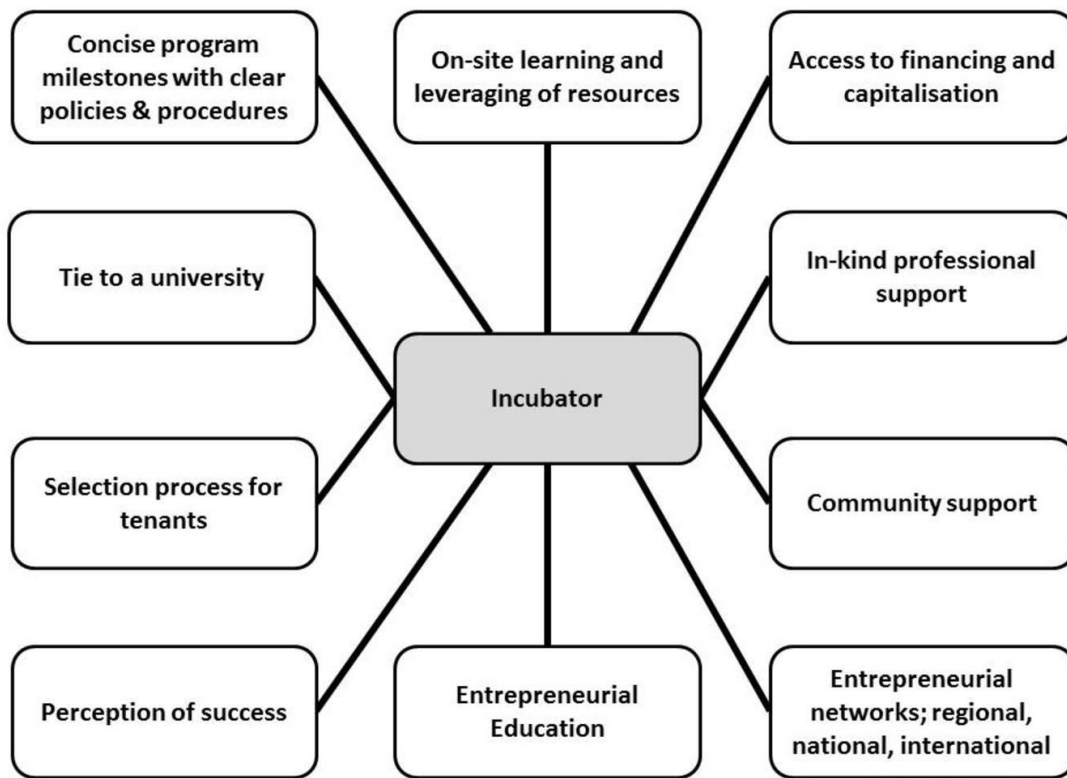
Incubators are organizations that work to foster the growth of new or relatively new businesses by providing essential resources such as space, accounting and legal services, and networking connections. These physical spaces are similar to normal offices in that they have internet, desk space, quiet individual work stations, conference rooms, and building security. Some incubators take the costs associated with rent and other infrastructure and split them between all of the startups in the building, while others act as angel investors and venture capitalists, seeking returns on their investments. An angel investor is someone who uses their own capital to aid in the growth of a small business, while a venture capitalist is someone who manages investment money

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<sup>67</sup> Ibid.

<sup>68</sup> Ibid.

of firms or companies.<sup>69</sup> This allows for these new companies to focus more on developing their company and less on the financial burdens a new business can face. Most incubators such as H-farm (with locations in Ca' Tron Italy, Seattle, London, and Mumbai), and Amsterdam Science Incubator, offer these basic amenities.<sup>70</sup> The major benefits of a startup business joining an incubator can be seen in see Figure 3.



Source: Wiggins & Gibson (2003)

**Figure 3:** Benefits of an Incubator. This diagram depicts the benefits of using an incubator, showing the many different types of support that come along with joining. These include financial support, community and education.<sup>71</sup>

<sup>69</sup> Stagars, Manuel. 2015. "Venture Capital and Angel Investors." In *University Startups and Spin-Offs*, 125-130: Springer.

<sup>70</sup> Zapalac, Laurie A. 2015. "Historic Maritime Cities as New Places for Entrepreneurs and Innovators: Lessons from Venice, Amsterdam and Boston." MIT. Pg 141, 154

<sup>71</sup> Wiggins, Joel and David V. Gibson. 2003. "Overview of US Incubators and the Case of the Austin Technology Incubator." *International Journal of Entrepreneurship and Innovation Management* 3 (1-2): 56-66.

Incubators can help strengthen a business, as well as provide additional benefits that can help in long term growth. An example of this is implementing a business education program into an incubator. This gives entrepreneurs an affordable way to learn more about developing their business in a positive manner. Laurie Zapalac describes additional benefits of incubators in her thesis paper. Zapalac is a researcher from Massachusetts Institute of Technology, who wrote about H-farm, a thriving incubator with multiple locations, well-known for its ability to involve popular companies in small businesses.<sup>72</sup> <sup>73</sup> H-Farm works directly with new business owners to maximize early stage growth, and after they reach intermediate development, a company with interest takes on the job of mentoring the business.<sup>74</sup> This process of involving outside companies with resources helps new businesses shift to the next level.

Another way that incubators help businesses grow is providing networking opportunities. Incubators such as H-Farm and WeWork have built their facilities with community spaces intended for discussion and networking.<sup>75</sup> H-Farm also holds specific business conferences, where small businesses pitch their ideas to the large companies in attendance.<sup>76</sup> The networking potential these incubators provide helps bring outside interest to these developing businesses. This strategy could be useful in Venice because incubators, while present, are largely unknown due to their locations on some of Venice's secluded islands. Drawing the attention of people, investors, and other companies to the businesses is a major advantage to the use of incubators.

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<sup>72</sup> Zapalac, Laurie A. 2015. "Historic Maritime Cities as New Places for Entrepreneurs and Innovators: Lessons from Venice, Amsterdam and Boston." MIT. Pg 140

<sup>73</sup> Grandinetti, Roberto. 2014. "Relationships at Work in a Networked Business" Pg 16

<sup>74</sup> Grandinetti, Roberto. 2014. "Relationships at Work in a Networked Business Incubator: The Case of H-Farm." Pg 17

<sup>75</sup> Company. "WeWork."

<sup>76</sup> Zapalac, Laurie A. 2015. "Historic Maritime Cities as New Places for Entrepreneurs and Innovators: Lessons from Venice, Amsterdam and Boston." MIT. Pg 139

The city of Venice started two incubators of its own in the last fifteen years. The first, CNOMV, was developed in 2005 in the old shipping building named Cantieri Navali Officine Meccaniche di Venezia. The facility, located on the island of Giudecca, was started to assist and support business in the startup phase.<sup>77</sup> Though there was not much information on the companies in this facility, it was disbanded and the building was transferred to Emergency, a non-profit organization, in 2014.<sup>78</sup> The second incubator, Herion, was created in 2008. There was an initial application process that took companies in the startup and early development phases. Upon the initial opening, there were thirty-eight applicants for thirty-four spots, which showed that the demand for new businesses existed. Upon opening, however, there were major problems with the facility. The heat, elevators, internet, and phone connections all experienced issues, and there were no secretarial services for the building, as was promised. By the end of the first three-year lease, only eight of the thirty-four companies resigned to continue to be apart. As of 2016 only four companies still ran business out of Herion.<sup>79</sup>

### **2.3.2 Government Policies and Relationships for New Businesses**

Governments hold a lot of power over business. They control the economy through fiscal and monetary laws, as well as the regulation of business operation.<sup>80</sup> By controlling interest rates, the government can alter the availability of money for investments and loans, and can control trade numbers.<sup>81</sup> Such regulations can make it difficult for new companies to enter an already established

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<sup>77</sup> Comune di Venezia. "Ex Cnomv Incubator on the Giudecca."

<sup>78</sup> VeneziaToday. 2014. "Emergency at the Giudecca in the Former Spaces Cnomv in Venice;" *VeneziaToday*.

<sup>79</sup> Comune di Venezia. "Acceleratore D'Impresa Herion."

<sup>80</sup> "How does the Government Influence Business?" Reference.

<sup>81</sup> Ibid.

industry.<sup>82</sup> One city with many government-backed initiatives for startup promotion is London, England. For example, there are the “Grant for Business Development” and “Selective Finance for Investment” schemes, which provide grants to entrepreneurs who launch businesses in specific sectors.<sup>83</sup> There are also programs in which entrepreneurs can obtain loans and loan assistance, as well as initiatives that provide technical and professional training.<sup>84</sup>

In both the United States, the government has introduced business improvement districts, or BIDs. BIDs are defined areas in which businesses pay extra taxes and fees to help fund additional projects and initiatives inside the districts. BIDs have been implemented where previous attempts at economic rejuvenation have been unsuccessful.<sup>85</sup> In 2006, there were over 400 BIDs in the United States, with the majority located in California, New York, New Jersey, North Carolina, and Wisconsin.<sup>86</sup> Advocates claim that BIDs are essential to the development of local governance, and though American BIDs are often focused on cleanliness and aesthetics, they also perform regulatory functions.<sup>87</sup> In doing so, they increase the level to which the government is involved in the development of the local economy and urbanization. By addressing social issues such as homelessness, and providing security patrols, BIDs work to improve the economic and overall climates in the cities they seek to better.<sup>88</sup>

Other areas, such as New York State, are working to aid business development. The involvement of local governments in the development of businesses has become a factor in the

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<sup>82</sup> Ibid.

<sup>83</sup> "Government Backed Schemes and Initiatives Promoting New Business Startups." ENT Magazine.

<sup>84</sup> Ibid.

<sup>85</sup> Ward, Kevin. 2006. "'Policies in Motion', Urban Management and State Restructuring: The Trans-Local Expansion of Business Improvement Districts." *International Journal of Urban and Regional Research* 30.1: 54-75.

<sup>86</sup> Ibid., 2006

<sup>87</sup> Ibid., 2006

<sup>88</sup> Ibid., 2006



success of these new economic ventures. Research shows that an important resource businesses are seeking is a supportive culture with the government, meaning that the policies enacted are intended to help, not hinder, business development.<sup>89</sup> In a supportive culture, a government would take into account the needs of entrepreneurs and tailor political and economic initiatives accordingly. It is important for cities who are looking to offer assistance to startups to cater to the specific needs each requires. Other policies exist to help businesses financially. For example, New York State offers companies the opportunity to operate tax-free for ten years.<sup>90</sup> The tax break was created to attract entrepreneurs who are looking for a location to start their businesses with better opportunities.

### **2.3.3 Science and Technology Parks**

Another way cities have been promoting businesses are science and technology parks. A science and technology park is a collection of research laboratories, businesses, and institutions that innovate in their industry to solve pressing problems.<sup>91</sup> The main philosophy of many of these parks is to create a welcoming environment in the research and business sectors. By making it a place people want to visit and explore, they promote the innovation that is created in the facility.<sup>92</sup> The Amsterdam Science Park's approach to achieving this is its architectural appeal and an inviting design. Other parks, such as Worcester's Gateway Park and Venice's VEGA (Venice Gateway for Science and Technology), promote their businesses by surrounding the facility with infrastructure, including restaurants, universities, and research facilities. Gateway Park has done

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<sup>89</sup> McFarland, Christiana. 2011. *Small Business Growth: U.S. Local Policy Implications*.

<sup>90</sup> Startup New York. "Tax Free Information." Startup New York., 2016

<sup>91</sup> UNESCO. "Science-Policy and Capacity-Building: A. Concept and Definition." United Nations Educational, Scientific, and Cultural Organization.

<sup>92</sup> Zapalac, Laurie A. 2015. "Historic Maritime Cities as New Places for Entrepreneurs and Innovators: Lessons from Venice, Amsterdam and Boston." MIT, Pg. 154-155

this by building in a previously developed area. The park is surrounded by Worcester Polytechnic Institute, the University of Massachusetts Medical Center, and a wide variety of restaurants.

VEGA, on the other hand, has seen success in its location near strong industries such as oil, shipbuilding, and chemistry. Its focus on visual appeal and surrounding infrastructure aid in promoting science and technology parks.<sup>93</sup> VEGA has workspaces that can fit between fifteen and 850 people, giving plenty of room to host trade shows and conferences.<sup>94</sup> It also runs a program similar to an incubator called VEGAINCUBE, which gives entrepreneurs the opportunity to develop their STEM businesses and ideas in an environment surrounded by preexisting science and technology.<sup>95</sup> By providing space and resources to developing companies, VEGA allows them to evolve and network in a place with security and support.<sup>96</sup> VEGA's proximity to Ca' Foscari University makes collaboration with students and researchers easy, growing VEGA's network of businesses.<sup>97</sup> A community like this could greatly benefit a new company that is looking for guidance. This type of community, particularly the supportive infrastructure such as transportation and food, can be seen in Figure 4, Amsterdam Science Park, below. Circles on the map emphasize these features, which are part of what makes the park unique. Incorporating these beneficial services and amenities directly into the facility makes it easy for participants to access them.

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<sup>93</sup> Ibid., 156

<sup>94</sup> "Vega Services." Venice Gateway for Science and Technology.

<sup>95</sup> "Incubator VEGAINCUBE." Venice Gateway for Science and Technology

<sup>96</sup> Vega Services." Venice Gateway for Science and Technology.

<sup>97</sup> "Vega Services."



**Figure 4:** Map of Amsterdam Science Park. This figure shows the layout of the science park, emphasizing its diversity, design, and accessibility. It includes buildings that have various purposes, and can be traveled by multiple modes of transportation. Various important buildings, such as restaurants and modes of transportation are circled.

### 2.3.4 Cities with Similar Crises

Venice, though unique in many ways, is related to many cities in terms of its current economic crisis. Santa Fe, a city in New Mexico, is similar to Venice. Both share a high level of tourism in the area, as well as a rising cost of living and a lack of affordable housing, which are causing local people to leave.<sup>98</sup> Santa Fe’s economy also includes industries related to the arts and

<sup>98</sup> Reynis, Lee A. and Jeffrey Mitchell. 2004. The Economic Importance of the Arts and Cultural Industries in Santa Fe County. Pg 26

culture, which are important to its overall economy. The University of New Mexico (UNM) Bureau of Business and Economic Research conducted a study on these industries and what can be done to rebuild and incorporate them into a shifting economic world.<sup>99</sup> Due to the similarities in the city life and the economy we feel that the ideas gathered in Santa Fe could be feasible in Venice, Italy.

UNM's plan expressed the idea of acting on three geographical scales: local, regional, and global, all with different motives. The local scale tasked the community and government to invest in the arts and craftsmanship. This included educating the young people of the community for future employment in these arts. If the city helped support the arts and trained people to work these new jobs, the economy would flourish.<sup>100</sup> The regional action tasked the community to create bond with nearby counties and strengthen connections. Like Venice's Historic City, Santa Fe had limited access to large affordable space and natural resources, which constrained its economic limitations. The researchers suggested that Santa Fe could overcome these constraints by creating connections that will integrate the economy on a regional level with Santa Fe as the "creative and organizational center".<sup>101</sup> This connective community could give way for new markets, collaborative ideas, and a cohesive region. The report backs up these statements with the examples of Denver and Boulder, Colorado: Denver provides the workforce, services, and national market, while Boulder gives innovation and creativity to the region.<sup>102</sup> The two counteract and benefit each other at the same time. The suggested global action would broaden the city's global presence in the arts enterprise.

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<sup>99</sup> Ibid.

<sup>100</sup> Ibid.

<sup>101</sup> Reynis, Lee A. and Jeffrey Mitchell. 2004. The Economic Importance of the Arts and Cultural Industries in Santa Fe County. Pg 27

<sup>102</sup> Ibid., 28

They felt the next move was to shape the city to be known as a center for creativity and innovation of arts, to market it around the world.

### **2.3.5 Unique Attempts to Promote Business**

Around the world, many cities are working to promote business in new and unique ways. A great example of this is Meltwater Entrepreneurial School of Technology or MEST, located in Accra, Ghana. MEST runs a two-year program that educates students in both software development and entrepreneurship.<sup>103</sup> The program is rigorous and very difficult to get into, but includes a full scholarship with room and board. At the end of the two years, students have the ability to sell to their new business idea to the company's incubator. The incubator helps develop the business, and gives hands-on advice for twelve to twenty-four months. Additionally, it provides substantial seed funding, in amounts ranging from fifty thousand to two hundred thousand dollars. The MEST team develops a system that incorporates training, investing, and mentoring, in an all-inclusive package. The program itself is still in its early stages of development, but the feedback and results are positive.<sup>104</sup>

Another unique location is H-Farm. Similar to MEST, H-Farm runs a four-month accelerator program for people with new business ideas. During this time, the idea is developed to its fullest potential. H-farm provides the entrepreneur with useful skills and helps him or her form a team capable of meeting the goals they set. These H-Farm mentors are an essential part of shifting

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<sup>103</sup> Evans, Daniel. 2015. *Developing and Analyzing Entrepreneur Networks: Data Collection in the Tech Entrepreneurial Environment of Six African Cities*.

<sup>104</sup> Robb, Alicia, Alexandria Valerio, and Brent Parton eds. 2014. "Entrepreneurship Education and Training: Insights from Ghana, Kenya, and Mozambique." In *World Bank Study*. Washington, DC: World Bank, 2014.

the owner's idea to a market-ready product in just four months.<sup>105</sup> As well as an accelerator, H-Farm also offers an education program to youth as well as adults looking to acquire more advanced skills.<sup>106</sup> Like MEST, this program is all-inclusive with funding, room, and board.

Y Combinator is an example of a longstanding incubator that provides seed funding for startups, meaning they invest about \$120,000 for small stakes in each company. Twice a year, they move approximately one hundred companies to Silicon Valley, CA for three months in order to improve their business and product pitching skills. The end goal of the program is to build a product or idea that has the ability to raise money from late-stage investors, to whom the entrepreneurs present on "Demo Day." Some of their success stories include but are not limited to Airbnb, Dropbox, and Stripe.<sup>107</sup>

New Urban Mechanics is an initiative started by the Mayor's Office in Boston, Massachusetts. It is an innovative idea that connects entrepreneurs and internal agencies in order to better the city. It aims to build the city's economy by keeping business inside. One of the more interesting projects that New Urban Mechanics has produced is called "Citizens Connect," which allows citizens to report problems with the city, including pot holes and downed, missing, or damaged street signs.<sup>108</sup>

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<sup>105</sup> "Who we are/ what we Do." H-Farm Website., <http://www.h-farm.com/h-farm/>.

<sup>106</sup> "H-Farm." H-Farm.

<sup>107</sup> "Y-Combinator." Y-Combinator.

<sup>108</sup> "Boston." Accessed december 13, 2016. <http://newurbanmechanics.org/boston/>.

## 3.0 Methodology

Our goal was to identify types of businesses besides tourism that could flourish in Venice, and develop strategies for fostering job creation in these sectors. Our objectives are as follows:

1. Identify past businesses producing material and immaterial goods in Venice.
2. Determine what types of businesses could thrive in Venice and how to help them prosper.
3. Outline a roadmap for the creation of innovative businesses by applying best practices that have worked elsewhere to suitable businesses that could flourish in Venice.



**Figure 5:** Spatial Scope of Project. This depicts which areas are within the geographic scope of our project. The islands that are circled and highlighted are included in the study.

