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Assessment of the Non-Resident Housing Market in Venice, Italy

An Interactive Qualifying Project Report  
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By

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## **Abstract**

This project, sponsored by the *Osservatorio Casa* of Venice, Italy, assessed the non-resident housing market within the historic center of Venice. Data collection included web searches, solicitations of real estate firms directly and through scenarios, integration of previous data (utility usages, hotel registrations) and surveys of tourists. The final report established the locations and costs per square meter of over two hundred non-resident rentals. Recommendations included suggestions for integrating official police and tax databases, further studies of the non-resident housing market throughout the entire year, and an investigation of the resident rental market.

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# 1. Executive Summary

Housing is an important socio-economic matter in every major city throughout the world. Centuries ago, it was essential for a city's population to be able to affordably live within its city center. However, as faster forms of transportation evolved, people no longer needed to live as close to the business center. The *Centro Storico* of Venice is situated in the middle of a lagoon. The majority of its residents no longer inhabit the *Centro Storico*, favoring instead the less expensive lifestyle available to them on the mainland. The *Osservatorio Casa* of the Commune of Venice is sponsoring our project in an effort to develop an initial assessment of the non-resident housing market in the historical center of Venice. Fashioning an understanding of the non-resident housing market will allow for better decision-making in regards to city housing policy and law.

The large numbers of tourists who come to Venice constitute a major part of the Venetian housing market. As in most economic markets, the Venetian housing market is driven by the factors of supply and demand, where either a high demand or low supply will drive prices up. The Commune of Venice has been faced with a sharp increase in rental prices for more than two decades, along with a forty-year decrease in population. The situation has reached a point where many residents can no longer afford to live in the historical center and therefore choose to live on the mainland. Non-residents, non-Venetians living in Venice, however, are willing to pay significantly more for their short stays within the city and thereby effectively out bid Venetians for housing.

The goal of our project was to formulate a possible means for quantifying the non-resident rental population in Venice as well as to obtain an initial assessment as

to the extent of the non-resident housing market. Some of the devised methods used in the study have proven ineffective due to uncooperative sources. Alternate methods have been employed in an effort to obtain the detailed information needed to create a baseline approximation of the rental market.

Uncovering the true nature of the non-resident housing situation required a large amount of background research. Numerous government and public agencies were contacted and researched in order to uncover the type and amount of information they collect. These efforts yielded five sources that contain/collect pertinent information in regards to non-residents. The *Questura*, maintained by the *Guardia di Finanza*, is a mandatory non-resident database of each Italian city's non-resident population. The *Registro Immobiliare* is a Venetian government agency that monitors all rental contracts as well as the sales transactions of real estate. Another important piece of information comes from the *ICI Tax*, which is a local tax that is charged to the property owners. From this data names and billing information of house owners in *Centro Storico* can be identified. The unfortunate result of the efforts to garner access to the information held by these agencies was a refusal to cooperate due to privacy issue. Proposals outlining the need and justification for the release of this information have been included as a deliverable for this project. The ESU, the *Ente Regionale per il Diritto allo Studio Universitario*, and the *Cerco Casa* are organizations linked with the universities located in Venice that deal with the student housing. Inquiries to these two organizations revealed that most students live on the mainland due to expensive housing costs in *Centro Storico*. The first three sources combined would have provided essential details for the approximation of non-resident apartment locations. The addition of the student residencies to these determined

locations would have completed the approximation of the non-resident housing market in Venice.

Due to the lack of cooperation on the part of the various public, private and government agencies, a more ingenious method of acquiring the locations of rental apartments was developed. A combination of real estate agency visitations, coupled with an examination of posted ads in real estate agency windows and the review of listings on bulletin boards, newspapers and the web were used. The collection of data over the short period of time afforded for this project resulted in only a snapshot of the overall non-resident rental market. Hopefully the data collection will continue over a longer period of time in future studies, in an effort to obtain a more complete picture.

After confirming the hypothesis that real estate agencies would not voluntarily share their information about rental apartments, another method was developed. Real estate agencies were systematically visited, whereby each team member posed as a potential client in search of apartment listings. Each team member was assigned a different scenario, with each having different requirements so as to maximize the number of listings obtained from each real estate agency. The scenarios were as follows: university student, Indonesian wedding party, family summer vacation, family fall vacation, and business worker. The most successful scenario was the Indonesian wedding party due to the large number of people who needed housing, while the student scenario proved the most ineffective as real estate agencies tend not to rent to students. Most of the apartment listings, however, were obtained from the web and posted ads in real estate agency windows.

Since the information that can be obtained from real estate agencies was very limited, a non-resident survey was developed that was expected to characterize the

non-resident population. The main purpose of this survey, which was conducted in various locations throughout the *Centro Storico*, was to obtain data directly from non-resident population staying in apartments. More apartment listings along with detailed descriptions were expected from this survey, as well as characterization of the renters in general. This survey, however, was not used according to its original purpose since only two percent of the respondents stayed in apartments. Instead, the survey was used to develop a ratio between the number of people staying in apartments versus those opting to stay in hotels. The inconclusive results from this survey concerning the characterization of non-residents was caused by the low number of people staying in apartments in comparison to tourists staying in hotels.

Due to the time limit imposed on this project, obtaining the total number of non-resident dwellings within the Commune of Venice was a seemingly impossible task. Hotel occupancy data was used to extrapolate the total number of non-resident dwellings in the *Centro Storico*.

The distribution of real estate throughout the *Centro Storico* of Venice mandated that our study area be broken-down into specific real estate regions. The most fundamental divisions of the *Centro Storico* are the seven *sestiere*. We further divided the study area into thirteen regions. This segmentation was created based upon the number of apartments found in a particular area, the locations of tourist attractions, and the importance of each area. The third breakdown of the *Centro Storico* was based on official homogeneous zones created by the Venetian government. These regions divide the city into three major areas of similar market value.

From data collected, an analysis of the median price, price range, price per square meter, and price per bed for each study area was performed. This analysis provided a pattern of rental prices within the city.

The first pattern that showed up from the price of non-resident dwellings based on *sestiere* was the fact that the weekly and monthly rentals behave exactly opposite of each other. The most popular area in the *Centro Storico*, *San Marco*, happened to be the most expensive area for monthly rentals, while it is the least expensive for weeklies. Another pattern that appeared during the analysis based on *sestiere* breakdown was that the monthly rental prices became less expensive as the distance from main tourist attraction areas increased. The exact opposite pattern was true for weekly rentals, with their rental prices being lower in the main tourist attraction areas.

The price of each dwelling per square meter was an important figure for this study. Comparing dwellings based on physical area erases any price bias due to size. Each apartment listing contained in our database was run through an algorithm to calculate its surface area. This area estimation algorithm was developed and tested on listings in our database that contained known area figures. Testing on our data proved that this formula could estimate area with a standard deviation of only eighteen square meters. When the *Centro Storico* is analyzed by square meter the results still show that weekly rentals are cheaper in central areas around the Grand Canal, while monthly rentals are cheaper in outlying areas like *Cannaregio* and *Giudecca*.

The extrapolation of the total number of non-resident apartments was approximately four hundred and forty two. Based upon a breakdown of the entire rental market into four segments, public housing, rent subsidized housing, non-resident housing, and resident housing, the non-residents comprise five percent of the

total market. It is also noteworthy to mention that the non-residents and rent subsidies are of comparable market shares.

Non-residents do have an impact on the real estate market in Venice and are part of the reason for the inflated rental prices. Compared to normal full-paying residents, non-residents represent only a small share of the total market. Upon initial inspection, this fact may make it appear as if they cannot have a large impact upon the total market, however this is incorrect. Their impact becomes more evident when the high end of the market is compared to the low end. Non-resident apartments number very close to rent-subsidized apartments. It would appear that as the non-resident market increases, apartments are taken from residents and so rent subsidies will naturally increase as well. As both of these smaller portions of the market increase the larger resident rental market is greatly impacted.

Outlined in this project are a number of proposals whose purposes are to develop methods for tracking the non-resident population in the *Centro Storico*. There are proposals directed towards the *Questura*, *Registro Immobiliare*, and *Ufficio Tributi*. In addition to these government agency proposals, there exists a proposal to study the resident housing market. Comparing the two markets with each other would provide a complete picture of the situation.

The proposal with the highest probability of success for future studies is that directed towards the *Questura*. In outlining both the need and requirements for gaining access to this privately held database it can be seen that a highly accurate ongoing study of the non-resident market may be conducted with such information as contained within the *Questura*.

Proposals made to the *Registro Immobiliare* and *Ufficio Tributi* are based on and highly dependent on gaining access to the *Questura*. The information requested

from the *Registro Immobiliare* would provide physical locations and transaction data concerning the apartments while the *Ufficio Tributi* would provide real estate tax information. This tax information would provide an estimate of market values for non-resident apartments as well as ownership data that would be useful in determining secondary homes used as rentals.

In essence, the Venetian real estate market is vital to the survival of Venice, and it is therefore hoped that in the future more elaborate and thorough studies will be conducted with aid from all concerned and interested parties.



## 2. Introduction

The Historical Center of Venice is one of the most attractive places in the world, as well as a tourism hotspot. Despite its allure, with a current population of approximately 67,000, Venice faces a population decline that has seen the emigration of about ten thousand people in the past decade alone. The declination has been the result of a combination of factors. The first has been a reduction in the housing quality, where in Venice most of the dwellings require vast amounts of repair. The next aspect has been the rising cost of property throughout the city. In a paradoxical fashion to most real estate sales, as the quality has diminished the price has risen. This contradiction has been linked to several causes. Many owners prefer to rent short-term to high-paying non-residents rather than long-term to locals. The high rental rates stem from the fact that the Venetian housing market is a world market. Price levels are determined according to global rather than local demand. Thus, housing has become unaffordable to those individuals living in accord with Venetian economics. The final reason for the overall decrease in the Venetian populace has been a direct result of legislation passed regarding practices of renting apartments.

The government, through legislation, has made attempts to counteract the departure of residents from the *Centro Storico*, or Historic Center. Agencies have been established to aid those that require housing in Venice, whereby rents are subsidized and low-income houses are acquired for residents. The organization primarily responsible for these actions is the *Osservatorio Casa*, or Housing Observatory in English. Some critical figures on the quantity of rental dwellings being used solely for tourists and other non-residents have been missing, thereby distorting the perspective on the entire rental market in Venice. Therefore, the

objective of this interactive qualifying project is to aid our sponsor, the *Osservatorio Casa*, with an assessment of the effect of non-resident occupancy on the Venetian housing market by determining the locations of non-resident dwellings as well as certain characteristics of the non-resident population in Venice.

The background and literature review section, Chapter Three, outlines and discusses information deemed necessary for understanding the problem in detail that this project hopes to solve. This chapter discusses the Italian government in general, specifically housing agencies, taxes, regulations and any other aspect of the government that deals with housing and non-residents. The agencies and codes of Venice were specifically examined to provide an understanding of where this study took place and the circumstances surrounding it. Venetian population data and statistics were examined to provide an analytical aspect to the background and to show the kinds of numbers involved in this study. Similar situations, government regulations and circumstances found in the United States were also inspected for comparison and for added depth of understanding.