We investigated the historical island city of Venice (shown in Figure 5) as well as the lagoon islands, because these islands are home to most of the city's artisan and non-tourist

businesses. We were given the Venice Chamber of Commerce data as the main data source of our project. From this, we translated, organized, and sorted the columns in the data to make them easier to use for our project. We then used this data to find businesses from various corporate sectors on each island. We looked for businesses that had good foundations, meaning ones that had shown to be successful, produced a quality product, and showed potential to expand and grow. We also talked to the owners, and examined each business in an effort to learn about each with the goal of finding how businesses have thrived or could thrive in the future. We investigated non-tourist businesses that have been successful between the years of 1950 and the present, parallel to the rise in tourism in Venice.

While services are a major industry in Venice, the focus of our study is placed solely on those businesses that produce exportable goods. This encompasses many types of businesses, including but not limited to technology companies, glass making, shipbuilding, and chemical synthesis. We also defined the level of “success” of each business by using data regarding the number of employees, the length of time the business has been open, and the recent growth of each business. We used this measure to understand how businesses have thrived and if others possess the ability to thrive in the future.

The following sections explain the methods we executed to achieve our objectives. We chose to focus on businesses in Venice that produce only material and immaterial goods. Immaterial goods are products that do not have a physical nature such as downloadable music, and software. We then conducted semi-structured interviews of some businesses, as well as recording observations of the business, strategies used, and owners’ knowledge. The next task was creating a recommendation sheet for successful business in Venice. To develop the sheet, we asked business owners about their experiences, and whether a specific strategy significantly helped or



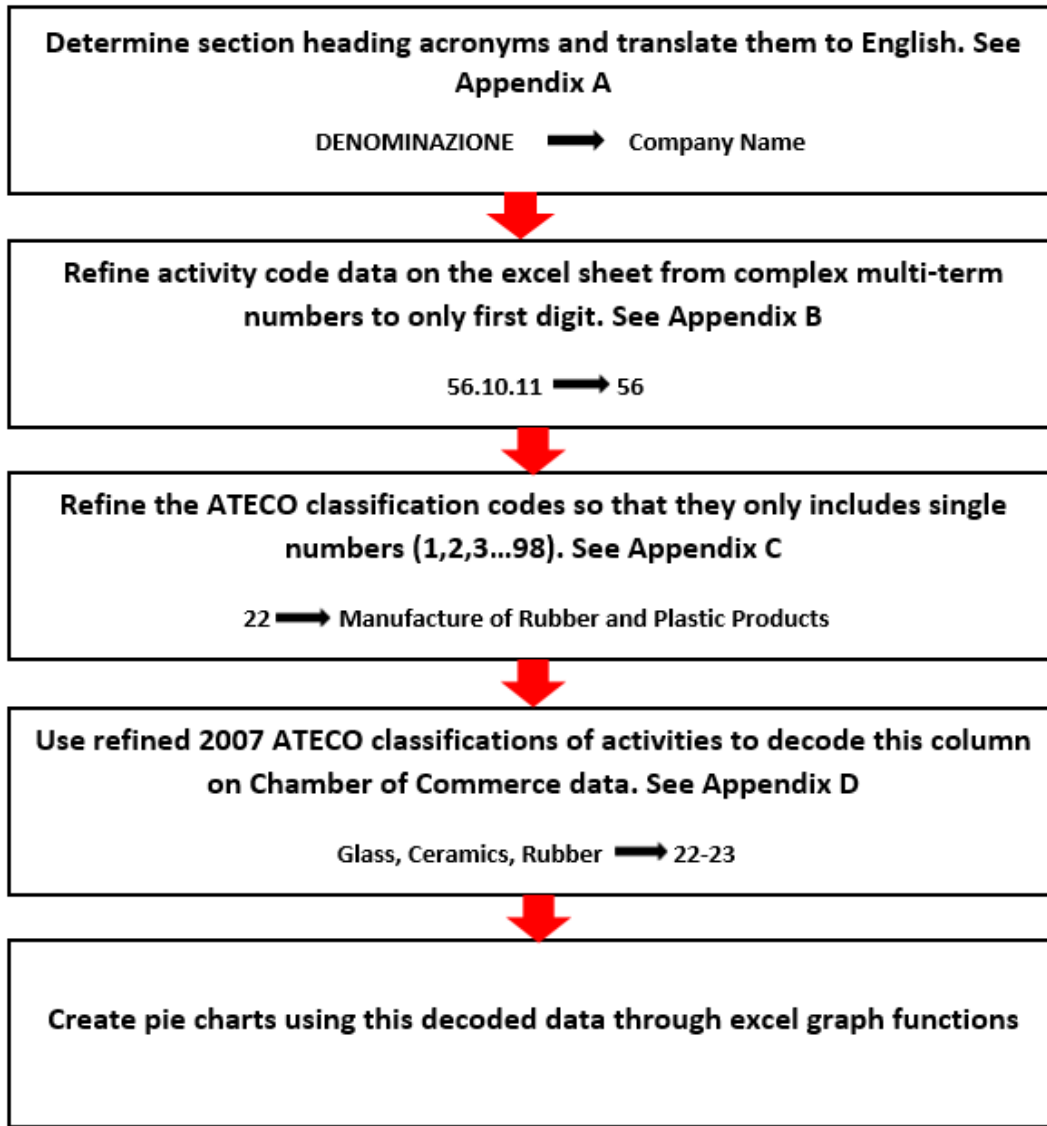
hurt their business. It was beneficial to ask their opinion regarding the operation of businesses in Venice, including what improvements they would like to see. Exploring the area allowed us to analyze business trends, and which qualities contribute to a successful business. Also using the best practices from other cities with similar issues Venice is facing was beneficial to come up with possible solutions that could also work for Venice.

### **3.1 Identifying Current and Past Businesses Producing Goods in Venice**

One of the first parts of our project involved identifying businesses that produced goods in Venice so we could then determine which to target our research on. To do this we needed to obtain access to the Venice Chamber of Commerce data. This data was given to the Venice Project Center from the Chamber of Commerce itself. The data was provided by companies as part of a legal requirement of registration with the local Chamber of Commerce with jurisdiction where the head office is located. This data set was an excel spreadsheet of all the businesses in Venice dating back since the early 1920s and the specifics of each businesses. By using this, we were able to compile a list of all the businesses. Some of the column headers on this data included the date of establishment and date of closure if applicable, number of employees, business sector type, and businesses description. We then sorted through this data and eliminated businesses which were service or food based; meaning all restaurants, grocery stores and general retail stores. This left us with businesses only producing material and immaterial goods.

### **3.1.1 Decoding the Chamber of Commerce Data**

The first step in this process was to obtain the Chamber of Commerce data from the Venice Project Center. Once we downloaded this information into an excel sheet on our computers, we began to clean up the data into understandable sections. Figure 6 illustrates the steps we took to understand the Chamber of Commerce data so that it could be used to understand Venice's economy and create our graphics.



**Figure 6:** Chamber of Commerce Flow Chart. Flow diagram of how the Chamber of Commerce data was analyzed, showing individual steps to analyze the data

Our first step involved translating the column headers in the Chamber of Commerce data using an Excel macro, Google Translate, and some additional help from the Venice Project Center. This step was critical because we were then able to understand what each column meant and sort them accordingly. Reference Appendix A to see all column header names and translations. After we translated the column headers, we put our focus into separating all the businesses into their

business sectors. As seen in Figure 7, we used this column to classify each business into its particular sector.

CODICI-ATTIVITA (Activity Codes)
47.11
50.3 P / 49.39.09 S
56.10.11
88.1
47.73.1
81.21 P / 81.29.1 S
79.90.19 P / 47.91.1 S

**Figure 7:** Activity Codes. Example of how the activity codes look like in the original Chamber of Commerce data

From there, we edited the activity codes on the Chamber of Commerce data to only incorporate the first digit instead of the multi-term number, as seen below in Figure 8. Doing so allowed us to group businesses into broader categories, so we could analyze the economy of Venice on a larger scale. More examples of this step can be seen in Appendix B.


<b>CODICI-ATTIVITA (Activity Codes)</b>	<b>ATECO 2-DIGIT</b>
47.11	47
50.3 P / 49.39.09 S	50
56.10.11	56
88.1	88
47.73.1	47
81.21 P / 81.29.1 S	81
79.90.19 P / 47.91.1 S	79

**Figure 8:** Refined Activity Codes. Examples of how we refined activities codes to go from complex terms to simpler 2-digit terms

Once we had simplified the activities codes on the data sheet we obtained the ATECO codes from the internet. In Italian, ATECO stands for *ATtività ECONomiche*. These codes are used for classifying economic activities. They are imperative to our project so that we can group all the businesses by sector type. This way we can see what sectors play the biggest roles in Venice's economy, other than tourism. Before we could use the ATECO classification codes, our first step was to refine them so that they only included single numbers starting at 1 and going to 98 in order to generalize the different business activities (fishing, retail trade, hotels, etc.). This step can be seen in Appendix C or in Figure 9 below. We then used the ATECO grouping system to put each number with its corresponding group. An example of this is codes 1 and 2 correspond to the agriculture business sector. The full list of business sectors with their corresponding ATECO code can be seen in Appendix D. Along with this step, it's important to note that we then went through the simplified ATECO codes with the help of a member of the VPC. This allowed us to verify our categorization of each code as service or production. The final list for this can be seen in Appendix E. This was an important step because it allowed us to see how many businesses on the Chamber of Commerce were in the production industry, since we wanted to focus our main research on

those companies. From this point, we then were able to use Microsoft Excel's built in graph functions to develop graphics, using our newly broken down version of the Chamber of Commerce data. It is important to note that since the Chamber of Commerce data we received begins at 1996, our graphs and analysis begin in that year.

22	MANUFACTURE OF RUBBER AND PLASTIC PRODUCTS
22.1	MANUFACTURE OF RUBBER
22.11	Manufacture of rubber tires and tubes; regeneration and reconstruction of tires
22.11.1	Manufacture of tires and inner tubes
22.11.10	Manufacture of tires and inner tubes



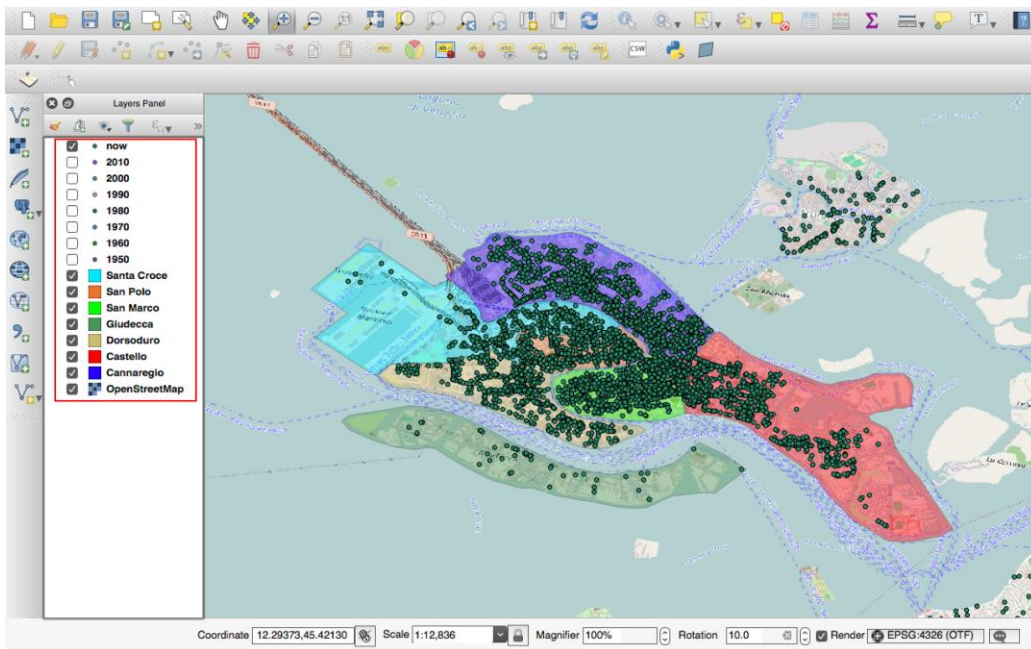
**Figure 9:** Simplified ATECO Codes. This shows the process as to how we simplify the ATECO codes from complex numbers to just whole number

### 3.1.2 Creation of Visual Maps of All Businesses

In order to further analyze the Chamber of Commerce data, each address of the businesses listed in the Chamber of Commerce data were run through a script provided by Tomaso Minelli to generate corresponding latitude and longitude coordinates. This allowed us to easily export information separated by decades into comma separated value format. The following step was the input of this information into QGIS, a fully functional geographic information system. We then plotted all of the businesses locations in Venice, as shown in Figure 10. In QGIS, layers are used to display information in a variety of ways, including data points and shapes. We used an OpenLayers plugin, which allowed us to display a map layer under the business locations. Once our Chamber of Commerce data was sorted, we created a map of the current businesses in each production sector. This was an important step in the data analysis of our project, because it allowed us to see the geographic distribution of the businesses in each production sector. An example of a QGIS map we made can be seen in Figure 11.

PRV (providence)	VE
N-REG-IMP (companies registration)	NULL
N-REA = Repertorio Economico-Administrativo (econ and admin index no.)	337807
UL-SEDE	SEDE
N-ALBO-AA (craftsman specific data number)/trades	NULL
SEZ-REG-IMP Section of the trade register in which the company is registered (see transcoding table)	P - C
NG (code of the legal nature)	DI
DT-ISCR-RI (Company Register Date)	7/25/07
DT-ISCR-RD (Company Register Date)	NULL
Opening Date Company	7/25/07
DT-ISCR-AA (Handcraft Companies Register Date)	NULL
DT-APER-UL (Company Storefront Opening Date)	NULL
DT-CESSAZ (Stop of Business)	1/4/10
DT-INI-AT (Start of Activity Date)	6/15/07
DT-CES-AT (End of Action Date)	11/27/09
Closing Date Company	1/4/10
DT-FALLIM(bankrupcy)	NULL
DT-LIQUID(liquidation)	NULL

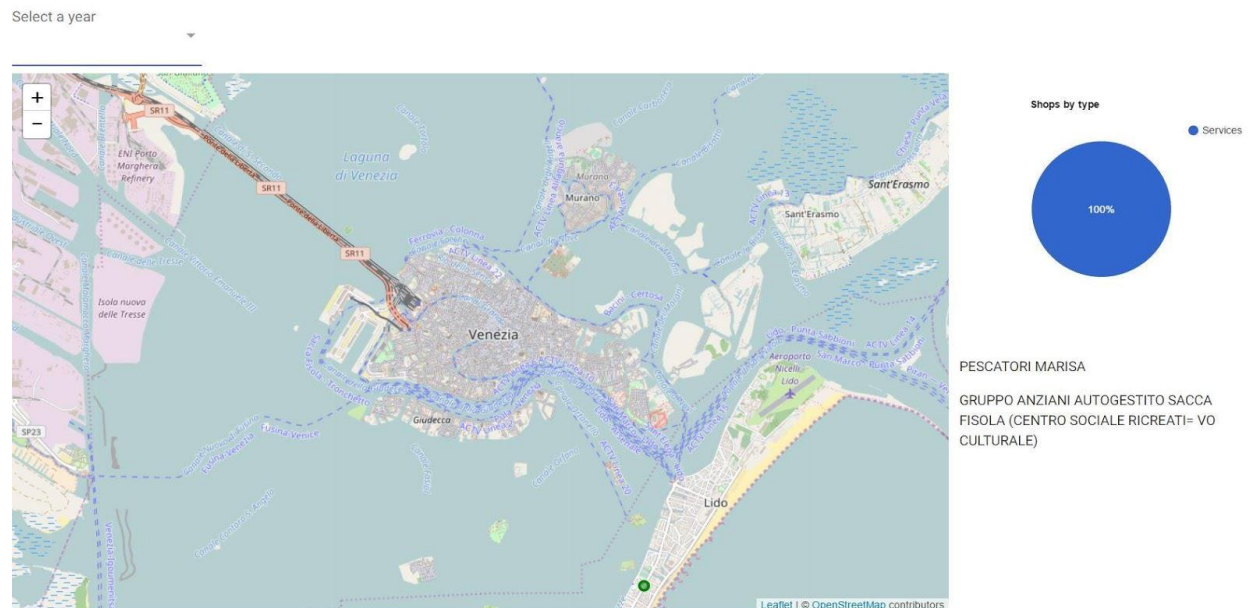
**Figure 10:** Attribute Table. Each object in QGIS contains an attribute table, with various parameters based on the type of object. This example shows a business with its respective Chamber of Commerce data.



**Figure 11:** QGIS Map Layout. The image above demonstrates which layers are hidden and shown (left red box) and the way businesses will be displayed as points on the map.

### 3.1.3 Creation of Website to Display Data

This objective distinctly defines the deliverables to be created throughout the project. The first deliverable consists of a map similar to the [Shops Map](#), but was designed to load much faster and provide useful information by applying filters. The “Made in Venice Map” uses efficient methods of data storage and handling including a Firebase server and Leaflet plugin. Firebase was used to store data exported from Chamber of Commerce Data showing all current and past businesses registered in Venice. Leaflet and Geojson were used to code each business with their address, as well as important filters to show businesses based on distinctive factors as described in Section 3.1.1. Overall, we created a map that is both quick to load and easy to use, to allow both tourists and researchers to determine key information about businesses in Venice. A screen capture from our website can be seen below in Figure 12.



**Figure 12:** Website Map Layout. This image shows the layout of our map on our website. The pie chart changes to reflect the number of service and production businesses for the selected year.



## **3.2 Determining what types of businesses could thrive in Venice**

We determined reasons why some businesses have failed and succeeded by not only using graphics we created, but also through interviewing business owners and using research we found on past businesses in Venice. The data we collected was important for developing our understanding of what successful businesses look like and the factors involved in creating success. This is important to our project because we will be able to make recommendations that could positively benefit current and future businesses in Venice.

### **3.2.1 Interviewing the businesses and owners and gathering data**

Other than using the Chamber of Commerce data, we interviewed businesses owners to gather additional data. We started this process once we had completed sorting and organizing the Chamber of Commerce data and our graphics had been made. From there, we were able to pick businesses based on our graphics we made from using the data. We picked production businesses that were still open in Venice, had a history in the city, and a willingness to speak with us about their businesses. The reason behind that criteria was businesses with an established history in Venice would likely have a good idea of the logistics required to run a company in this unique city. We wanted to interview businesses that started in Venice and are still open today, in hopes of learning about their rationale and strategies. We first sent a list to the VPC of the businesses we wanted to talk to. Meetings were set up and we went to these businesses as a team to talk to the owners. We had one person in the group keep track of the answers we received from the business owners while one other member of the group led the interview with the business owner. We created a form of questions to ask the business owners, this list can be seen below in Table 1.

<b>Questions for Business Owners</b>
○ Was there any specific reasons behind getting into this business in the first place?
○ Have you had any peaks in business lately
→ if yes: Do you have any ideas why this is happening?
○ Have you had any drops in business lately
→ If yes: Do you have any ideas why this is happening?
○ Any other businesses/organizations that your business works with?
○ Do you make your own products in house?
→ If no, where are your products coming from?
○ Can your business keep up with the current demand?
○ Do you believe your business could be franchised/expanded?
○ Other than money, what is something that could help benefit your business?
○ If given money, what would your business spend it on?
○ What challenges have you encountered?
○ If you could go back in time, what is one thing you would do differently in terms of opening this business?
○ What makes a successful business in Venice?
○ What are some examples of successful businesses in Venice you know of?
○ Why are these businesses successful in your eyes?
○ Do you think the large influx in tourism helps or hurts your business?

**Table 1:** Business Owner Interview Questions

After the in-person interviews were complete, we transferred the notes we took from the interview into a Google Sheet for VPC reference, as well as a written transcript for inclusion in this report. It can be seen in Appendix F. From there, we were able to analyze if businesses shared common themes and if these themes played into their successes. We aimed to discover similar trends in the businesses data that could reason for their success as well as things that made business

success hard to achieve. These conclusions about Venetian businesses were then compiled into our roadmap and recommendation sheet for innovative business success, and for future projects on our topic.

### **3.3 Outlining a Roadmap for the Creation of Innovative Businesses**

There are two tasks critical to the determination of a generalized framework promoting the success of businesses in Venice. These include the creation of an overarching recommendation sheet providing useful business strategies, and the design of a roadmap for future project usage. The recommendation sheet provides insight to potential business owners along with current owners who may be struggling. The roadmap, which is our main project report, will be used by future project groups to reach the ultimate goal of job creation in the production sector. These deliverables provide insight to owners or future project groups looking to analyze Venetian business. All of the research conducted in the previous tasks will be used in some respect to achieve the ultimate goal of the project.

#### **3.3.1 Making a Recommendation Sheet with General Business Strategies**

Along with our project report, which we hope will be used by future project groups as a roadmap, and our online web map, another deliverable we created was a recommendation sheet that will provide general guidance for production businesses in Venice to grow. The goal behind creating this sheet is to inform potential business owners of ways to better their companies. This sheet includes strategies we gathered from conducting interviews and background research.

Not only do we intend for this sheet to help new business owners, but we believe it can help struggling business owners address their current problems. The common factors of successful businesses show specifically which businesses and management methods foster success. These strategies are outlined in the recommendation sheet so that business owners can reference and utilize them. We used the information we gathered from interviewing business owners to create these strategies. We felt that the advice from current successful business owners in Venice was the most useful in developing these strategies. These entrepreneurs have business experience, and have proven that they can manage a successful business in a unique location. Recommendations for businesses consist of all of the research conducted to give an overall outline for creating success and fostering new business growth. A better understanding of these methods will give business owners new insight into how they can promote their companies.

## **4.0 Results and Analysis**

During our time in Venice, we gained a better understanding of the city's current economy, as well as the struggles and successes current business owners encounter. Our group analyzed Venice's Chamber of Commerce data to break down the current economy to its core, and examined Venice's economic journey from past to present. We also interviewed Venetian business owners to gain insight into business strategies and logistics.

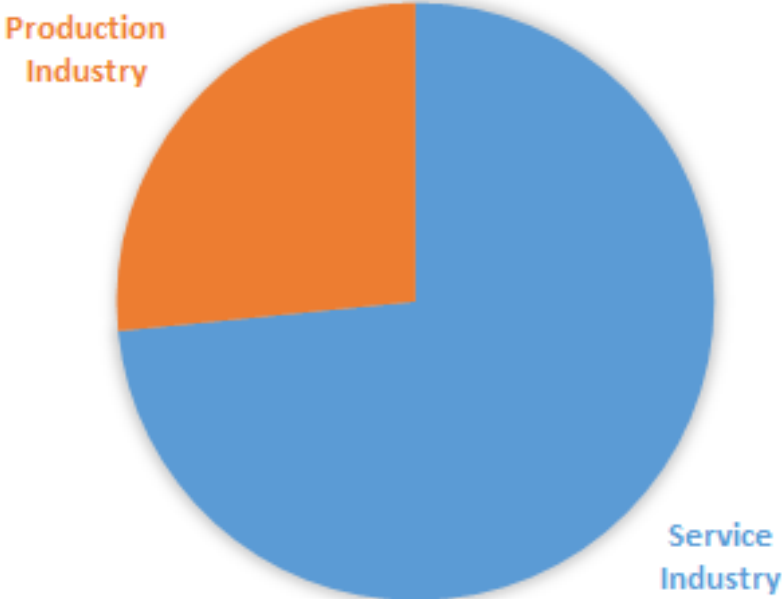
### **4.1 Analysis of Chamber of Commerce Data**

Through the analysis of the Chamber of Commerce data, we gained a deeper understanding of how Venice's economy has evolved from its past to present state. Due to the inconsistency in the data collection for Venetian companies, the data set was incomplete until the middle of 1996. Therefore, our analysis began at the year 1997. Once we translated the data set, we were able to organize it by sector and year. We then created graphics that broke down the evolution of Venetian business by sector for each year. This allowed us to visually represent the city's economic changes over time.

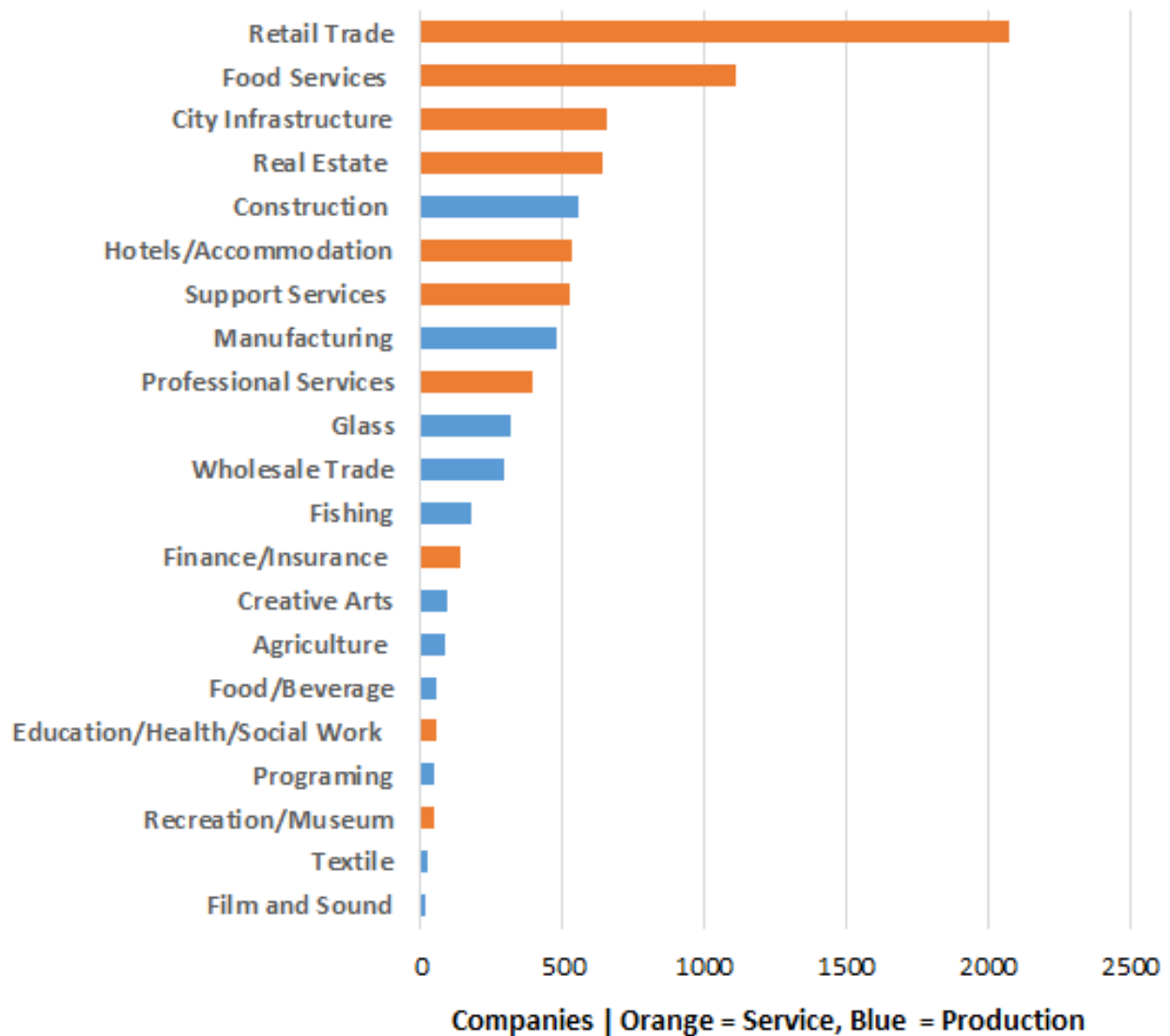
#### **4.1.1 Venetian Businesses Today**

In 2016 there were 8,355 businesses in Venice, 2,220 of which were in the production industry and 6,135 were service-related as seen in Figure 13. Of these businesses, 3711 fell into the three sectors that drive tourism: accommodations, food services, and retail trade; an astounding 44.4% of the total companies in Venice. This is corroborated by Figure 14, which depicts these three sectors as some of the largest in Venice. This large number can be attributed to the more than 50,000 tourists that visit Venice every day. These service companies, such as hotels, restaurants,

and transportation agencies, greatly outnumber the businesses that manufacture goods in the Historic City, and are geared toward visitors. The service and production industries can be further broken down, as depicted in Figure 14 below and analyzed as described in the following sections.



**Figure 13:** Production versus Service Industries. This pie chart shows total number of current businesses in Venice broken down by the service and production sectors.



**Figure 14:** Companies per Business Sector. The number of companies in each sub sector in 2016. Shows the discrepancy between the number of companies in service-related industries and those in production.

The next largest sectors were related to the city's basic functions and needs. The sectors of city infrastructure, construction, real estate, and supportive services accounted for 2,375 of the businesses in Venice, which was 28.4% of the total companies. The final group of sectors was mainly production, as well as some smaller services including education/health/social work, finance/insurance, professional services, and recreation/museums. All of these sectors had under

four hundred companies each, and in total, accounted for 27.2% of the companies in Venice. These three groups, though important to a city's economy, were not present in ratios appropriate for Venice.

The city functions group relied heavily on Venice's residents. The demand for sectors such as transportation, real estate, and construction varied depending on how many people lived in the city. Therefore, the number of people and the size of city determined the demand. The other two groups were slightly different. While some businesses such as restaurants and retail stores were supporting the local people, these three most prevalent sectors were vastly larger in Venice, and existed to support visitors and tourists. The final group, consisting mostly of the production industry and skilled jobs, was made up of businesses that support both visitors and locals.

Although new companies were being created each year, these companies were mostly in food service, accommodations, retail trade, and city infrastructure. The problem was not in the lack of jobs, but in the type of jobs being created. Jobs created in these sectors were not education driven and were low paying, particularly compared to a job that required a high-level degree.<sup>109</sup> So, while there were more companies and jobs each year, they were not fit to support the young, educated people of Venice.

As noted in the previous paragraph, the majority of current and new companies were creating jobs that did not require a university education and did not pay enough to support a Venetian lifestyle.<sup>110</sup> Next, we investigated the types of companies that offered a large number of jobs, and were therefore in a good position to expand. To do this, we analyzed worker distribution

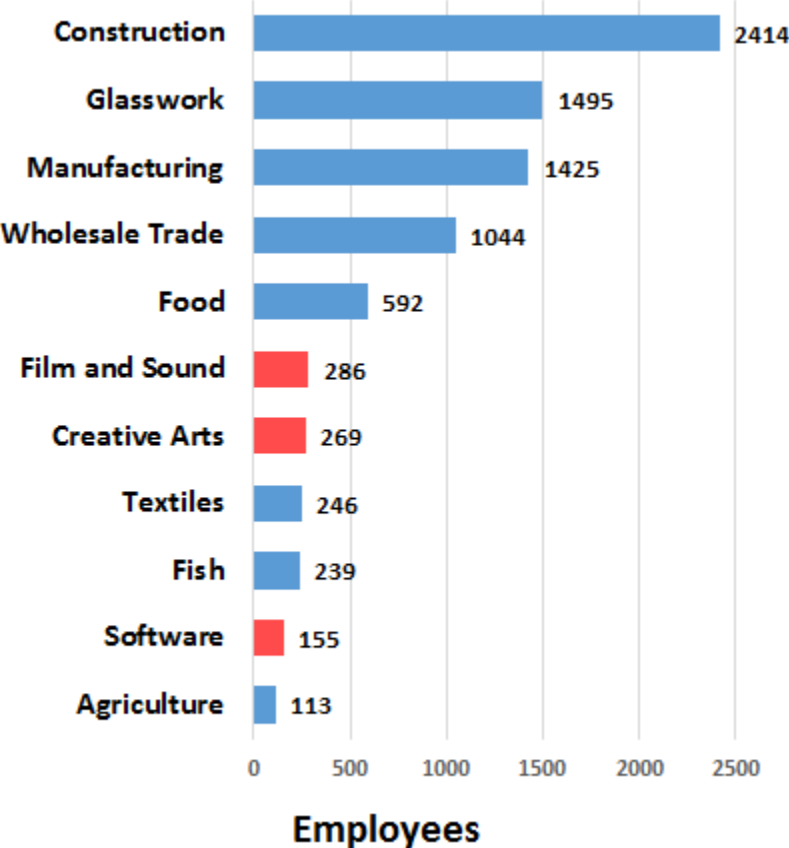
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<sup>109</sup> Pisani, Bob. "Venice: Symbol of Italy's Never Ending Struggles." CNBC., last modified 2014-09-05T09:18:46-0400

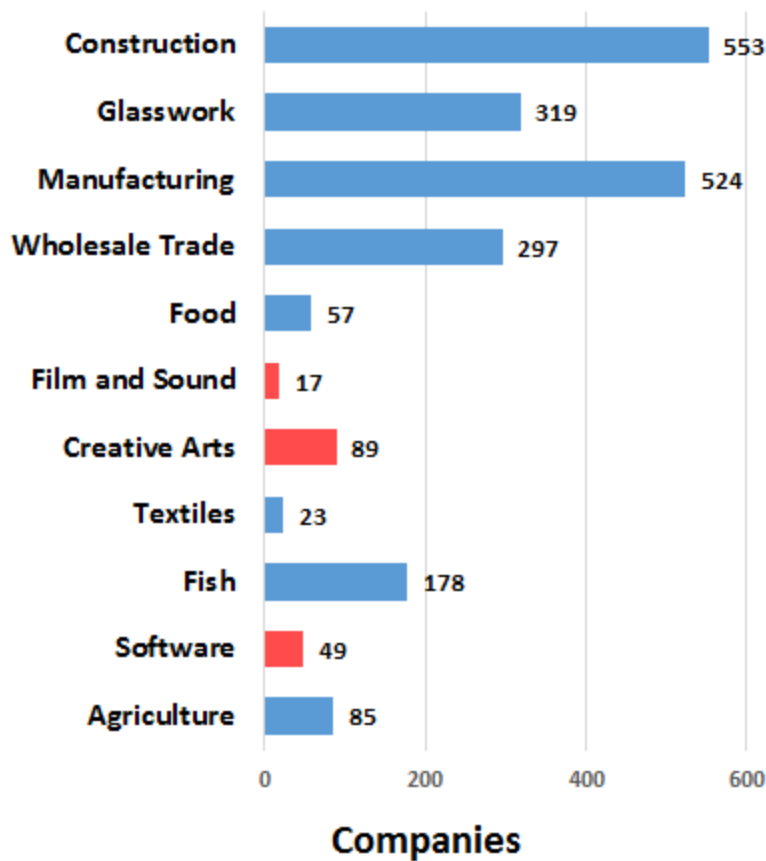
<sup>110</sup> Pisani, Bob. "Venice: Symbol of Italy's Never Ending Struggles." CNBC., last modified 2014-09-05T09:18:46-0400



in production industry by the eleven sectors, shown below in Figure 15. In Figure 16, the same sectors are depicted, but use the number of companies in each.



**Figure 15:** Employees by Production Sector Type. Worker distribution in production industries, material is in blue while immaterial is in red, with the number of workers in each, 2016.

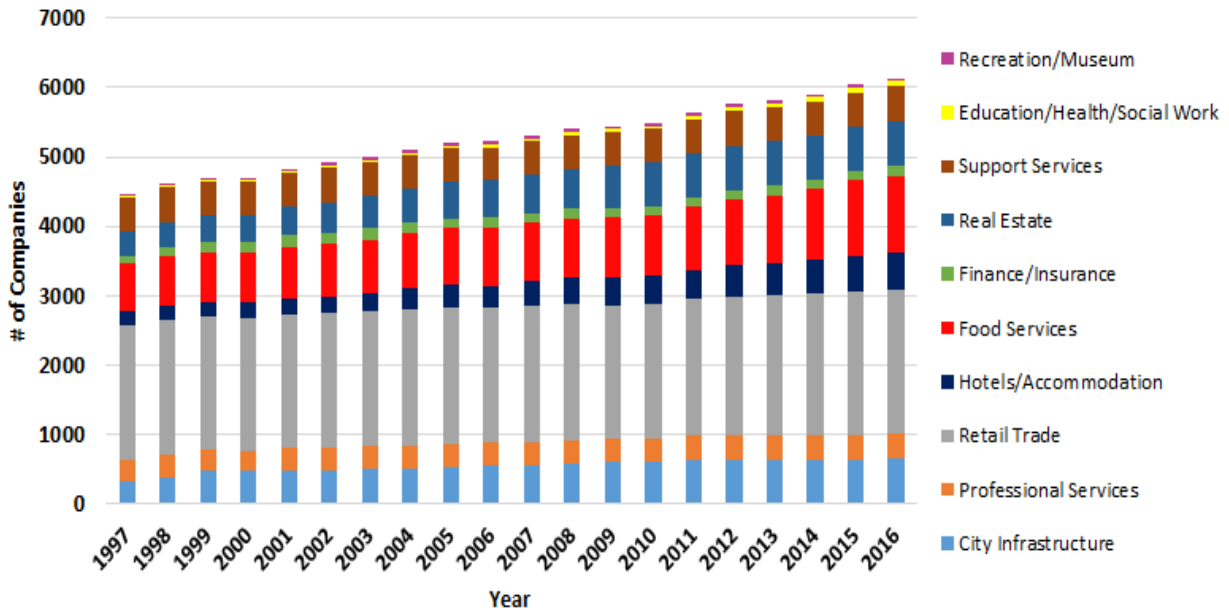


**Figure 16:** Companies by Production Sector. Number of companies in production industries, material is in blue while immaterial is in red. This data is for 2016.

As visible in Figure 16, there were sectors that dominated a large portion of Venetian companies. The top sector on the graph was construction. The sectors that followed were manufacturing, glasswork, and wholesale trade. These industries already had a strong presence in Venice, and some had successful histories, which if harnessed, could make them stronger. While other sectors were not as popular, it is possible to increase their presence with the right guidance and a solid business idea.