The study area of our project and the procedures used to attain these goals are outlined in Chapter Four. Details of procedures taken to gather data and methods for accomplishing the required tasks are included here as well. Methodologies to obtain data needed to locate non-resident dwellings, to determine the extent of student housing within the city, and procedures to characterize the non-resident population comprise the rest of this section.

The final chapter contains the results and analysis of the acquired data. Included is a map of current non-resident dwellings linked to a database containing information on their characterization. Along with that are several map layers. Also, an updated and easy to use database containing the information gathered previously

by our sponsor and any other past studies were created. The analysis section includes the impact on non-residents in Venice. Such topics as the regulation of the non-resident market and improved methods for analysis and data collection are presented in this chapter.

### **3. Background and Literature Review**

A variety of aspects relating to the issue of non-resident rental housing were considered during this initial investigation. Such topics include laws and pertinent regulations, an examination of the housing market, types of non-residents and their impact, as well as some case studies of similar projects being conducted. The ensuing sections detail these aspects with relevance to our specific problem.

To begin, in an effort to bring the central issue of housing in Venice into perspective the regulations, policies, and codes presently in place in Europe, Italy, Venice, and the United States were reviewed. Established policies and regulations in Venice, Italy, and in the United States were contrasted and compared as well.

Venice depends heavily on the tourism industry and has an extremely diverse population. Tourists play a very important role in the Venetian economy, in which their impact has far reaching effects. Past WPI projects have quantified and characterized tourists in numerous ways. These findings are presented later in this section.

The Commune of Venice supports a large student population. Presently there are two universities located within its historical center. These institutions draw a large non-resident student population into the city. The rental market absorbs some of the impact of the college students, thereby decreasing the number of dwellings available to residents. In addition to students and tourists, temporary workers such as construction crews or theater troupes, constitute another large portion of the non-residents present in the city.

Also, a number of case studies conducted in the United States were examined for possible solutions. These studies have created organizations and regulatory

bodies, which have been able to alter some of the effects of their specific housing developments. These resolutions have been compared and contrasted for similar ideas pertinent to the non-resident housing situation found in Venice.

### **3.1 Housing Laws and Regulations**

Housing is an area that is regularly subjected to numerous laws, codes and regulations at numerous levels of jurisdiction. In the following sections American Laws are discussed first and serve as a base level for further comparison. Next laws of the European Union are considered. Finally Italian (federal), *Veneto* (regional), and Venetian (municipal) laws are discussed.

#### **3.1.1 U.S. Statutes**

In the United States, the Department of Housing and Urban Development (HUD) is a federal agency whose main purpose is to provide a decent, safe, and sanitary home and suitable living environment for every American<sup>1</sup>, particularly to low-income families. HUD was brought into existence in 1965. Part of its mission is to commission and fund studies on housing markets in almost every city across the United States. This organization is usually associated with low-income housing, which refers to the fact that these occupants typically cannot afford housing at regular market prices. HUD is also responsible for the development of communities and stimulating economic growth in troubled neighborhoods. Its other goal is the enforcement of the Fair Housing Act, which is a national law that bars home sellers and landlords from discriminating based on race, gender, color, or sexual orientation.

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<sup>1</sup> U.S. Department of Housing and Urban Development. 2001. Homes and Communities – U.S. Department of Housing and Urban Development. Site retrieved on March 26, 2001 at <http://www.hud.gov>

Other than the Department of Housing and Urban Development, there is no federal or state agency that keeps track of the United States real estate market.

### **3.1.2 European Union Laws**

Laws of the European Union, of which Italy is a founding member, have not yet focused on housing, tourism, or taxation. European Union laws, however, allow for easier travel, purchasing of properties and living in foreign nations for the residents of member countries. For this reason the purchase of housing and travel to Venice is facilitated for Europeans.<sup>2</sup> As this organization is still in its infancy, future regulation could have an impact on tourism and related issues, therefore having a larger impact on the real estate transactions within the European Union. At present, however, there are no known laws pertinent to this study.

### **3.1.3 Italian National Laws**

The Italian housing market has been the subject of much debate in the past few decades. Much of the discussion concerning it began to surface in the 1960's and 1970's. At this time period, the issue of rehabilitating existing housing in Italy was brought into debate and gained more attention from the academic and political circles. More studies concerning the poor housing stocks in Italy were conducted, verifying that the need to rehabilitate old dwellings should be included among the ways to improve the overall housing stock. At this time officials focused on creating a large quantity of housing stock as well as increasing the quality of the old housing stock. During the late 1970's, Italian officials decided to control the housing market by passing numerous laws pertaining to rent control and land regulation.

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<sup>2</sup> European Union. 2001. EU Laws and Policies. Site retrieved March 24, 2001 at <http://www.eurunion.org/legislat/home.htm>

Since 1960's the size of the housing stock in Italy has not changed very much. The total number of public housing stocks at this time was approximately one million twenty-six thousand. These dwellings are mostly owned and managed by the *Istituti Autonomi per le Case Popolari* (IACP), a national agency, and by local authorities<sup>3</sup>. To overcome the housing deficit, the Italian government passed Ten-Year Plan for Public House-Building (*Piano Decennale*) of 1978 in an effort to create an additional one hundred thousand public housing dwellings throughout the nation. The plan embraced both the private and public sectors in an effort to break down traditional segmentation in the housing market. It put a strong emphasis on rehabilitation and either partially or wholly subsidized housing for the public.

The Fair Rent Act (*Equo Canone*) of 1978 was created in order to overcome the excessive segmentation in the rental market. It implemented two types of regulations. First, rent cost was to be determined through institutional procedures based on the construction cost of public housing multiplied by a series of coefficients. The second regulation was a limit on the length of leases. All leases were set to expire after four years. It was thought that this law would help Italians with low income by putting the housing price below the market price, however it had the exact opposite effect. Landlords and property owners took this as an opportunity to evict tenants with low incomes<sup>4</sup>. New tenants could be found that would pay higher prices for the same dwellings. One effect that was expected by people who supported the removal of tenure security from this law was that the population in the *Centro Storico* of Venice would increase as old people occupying large apartments were forced to

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<sup>3</sup> Padovani, Liliana. "Housing Policies in Italy", Housing Policies in Europe. London and New York: Routledge, 1996.

<sup>4</sup> Padovani, Liliana. Urban Change and Housing Policies. Venice, Italy: DAEST, Ricerca n. 19, 1995.

give up some space to younger households larger in size<sup>5</sup>. This did not happen since more wealthy individuals tended to buy these apartments and hold onto these. Overall these laws did not help the housing market. Instead of diversifying the market, they catered to high paying renters and short-term rentals.

The Italian government in an effort to reduce the demand for public housing and rent subsidies, as well as to promote rentals for residents within city centers, has developed a systematic plan for rent regulation. Law 431 of 1998 is a national law that offers tax breaks to individuals who rent according to the specified regulations. The regulations specify how much a certain apartment can be rented for depending on which zone it resides in and the characteristics of the apartment. The creation of price brackets and homogenous housing zones is delegated to local city authorities. These homogeneous housing zones are intended to enclose areas of real estate that are generally valued at the equal levels. Each of these housing zones has a set of regulated rental prices. The Commune of Venice has three homogeneous zones defined for the *Centro Storico* area. The prices for these zones are designed to be approximately twenty-five percent below market value. The reduction in cost is hoped to make renting more affordable for residents. If an owner agrees to follow these regulations he is entitled to a significant tax break. These tax breaks include a thirty percent reduction in the cost to register a rental with *Ufficio Registro* and a forty percent reduction in the *ICI* real estate tax. This same law also established a regional fund to be used for housing subsidies in each region throughout Italy. Refer to Section 3.2 of the background, Public Housing and Rent Subsidies, for more information pertaining to this law.

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<sup>5</sup> Padovani, Liliana. Urban Change and Housing Policies. Venice, Italy: DAEST, Ricerca n. 19, 1995.



The *Conservatoria dei Registro Immobiliare* is the Italian government's real estate registry, which contains records of all properties and their sales in Italy. There is a main branch in Rome and each region has its own office. It maintains a database called the *Catasto*, which contains detailed information of the properties owned in Italy. This database contains the structural features, age, location and other pertinent details of the properties.<sup>6</sup> The *Catasto* could serve as a base point from which to begin a study of the non-resident rental housing market.

### **3.1.4 Laws of the Veneto Region**

Venice is governed by both the Italian government, with regard to general federal laws and practices, by the region of *Veneto*, which may impose its own regulations, and by the regional agencies established to govern the *Veneto*.

Regional Law 14 was passed in 1997 by the regional government of the *Veneto* region. This law concerns itself with public housing. It specifically outlines the guidelines to be used for the assignment of public housing

### **3.1.5 Municipal Regulations in Venice**

Venice as a municipality has its own separate law making and governing body that can impose laws, codes, and taxes of its own accord.

In 1999, the *Commune di Venezia* passed Law 49. This law was intended to deal with the expected increase in tourism due to the 2000 Jubilee Year celebration. It eased rental rules and allowed the creation of bed and breakfast type hotels. These are run out of local houses and usually involve the rental of spare rooms.

Law 171 of 1973, Law 798 of 1984, and Law 360 of 1991 were laws that were established by the Italian Parliament specifically to respond to the overall degradation

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<sup>6</sup> National Association of Realtors. Italian Housing Market Report. Copyright 2000.

of Venice. These laws are collectively known as the Venice Rescue Act or “Special Law”. The purpose of these laws was twofold. The original purpose of these laws was to fund public works such as the restoration of monuments and lagoon environmental balance. However, since the poor condition of housing in Venice has driven the population out of the *Centro Storico*, these laws were also targeted towards ordinary housing. This was expected to slow down the emigration of the population. These laws also allow Venetians, who have lived in the city more than eight years, to apply for subsidies towards mortgage payments if they rehabilitate their own dwellings. This second part of these laws would only apply if the resident would use the dwellings for themselves or for their children, or if they rent it for fifteen years under reasonable rent conditions. In general, the purpose of these three laws was to rehabilitate old dwellings in Venice while at the same time avoid a population loss.

In the following sections, zoning laws and housing taxes are examined. These all relate to the project in that zoning laws influence a great deal of what an area can contain in terms of housing and residency. For example, if a particular area is zoned for industry and has strict housing codes it is not likely to contain very many apartments available for the non-resident population of Venice. Taxes play an important role because they greatly influence how a particular landowner might be inclined to manage his property. Taxes also serve as a possible source of future regulation for the Commune of Venice to control the non-resident situation.

### **3.1.5.1 Zoning**

Zoning in the Commune of Venice is divided into four major categories: residential, commercial, agriculture, and industrial. The *Centro Storico* section has been subdivided into eighteen zones, which are largely based on the concept of

historical preservation. Zoning in *Centro Storico* regulates the usage of the restored and rehabilitated old dwellings. The direct impact of the historical preservation efforts is a stiff limitation on changes in the housing stock and its usage. Housing stock in the *Centro Storico* can hardly change and rehabilitated buildings can only serve the same purpose as prior to the restoration.

### **3.1.5.2 Local Real Estate Taxes**

The Real Estate Properties Tax is due every year to the municipality in which the property is located. It may vary between 0.4 and 0.6 percent of the total property value. The Real Estate Appreciation Tax is due from the seller, when real estate is sold, at a rate ranging from five to thirty percent. The value of the property is determined by the information in the *Catasto*; the rate at which the sale will be taxed is adjusted accordingly. Registration Tax is due when a legal transaction or deed is registered. Rates are applied on the declared value. The heirs of the properties in Venice pay the Inheritance and Gift Tax, which ranges from three to thirty-three percent of the value determined by the *Catasto* database.<sup>7</sup> The *Imposto Comunale sugli Immobiliari* (ICI) tax, perhaps the most important to our study, is a tax that is charged to the owners of houses and is a local tax. The information relating to this tax is stored within the city and has such data as the owner of the property and the billing address of the owner. The housing information, however, is kept in a way that may prove to be a hindrance to our obtaining valid figures. At the very least this tax helped us to identify the owners of housing in Venice by way of the names on the billing information and more importantly the addresses to which the bill itself is being sent.

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<sup>7</sup> Penta Consulting. Business & Fiscal Advisor Firm. Report on the Italian Fiscal System.

## **3.2 Public Housing and Rent Subsidies**

The *Osservatorio Casa*, the sponsor of our project, has the responsibility of monitoring the housing market for the Housing Department of the Commune of Venice. The rental market within the *Centro Storico* is very expensive and therefore many residents require help to afford housing. Residents can apply for either public housing or rent subsidies.

### **3.2.1 Osservatorio Casa**

The *Osservatorio Casa* is a sub-division of the Housing Department of the Commune of Venice. The main responsibility of this agency includes monitoring and informing the Housing Department of the current status of the Venetian housing market. Annually, they publish reports detailing the current public housing condition, as well as an analysis of the usage of these dwellings. The *Osservatorio Casa* is not solely responsible for the creation or administration of legislation; they merely examine and report on the current state of the housing market for the Commune of Venice.

### **3.2.2 Public Housing**

The Housing Department of Venice is the entity responsible for the assignment of public housing. Public housing is granted to those families that have the lowest combined income or are facing other extenuating circumstances. In Venice, a large amount of the public housing stock is owned by public companies. The largest of these organizations is *ATER*, the regional housing authority for the *Veneto* region. Any individual or company who owns a house and offers it up for public housing becomes eligible for tax breaks. The tax breaks are intended as an

incentive to bolster the public housing stock. As of June 2001, the number of families situated in public houses was two thousand three hundred one. Public housing comprises approximately fifteen to twenty percent of the total rental housing stock. With this percentage being utilized for subsidized housing, very little is left for residents of the city to occupy.

### 3.2.3 Rent Subsidies

Rent subsidies are the other type of governmental aid afforded to families unable to afford housing. The Italian national and Venetian municipal government have only recently begun providing rent subsidies. Rent subsidies are intended for families that are partially supported by other family members, such as the elderly, or those that make too much to be considered for public housing. Families that request money are divided into two categories. The first are families that make less than two standard pensions while the second consists of families making more than two standard pensions. The minimum amount provided is based on a percentage of annual income devoted toward rent and the maximum is capped at five hundred thousand lire per month. The following chart breaks down the requirement scheme for funding. The total number of subsidies provided with this fund in 2000 was three hundred ninety-eight for the *Centro Storico*.

Category I	Income	Equivalent Income	Minimum	Maximum
1	>two standard pensions	>18,448,300 Lire (self employed) >11,068,980 Lire (not self emp.)	14% of Income	500,000 L
2	<two standard pensions	<18,448,300 Lire (self employed) <11,068,980 Lire (not self emp.)	24% of Income	500,000 L

**Table 1 - Rent Subsidy Categories**

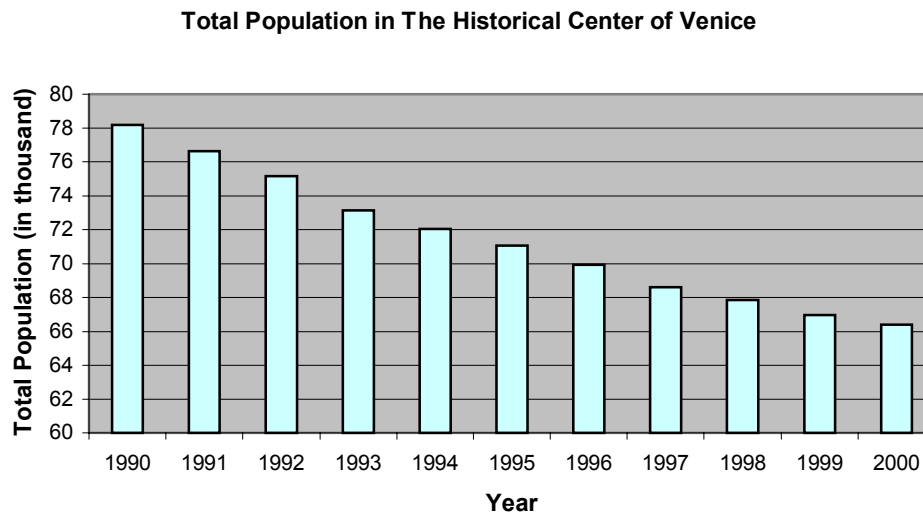
The Commune of Venice established its rent subsidy program in 1997 and funded it from an annually renewed budget. Subsidies are distributed in lump sums of five hundred thousand lire per month per family. Each recipient must reapply each year for continued funding. Currently, the Housing Department provides ninety-five families with rent subsidies. The national government established its own fund for rent subsidies with Law 431 of 1998. These funds are divided and distributed to each region of Italy. The Region of *Veneto* then redistributes this funding to each city within the region. Therefore, the Commune of Venice has two established funds from which to draw monies for rent subsidies.

### **3.3 Venice Demographics and Housing Statistics**

Venetian statistics and the picture they create with relationship to housing, tourism, and population were looked into for a complete and accurate study. Current demographics as well as those of years past were analyzed and the results discussed. Their value lies in their ability to show trends over time and to predict future outcomes.

### 3.3.1 Census Data

Venice has a population of about sixty-eight thousand.<sup>9</sup> The historical center of Venice is becoming a museum, with inhabitants who service hotels and restaurants



**Chart 1 - Population of Historical Center 1990-2000<sup>8</sup>**

for tourist trade or work in retail.<sup>10</sup> Artisan workshops, however, are still in abundance. Many of those artisans who left, moved to the adjoining mainland where commerce and industry flourish.

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<sup>8</sup> Santillo, Giuseppe. June 2000. Quinto rapporto. Pagina 10. Comune di Venezia: Osservatorio

<sup>9</sup> Venice. 2000. Venice Confronts Population Loss Environmental Problems. Site retrieved on March 18, 2001 at [www.urbanecology.org/journal/ue00.3.cityfront.f.html](http://www.urbanecology.org/journal/ue00.3.cityfront.f.html)

<sup>10</sup> Weideger, Paula. January 24, 1997. Death or Transfiguration? Site retrieved on March 16, 2001 at [http://www.findarticles.com/m0FQP/n4318\\_v126/19223564/p1/article.jhtml](http://www.findarticles.com/m0FQP/n4318_v126/19223564/p1/article.jhtml)

The population of Venice, especially in the *Centro Storico*, has been on a steady decline since the end of the Second World War. Chart 1 demonstrates the population fluctuation in the *Centro Storico* area of Venice over the last 10 years.

Additionally Table 2 shows that the mortality rate is greater than that of the birth rate, and also that there are more people leaving than entering the city. With the decreasing number of local inhabitants and increasing number of visitors, the influence of non-residents on the housing market has become more significant than that of local residents. With the shift of focus towards non-residents, the city

Year	Total Birth Rate	Total Migration Rate	Total Population
1990	-8.74	-8.03	78.165
1991	-10.3	-6.35	76.644
1992	-9.76	-9.80	75.159
1993	-10.05	-6.61	73.149
1994	-9.90	-7.67	72.037
1995	-9.07	-4.85	71.053
1996	-9.88	-6.78	69.906
1997	-11.58	-7.60	68.600
1998	-9.45	-1.92	67.838
1999	-9.7	-3.56	66.945

of Venice could make the transformation into a permanent museum of the Adriatic coast.

**Table 2 - Venetian Population 1990-1999**<sup>11</sup>

Another possible explanation in the population decline in Venice is the initial population in the city was too large. The overcrowding situation eventually led to population overspill from Venice. From the housing availability point of view, the poor quality of the housing stocks accompanied by high prices motivates people to move to the mainland area where housing quality is better and the price is lower<sup>12</sup>.

The last explanation is that foreigners are willing to pay higher prices. As the foreigners outbid the locals, housing availability for the Venetians is taken away. The

<sup>11</sup>Santillo, Giuseppe. June 2000. Quinto rapporto. Pagina 10. Comune di Venezia: Osservatorio

<sup>12</sup> Padovani, Liliana. Urban Change and Housing Policies. Venice, Italy: DAEST, Ricerca n. 19, 1995.



bidding between foreigners and the locals also drives up the price of real estate in the city. If the price of dwellings in Venice cannot be maintained at affordable level, then even more locals will be driven out from Venice.

### 3.3.2 Housing Statistics

Many of the visitors to the city stay in the older palaces, which have been converted to hotels for short-term stays. For those planning to visit the city longer, it is economically more feasible to stay in one of the many apartments that are available throughout the city. Some of these apartments cater toward tourists that will probably be visiting for a week up to a month. Others are marketed towards longer-term non-residents, such as students and workers that will be living in the city for months at a time.