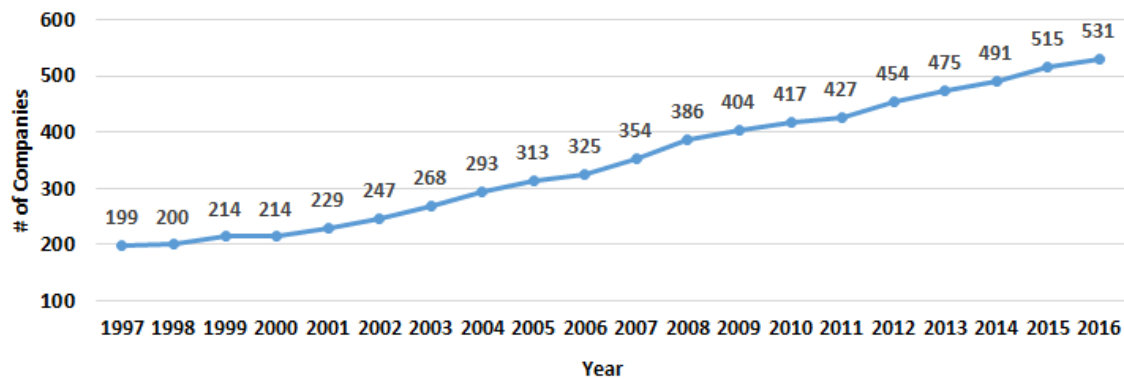
### 4.1.2 Service Industries Analysis

The service industry as a whole is on the rise, and has been for years. Taking a closer look at the nineteen years we have analyzed, all ten sectors included in the service industry have seen increases in number of companies, as shown in Figure 17. A first list of the service industry’s sectors descriptions can be seen in Appendix G.



**Figure 17:** Service Industry Breakdown. The service industry from 1997 to 2016, broken up by business sector. This allows for the visual comparison of the number of companies in each sector from year to year.

When identifying what businesses qualified as services, we focused on the sectors we felt best supported tourism. A major player in that industry was hotels and accommodations. We noticed this particular sector had the largest percentage growth of 166.8%, increasing from 199 companies to 531 in just nineteen years. This can be seen graphically in Figure 18.

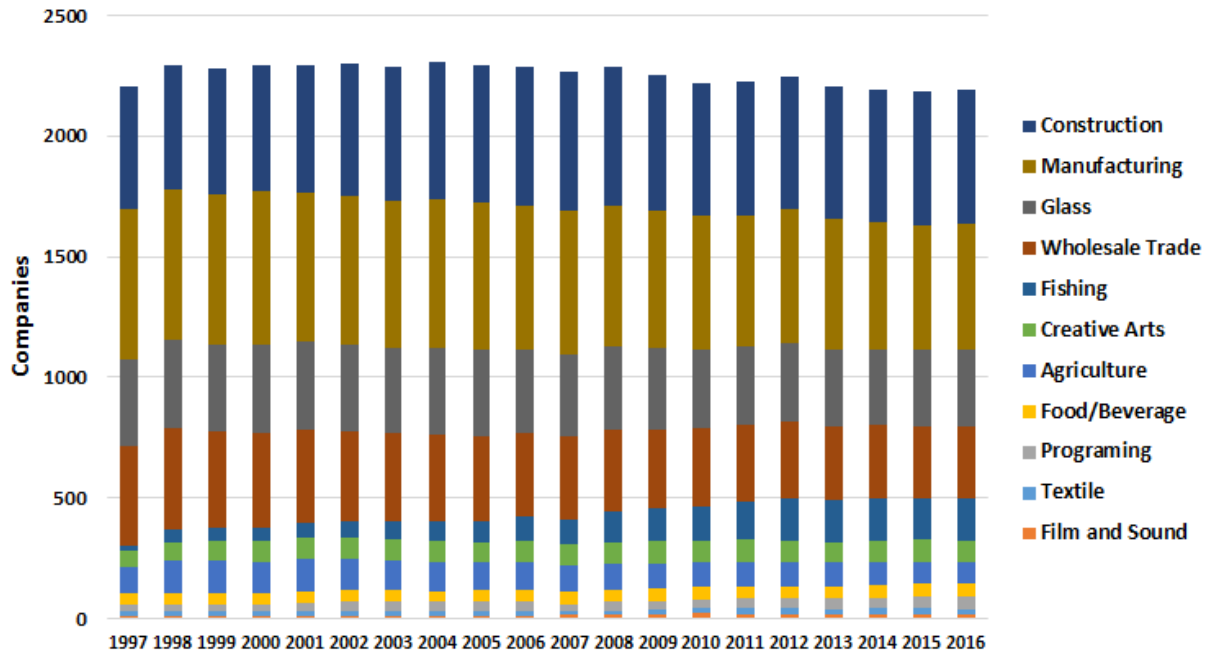


**Figure 18:** Hotel/Accommodation Companies. Shows the increasing number of hotel and accommodation companies from 1997-2016.

While the entire service industry saw growth, a few business sectors dominated these changes. Retail trade and food service have been the top two sectors by number of companies for the last nineteen years. During that time, the two have accounted for between forty-nine and fifty-six percent of service companies. These two industries play a large part in supporting tourist activity in Venice by providing places to stay, eat and shop. The strength of the food service, retail trade, and hotel accommodation sectors leads us to believe that the service industry is reliant upon and caters to tourism.

### 4.1.3 Production Industries Analysis

When looking at the production data, we realized that the number of open companies had not changed much. However, by looking at specific sectors within the production industry, some trends became apparent. There are eleven production sectors in Venice, which can be seen below in Figure 19.



**Figure 19:** Production Industry Breakdown. The production industry over 1997-2016, broken up by sector to depict the growth of each over time.

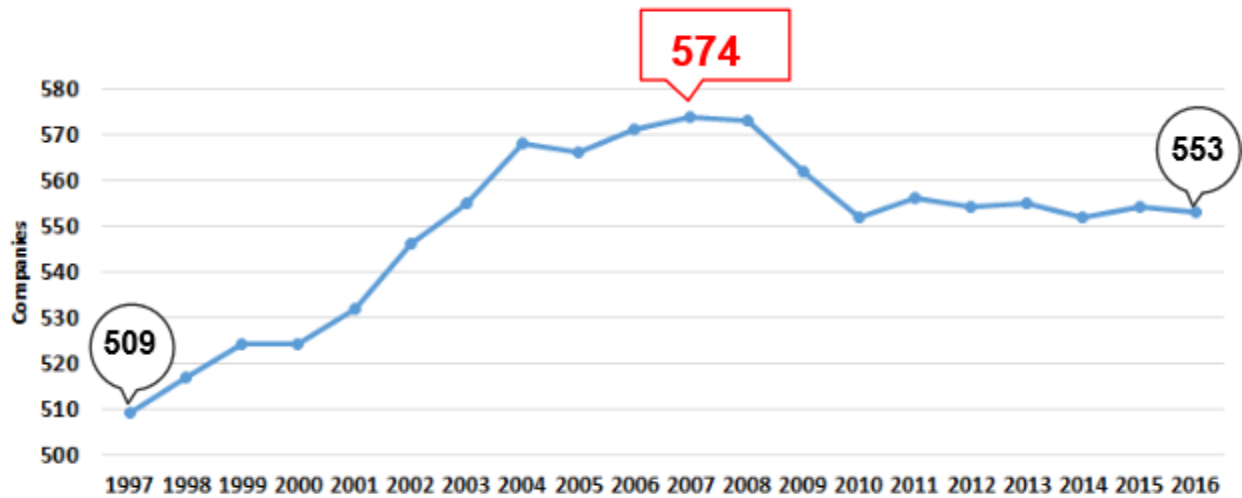
Within the production industry, we further broke down our analysis to focus on the changes in each individual sector. These analyses are as follows in Figures 20-41.

### Construction

Since 1997, construction companies have increased by nine percent, starting at 509 companies and ending at 553 in 2016. It peaked at 574 companies in 2007. The current 553 companies employ 2414 Venetians. Figure 20 is a map of these companies, and Figure 21 depicts the change in the number of companies since 1997. Construction is the highest-employing production industry in Venice, contributing the most companies to the city’s production sector.



**Figure 20:** Construction Company Map. Location of construction companies in Venice using data from the Chamber of Commerce.



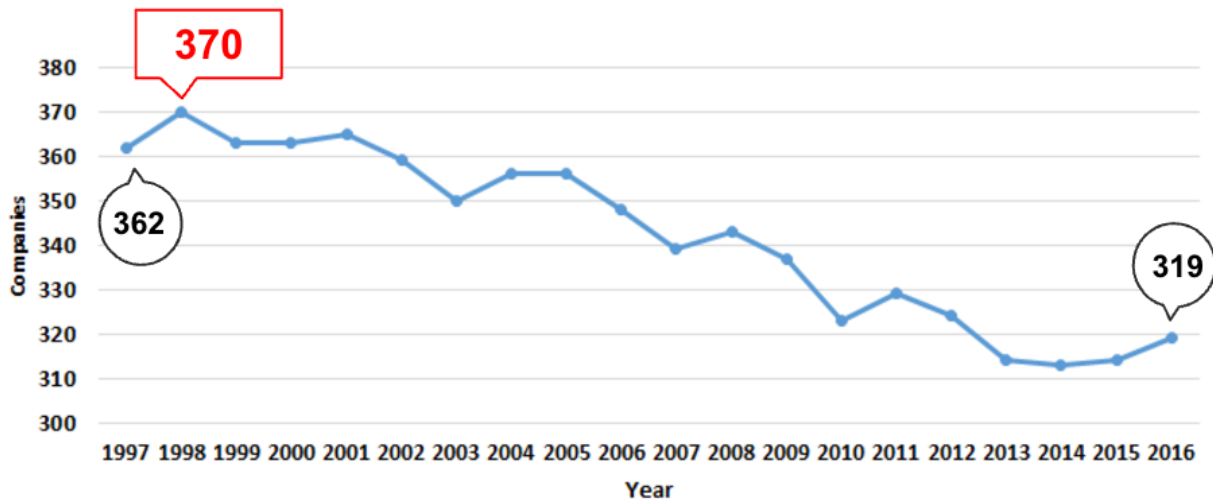
**Figure 21:** Trends Graph of Construction Companies. Graphs shows number of companies from 1997 to 2016 in the construction sector.

## Glasswork

There are currently 312 glasswork companies in Venice, employing 1495 people. This is a 12% decrease since 1997, when there were 362 companies. The industry peaked a year later in 1998, with 370 companies producing glass. Figure 22 shows the map of these companies, and Figure 23 shows the trend in this industry since 1997. Despite this decline, the glasswork industry is the second-largest production sector in Venice.



**Figure 22:** Glasswork Company Map. Location of glasswork companies in Venice using data from the Chamber of Commerce



**Figure 23:** Trends Graph of Glasswork Companies. Graphs shows number of companies from 1997 to 2016 in the glasswork sector.

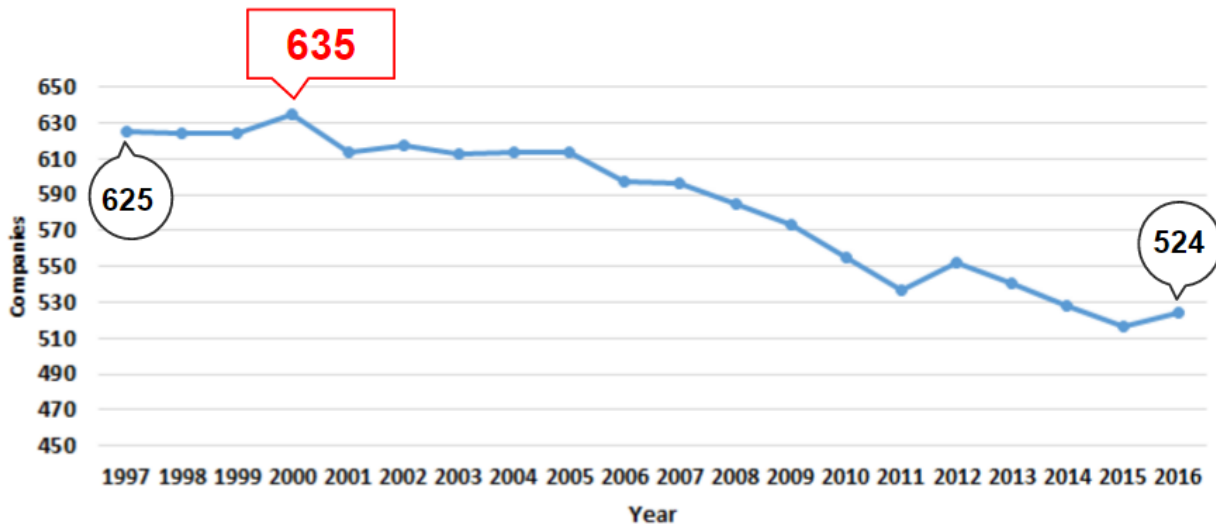
### Manufacturing

Venice is home to 512 manufacturing companies that employ a total of 1413 people. The industry has decreased twenty percent since 1997, from 599 to 482 companies in 2016, with its peak at 607 companies in 2000. Manufacturing is the third largest production sector in Venice, despite the increase in the number of companies. Figure 24 is a map that displays the locations of these companies, and Figure 25 graphically depicts the trend of the number of companies since 1997.





**Figure 24:** Manufacturing Company Map. Location of manufacturing companies in Venice using data from the Chamber of Commerce



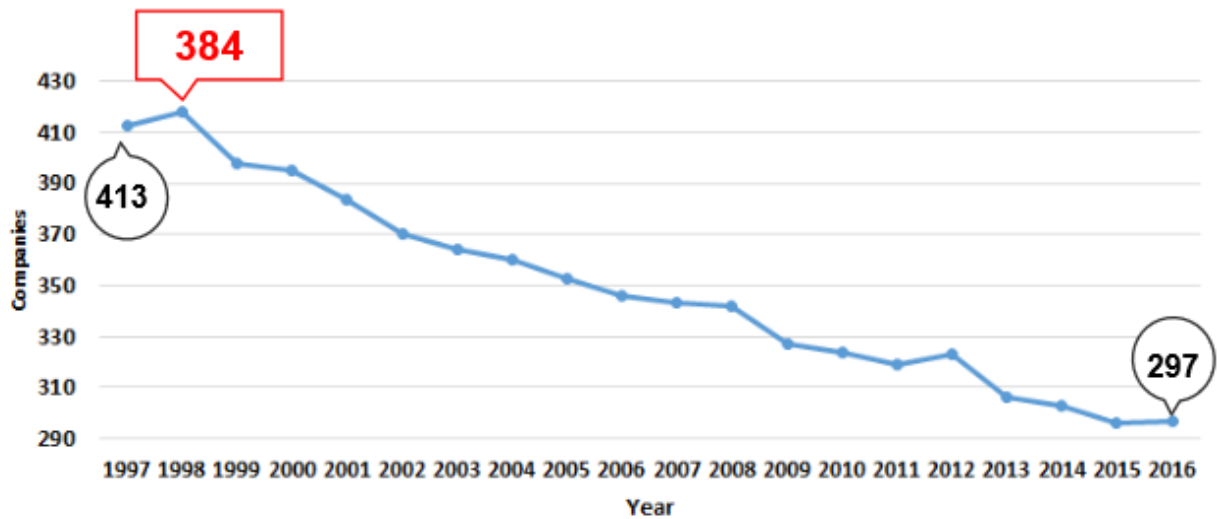
**Figure 25:** Trends Graph of Manufacturing Companies. Graphs shows number of companies from 1997 to 2016 in the manufacturing sector.

**Wholesale Trade**

Wholesale trade, as the fourth largest production industry, is important to Venice’s economy. It provides the resources that production sectors need to make their goods. There are 280 companies in this sector, employing 1017 Venetians. It has decreased twenty-eight percent since 1997, going from 413 companies to 297, with a peak at 384 in 1998. Figure 26 is a map of these companies, and Figure 27 depicts the aforementioned downward trend.



**Figure 26:** Wholesale Trade Company Map. Location of wholesale trade companies in Venice using data from the Chamber of Commerce



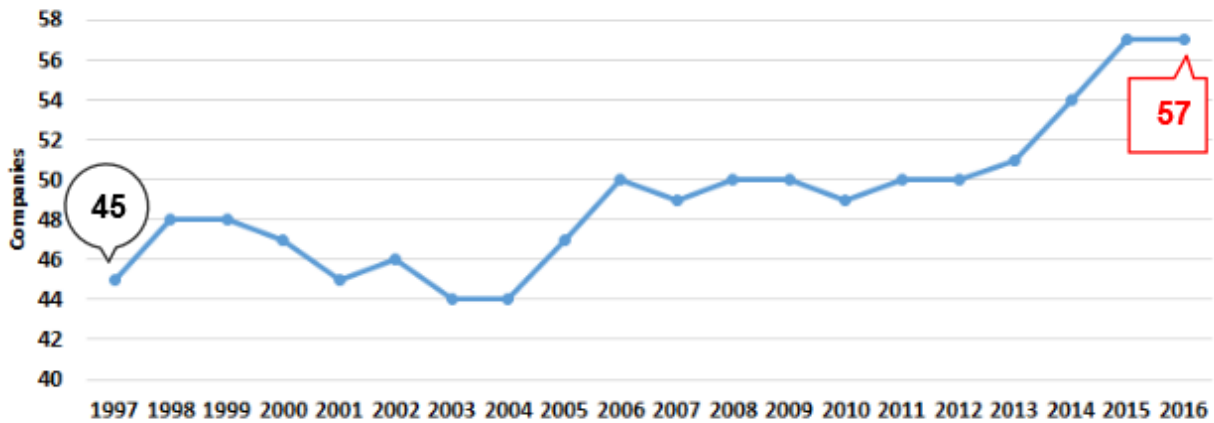
**Figure 27:** Trends Graph of Wholesale Trade Companies. Graphs shows number of companies from 1997 to 2016 in the wholesale trade sector.

### Food

There are fifty-seven companies in food production that employ 568 Venetians. There has been a twenty-seven percent increase in the number of these companies since 1997, beginning at forty-five and ending at a high of fifty-seven in 2016. A map of these locations can be seen in Figure 28, and the trend in the sector since 1997 can be seen in Figure 29.



**Figure 28:** Food Company Map. Location of food companies in Venice using data from the Chamber of Commerce



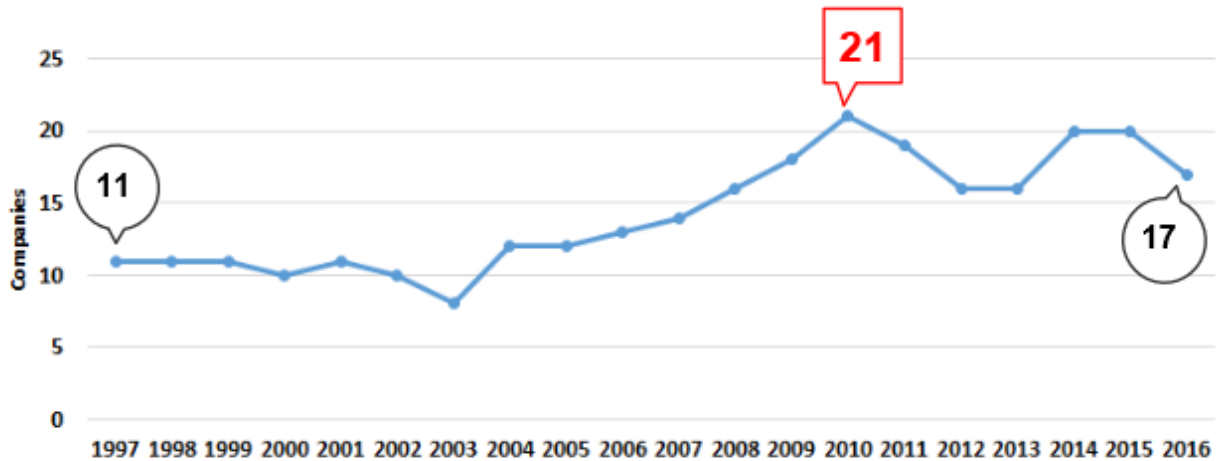
**Figure 29:** Trends Graph of Food Companies. Graphs shows number of companies from 1997 to 2016 in the food sector.