#### 3.3.2.1 Real Estate Transactions

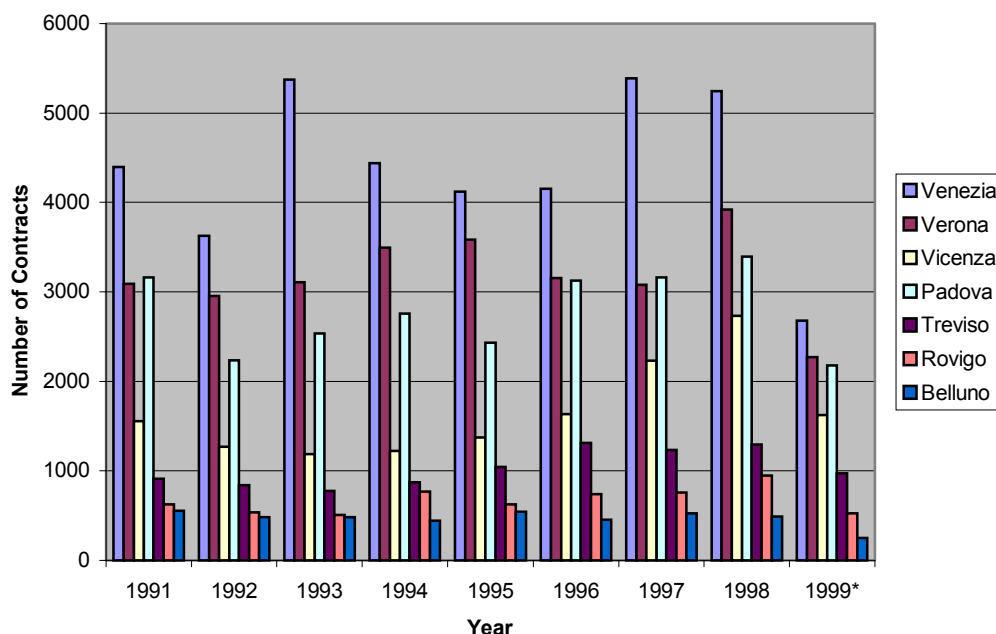
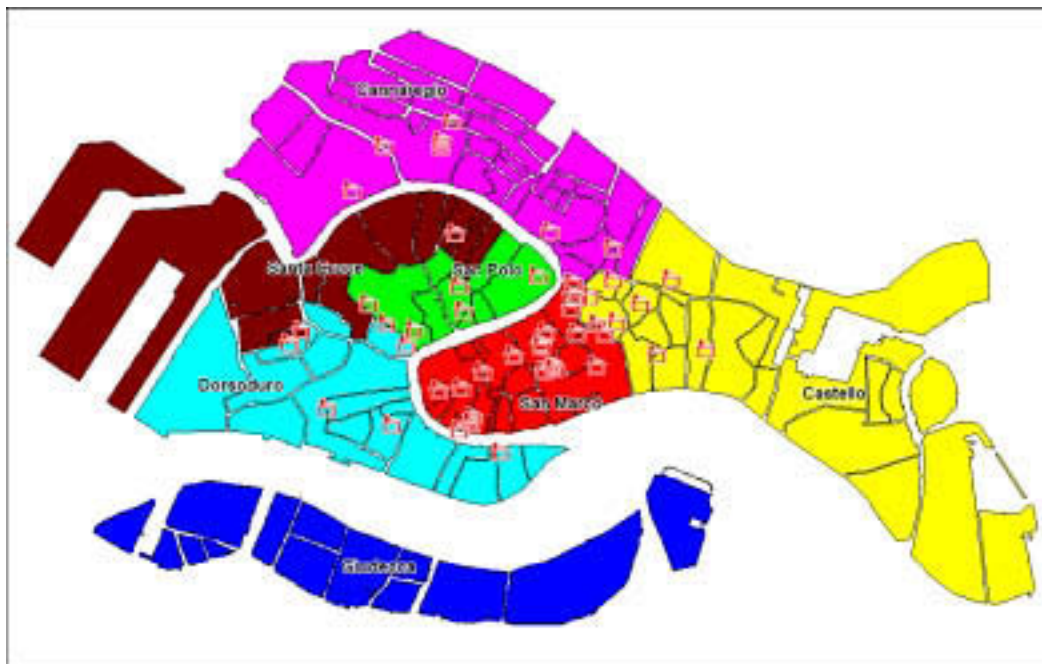


Chart 2 - Total Housing Contracts for Veneto Region (\* January - June 1999)<sup>13</sup>

<sup>13</sup> Santillo, Giuseppe. June 2000. Quinto rapporto. Pagina 10. Comune di Venezia: Osservatorio

Housing in Venice is very expensive. Owners prefer to rent short term high-paying non-residents than long-term to locals. Venice has more housing contracts made compared to other cities in *Veneto* because of the contracts made with tourists who stay for several days. Tourists prefer to stay in apartments because they are more convenient and affordable than hotels for these long-term stays. Chart 2 shows the number of total contracts generated in Venice and several other major cities in the *Veneto* region over the last nine years.<sup>14</sup> The graph shows that Venice, although it does not have room for expansion of its housing stock, is the leading city in *Veneto* with regard to the housing contacts made every year.

### 3.3.2.2 Real Estate Agencies



**Figure 1 - Real Estate Agency Locations<sup>15</sup>**

In total there are forty-six real estate agencies in the historical center of Venice. There happen to be others located on the *Lido* and *Mestre*, however given that the focus area of this project is centered on the historical center it makes less sense to be concerned with these additional real estate agencies. These other agencies

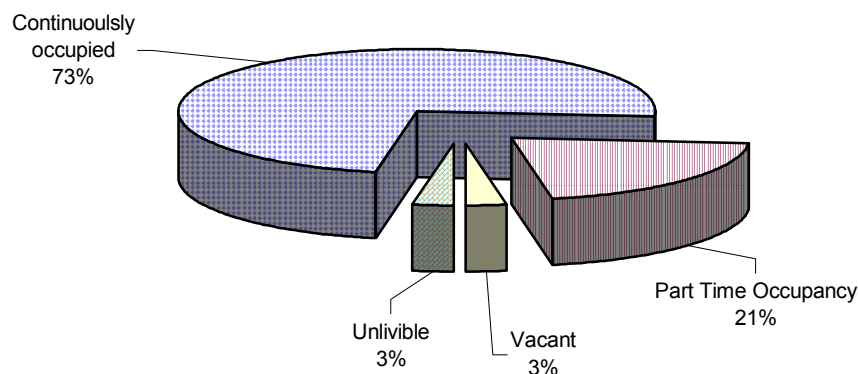
<sup>14</sup> Santillo, Giuseppe. June 2000. Quinto rapporto. Pagina 10. Comune di Venezia: Osservatorio

<sup>15</sup> Refer to Appendix C.2.

could have listings in the *Centro Storico*, but those in historical center hold the majority of the real estate listings for our study area. Figure 1 shows the exact locations of all the real estate agencies in the historic center. There is a large concentration of agencies in the *Sestiere di San Marco*. This high density is somewhat unexpected due to the small number of apartments actually available in this area, however it makes sense on the basis that it is a centrally located business district.

### 3.3.2.3 Occupancy Statistics

The housing situation in Venice is quite complex. There are basically four types of housing occupancy categories. These categories are: continuous occupancy, part time occupancy, vacant, and unlivable. The vast majority of dwellings in Venice



**Figure 2 - Dwellings by Occupancy Type<sup>16</sup>**

are continuously occupied. The *Osservatorio Casa* keeps track of this data by tracking the water consumption of each household. This is a fairly accurate measure of occupancy. Figure 2 shows the breakdown of dwellings by how they are occupied. Around seventy-five percent of all the houses in the historical center of Venice are

<sup>16</sup> Santillo, Giuseppe. June 2000. Quinto rapporto. Pagina 10. Comune di Venezia: Osservatorio

continuously occupied. Of those dwellings situated in the historical center that are either continuously or partially occupied, non-residents occupy twenty percent.

Figure 3 shows the occupied dwellings broken down into residents and non-residents.

Once again, the *Osservatorio Casa* collected this data based on water consumption.

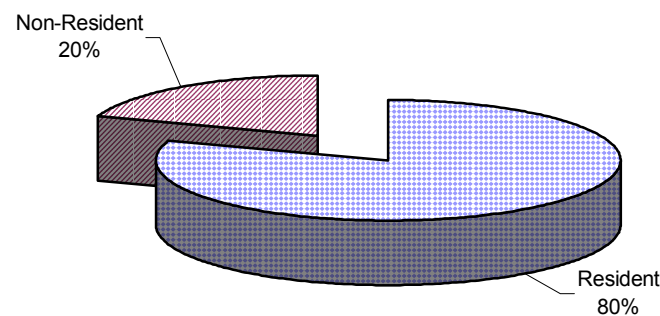


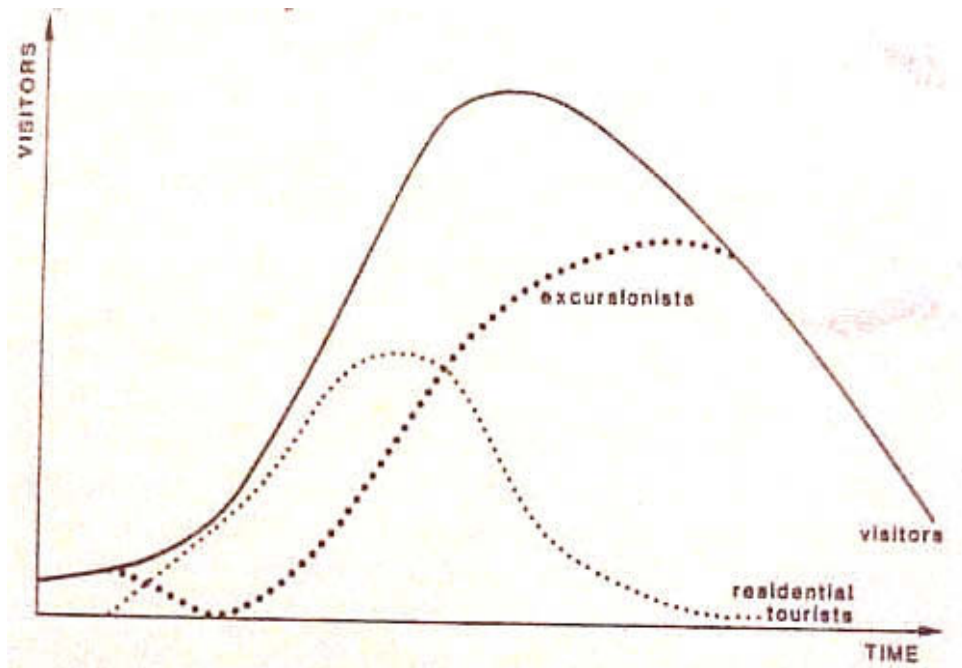
Figure 3 - Itemization of Occupied Housing<sup>17</sup>

### 3.4 Tourism in Venice

Cities are faced with varying degrees of impact from tourism. Initially, small cities draw in day-trippers and random guests. Over time, as the community begins to cater towards these tourists, the focus of the city's economy is altered. A model has been created to predict these changes and the pattern that they follow, as can be seen in Figure 4. The three basic stages of this model are prices, trends, and the Tourism Paradox. The beautification of the city is wholly contained within the prices aspect of the model. As the city is beautified, the cost of living for visitors increases to accept the cost of this attractiveness.

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<sup>17</sup> Santillo, Giuseppe. June 2000. Quinto rapporto. Pagina 10. Comune di Venezia: Osservatorio



**Figure 4 - Tourism Lifecycle<sup>18</sup>**

Tourists follow trends. These trends represent a variety of changes within the economy and society of the tourist destination. The tourism paradox becomes apparent as the level of tourism declines in a once popular location. Tourism will eventually destroy itself. Several factors, for example pollution and congestion, may eventually lead to the decline of tourism in a city. Venice is currently at, or seems very near the peak of this trend. Fortunately, the city has instituted measures to maintain its appearance, cut back on pollution and regulate tourism. These procedures have helped to stabilize the city's economy and tourism industry. These measures may have also helped to bring the tourism trend to a plateau rather than into its eventual decline, as outlined in the figure. If the plateau occurs, then the tourism industry in Venice may never see a decline thereby forcing more and more residents out of the city and turning the city into a sort of "theme park".

<sup>18</sup> Van der Borg, Jan and Giuseppe Gotti. Tourism and Cities of Art. Venice: UNESCO ROSTE. 1994.

### 3.4.1 Tourism Overview

The overall number of tourists visiting Venice increases dramatically during the summer months. The Commune of Venice is a virtually dead city during the winter months comparatively. In recent years the effects of tourism has turned Venice into a “museum” city. People travel to Venice only to look and observe, where the only contributions made are in the area of the tourism market, which has a profound effect on the economy. There are tourist peaks around certain times of the year, such as around the celebration of *Carnivale* and during the film festival in the fall.

The volume of the various tourists increases and decreases with the summer months generally. The economy experiences an increase in the number consumers each summer, leading to an increase in prices of most goods. Most entrepreneurs raise prices in an effort to increase their income to offset the deficiency of money made in the winter. The volume of tourists entering the city in a given year has been phenomenal. In 1994 alone, ten million tourists visited the Commune of Venice, from which it was estimated that sixty-eight percent visited for a single day.<sup>19</sup> The remaining thirty-two percent stayed in hotels, hostels or apartments.

As these tourists enter the city, the landlords and hotels are responsible for registering their visitors who plan on spending more than a week. Forms are submitted into the *Questura*, a database maintained by the *Guardia di Finanza* containing such details as the visitor’s nationality, place of residence, date of birth, location of stay, length of stay and so forth.

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<sup>19</sup> Unknown. 2001. Revitalizing Venice. Site retrieved on March 17, 2001 at [http://www.unesco.org/culture/heritage/tangible/venice/html\\_eng/resultatve.htm](http://www.unesco.org/culture/heritage/tangible/venice/html_eng/resultatve.htm).

### 3.4.2 Overnight Tourists

Tourists that stay in Venice overnight number fewer in comparison to excursionist tourist. According to a WPI study conducted in 1999, residential tourists numbered approximately four million compared to about six million excursionist tourists. Current Venetian statistics show that the average length of stay in the historical region is about two and a half days<sup>20</sup>. Hotels absorb almost all the overnight tourist influx in Venice. The remaining overnight tourists are those that rent apartments or houses. Table 3 shows the official tourism report for the Commune of Venice for 1999.

Zone	Hotel Occupancy		Other Places of Occupancy		TOTAL		Average number of days
	Occupants	Nights	Occupants	Nights	Occupants	Nights	
Historical Center	1,346,317	3,090,206	105,130	369,117	1,451,447	3,459,323	2.38
Venice Lido	199,729	498,727	3,824	32,133	203,553	530,860	2.61
Shoreline of Cavallino	44,464	157,048	542,481	5,379,616	586,945	5,536,664	9.43
Mainland	841,310	1,443,991	110,597	291,620	951,907	1,735,611	1.82
Total 2,43	1,820	5,189,972	762,032	6,072,486	3,193,852	11,262,458	3.53

Table 3 - Tourism in Venice 1999<sup>21</sup>

### 3.5 Higher Education Institutions in Venice

Another significant demographic group in Venice is the student population. While they may study for extended periods, they are typically characterized as non-residents due to the fact that students do not participate in the voting process. Although they typically spend more lengthy periods of time in the city than most tourists, students still require temporary housing, which detracts from that available to residents. The largest majority of students found in the city are attending secondary

<sup>20</sup> Unknown. 2001. Turismo – dati dell’Apt. Site retrieved on April 19, 2001 at [http://www.comune.venezia.it/statistica/apt2.asp?F=nf\\_b&M=uff4\\_sta](http://www.comune.venezia.it/statistica/apt2.asp?F=nf_b&M=uff4_sta)

<sup>21</sup> Unknown. 2001. Turismo – dati dell’Apt. Site retrieved on April 19, 2001 at [http://www.comune.venezia.it/statistica/apt2.asp?F=nf\\_b&M=uff4\\_sta](http://www.comune.venezia.it/statistica/apt2.asp?F=nf_b&M=uff4_sta)

schools. However, the student population that consumes the largest quantity of the rental housing market is those attending the universities.

### 3.5.1 Types of Schools

The educational system of Venice is a three-tiered structure. The first tier is called *scuola dell'obbligo*, which translates to mandatory schooling. Every Venetian is required to attend these schools from three to thirteen years of age. These mandatory schools are further broken down into maternal, elementary, and inferior medium schools. The second tier of Venetian education consists of the *scuola post diploma* (schools of secondary instruction). At this educational level students are given the choice of what type of school they may attend. All of the second tier schools are five years in duration. Graduates of this level are thirteen to eighteen years of age. The exception is the Conservatory that is five to ten years in duration. The breakdown of the secondary schools is outlined in Table 4.

MINISTRY OF EDUCATION						
	Professional Institutes	Technical Institutes	State institute of Art	Skillful Institute	Grammars school	Conservatory
DURATION	3 years + 2 years for the professional maturity	5 years	3 years + 2 years for the professional maturity	5 years	5 years	From five to ten years to second of the chosen instrument
TYPES	Agriculture Industry and Handicraft Hotel services and of the ristorazione Tourist commercial services and of the publicity Social services	Aeronautical Agrarian Commercial Feminine Geometricians Manufacturer Business experts Nautical Tourism			Artistic Classic Scientific Linguistic	

Table 4 - Secondary Schools <sup>22</sup>

In addition to these secondary schools, Venetians have the option of continuing their studies at one of five postgraduate schools as shown in Table 5. These are essentially equal to United States' universities and colleges. The duration

<sup>22</sup> Unknown. 2001. Scuola post diploma. Site retrieved on April 1, 2001 at <http://www.comune.venezia.it/infolavoro/vezza/progeu/spagnolo/second.htm>.



of study at one of these institutions can vary widely. Typical students reside at these institutions for two to four years. Students at this level of education are all over the age of eighteen.

	Universities				
	Professional formation Post Diploma	Academy of Fine Arts	ISIA Advanced Institute for the Artistic Industries	University	ISEF Higher Institute of Physical Education
Duration	Varied	4 years	4 years + 2 years for the professional maturity	Varied	3 years
Degree Types		Painting Sculpture Decoration Scenografia	Design and diagram	University Diplomas Course of Bachelor	

Table 5 - Post Diploma Schools<sup>23</sup>

### 3.5.2 Location of Educational Institutions and Student Residencies

The primary and secondary schools are located on both the mainland as well as in the historical section of Venice. Venice has two universities located in its

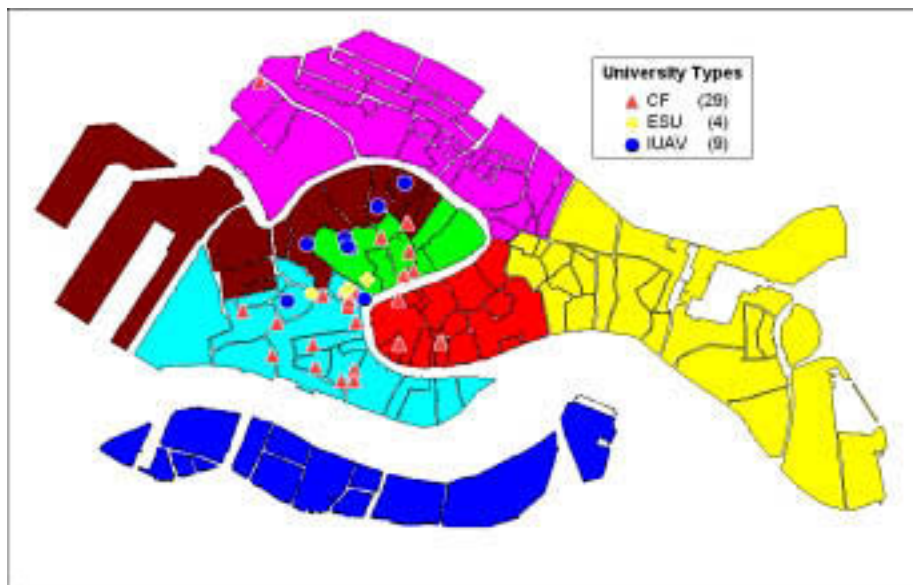


Figure 5 - Locations of Universities in Venice

historical center: the University of Venice (*Ca' Foscari*) and the School of Architecture (*IUAV*). Figure 5 shows the locations of the two post diploma schools

<sup>23</sup> Unknown. 2001. Scuola Post Diploma. Site retrieved on April 1, 2001 at <http://www.comune.venezia.it/infolavoro/vezza/progeu/spagnolo/post.htm>.

located in the historical center. Also shown are the locations of *ESU* facilities, which is a student housing organization connected to the two universities. It is responsible for housing university students as well as monitoring the student-housing situation.

The majority of students who attend Venetian secondary schools live on the mainland. Those students attending either the University or School of Architecture living in the historical center of Venice are mainly concentrated around either institution. The majority of university students live either in *ESU* facilities or live on the mainland.

### **3.6 Comparative Housing Case Studies**

Often times while attempting to solve a problem, it is helpful to compare it with similar problems that have already been analyzed. For the housing issue being presented in Venice, reports from other cities were examined. These studies provided some examples for possible solutions, methods for research, and locations of other background sources.

#### **3.6.1 Massachusetts Cities**

The City of Worcester, MA is the third largest city in New England, closely following Providence, R.I. and Boston, MA. There are more than ten colleges in and around the city that bring a significant number of students to the area. A great majority of these students need to find temporary housing. The housing needs are particularly acute among the extremely low and very low-income groups.<sup>24</sup>

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<sup>24</sup> Worcester Office of Planning and Community Development. 1995. Worcester Consolidated Plan. Site retrieved on March 26, 2001 at <http://www.hud.gov/cpes/ma/worcesma.html>.

The City of Boston is the capital of Massachusetts. Its history dates back to the colonial period, the beginning of America. In recent years, the City of Boston has witnessed a decline in its resident population. Today it stands at 574,283 persons. Boston has experienced severe overcrowding within its city's limits, due to a large student population, the need for housing for city workers, its visiting population as well as several other factors. For this reason, Boston has been the center of attention for numerous studies and reports. The local housing problems in Boston include the insufficient range of affordable housing and the poor condition of its old housing stock, which relates closely to the situation in Venice.<sup>25</sup>

#### **3.6.1.1 Case Studies**

The University of Massachusetts has conducted a study, *A Profile of Housing in Massachusetts*<sup>26</sup>, which primarily examined the overcrowding experienced in low-income districts of the state. It considered ownership, trends in population growth, impact of subsidized housing, and proposed ideas on how to manage these problems over the next decade. The *Osservatorio Casa* operates in a similar manner and many ideas could be generated from this study, as it applies to the current situation in Italy.

#### **3.6.1.2 Organizations and Laws**

The Cape Cod Commission (CCC) is an organization that has been established to regulate and preserve the lands of Cape Cod. They are a regulatory body in the State of Massachusetts who preside over land disputes and proposals on the islands of Cape Cod. They may provide an example of a similar organization that needs to be established in Venice.

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<sup>25</sup> Worcester Office of Planning and Community Development. 1995. Worcester Consolidated Plan. Site retrieved on March 26, 2001 at <http://www.hud.gov/cpes/ma/bostonma.html>.