## Film and Sound

Film and sound is the first immaterial sector we discuss. There are 17 companies in Venice that employ 286 Venetians. The locations of these 17 companies on the island can be seen in Figure 30. This industry had 11 companies in 1997 and did not see much growth until 2010 when it hit a total of 21 companies. From that point, the industry was up and down and currently stands at 17 companies. The complete trend line for the film and sound industry can be seen in Figure 31.



**Figure 30:** Film and Sound Company Map. Location of film and sound companies in Venice using data from the Chamber of Commerce



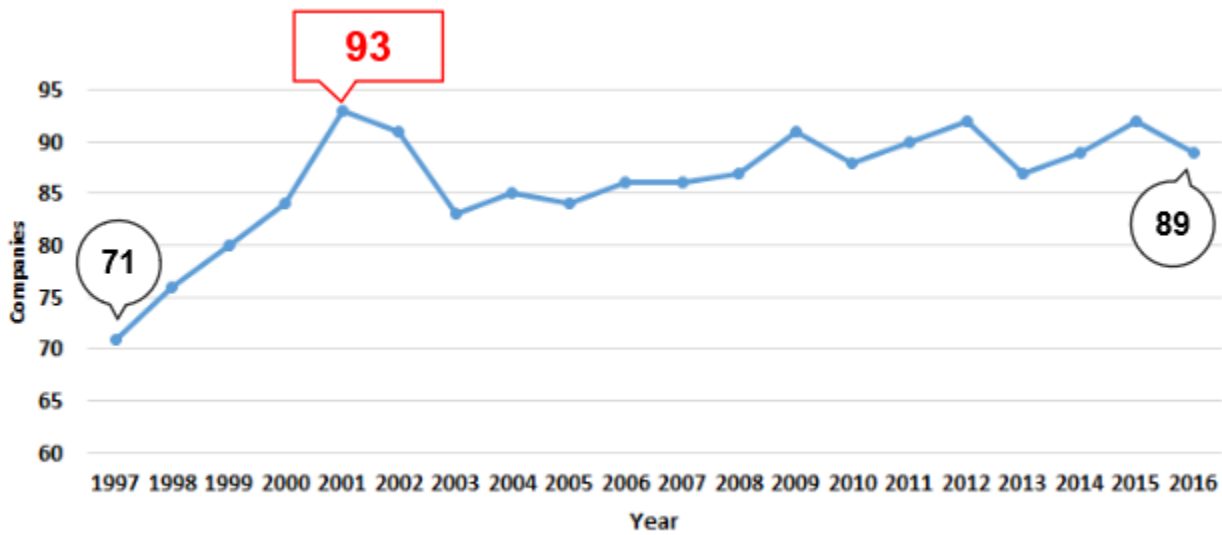
**Figure 31:** Trends Graph of Film and Sound Companies. Graphs shows number of companies from 1997 to 2016 in the film and sound sector.

### Creative Arts

The second immaterial sector we discuss is creative arts production. This incorporates exhibits of art, art museums and plaster artists. There are currently 89 companies in the creative arts sector and this is responsible for employing 269 venetians. This can be referenced in Figure 32 below. From 1997 to 2001, the arts were on the rise. It hit its peak in 2001 at 93 companies but since then has not made much process and currently remains at 89 companies. This graph can be seen in Figure 33.



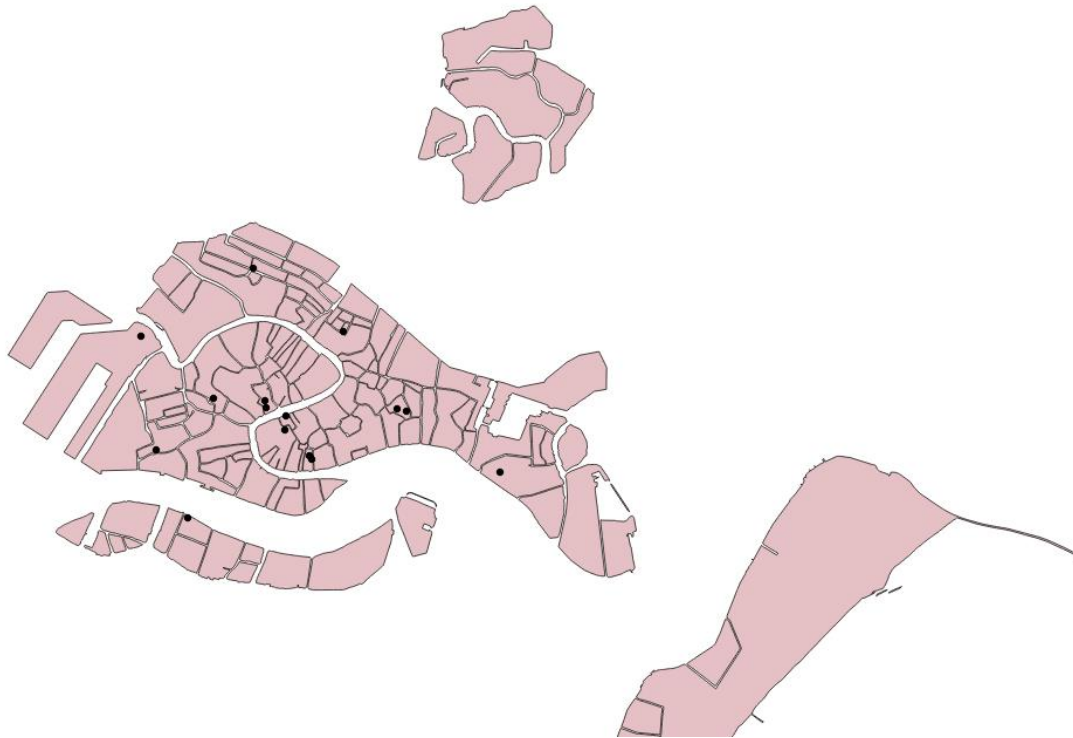
**Figure 32:** Creative Arts Company Map. Location of creative arts companies in Venice using data from the Chamber of Commerce



**Figure 33:** Trends Graph of Creative Arts Companies. Graphs shows number of companies from 1997 to 2016 in the creative arts sector.

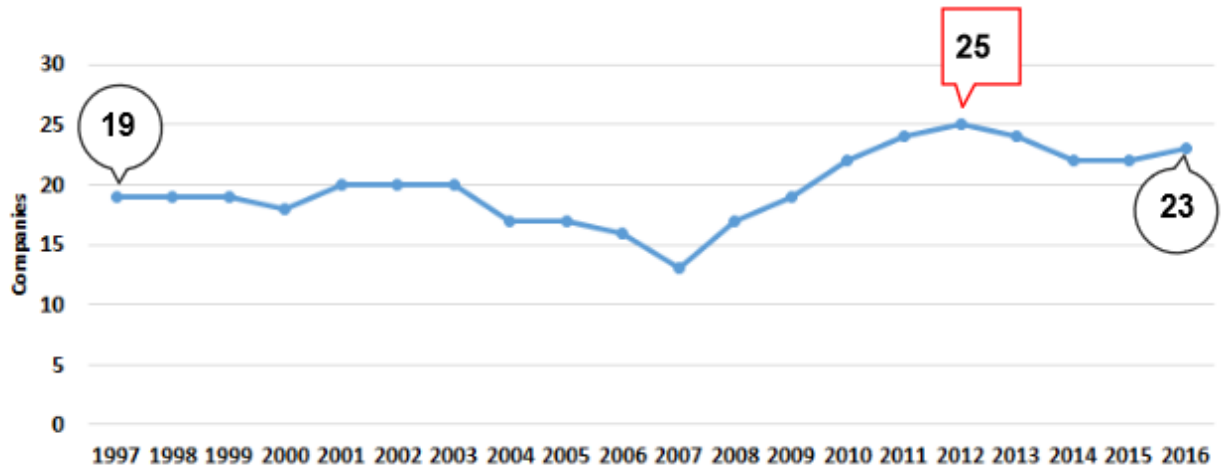
## Textiles

In Figure 34 you can see that there are twenty-three textile companies in Venice in 2016, and this number has stayed fairly consistent since 1997. This sector employs 246 Venetians and has saw a high of twenty-five companies in 2012; six more companies than it had in 1997, which was nineteen as seen in Figure 35. Although this industry makes up a small portion of Venice's production sector, its numbers have stayed constant, indicating that it is relatively stable.



**Figure 34:** Textile Company Map. Location of textile companies in Venice using data from the Chamber of Commerce





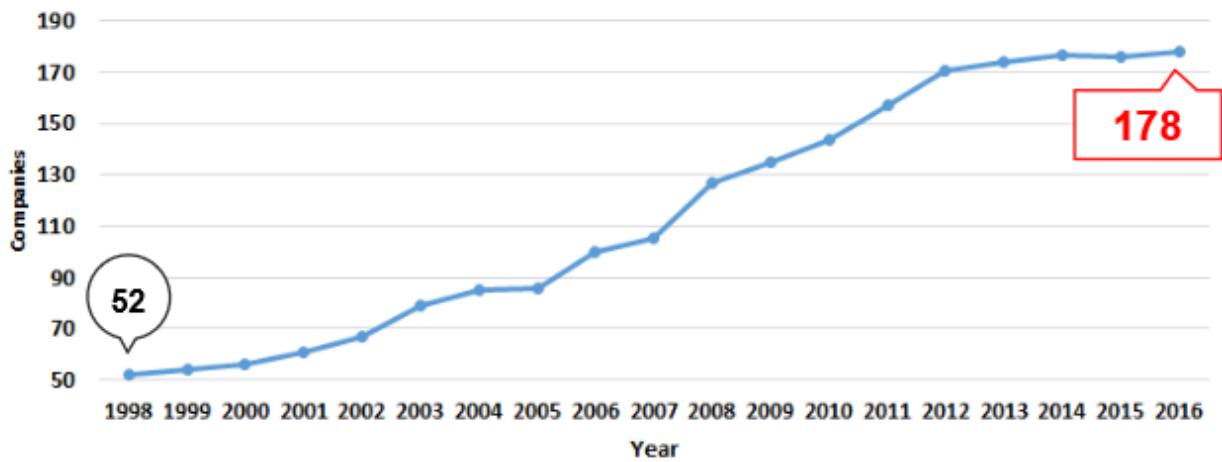
**Figure 35:** Trends Graph of Textile Companies. Graphs shows number of companies from 1997 to 2016 in the textile sector.

### Fishing

The fishing industry has seen the most dramatic change over the past 20 years. It currently has 178 companies in Venice that employs 239 venetians. Figure 36 displays where they are located in Venice. Since most of these fishing industries do not have headquarters, they do not have addresses and as a result cannot be shown on the map below. Starting in 1997, the fishing industry only had 52 companies, and since then has increased by 240%. It has peaked this year, in 2016 to a total of 178 companies. This can be seen in Figure 37.



**Figure 36:** Fishing Company Map. Location of fishing companies in Venice using data from the Chamber of Commerce



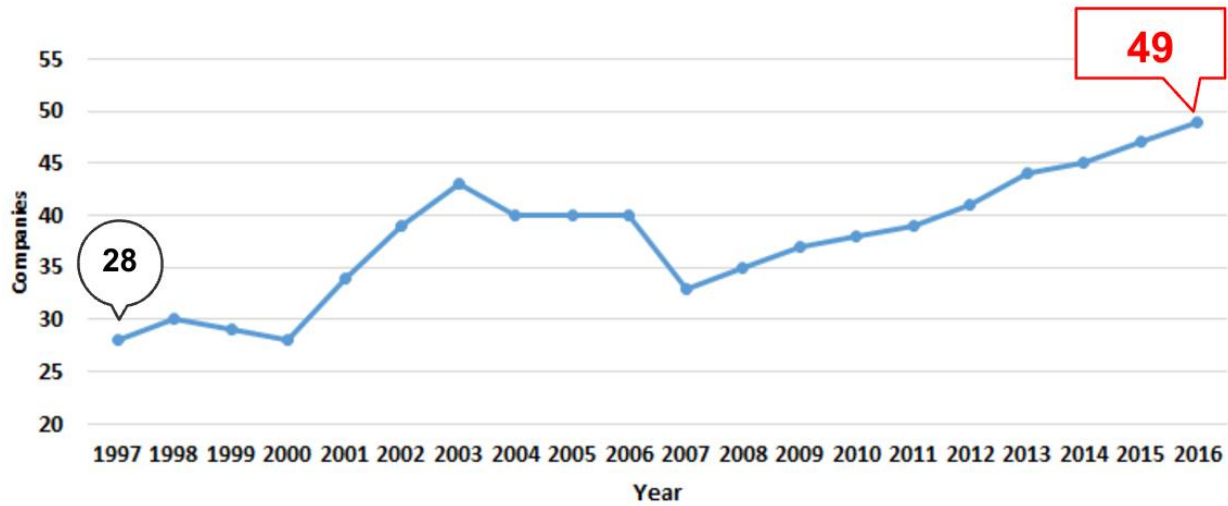
**Figure 37:** Trends Graph of Fishing Companies. Graphs shows number of companies from 1997 to 2016 in the fishing sector.

## Software

As seen in Figure 38, there are forty-nine software companies in Venice, that employ 155 people. This is the most companies in this sector since 1997, when there were twenty-eight. Looking at Figure 39, there has been an eighty-four percent increase in the number of software companies since 1997.



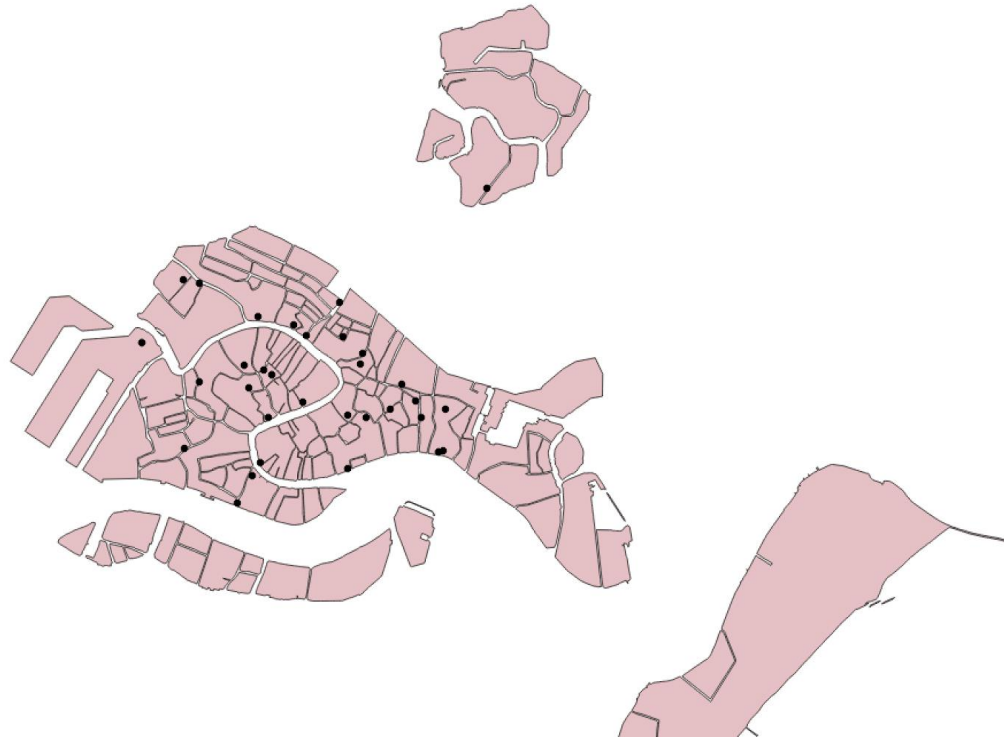
**Figure 38:** Software Company Map. Location of software companies in Venice using data from the Chamber of Commerce



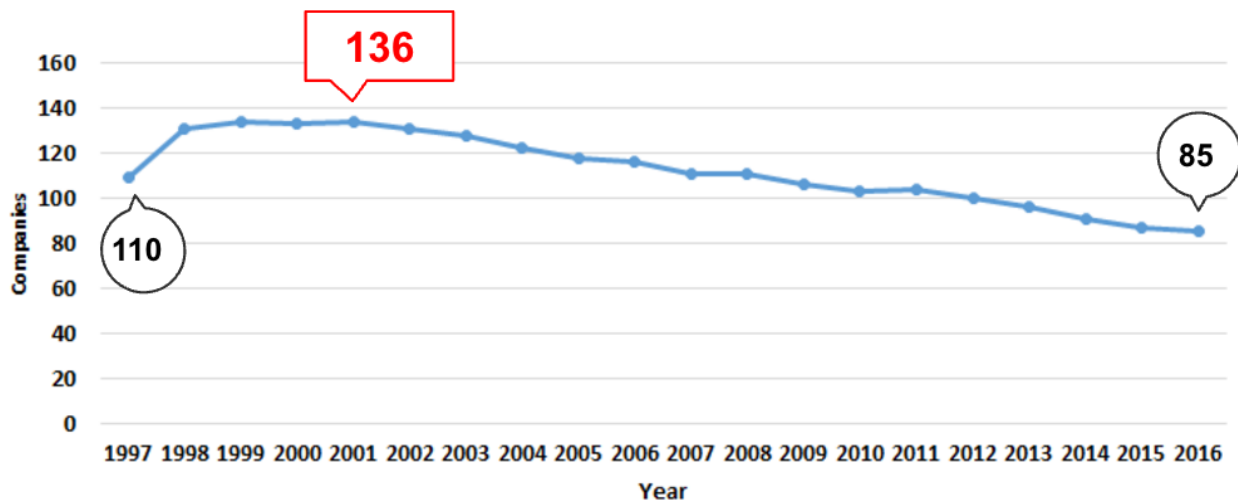
**Figure 39:** Trends Graph of Software Companies. Graphs shows number of companies from 1997 to 2016 in the software sector.

## Agriculture

Agriculture is the last sector in the production industry. This sector currently employs 113 and has a total of 85 companies. The locations of these companies can be seen in Figure 40 below. Although agriculture peaked in 2001 at 136 total companies, it has decreased 21% since 1997. It currently has 85 companies. This can be seen in Figure 41 below.



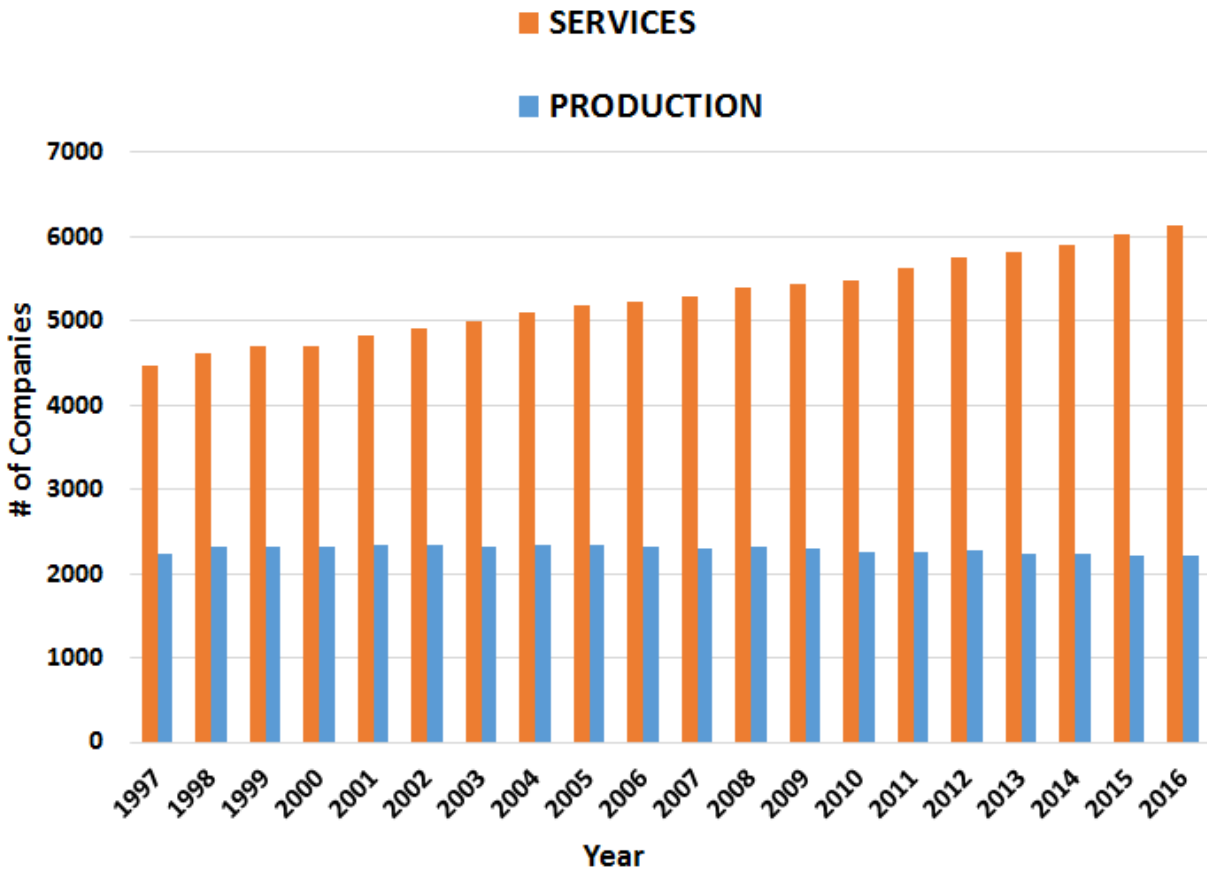
**Figure 40:** Agriculture Company Map. Location of agriculture companies in Venice using data from the Chamber of Commerce



**Figure 41:** Trends Graph of Agriculture Companies. Graphs shows number of companies from 1997 to 2016 in the agriculture sector.

#### **4.1.4 Venice's Service and Production Gap**

When looking at the Chamber of Commerce data, we noticed that the service industry is larger than the production industry. In 1997, services outnumbered production 2:1, and by 2016, this margin increased to more than 3:1. As shown in Figure 42, this gap continues to grow. From 1997-2016 the number of companies in the service industry grew 35.7%, while the same number for the production industry dropped 0.8%. These figures suggested that a large percentage of these new companies are in the service industry. Every year, it grows by an average of 87 companies. In Venice, the service industry controlled the economy and the gap between services and production continues to grow. These trends proved that Venetians are focusing their business efforts on the lucrative tourist industry.

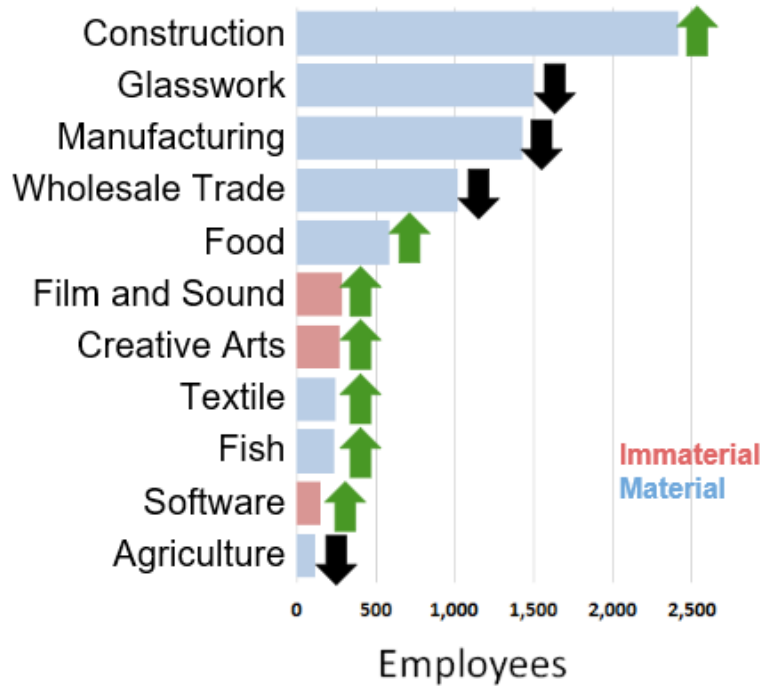


**Figure 42:** Service versus Production Companies over Time. This graph depicts the number of companies open on January 1 of each year, 1997-2016. The number of companies in the service industry rises steadily, while the number of production companies makes a slight decline.

### 4.1.5 Analysis of Overall Trends

Figure 43 below shows which sectors have increased or decreased their total number of companies from 1997 to 2016. There are a total of seven sectors that have increased its number of companies over the past nineteen years. These include construction, food, film and sound, creative arts, textile, fish and software. It is important to note that all immaterial sectors in production have increased, which is a good sign for the future. All immaterial sectors can be seen in red in the figure below. There was also four sectors in the production industry that saw a decrease in the number of companies in Venice. These include glasswork, manufacturing, wholesale trade and

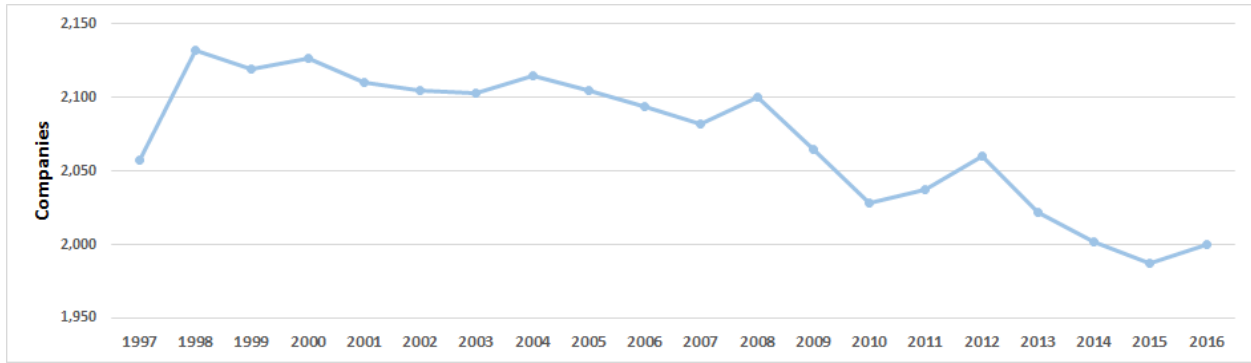
agriculture. It important to reference that out of these four sectors that saw a decrease that three them fall under the top four sectors that have the most companies. If these bigger industries continue to lose companies this could affect the city.



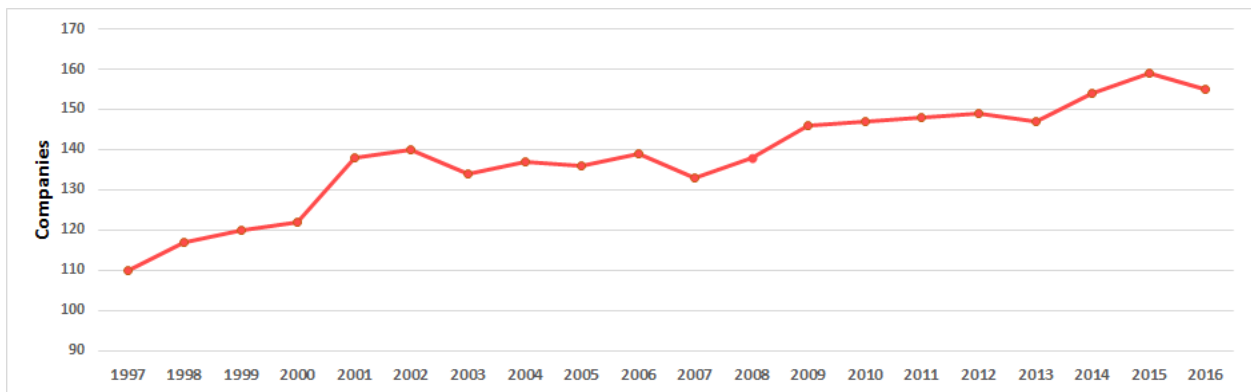
**Figure 43:** Summary of Increasing and Decreasing Sectors. Green up arrows indicate sectors that saw an increase in number of companies while black down arrows indicate a decrease in companies.

We also compared the number of material production companies to the number of immaterial production companies from 1997 to 2016. We noticed that the number material production companies has decreased fairly steadily over time, while the quantity of immaterial production companies has been increasing. The material production trend can be seen in Figure 44, and the immaterial production trend can be seen in Figure 45.





**Figure 44:** Number of Material Production Companies. This graph shows the downward trend in the number of material production companies from 1997 to 2016.

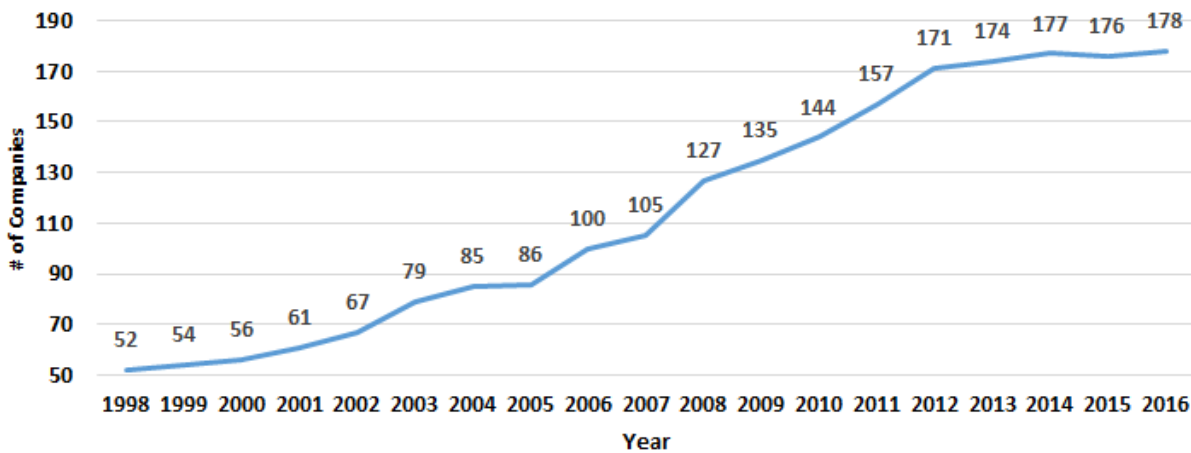


**Figure 45:** Number of Immaterial Production Companies. This graph shows the upward trend in the number of immaterial production companies from 1997 to 2016.

Within the production industry, every business sector saw a change in the number of companies over this period of nineteen years. However, the industry has been consistently dominated by a few individual sectors. As displayed in Figure 19, the sectors of wholesale trade, construction, and glass/ceramics/rubber control a large portion of the industry. These three sectors have accounted for anywhere from fifty-three to fifty-seven percent of all production companies in the last nineteen years, supporting production throughout our time period of interest.

The only standout change occurred in the fishing sector: it saw a noticeable increase, from fifty-two to 178 companies over the last nineteen years. This is an average increase of 13.5% each

year, which can be seen in Figure 46, below. Compared to other sectors, this change was massive, as the next largest change was in technology, at only a four percent increase per year. Other production sectors that saw increases included construction, arts/entertainment, and food/beverage, at around a one percent yearly increase. There were similar decreases, as agriculture, wood/paper, electrical/computer, and wholesale trade saw an average 1.5% to two percent decrease per year. Overall, although Venice’s fishing industry was not particularly large, the importance of it lay in its documented growth and potential to continue growing



**Figure 46:** Fishing Companies. The number of fishing companies from 1997-2016, showing the industry’s steady increase in size.

If the service industry continues to dominate the production sector as it currently does, the number of production companies will continue to fall. This could turn Venice into a ghost town, populated only by tourists during the day, with a severe lack of genuine Venetian goods being sold. However, if Venetians work to increase the number of production companies, particularly those in immaterial sectors, this trend could be reversed.

## **4.2 Interviews of Sample Venetian Companies**

During our time in Venice, we visited and interviewed companies to gain specific insight into how business works on the island. While data analysis can result in many important conclusions, conducting interviews granted a different type of understanding, including physical observations, of each business. We interviewed businesses from a few different sectors in order to obtain a diverse sample, including food, textiles, and glasswork, as well as a company that moved to the mainland.

### **4.2.1 Food and Strategic Locations**

#### **Torrefazione Cannaregio**

Torrefazione Cannaregio is a coffee shop that roasts its beans daily and creates artisan blends to sell to customers. The large coffee roaster behind the counter, the only gas roaster remaining in Venice, created a reputation for the business. This company strategically places its shops on tourism paths to attract more customers. Torrefazione Cannaregio serves fresh drinks, but sells three times as much coffee in bags. Most of their business is done online, where eighty percent of customers are international. While their production is optimized, one thing they said they would like to invest more in is advertising, which would help their business reach more customers. The main things we learned from interviewing this business are as follows:

- Uses its locations to market to tourists that could buy from e-commerce upon returning home
- Customers appreciate tradition and artisanship in local products.

- Creating variety within the product keeps customers interested, and as a result, causes them to order merchandise online.

## **Majer**

Majer is a coffee shop, winery, bakery, and restaurant, who makes roughly five to ten percent of their revenue through e-commerce. They focus mainly on the tourist market, with all of their stores placed on tourist paths. They work to provide the highest quality goods to their customers and allow the brand's success to build its reputation. If they shifted their focus to e-commerce, they feel the stores would suffer because customers would shop online for better prices. However, they recognize that not all approaches will work, and that learning from their experiences is the way to be successful. The major points we learned from Majer are as follows:

- Consistency and quality will allow a brand's reputation to be built.
- Advertisement is something companies want, but cannot afford to do well because of its high price. This is why they allow their quality products to speak for themselves.
- Experimentation is necessary, even when logistics make business difficult, as in Venice.
- Their shops are strategically placed to intercept common tourist routes and commuters

## **I Tre Mercanti**

I Tre Mercanti is a shop that sells many different types of tiramisu, macaroons and specialty products such as oils, pastas, spice blends and cheeses. They are known for creating tiramisu in the window of their shop to attract locals and tourists wanting to try their product. They currently

have three stores: Venice, Italy; Seoul, South Korea; Riyadh, Saudi Arabia. They push franchising their business and hope to open many other locations in the future.

- New flavors of tiramisu each day helps keep customers coming back to taste all they have to offer.
- Creating their tiramisu in the window for potential customers walking by to see is a great way to advertise their product without spending extra money.
- They have big aspirations to grow and expand. Franchising their business idea brings more publicity to the I Tre Mercanti name.

#### **4.2.2 Historic Companies with High-Value Products**

##### **Luigi Bevilacqua**

The textile company that we visited was Luigi Bevilacqua, which is the only hand-woven textile manufacturer in Venice. Their small number of employees and time consuming production result in long wait times for finished goods and high prices. While they have had the opportunity to move off the island, the company feels that tradition and creativity are much more important than lower costs for shipping and logistics. Their largest markets are interior designers, high fashion, and personal orders from international buyers. While the market for this high-value, luxury product is quite small, the product itself is still very exportable, due to its unique nature.

- Tradition and creativity are valuable in Venice, and are more important than simplicity with regard to transportation, etc.
- Some companies have small markets, and have no desire to expand or franchise because it does not fit the size of their customer base.

- For a handmade product whose production requires years of training, long term orders are necessary to justify the hiring of new employees.
- Utilizes its niche market to sell expensive product to high-profile international buyers.

## **Orsoni**

We visited was Orsoni, which produces glass tiles for high-value projects such as mosaics, including large projects, decor, private residences, and restorations. Their business is small, and they prefer not to hire more workers due to space limitations and fluctuating demand for their product. While it is approximately twenty percent more expensive to operate their production in the Historic City, creating an artistic product in one of the most artistic places is more important to them than that cost. They receive requests for tours and documentaries, which helps with publicity.

- Logistics are difficult. Special permission is required for them to move large boats through their small canals.
- Building a reputation is easier when using the name of the family that owns it.
- Adding an additional service such as a facility tour helps bring customers in and publicizes the business/product.

### **4.2.3 Social Media and E-Commerce Presence**

## **Dogal Strings**

Dogal Strings produces strings for many different musical instruments and moved to the mainland in 1997. While it is definitely less expensive in every aspect to operate outside the

Historic City, they moved to shorten commuting times for their female employees. Additionally, the ability make noise during production and mechanical testing is not an option on the quiet islands. This new location is in a building with other artisan companies, which creates a sense of community. Dogal Strings still puts creativity and consistency at the top of its list of priorities, and the mainland allows this balance between cost and quality. They use social media as their main form of advertisement since all of their products must be purchased on e-commerce.

- Logistics are difficult and expensive in Venice!
- It is hard to be a production company in the Historical City of Venice since the city is so quiet and loud noises are unwelcomed.
- Strategic use of social media to market their product in a cheaper way than traditional advertising.

#### **4.2.4 Consortium with Certified Trademark**

##### **Consorzio Promovetro Murano**

Consorzio Promovetro Murano focuses on advertisement and logistics for the forty-seven glass factories it represents. Logistics are extremely difficult for glass companies, and shipping raw materials and finished products is very expensive. The Consorzio provides wholesale inventories of materials to its businesses, and markets a “trademark” sticker to its customers. This sticker is not a measure of quality, but a geographic certification, promising the authenticity of the glass. The glass industry has problems with cheap, counterfeit products from Asia, and this sticker combats this issue. Glassmakers can also expect the sticker to help their image, as it associates their brand with authenticity and the traditionalism that runs through the Murano glass industry. We believe that a trademark stick, such as the one provided by the consorzio is a great way to

attract customers into buy more high quality goods. If customers can be assured that their goods they are purchasing were made right in Venice they will be willing to spend more money on them.