<sup>26</sup> University of Massachusetts. 1999. University of Massachusetts Publications. Site retrieved on March 25, 2001 at <http://www.donahue.umass.edu/publications/housing/>

## 4. Methodology

The objective of this project is to assist the *Osservatorio Casa* of the Commune of Venice with the assessment of the impact of non-resident occupancy on the Venetian housing market, by identifying and quantifying the clientele and the spatial and temporal distribution of this phenomenon. The primary objectives that we have isolated for this project include:

1. Determination of the locations of all officially reported non-resident rental housing.
2. Identification of the locations of unreported non-resident housing.
3. Determination of the location of student residencies within the *Centro Storico* of Venice.
4. Quantification of non-resident data with estimates.

The remainder of this chapter includes:

- **Section 4.1**, which outlines the boundaries of this project and defines the basic vocabulary required.
- **Section 4.2**, which describes the area being studied within the city, including the areas where sampling was employed.
- **Section 4.3**, which outlines the necessary information requirements.
- **Section 4.4**, which outlines the process of determining the sites of reported non-resident housing.
- **Section 4.5**, which offers details of the methods used to collect the information regarding the location and extent of the unreported non-resident housing in Venice.
- **Section 4.6**, which describes how, with the help of the University, the locations of student dwellings can be identified.
- **Section 4.7**, which explains the techniques utilized to characterize the population of non-residents visiting the city.

### 4.1 Domain of Inquiry and Definitions

This project has restricted its inquiry to non-residents and their dwellings. The primary objective of this project is to develop a database containing all known non-

resident locations, including specific characteristics of each dwelling that can be used for analyzing the non-resident market. The domain of inquiry has expanded slightly to include a characterization of these non-residents. In future studies, it would be useful to organize a database that includes the characteristics of all housing within the city. These limitations are due in part to time restrictions, data collection feasibility, and requirements outlined by our sponsor.

Throughout this project many key terms are referenced numerous times. The following list comprises the terminology pertinent in our study of the non-resident housing market. Along with their use during the study, the results section also makes reference to these key terms in an effort to provide uniformity.

- House = an individual dwelling that occupies an entire building.
- Apartment = an individual dwelling wholly contained within a larger building.
- Rental = dwelling in which occupant is not the owner, and pays for living space at predetermined intervals to landlord or owner.
- Short-term = occupancy term lasting less than six months.
- Long-term = occupancy term lasting more than six months.
- Non-tourists = people who visit the city for business or academic reasons.
- Tourist = person who primarily partakes in leisure activities.
- Student = individual whose primary occupation is educational advancement.
- Worker = individual who travels to Venice for employment.
- Non-Resident = person living in Venice whose official permanent residence is outside the municipality.
- Resident = person who is able to vote and claims residence in Venice.
- Owner = individual who is in possession of the title for a house or apartment.
- Renter = individual who occupies a dwelling without the title for that location.

Besides the vocabulary defined above, numerous Italian words were translated for an easier understanding of the descriptions provided in newspapers, magazines and other similar sources. The following list contains most of the terms deemed necessary for our specific study.

- Abitabile = inhabitable, live-in (usually in reference to kitchens)
- Angolo = small corner kitchen
- Arredata = furnished
- Ascensore = elevator

Bagno = bathroom  
Bilocale = two rooms  
Camera = generic term for a room  
Camera (da letto)= bedroom  
Contratto = contract  
Cucina = kitchen  
Cucinino = small kitchen  
Doppia = double (usually referring to beds)  
Ingresso = entrance  
Matrimoniale = matrimonial (double bed)  
Mensarda = attic  
Metratura = view  
Ottimo = optimum, very good  
Piano = floor  
Posto = mail service  
Ripostiglio = cupboard  
Riunioni = meeting  
Sala = long entry way/hall  
Sala da pranzo = dining room  
Salotto = living room  
Sestiere = borough  
Singola = single (usually referring to beds)  
Soggiorno = living room  
Soleggiata = sunny  
Stanza = room  
Stato = condition  
Studiolo = study  
Terrazza = terrace  
Ufficio = office  
Vano = room or opening

## **4.2 Study Area and Parameters**

To fully understand the non-resident housing market in Venice, our primary study area comprises the entire historical region, as seen in Figure 6. Additionally, experimentation with certain aspects of the project was conducted on the Lido, an island on the Adriatic coast that creates a border around the lagoon.

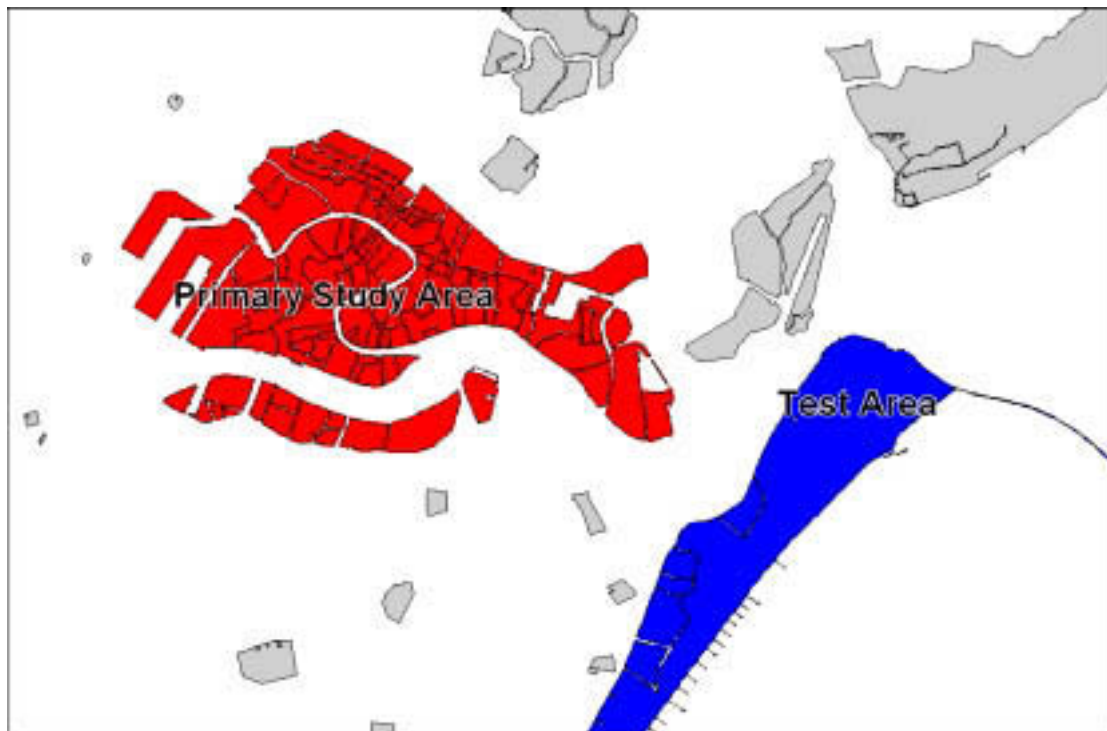


Figure 6 - Project Study Area

### 4.3 Information Requirements

Determining the number and location of all unreported non-resident dwellings in Venice is an exhaustive process requiring the integration of pre-existing housing data with newly garnered information obtained from a variety of sources. Ideally, these sources would provide the exact location of the rental apartments with an explicit description of each location. The description would entail such particulars as number of bedrooms, bathrooms, price, etc., as outlined in Appendix C.2. Requesting this information from the various government agencies would be the simplest and most ideal method of obtaining data, however such direct acquisition proved difficult. Other sources and methods were examined, and what follows details the methods used for determining the extent of non-resident housing within the *Centro Storico* of Venice. Figure 7 contains an organizational flow chart of the methodology followed during our study of the non-resident rental housing market.

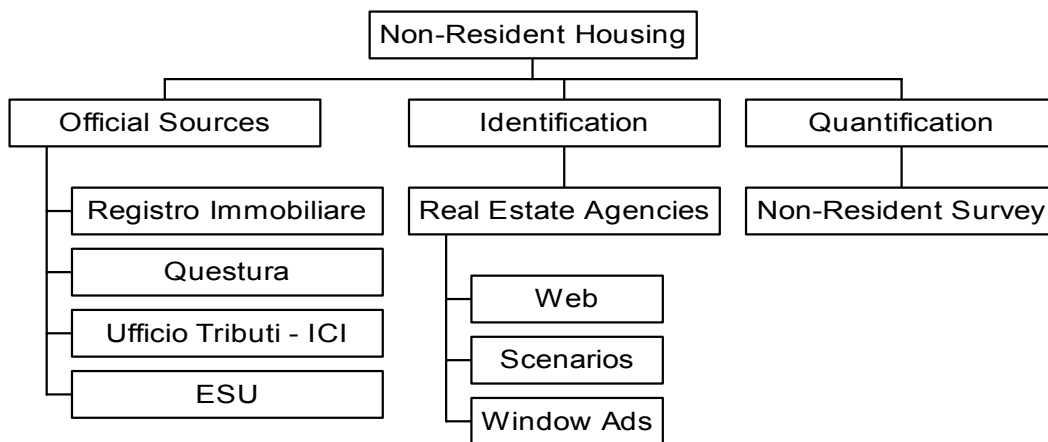


Figure 7 - Organizational Flow Chart

## 4.4 Officially Reported Non-Resident Housing Data

As with most municipalities, the Commune of Venice and the Italian government require that apartments being rented be reported to the government for taxation purposes. Within the Commune of Venice, few apartment owners feel obligated to report their rental facilities to the proper authorities. The Italian government requires by law that all citizens report all facets of their income annually. Along these same lines, property owners are supposed to pay taxes on all owned properties, which often times also go unreported. Given this situation, determining the location of non-resident dwellings is limited in how helpful the local and federal government agencies are. Even so, official sources were used as much as possible to determine as much of the rental market as viable.

### 4.4.1 Collection of Existing Official Rental Data

Our study of the rental housing market began with an investigation into the diverse records held by the various government agencies within the city. The *Osservatorio Casa* served as the primary source for contacting the other government bureaus. The difficulty of this search has been in gaining access to the pertinent data



on non-resident dwellings, which has been subsequently denied. The resources being used belong to several different agencies, most of which are on different levels of government and are not accustomed to working together. Proposals have been made, found in Chapter 6 Proposals and Recommendations of this report, to link several of these bureaus together in an effort to simplify further research in this field for both the project at hand and future follow up studies.