- Authenticity will help build a brand and bring in customers who care about the quality of their product more than the price.
- Logistics are difficult for production companies in Venice.
- Location matters: Placing a company catering to a specific market directly in that market makes a difference in sales and reputation.
- Other sectors in Venice could benefit from a trademark sticker like this to increase value and product security

#### **4.2.5. Summary of Interviews**

Overall, we learned that Venetian business rely on word of mouth and self-developed reputation to advertise their products. These business would rather spend money on improving their products than on advertising. While logistics are difficult, keeping the business in Venice adds an element of tradition and authenticity to the product; both of which are extremely valuable for artisan goods. However, it sometimes makes sense to transition all or part of the company to the mainland in order to maintain creativity and to respect the skilled employees who make the product. Although many of these products belong to niche markets, these business owners recognize that by producing quality goods, they attract customers who can afford them and will appreciate their value.



### 4.3 Analysis of Attempts to Promote Business

We looked closely at initiatives implemented by other cities, and chose aspects of each that we deemed important to creating successful production businesses in Venice. The first idea stemmed from the MEST initiative. This group ran an investor-driven incubator, but stood out for its education program. We felt that the practice of educating community members in entrepreneurship played an important role in developing more successful businesses by establishing a forward-thinking mindset within the community.<sup>111</sup> H-farm, another successful incubator, had a very successful 4 month accelerator program. This program was unique in how it developed an idea into a business. H-farm brings together experts from different disciplines, who can contribute to developing the product. Building the team around the owner and subject of the project allows the individuality of the idea to come first.<sup>112</sup>

From New Urban Mechanics, we learned that a government needs to support business improvement initiatives for them to be successful. New Urban Mechanics began in the mayor's office of Boston, Massachusetts, and therefore had support from the start. This type of top-level support is important when working to improve an urban area. New Urban Mechanics worked with entrepreneurs who had businesses that worked solve the city's problems. The mayor who ran the initiative was then able to connect these entrepreneurs to the private business that would help them develop their idea. Leadership from the government, and a group with a tenacious, problem-solving attitude, could be successful in Venice.<sup>113</sup> Finally, our research into Y-Combinator, one of

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<sup>111</sup> Evans, Daniel. 2015. Developing and Analyzing Entrepreneur Networks: Data Collection in the Tech Entrepreneurial Environment of Six African Cities.

<sup>112</sup> "Who we are/ what we Do." H-Farm Website., <http://www.h-farm.com/h-farm/>.

<sup>113</sup> "Boston." Accessed december 13, 2016. <http://newurbanmechanics.org/boston/>.

the world's most prestigious incubators, confirmed that to make a new business successful, a good idea is the most important part.<sup>114</sup> Everything else can be developed after.

#### **4.4 Development of Recommendation Sheet**

To help us leave a lasting impact on Venetian businesses, we developed a one-page recommendation sheet that could be distributed to entrepreneurs who have already started, or plan to start, a production company in Venice. We utilized the information we gathered from our interviews with business owners, as well as our background research of past attempts at improvement, to develop these tips. Basing the recommendations on the comments and observations of successful business owners adds a level of credibility to the sheet. Researching past attempts and evaluating their success also helped. We were able to apply strategies used in various incubators and accelerators, which have been proven successful by launching popular companies. The sheet includes the rationale behind our suggestions, along with six simple, easy-to-understand business recommendations. We designed the sheet on the computer in order to make it neat, colorful, and visually appealing. The sheet can be seen in below in Figure 47.

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<sup>114</sup> “Y-Combinator.” Y-Combinator.2

# Made in Venice

## Tips for Venetian production business: present and future



### Unique businesses in a unique city:

Logistics are difficult for businesses in Venice’s Historic City. Awareness and extra attention can help overcome this.

In order to promote the growth of production industries in Venice, there are strategies that businesses should be implementing. We believe that upon implementation, these suggestions can have a positive impact on individual businesses and the Venetian production sector as a whole.

<p style="text-align: center; font-size: 2em; font-weight: bold;">4</p> <p style="text-align: center; font-weight: bold;">ADVERTISE</p> <p>Investing in good advertising will effectively promote your product to locals, tourists, or your desired audience.</p>	<p style="text-align: center; font-size: 2em; font-weight: bold;">5</p> <p style="text-align: center; font-weight: bold;">E-COMMERCE</p> <p>Selling your product online will allow one-time, visiting buyers to become long-time, repeat customers.</p>	<p style="text-align: center; font-size: 2em; font-weight: bold;">6</p> <p style="text-align: center; font-weight: bold;">COLLABORATE</p> <p>Building relationships with similar businesses will market your business and products, as well as grow your customer base.</p>	<p style="text-align: center; font-size: 2em; font-weight: bold;">1</p> <p style="text-align: center; font-weight: bold;">KNOW YOUR CUSTOMERS</p> <p>Aim advertising at your target audience based on the proper market for your product.</p> <hr/> <p style="text-align: center; font-size: 2em; font-weight: bold;">2</p> <p style="text-align: center; font-weight: bold;">EMPHASIZE STRENGTHS</p> <p>Use what makes your company special, such as tradition or machinery, to your advantage!</p> <hr/> <p style="text-align: center; font-size: 2em; font-weight: bold;">3</p> <p style="text-align: center; font-weight: bold;">EDUCATE &amp; INCUBATE</p> <p>Learn about your industry, and join an incubator or accelerator if possible. This will jump-start your idea!</p>
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**Figure 47:** Recommendation Sheet. This is the recommendation sheet we developed for new or current production businesses. It gives suggestions for improving a business, and could therefore improve the production sector as a whole.

## 5.0 Conclusion and Recommendations

In conclusion, from our research and interviews, we determined that there is a lack of production-based businesses in Venice. Currently, in 2016, service companies outnumber production companies by nearly three to one. While sectors such as food service, retail trade, and city infrastructure dominate large portions of the economy, we focused our analysis on the Venetian production sectors. Using the Chamber of Commerce data we were given, we analyzed the past and current states of each production sector. This allowed us to determine whether each sector saw an increase or decrease in the number of companies open between 1997 and 2016. Overall, glasswork, manufacturing, wholesale trade, and agriculture saw decreases in the number of companies during this period. On the other hand, construction, food, film and sound, creative arts, textiles, fishing, and software all saw increases.

It is important to note that every immaterial sector, meaning film and sound, creative arts, and software, increased in number of companies. Since Venice is an island city, all production supplies must be brought in by boat through the canals, and sometimes walked over numerous bridges. However, when operating a company that produces immaterial goods, such as software, there is no need for large shipments of raw materials. This, combined with the increases in these immaterial sectors, supports our conclusion that immaterial production is a feasible solution in Venice.

While tourism (that is supported by these service companies) plays an important role in the Venetian economy, it is necessary to expand the city's production sector. When an area relies heavily on one industry for economic sustenance, it leaves itself vulnerable to severe damage, should that one industry suffer. We concluded that the best way to improve the production industry

is to focus on growing individual sectors based on trends we found in the data. Based on our data analysis, we found that fishing has been on an upward trend in the last eighteen years, along with immaterial goods. With these conclusions in mind, we believe that Herion should be repurposed as an incubator for companies working with immaterial goods. Once the maintenance in Herion is arranged and improved, these companies can collaborate with each other to develop new ideas that can help address Venetian problems.

## **5.1 Main Recommendations Based on Results Section**

By analyzing our results section, we have come up with a set of recommendations we feel could benefit the city of Venice. We came to these recommendations by using the graphics we created in the results section using the Chamber of Commerce data, our interviews with local businesses, research on best practices, past Venetian attempts to fix similar issues, and our own observations. We feel that these recommendations could not only resolve some of Venice's tourism and production problems but other cities' as well.

### **5.1.1 Immaterial Production is the Future**

For entrepreneurs looking to open a new business in Venice, an immaterial production company is the best direction to go. As seen in Figures 43 and 44, the Chamber of Commerce data shows the over the last twenty years, there are increasing numbers of immaterial companies while the number of material companies are decreasing. Our interviews also saw a common theme: logistics are one of the hardest parts of operating a material production company in Venice. Due to its unique canal system, companies need to transport their raw materials by boat from the mainland to Venice. This can cost up to twenty percent more, and with immaterial companies, this

expense is lessened. Like other organizations in Venice, the Venice Project Center has great ideas in the immaterial sector. Organizations like these are looking for entrepreneurs to purchase their ideas to make their ideas a reality. We recommend this method of opening a business venture because not only will more immaterial products be introduced to locals in Venice, but more skilled and educated citizens will have a desire to stay in the city. Immaterial goods can transform a city into an innovative place and as a result, make the daily lives of Venetians easier.

### **5.1.2 Fishing Industry is on the Rise**

The Fishing industry as a whole had a huge 240% increase in the last 20 years, jumping all the way from fifty-two companies in 1998 to 178 companies today. A graph of these changes can be seen in Figure 45. Due to Venice's location on the water, the fishing industry is accessible and on the rise. We suggest any companies that work to benefit the fishing industry, or work alongside it, could see success if this trend continues. This industry is perfect to endorse because of Venice's location, and other markets could benefit from more fishing industries opening up. Also, because Venice has many restaurants and local markets, it is an easy way to sell products and make money.

### **5.1.3 Repurpose Herion**

To increase the development of new business we suggest to repurpose Herion incubator. The building is already in use for developing new businesses so it already is set up as a good location. The first task would be to fix the building's problems that still remain. The main issues including heat, water, electricity, internet, phone all need to be working at the best technology levels. The second step would be to set up the incubators scope. For Herion, we suggest companies that would produce immaterial goods. More specifically it would be great if these ideas solve Venice's city problems, similar to the way the new urban mechanics works. These solutions

would be helpful and supportive to Venice but could also be marketed to other cities around the world with similar problems.

#### **5.1.4 Use Venice's Name as Advertisement**

For the existing companies that sell high-profile, high-value products, producing goods in Venice is the best form of advertising. Going forward, we believe that a universal trademark to denote the origin of Venetian products could become a useful part of selling and marketing the goods. As in Consorzio Promovetro Murano's case, their sticker assures customers that the piece of glass has actually been made in Murano. This type of authenticity allows for a company to charge more, since a high-quality product is being delivered to the customer. We believe that the City of Venice could use a similar trademark and have similar success to the consortium. We have created a sample trademark that could be placed on goods made directly in Venice. This sample can be seen below, in Figure 48.



**Figure 48:** Made in Venice Trademark. This sticker is a sample of what could be placed on Venetian goods to ensure authenticity.

## 5.2 Recommendation for Current Business Owners

For current business owners in Venice, we recommend:

- **Advertisement & Authenticity:** Due to the high price of commercial advertising, we recommend businesses to use a trademark sticker to not only advertise their products but also prove authenticity. Advertisement in some form, whether through a sticker or social media is a great way to draw new customers to products.
- **Creativity:** Many products being sold on the market are very similar. A business' creativity can make it stand out from other businesses selling similar goods. For example, I Tre Mercanti makes their tiramisù in the window of their shop to attract customers. This creative approach is directly related to their success. Applying outside-the-box type thinking can truly benefit a business.



- **Locations:** If possible, having multiple store locations helps to build the brand, thus building a reputation among customers. Majer and I Tre Mercanti, place their stores on typical tourist paths to better attract customers. In Majer's case, having multiple stores increases the chances of customers recognizing their name and coming inside the store, while I Tre Mercanti franchises its company name in different parts of the world. Customers can approach the company to discuss franchising, which would be impossible had the people not noticed the shop and liked the business concept.
- **E-commerce:** The use of an online store, particularly for international customers, is very useful. If customers enjoy a product while in Venice, they may be willing to repurchase it from home if it is available online. A great example is Torrefazione Cannaregio, whose business model relies on one-time customers visiting the store and becoming repeat online buyers. However, per the advice of Majer, prices should be consistent between the retail and online stores, so that the retail store remains relevant.
- **Know the audience and customer base:** It is important to know the customer base and audience to which the business appeals. By targeting products to the proper market, a company will be able to sell more goods. For example, businesses like Orsoni and Luigi Bevilacqua, who operate in a niche market due to the high prices of their goods, should primarily advertise to individuals and groups who can afford the product. This maximizes their efforts and the number of customers they get.
- **Collaboration:** If businesses focus on collaboration, rather than competition, then they can help each other grow. When businesses compete and drive each other out, that does not help the production sector. As those surviving businesses grow, they leave the Historic City

and damage its economy. It would be more stable economically to have numerous smaller coexisting companies, rather than two or three that dominate the entire industry.

### **5.3 Recommendations for Future Business Owners**

For individuals considering opening a new production business in Venice we recommend:

- **Logistics:** Be aware of the logistics of operating a business in Venice. Do research about how to obtain and deliver raw materials, and how to ship the finished product, as well as how much it will cost. This way, nothing will be a surprise when it comes time to complete these tasks. Orsoni for example, has to get special permission from the city just so their large delivery boats can travel their small canals. An awareness of these things would be beneficial to a new business owner.
- **Education:** If available, take business, management, or finance classes and learn applicable technical skills before starting a business. Having business and management knowledge will be useful when starting and maintaining a company. Some education programs will continue communication with the startup after the program, which would be helpful while getting settled in the early stages of operation.
- **Incubator:** Join an incubator, science park, or consortium! They are hubs of innovation and can provide valuable certifications and training. This adds a level of credibility to the product and business as a whole. Plus, there are countless opportunities for collaboration at these institutions. If Herion were to be running as we suggest, it could be a great way for Venetians to jump-start their businesses.

- **Experiment:** Experiment! Don't be afraid to make mistakes, as these are the best way to learn. By trying new things, entrepreneurs can discover what works and what does not. This will allow them to then reevaluate and improve on the next attempt.

## 5.4 Recommendations for City Officials

We recommend that city officials should:

- **Implement streamlined incubators:** We recommend the establishment of a streamlined incubator, or even multiple for different sectors. This program would seek startup ideas in specific sectors, and provide space free of charge for the first few months. This would allow the incubator to filter its applicants and focus its improvements on a specific area of the economy, such as technology.
- **Publicize:** Publicize science parks, incubators, and accelerators. This way, entrepreneurs know they exist, and know where to go with their ideas. People will be curious about the facilities, which will increase exposure and attract more applicants. Thus, these institutions will have more applicants to choose from, and can accept the entrepreneurs who have the best ideas.
- **Tax breaks and grant assistance:** Tax breaks and grants are great incentives for encouraging people to start businesses. If a government is unable to increase the number or amount of such breaks/grants, it should increase publicity so entrepreneurs know the programs exist and can find out how to apply in the first place.
- **Incubators with education:** The establishment of an incubator with education programs could greatly benefit new businesses in Venice. Other similar institutions like H-Farm and MEST have seen success by teaching entrepreneurs as they develop their ideas. By shaping

the minds of these business owners, the city can put itself back on track to grow its production sector.

- **Accessible information:** By making information about incubators, accelerators, science parks, and incentives accessible, the resources can attract people and be utilized most effectively. Additionally, people with new ideas can reach out to these institutions to get involved or make suggestions.
- **Community:** Educate the community on the importance of production based businesses. This way, they know to support them and understand how to identify authentic goods, such as with a trademark sticker.

## 5.5 Future IQP Team's Recommendations

One of the most troublesome issues we experienced with our project was the data set we were given by the Chamber of Commerce. This data is supposed to have the information for all businesses in Venice, past and present. It contains over 18,000 cells of data and has thirty columns of information. We believe a future IQP team could devise a new system and/or program that could be used to organize and display all this data. If proper documentation of all businesses in Venice was enforced, this data set could be populated every year. As a result, city officials, citizens, and researchers could more easily recognize trends to further improve the Venetian economy.

Additionally, it would be beneficial for a future IQP team to obtain the number of workers in Venice per year. This data was not available to us, but we hope that if a new system is devised to collect this data every year, an archive could be built over time. Analyzing these figures would give deeper insight into how the Venetian economy evolves over time. We also wish it was possible to break down or organize the Chamber of Commerce data by year. That way, it would

be simpler to see which businesses were open and closed that year. We only had the opening and closing date of each business, so it was challenging to see which businesses still existed and which have closed. Having a breakdown of the open businesses every year would make it much easier to analyze trends over time.

With these recommendations in mind, we are hopeful that all future researchers for the Venice Project Center can move closer to growing the production sector of the Venetian economy. This way, more skilled jobs can be created for local workers.

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# Appendix

## A. Chamber of Commerce Translated Column Headers

Column Header	English Translation
PRV	Providence
N-REG-IMP	Company's Registration
N-REA	Economic and Administrative Index Number
N-ALBO-AA	Craftsman specific Data Number
SEZ-REG-IMP	Section of Trade Registry
NG	Code of the Legal Nature
DI-ISCR-RI	Company Registration Date
DI-ISCR-RD	Company Registration Date
DT-ISCR-AA	Handcraft Company's Register Date
DT-APER-UL	Company Storefront Opening Date
DT-CESSAZ	Stop of Business
DT-INI-AT	Start of Activity Date
DT-CES-AT	End of Action Date
DT-FALLIM	Bankruptcy
DT-LIQUID	Liquidation
DENOMINAZIONE	Company Name
INDIRIZZO	Address
STRAD	Type of Street
CAP	Zip Code
COMUNE	Common
FRAZIONE	Fraction
ALTRE-INDICAZIONI	Other Directions

IND	Number of Total Independent Enterprise Employees
DIP	Total Number of Employees Involved in the Enterprise
C-FISCALE	Fiscal Code
PARTITA-IVA	Match Code
TELEFONO	Telephone Number
CAPITALE	Capital
ATTIVITA'	Activity Description
CODICI-ATTIVITA	Activity Code
VALUTA-CAPITALE	Currency

## **B. Examples of Simplified Activity Codes on Excel sheet**

<b>CODICI-ATTIVITA (activity codes)</b>	<b>ATECO 2-DIGIT</b>
47.11	47
50.3 P / 49.39.09 S	50
56.10.11	56
88.1	88
47.73.1	47
81.21 P / 81.29.1 S	81
79.90.19 P / 47.91.1 S	79

### C. Examples of ATECO Classification Codes

<b>21</b>	<b>MANUFACTURE OF BASIC PHARMACEUTICAL PRODUCTS AND PHARMACEUTICAL PREPARATIONS</b>
<b>21.1</b>	<b>MANUFACTURE OF BASIC PHARMACEUTICAL</b>
<b>21.10</b>	<b>Manufacture of basic pharmaceutical products</b>
21.10.0	Manufacture of basic pharmaceutical products
21.10.00	Manufacture of basic pharmaceutical products
<b>21.2</b>	<b>MANUFACTURE OF MEDICINES AND PHARMACEUTICAL PREPARATIONS</b>
<b>21.20</b>	<b>Manufacture of pharmaceutical preparations</b>
21.20.0	Fabbricazione di medicinali e preparati farmaceutici
21.20.01	radioactive diagnostic substance manufacturing in vivo
21.20.09	Manufacture of medicines and other pharmaceutical preparations
<b>22</b>	<b>MANUFACTURE OF RUBBER AND PLASTIC PRODUCTS</b>
<b>22.1</b>	<b>MANUFACTURE OF RUBBER</b>
<b>22.11</b>	<b>Manufacture of rubber tires and tubes; regeneration and reconstruction of tires</b>
22.11.1	Manufacture of tires and inner tubes
22.11.10	Manufacture of tires and inner tubes