The various utility companies in Venice have provided another source of information. There are three major utility companies that service the historical section of Venice: Telecom Italia (telephone), ASPIV (water), and VEGAS (gas). The *Osservatorio Casa* currently makes use of this data and utilizes it in their annual reports. Utility data is broken into three categories that classify usage. These categories are normal, low, and none. There is also a list of buildings where service has been discontinued. Utility data is an indicator of how a dwelling is being used, and thus sheds light on the possible identity of the dwellings' occupants. Unused dwellings are removed from the resident housing stock. Dwellings that show a normal utility consumption rate were assumed occupied by residents or non-residents who happen to rent long-term, or for a year's time. Those dwellings that are classified as low consumption serve most likely as second homes for Italians or foreigners, part-time residences for Venetians, or non-resident housing. One possible improvement that could be made to increase the effectiveness of the utility consumption data would be to increase the interval at which it is collected. At the moment an entire years worth of data is presented as a single consumption figure. Monthly usage statistics would indicate exactly how a dwelling is being used and thereby would indicate for example if a particular dwelling were used only during the summer as vacation home. Singularly, utility consumption data does not provide a

clear picture of the housing market. However when coupled with other data such as sales records and public housing data, a better understanding of the overall situation can be unveiled. Table 6 outlines the utility consumption databases and other files made available for our project.

Utility Year	Year	File Name	Description
Telephone	1999	Cest12ve.dbf	Discontinued residential telephone service
Telephone	1999	Cest3ve.dbf	Discontinued residential telephone service
Gas	1999	Vegas.zip	Deactivated gas service
Water	1999	Aspiv2.zip	Low water consumption
Water	1999	Aspiv.zip	Discontinued water service

**Table 6 - Utility Consumption Databases**

#### **4.4.2 Overview of Data Collection**

The initial point from which the investigation into rental housing began was with the *Registro Immobiliare*. As described previously in Chapter 3 Background and Literature Review of this report, the *Registro Immobiliare* is responsible for recording the transaction of real estate and property holdings in Italy. These documents would have provided a detailed source of the reported properties being rented in the city, thereby leaving only the unreported apartments for investigation. The *Registro Immobiliare* however would not divulge any of this data due to privacy issues. The next source of information regarding the locations of non-resident dwellings is the *Questura*. The apartment owners for those non-residents planning to stay longer than one week must file this record with the *Guardia di Finanza*. This database contains information pertaining to the length of stay, location of their stay, nationality, permanent address and general passport information. While many landlords choose not to report rentals to the appropriate authorities, they do in fact file with the *Questura*, as it is more isolated and has never cooperated with the other agencies in any effort before. Another source of data includes the records of taxation held by the

*Ufficio Tributi – Imposta Comunale sugli Immobiliari*. The records of the owner's addresses held in these files could be cross-referenced with water consumption data provided by the *Osservatorio Casa* to determine whether the owned house is used for rental purposes and assumptions on the residency of the occupants. This is not a definite method of determining location of non-resident rental dwellings, however it is a technique for confirming other data that has been collected.

The *Osservatorio Casa* has contacted the *Guardia di Finanza* in an effort to obtain the data held within the *Questura*. Unfortunately, these records are being withheld due to issues of privacy. Proposals have been created in Chapter 6 Proposals and Recommendations that outline steps required for the compilation of this data with other government statistics.

All of the listed apartments may not necessarily be present in the records of the *Registro Immobiliare* because owners regularly list their renters with the police, but do not report their owned properties to the *Ufficio Tributi – ICI*. However, the link of records between the *Osservatorio Casa* and the police would prove to be a valuable approximation of the non-resident housing demand within the city. Also, the *Guardia di Finanza*, responsible for the assessment and collection of taxes, as of late has been assuring that characteristics of each piece of property are reported accurately for use in their records. If all of these sources could be combined, a sizable majority of the rental market in Venice could be referenced and taxes could be assessed toward the owners. It would seem that such a linkage would benefit all of the involved agencies.

Overall, the government agencies have in their possession a majority of the information needed to gather a reasonable assessment of the non-resident housing market. If all of the databases and archived records were gathered and cross-

referenced with each other, the process of tracking this situation in the future could be simpler than the methods employed in this study.

#### **4.4.3 Data Archival**

The following subsections contain descriptions of the various methods that were used to archive the collected data. The *Osservatorio Casa* has been presented with a series of map layers and databases containing details on the location of the non-resident dwellings throughout the *Centro Storico*, including the public housing rendered.

##### **4.4.3.1 Database**

The primary database for this objective was a collection of the non-resident apartments that have been collected by the various means of triangulation. There is also a database cataloging current dwellings used for public housing.

##### **4.4.3.2 Map Layers**

In conjunction with the databases produced, accompanying map layers have been created to provide a visual representation of the collected data and promote further analysis.

#### **4.5 Identification of Non-Reported Non-Resident Dwellings**

Many of the problems Venice faces in regards to the housing market and its population decline are due in large part to an uncertainty of its present condition. As of this moment there are no known databases or listings detailing the entire housing market. Through this objective, the locations and characteristics of many of the unknown non-resident dwellings were determined and catalogued.

#### **4.5.1 Necessary Housing Data**

A possible primary source of rental housing market data includes real estate agencies. Under ideal conditions, they would have a catalog of their entire real estate inventory that they would be willing to share. These catalogs might have shed light on which houses non-residents routinely use. However, the largest obstacle faced here was obtaining this data from the real estate agencies. A letter, as seen in Appendix D.2, was presented to several real estate agencies. The letter simply requested that they share information regarding apartment rental locations with us, and in return we would share all of our data with them after completion of the project. With these sources, the information could have been compiled into a single database for ease of use in future projects as well as for future tracking. This compiled record would have included information that would be pertinent to several government agencies. Such data could include the type of house, use of the house, available number of rooms, size of the rooms, facilities available in the house, short description of physical attributes of exterior, location, cost, length of rental lease, etc. The real estate agencies were unwilling to reveal the locations of these non-resident rental dwellings because it is within the realm of classified company information. By disclosing this data, they put themselves at the mercy of government intervention. If by chance the dwellings they represent were not reported for taxation purposes or otherwise, the government could intervene. So, in an effort to protect their clientele as well as their business reputation, the real estate agencies would not reveal their listings. Also, if their listings were made available to the public, these agencies risk losing business to their competitors. Therefore, other methods of retrieving the necessary data were employed.

#### **4.5.2 Identification and Description of Existing Data Sources**

A search was required to find the listings of dwellings from the real estate agencies. The real estate agencies in Venice were the biggest asset to this project as far as existing data in concerned outside of the data held by the government agencies. Given the size of the Commune of Venice and the nature of the housing market, we can assume that almost any given real estate agency has a strong grasp on the locations of rental houses in specific districts. To this end, real estate agents must be visited and questioned on the aforementioned pertinent data that may have been of use to our own study. These businesses may be unwilling to share this information, however, because it puts them in some danger of losing some of their clientele. More creative solutions were sought out so that some of this material can be used in the study, as outlined in the following sections.

#### **4.5.3 Overview of Data Collection**

Once all available sources have been consulted, field data had to be collected. The data included some lesser-known information, such as the cost, location, and physical description along with other amenity details. To retrieve this data, research in the area of the real estate market was necessary. Trips to a variety of agencies became necessary to obtain a reasonable sample of the data required. Along with the data collected, surveys could additionally serve as a source of information on the location of non-resident apartments. Section 4.7 Ratio Linking Apartment and Hotel Dwellers and Appendix E - Population Survey Forms contain more detailed information regarding the extent of the survey conducted for this study. Such surveys provided some of the most vague data, as most individuals are unwilling to disclose

their exact location of stay to a “stranger”. The collected data shows a snapshot in time, merely representing the brief period of our study.

The Venetian hotel industry absorbs a large percentage of the tourist population. In an effort to provide better accommodations for tourist visiting Venice for extended periods of time, recently hotels have been buying rental apartments. These purchases effectively decreased the number of apartments available to Venetians.

Marketing and advertisement is a very important tool in the sale or rental of goods, particularly something as singular and large-scale as a house. As property owners or renters it is very important that people hear about the property you are putting onto the market. Depending on the type of person being targeted, the owner may want to list in different types of places or different locations. These listings, on bulletin boards, in newspapers and magazines, were reviewed and used to help quantify the current housing market and situation in Venice.

#### **4.5.4 Overall Data Collection Schedule**

Obtaining the data from the real estate agencies is a time consuming process. The interviews with the various agencies took place early in the project so as to allow time later for the compilation and analysis of the garnered information. Appendix D.1 - Real Estate Visitation Schedule contains the real estate agency interview schedule for further details of the actual collection period.

#### **4.5.5 Data Collection Method**

The collection of data largely consisted of surveys and interviews with a variety of agencies, which included notes, later being transcribed into some database. The locations of all known real estate agencies were determined and plotted on map

layers. A combination of simulated requests and archival-posted advertisements were combined to form a workable database.

#### **4.5.5.1 Housing parameters**

The following list contains the parameters by which the survey was quantified for our study. Along with the list is a brief description of each of the categories. These parameters were used as the fields for our forms, as well as in the final apartment database, contained in Appendix E - Population Survey Forms and Appendix C.1.1 - Apartment Databases, respectively.

##### *Sestiere*

The *sestiere* refers to the boroughs of Venice in which the dwellings are located. This is the most universal reference in regards to position.

##### Location

The location parameter refers to a generalized position of the dwelling. An example of this would be a campo, church or other such landmark that the dwelling is situated near.

##### Address

The address would be the actual numeric address of the dwelling if it has been supplied.

##### Type

The dwellings are often categorized by the real estate agencies for a specific clientele, i.e. students, non-residents, etc.

##### Floor

The floor field refers to the specific level of the dwelling within the building.

##### Price

The price refers to the average monthly rate paid on a dwelling, however in specific situations it has been recorded by the weekly rate depending on the period of rental for the specific location.

##### Condition

The condition refers to the present state of the apartment. For example, some apartments have been restored or are in the process of restoration.

##### Bedrooms

The number of bedrooms, along with the type of beds contained within these rooms, has been recorded in this field

##### Bathrooms

Along the same lines as the bedroom parameter, the bathrooms category lists the size and number of bathrooms in the house.

##### Kitchen

This category entails the size and functionality of the kitchen in each of the specific apartments.



#### Living Room

The living room parameter simply refers to the size and type of common living space available.

#### Area

Area refers to the approximate size of the entire apartment in square meters.

#### **4.5.5.2 Locations of Data Collection**

Real estate agencies served as our main source of data for the overall approximation of the non-resident housing situation. The addresses of these agencies has been obtained and archived in an access database and were then plotted on map layers. These agencies have provided us with two types of information; one is through window advertisements and the other is through the actual interview/survey results. The real estate agencies are located throughout the *Centro Storico* of Venice, therefore allowing the interview/survey locations to be dispersed throughout this entire region. The review of posted ads took place at billboards in public areas and the two universities within Venice. In addition, the advertisement review included an examination of newspapers and magazines.

#### **4.5.5.3 Data Collection Timetable**

The tentative timetable for the collection of data outlines a completion of the collection process by mid-July. This schedule permitted enough time for archival and further data collection in order to fill holes in our data set. Real estate agencies were visited during the early morning in order to approach them at a time of day when they might be willing to work with us. Afternoon visits were not helpful due to the observed mid-day siesta.

#### **4.5.5.4 Collection Procedures**

Real estate agencies have been visited in a systematic fashion. A system of scenarios was employed in an effort to obtain as many listings as possible. Each team member was assigned a different scenario and conducted interviews accordingly.