### D. Industry Sectors with Corresponding ATECO Codes

ATECO codes in each Sector	Industry Sector
59	Film and Sound
13	Textile
91-93	Recreation/Museum
62	Programing
85-88	Education/Health/Social Work
10-12,	Food/Beverage
1-2,	Agriculture
90	Creative Arts
64-66,	Finance/Insurance
3	Fishing

45-46	Wholesale Trade
23	Glass
58,60,61, 63, 69-74	Professional Services
14-22, 24-33	Manufacturing
77-82, 94-96	Support Services
55	Hotels/Accommodation
41-43	Construction
68	Real Estate
35-39, 49-53	City Infrastructure
56	Food Services
47	Retail Trade

## E. 2- Digit ATECO Code with Service vs. Production Breakdown

Code Ateco 2007	Description
A	AGRICULTURE, FORESTRY AND FISHERIES
P 1	CROPS AND AGRICULTURAL PRODUCTION OF ANIMAL PRODUCTS, HUNTING AND RELATED SERVICES
P 2	FORESTRY AND USE OF LOGGING
P 3	FISHERIES AND AQUACULTURE
B	MINING TO CAVE AND MINES
na 5	COAL MINING (EXCLUDING PEAT)
na 6	EXTRACTION OF CRUDE PETROLEUM AND NATURAL GAS
na 7	METALLIC MINERAL EXTRACTION
na 8	OTHER ACTIVITIES OF MINING TO CAVE AND MINES
na 9	ACTIVITIES OF EXTRACTION OF SUPPORT SERVICES
C	MANUFACTURING
P 10	FOOD INDUSTRIES

P	11	BEVERAGE INDUSTRY
P	12	TOBACCO INDUSTRY
P	13	TEXTILE INDUSTRIES
P	14	MANUFACTURE OF WEARING APPAREL; Manufacture of articles of LEATHER AND FUR
P	15	MANUFACTURE OF LEATHER AND THE LIKE
P	16	MANUFACTURE OF WOOD AND OF PRODUCTS OF WOOD AND CORK (EXCEPT FURNITURE); MANUFACTURE OF ARTICLES OF STRAW AND PLAITING MATERIALS
P	17	MANUFACTURE OF PAPER AND PAPER PRODUCTS
P	18	PRINTING AND REPRODUCTION OF RECORDED MEDIA
P	19	MANUFACTURE OF COKE AND PRODUCTS RESULTING FROM PETROLEUM REFINING
P	20	MANUFACTURE OF CHEMICALS
P	21	MANUFACTURE OF BASIC PHARMACEUTICAL PRODUCTS AND PHARMACEUTICAL PREPARATIONS
P	22	MANUFACTURE OF RUBBER AND PLASTIC PRODUCTS
P	23	MANUFACTURE OF OTHER PRODUCTS OF THE PROCESSING OF NON-METALLIC MINERAL
P	24	METALLURGY
P	25	METAL PRODUCTS MANUFACTURING (EXCEPT MACHINERY AND EQUIPMENT)
P	26	MANUFACTURE OF COMPUTERS AND ELECTRONIC AND OPTICAL PRODUCTS; ELECTRO-MEDICAL EQUIPMENT, MEASUREMENT EQUIPMENT AND WATCHES
P	27	MANUFACTURE OF ELECTRICAL APPLIANCES AND EQUIPMENT FOR HOME NOT ELECTRIC
P	28	MANUFACTURE OF MACHINERY AND EQUIPMENT NEC
P	29	MANUFACTURE OF MOTOR VEHICLES, TRAILERS
P	30	MANUFACTURE OF OTHER TRANSPORT
P	31	MANUFACTURE OF FURNITURE
P	32	OTHER MANUFACTURING
P	33	REPAIR, MAINTENANCE AND INSTALLATION OF MACHINERY AND EQUIPMENT
D		ELECTRICITY, GAS, STEAM AND AIR CONDITIONING
P	35	ELECTRICITY, GAS, STEAM AND AIR CONDITIONING
E		WATER SUPPLY; SEWERAGE, WASTE MANAGEMENT AND REHABILITATION
S	36	COLLECTION, TREATMENT AND WATER SUPPLY
S	37	MANAGEMENT OF SEWAGE NETWORKS
S	38	ACTIVITIES OF COLLECTION, TREATMENT AND DISPOSAL OF WASTE; RECOVERY OF MATERIAL
S	39	REHABILITATION ACTIVITIES AND OTHER SERVICES OF WASTE MANAGEMENT
F		CONSTRUCTION
P	41	BUILDING CONSTRUCTION

P	42	CIVIL ENGINEERING
P	43	SPECIALIZED CONSTRUCTION WORK
G		WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND MOTORCYCLES
P	45	WHOLESALE AND RETAIL TRADE AND REPAIR OF MOTOR VEHICLES AND MOTORCYCLES
P	46	WHOLESALE TRADE (EXCEPT OF MOTOR VEHICLES AND MOTORCYCLES)
S	47	RETAIL TRADE (EXCEPT OF MOTOR VEHICLES AND MOTORCYCLES)
H		TRANSPORTATION AND STORAGE
S	49	LAND TRANSPORT AND TRANSPORT VIA PIPELINES
S	50	MARITIME TRANSPORT AND WATERWAYS
S	51	AIRPLANE TRANSPORT
S	52	WAREHOUSING AND SUPPORT ACTIVITIES TO TRANSPORT
S	53	POSTAL AND COURIER ACTIVITIES
I		ACTIVITIES OF ACCOMMODATION AND FOOD SERVICE
S	55	ACCOMMODATION
S	56	ACTIVITIES OF CATERING SERVICES
J		INFORMATION AND COMMUNICATION
S	58	PUBLISHING ACTIVITIES
P	59	PRODUCTION ACTIVITIES FILM, VIDEO AND TELEVISION PROGRAMMES, OF MUSIC AND SOUND RECORDINGS
P	60	PROGRAMMING ACTIVITIES AND TRANSMISSION
S	61	TELECOMMUNICATIONS
P	62	PRODUCTION OF SOFTWARE, CONSULTING AND RELATED ACTIVITIES
S	63	ACTIVITIES OF INFORMATION SERVICES AND OTHER COMPUTER SERVICES
K		FINANCIAL AND INSURANCE
S	64	FINANCIAL SERVICES ACTIVITIES (EXCEPT INSURANCE AND PENSION FUNDS)
S	65	INSURANCE, REINSURANCE AND PENSION FUNDS (EXCLUDING COMPULSORY SOCIAL SECURITY)
S	66	ACTIVITIES AUXILIARY TO FINANCIAL SERVICES AND INSURANCE ACTIVITIES
L		ACTIVITY 'REAL ESTATE
S	68	REAL ESTATE ACTIVITIES
M		PROFESSIONAL, SCIENTIFIC AND TECHNICAL
S	69	ACTIVITIES LEGAL AND ACCOUNTING
S	70	CORPORATE MANAGEMENT AND MANAGEMENT CONSULTING

S 71 ACTIVITIES OF THE UNIVERSITY OF ARCHITECTURE AND ENGINEERING; TESTS AND TECHNICAL ANALYSIS

S 72 SCIENTIFIC RESEARCH AND DEVELOPMENT

S 73 ADVERTISING AND MARKET RESEARCH

S 74 OTHER PROFESSIONAL, SCIENTIFIC AND TECHNICAL

S 75 VETERINARY SERVICES

N HIRE, TRAVEL AGENCIES, SUPPORT SERVICES FOR BUSINESSES

S 77 RENTAL AND LEASING OPERATING ACTIVITIES

S 78 RESEARCH, SELECTION, PROVISION OF PERSONNEL

S 79 SERVICES ACTIVITIES OF TRAVEL AGENCIES, TOUR OPERATORS OF RESERVATION AND SERVICES AND RELATED ACTIVITIES

S 80 REGULATORY SERVICES AND INVESTIGATION

S 81 SERVICE OPERATIONS FOR BUILDINGS AND LANDSCAPE

S 82 SUPPORT ACTIVITIES FOR THE FUNCTIONS OF OFFICE AND OTHER SUPPORT SERVICES FOR BUSINESSES

O Public administration and defense; COMPULSORY SOCIAL SECURITY

na 84 Public administration and defense; COMPULSORY SOCIAL SECURITY

P EDUCATION

S 85 EDUCATION

Q HEALTH 'AND SOCIAL WORK

S 86 HEALTH CARE

S 87 SERVICES OF SOCIAL RESIDENTIAL

S 88 SOCIAL NON-RESIDENTIAL

R ARTS, SPORTS, ENTERTAINMENT AND RECREATION

P 90 CREATIVE ACTIVITIES, ARTS AND ENTERTAINMENT

S 91 ACTIVITIES OF LIBRARIES, ARCHIVES, MUSEUMS AND OTHER CULTURAL ACTIVITIES

S 92 ACTIVITIES CONCERNING THE LOTTERIES, BETTING, THE HOUSES FROM GAME

S 93 SPORTS, ENTERTAINMENT AND RECREATION

S OTHER SERVICE ACTIVITIES

S 94 ACTIVITIES OF MEMBERSHIP ORGANISATIONS

S 95 COMPUTER REPAIR AND GOODS FOR THE PERSONAL AND HOUSEHOLD

S 96 OTHER ACTIVITIES OF THE PERSON FOR SERVICES

T FAMILIES OF ASSETS AND UNDIFFERENTIATED AS EMPLOYERS FOR PERSONAL HOME; PRODUCTION OF GOODS AND SERVICES UNDIFFERENTIATED FOR OWN USE OF HOUSEHOLDS



na	97	FAMILIES OF ASSETS AND UNDIFFERENTIATED AS EMPLOYERS FOR PERSONAL HOME
na	98	PRODUCTION OF GOODS AND SERVICES UNDIFFERENTIATED FOR OWN USE OF HOUSEHOLDS
	U	EXTRATERRITORIAL ORGANISATIONS AND BODIES
na	99	EXTRATERRITORIAL ORGANISATIONS AND BODIES

P = Production / S = Service / na= Not Applicable for Venice

## F. Interview Transcripts

### Luigi Bevilacqua - 28/11/16

#### **How many people work in your company?**

Six weavers (women, by tradition) and one technician. It takes many years to train weavers.

#### **Do you make your own products in house?**

Yes, they have fifteen looms. They could likely build more with the spare parts they have lying around, but each loom requires the Jacquard loom piece, which reads the punch cards. Those are harder to find.

#### **Why stay in Venice?**

Family tradition! Now that they are the last remaining, there is even more reason to stay. They are the only production company on the Grand Canal, which is good for business. They give paid tours to tourists, and some become customers. Any exposure is helpful.

#### **What are your biggest markets?**

Interior design (furniture, wall coverings), high fashion, personal orders. Wholesale to the US, Russia, Arab countries, Great Britain.

#### **What about restoration projects?**

Some, but most people don't want to wait the time it takes to make the product.

#### **Can your business keep up with the current demand?**

It is difficult. They have only six weavers, who can make at most one meter per day. A sofa for example, requires about thirty meters of fabric. Thus it could take 5-6 months to produce. After ten meters, the warp (backing piece) needs to be remade.

#### **Would you consider hiring more workers/weavers?**

Yes, but they would need to have more long-term orders. Since it takes so long to train weavers, they would need those big orders to justify that time and training.

#### **Other than money, what is something that could help benefit your business?**

Expansion to other markets, such as art and collaboration with glassmakers.

#### **Do you do any e-commerce?**

No, if anything it would just be for follow-ups. Maybe reorders. But it's more important for the buyer to come see and touch the product. Same with advertising.

**Are there other companies in Venice that do what you do?**

There is Fortuni, but they print the pattern on. And there used to be Rubelli, but they moved out.

Torrefazione Cannaregio - 29/11/16

**How many people work in your company?**

LTD-1 Owner, 9 Workers

**Any other businesses/organizations that your business works with?**

Marzocco makes the coffee roasting machine in Florence, but the company is based in Seattle.

**Do you make your own products in house?**

Coffee beans are shipped in from different countries, but final production is done in house.

**Can your business keep up with the current demand?**

Yes, they are licensed to roast 430 kg per day but only roast approximately 90kg per day.

**If given money, what would your business spend it on?**

Marketing/Advertising

**Do you think the large influx in tourism helps or hurts your business?**

Yes, a lot of international tourists will try coffee in Venice and then have it shipped to drink at home.

Orsoni - 30/11/16

**Was there any specific reasons behind getting into this business in the first place?**

**How many people work in your company?**

Nineteen workers: only men in the furnace, and girls cut tiles.

**Can your business keep up with the current demand?**

They're rushing now, because they have a big project. But there are times when business is quieter.

**Would you consider hiring more workers?**

They try not to increase our numbers, particularly due to limited workshop space.

**Any other businesses/organizations that your business works with?**

They may reach out to other companies for help with things, such as cutting, if demand is high.

**Do you make your own products in house?**

Yes, they make 500 kg of smalti (hand-cut mosaic glass) in the furnace per day, and cut 220 kg per day.

**What are your main markets?**

Their product is not cheap, and it is a small market. They mainly do big projects, decor, private residences, and restorations.

**What is it like running a business in Venice?**

It is complicated and expensive (20% more here), but overall an advantage. They make an artistic product in one of the most artistic places.

**Complicated how?**

They must ask for city permission to bring our large delivery boats down the small canals. They are still downtown because they've been here for so long. The city won't let them open a new location because of environmental and worker health.

**Do you think the large influx in tourism helps or hurts your business?**

Tourism doesn't have much influence on sales. They get lots of requests for visits, and have been published in magazines and featured on television documentaries. So in that way, it is good publicity.

**If given money, what would your business spend it on?**

A new furnace! Also a new annealer. They'd also do new marketing, to promote their material for architecture--more than just churches.

**What challenges have you encountered?**

The expense and logistics of operating a business in Venice. Small workspace.

Dogal Strings - 01/12/16**How many people work in your company?**

9 women

**Have you had any peaks in business lately?**

August to December is the top time. There are special flat strings made for Greek instruments that provide a pretty stable market.

**Do you make your own products in house?**

Yes, and everyone knows Venice. They built the machines themselves, too.

**Why move to the mainland?**

Most of the workers live on the mainland, so moving production there is more convenient for them. Their current building is full of artisanal companies which creates a sense of community. It's also easier to make noise (production, testing) on the mainland, because Venice is so quiet. Production is hard in Venice, and real estate is very expensive. 70% of strings are sent outside Italy.

**Can your business keep up with the current demand?**

Don't sell to the general public. Make strings for guitars, violins, mandolins, and more. Have e-commerce, but only for Italy. Sell wholesale to other countries. No aggressive marketing or promotions. Simple selling, no Amazon. It's more important to them to focus on quality and creativity. Less employees allows for this. These strategies can be limiting, but are worth it. It can be hard to keep up, orders take about two months.

**What makes a successful business in Venice?**

Energy, transportation, technology, and health are important. Be private with public control/influence. Going to conventions/shows helps. Venice is atypical, so be open minded. The nearby architectural university is helpful, they do mechanical testing there. Social media really helps, especially since it is free! Combining the American tenacity with the Italian creativity is the way to success.

## Majer - 05/12/16

### **Was there any specific reasons behind getting into this business in the first place?**

Very small city with lots of tourists, and they all do the same thing. Trying to build a brand: more stores help impress that upon people/tourists. Their strongest relationships are with people who give them ingredients, working together for collaboration.

### **Have you had any peaks/drops in business lately?**

Business has been good, and growing about 10% every year. It's hard for them because they produce everything in Venice. They really have to keep up quality and consistency, growing in many ways and directions at once.

### **Do you make your own products in house?**

Yes.

### **Can your business keep up with the current demand?**

Comes with the way people see the brand. Must tell people what they're doing, but do it first. They think it takes ~10 years to develop a really solid business.

### **Other than money, what is something that could help benefit your business?**

Next steps in the next two years: image, marketing, and communication.

### **If given money, what would your business spend it on?**

Products, image

### **Do you do e-commerce? If so, how much?**

Yes, it's a small part, <10%. Could change that with advertising, but it's not real...People are just looking for a lower price. They sell at the same price because the quality makes it worth it. Don't want e-commerce to kill the regular store!!

### **What challenges have you encountered?**

Advertising is hard. To do it the right way is very expensive.

### **If you could go back in time, what is one thing you would do differently in terms of opening this business?**

Many things...but mistakes are important for learning, as is experimentation.

### **Do you think the large influx in tourism helps or hurts your business?**

Helps it. Every tourist makes the same loop, which allows the brand to be built up and a reputation to be created.

## Consorzio Promovetro Murano - 06/12/16

### **Was there any specific reasons behind getting into this business in the first place?**

To promote the production of glass through exhibitions, projects, and conferences. Promotion through web (social media), and sticker of authentication of geographic location.

### **How many people work in your company?**

47 glass companies

### **Any other businesses/organizations that your business works with?**

47 glass companies

**Do you make your own products in house?**

The companies that get the sticker have to for certification

**Can your business keep up with the current demand?**

Yes, but always trying to get more companies involved

**If given money, what would your business spend it on?**

Promotion of the original product, and promote the official trademark. It’s getting more popular, but they want more!!! More advertising. It’s expensive, and hard to show the product in order to sell it.

**What challenges have you encountered?**

Raw materials in Venice is not easy! Production has been smaller since late 1990s, but better since 2012. Getting all companies using the trademark isn’t easy. Some don’t want it, can’t afford it, or don’t qualify based on production location. It’s hard to emphasize that the sticker is a matter of origin, not quality. Remain neutral when advising and promoting businesses.

**Why stay in Venice?**

That’s where the business is! They should be there to represent their companies and the location.

**What makes a successful business in Venice?**

Authenticity, certification

**G. Service Sector Business Examples**

<b>Sector</b>	<b>Business Examples</b>
Recreation/Museum	Museums
Education/Health/Social Work	School, Hospitals
Support Services	Travel Agencies
Real Estate	Buying & Selling homes
Finance/Insurance	Insurance Companies
Food Services	Restaurants, Bakeries
Hotels/Accommodations	Hotels
Retail Trade	Clothing stores, souveiner shops
Professional Services	Scientific Research, Lawyers
City Infrastructure	Trash Services, City repairs

## H. Additional Background Information

### Small Business Expansion

Some of America's most well-known companies, such as Ben and Jerry's and Under Armour started as small startups like some that exist in Venice. Strategies used by these companies could also be viable solutions for making small businesses, outside of tourism in Venice, rise to the next level of success. The common link between these companies was persistence and a strong market audience. Ben and Jerry's succeeded because they developed an idea no one had thought of and marketed it to the right audience. If they had not convinced grocery stores to put their new flavor of ice cream on their shelves, the company would likely not be as successful as it is today.<sup>115</sup> They were persistent even though they had been shut down in the past. Once one product becomes successful, it is easier to expand because there is a network of customer support. Another example is Under Armor, which grew because the owner had connections with the National Hockey League. Once people saw under armor apparel on a professional athletes it sold out in many stores.<sup>116</sup> This shows if you can get your products in the hands of the right audience it will market itself and grow based on word of mouth. Smaller businesses that connect with larger organizations are able to work off their customer base, leading to faster growth, and in turn expansion in sectors outside of tourism.

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<sup>115</sup> Harrison, J. D. 2014a. "When we were Small: Ben & Jerry'S." *The Washington Post*.

<sup>116</sup> Harrison, J. D.