Since there exists a wide variety of attributes pertaining to non-residents, these scenarios stressed the ones believed to be the most important. Non-residents who stay in the Commune of Venice either stay short term or long term. Also, these non-residents are comprised of students, tourists, and business workers.

#### 4.5.5.4.1 Scenario #1

The first scenario focuses on housing for students. For this situation, we posed as exchange students looking for inexpensive housing. Initial inquiries stressed housing available for two to five individuals. The housing must be available from late August through June of the following year. Preference was placed on dwellings located in the general vicinity of the university. This scenario attempted to yield long-term non-resident housing and those dwellings geared specifically towards students. It also could have provided a picture as to what is available in terms of non-peak season rentals. Unfortunately, the student scenario was a failure due to the unwillingness of real estate agencies to rent to students.

#### 4.5.5.4.2 Scenario #2

The second scenario for visiting real estate agencies involved posing as an individual planning to have a wedding in the Commune of Venice. This scenario stressed short-term housing available for only two weeks. The wedding party would consist of twenty to forty people and therefore requires multiple apartments in the same general area. The price range has been set high in order to capture another range of the non-resident housing market. The wedding was planned to take place in either the spring or fall. This scenario would identify large amounts of short-term non-resident dwellings within each district at a time that is slightly off-season.

#### 4.5.5.4.3 Scenario #3

Posing as a vacationer/tourist was the focus of the third scenario. For these interviews, the team member posed as a vacationer visiting the city on a Mediterranean cruise. They wished to come back with their family in a year's time and hopefully plan to stay the whole summer, three months most likely. Desired apartments would moderately accommodate a family of three to four. The prices should be moderate and the location can vary depending on the agency's location. These parameters provided a wide spectrum of listings throughout the city.

#### 4.5.5.4.4 Scenario #4

Scenario four has a team member posing as a professional assistant seeking housing for their boss. They required the first week of four consecutive months on the concept that their boss needed to return monthly to check on the progress of a project being conducted locally. The price was set moderate to high on the assumption that the company would have paid for their accommodations. The company had been lodging in a hotel for the current week and would rather make use of an apartment. These limitations should offer a sample of short-term residency consistently from the peak season into the off-season.

#### 4.5.5.4.5 Scenario #5

Scenario five was created as a replacement for scenario one. This situation places a team member posing as an individual who is in the market for an apartment for their parents as an anniversary gift. The length of lease was set for an entire month. The targeted month was October, as most real estate agents are unable to provide details on apartment listings too far in advance.

The entire scenario provided a sample of residence for two individuals for a short-term lease within the city.

#### **4.5.6 Data Archival Method**

The following is a list of formats used to archive the data that was collected from the variety of agencies.

##### **4.5.6.1 Databases**

There are two main databases used to catalog the information collected. The first is all-encompassing and includes information concerning every known non-resident dwelling. The second database contains a listing of all real estate agencies in the Commune of Venice.

##### **4.5.6.2 Map Layers**

A variety of maps have been produced from the information collected in this portion of the project. Map layers created include general location, several price breakdowns and analyses and comparative maps to outline and highlight interesting information. A series of maps indicate the locations of pertinent agencies located throughout the Commune of Venice in conjunction with the previously mentioned databases.

#### **4.5.7 Synthetic and Extrapolated Parameters**

The following parameters are the ones that have not been directly measured. They contain a degree of estimation, but are based highly upon data collected.

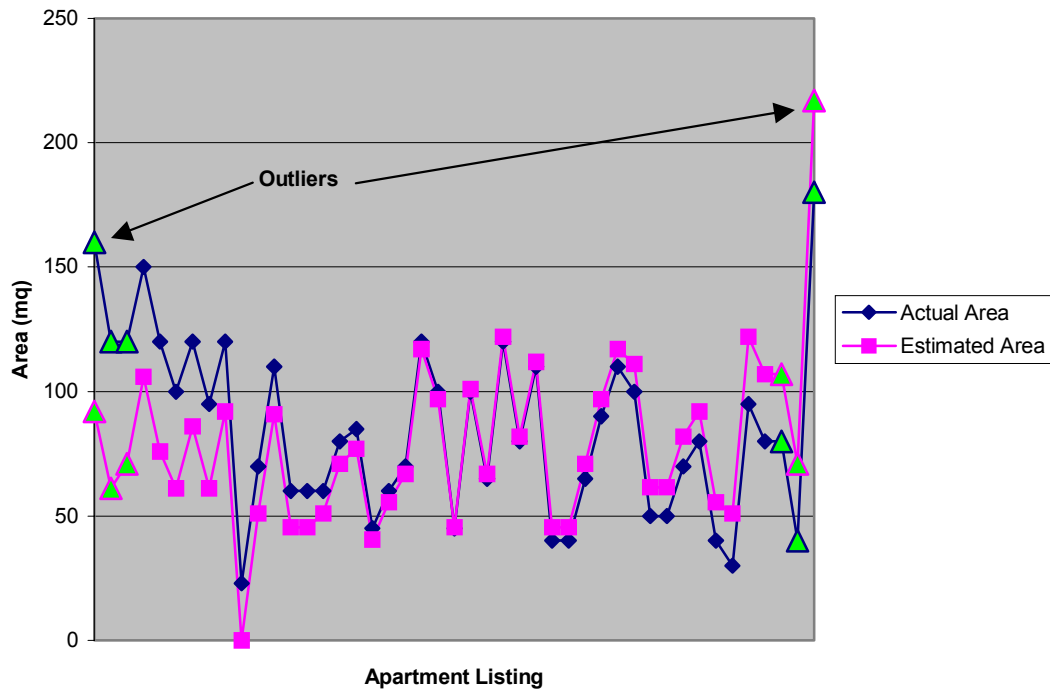
##### **4.5.7.1 Estimated Area**

If the area of a specific apartment is not listed, then its area was approximated by a formula based on city building code data. The city has set standard minimum sizes for every type of room. An area figure was computed for all apartment listings.

Room Type	Single Bedroom	Double Bedroom	Bathroom	Kitchen	Living Room
Area (mq)	15	20	15	16	16

**Table 7 - Living Space Area (Square Meters)**

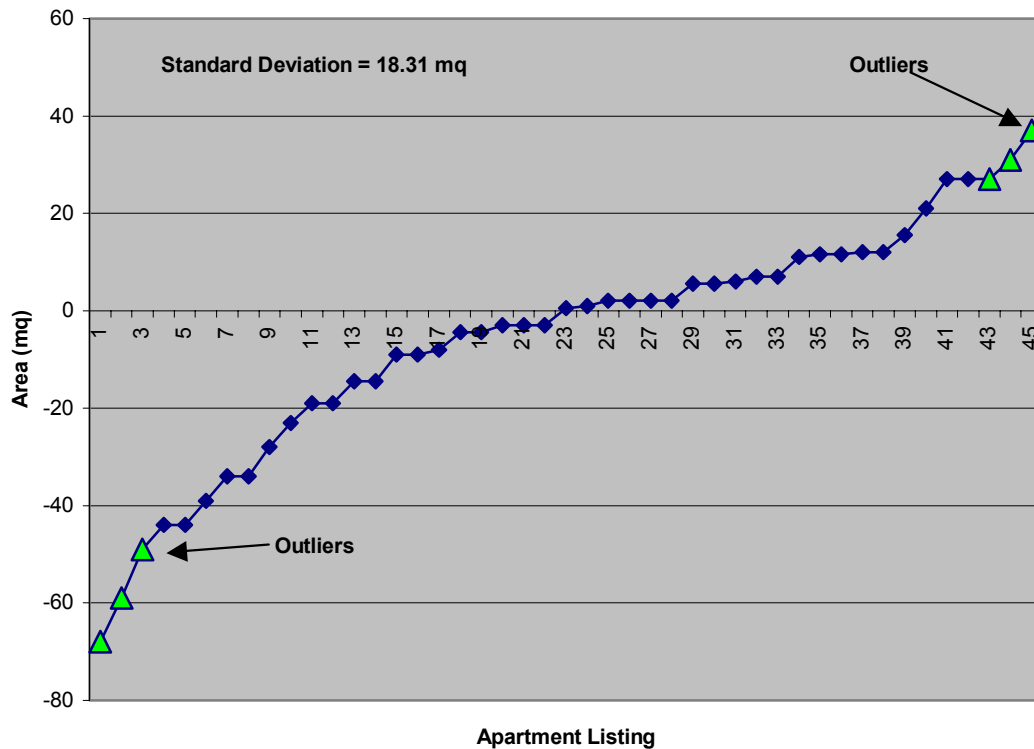
The formula was first used on apartment listings with known areas.



**Chart 3 - Actual Areas Vs. Estimated Areas**

The estimated area of each apartment was compared to the actual area as can be seen in Chart 3. Following the dismissal of the outlying points it can be seen that the actual and estimated areas are extremely similar. The standard deviation was then computed to yield a figure for the accuracy of the area formula. Discarding certain outliers

based on inconsistent data produced a standard deviation of eighteen square meters.



**Chart 4 - Difference in Estimated Area and Actual Area**

Chart 4 shows the distribution of the points away from the norm, which is represented by the central line. The estimated area figure was then used with price data to yield a price per square meter for every apartment. The price per square meter figure allowed apartments from different city locations to be compared on an even scale.

#### 4.5.7.2 Density

The density of non-resident dwellings per region was calculated from the collected information. This figure shows the density of non-resident dwellings either by block or *sestiere*. This figure can be calculated based on the total number of existing houses.

#### **4.5.8 Deliverables**

The final product of the research conducted includes a database with linked maps and images. The *Osservatorio Casa* was provided with a private catalog available for their use only.

### **4.6 Student Residencies within the *Centro Storico***

One of the other consumers of non-reported rental housing in Venice is the student population. Determining the location of their residencies did not prove to be as daunting a task as with the rest of the non-resident housing market. Through the University, records are kept pertaining to the locations usually rented out by the students in attendance. This section outlines the methods used to ascertain the details on these locations.

#### **4.6.1 Student Housing Overview**

The majority of students attending the universities stay in apartments on the mainland of Venice. Freshman year is typically spent living in and around the school itself, mainly in a few large dormitory buildings owned and maintained by the school. Upperclassmen tend to move farther away from the University in search of lower rents. The favorable location presently, *Mestre*, is on the mainland. Students work in conjunction with the university to obtain these apartments, which is why this proved to be a valuable resource. With these records of student housing, it was quite easy to record the locations of student residencies.

#### **4.6.2 Student Dwelling Locations**

As mentioned previously, the university has on record as a part of the *ESU*, the *Ente Regionale per il Diritto allo Studio Universitario*, records of where the students

attending the university are residing. These records provided a fairly reasonable assessment of the student residencies within Venice. Along with this, the *ESU* also has several apartments that they rent regularly to students. The school owns these apartments, for use by those students attending the university.

Another source of determining the location of student dwellings included checking the bulletin boards around campus. These postings offered a sample of the need for housing by the student population as well as providing some random housing lists. All available sources were reviewed for the optimum student housing demand in Venice. In conjunction with these sources, there are many pieces of literature available, many of which in our possession, which yielded several perspectives on this situation. They helped us to assess the entire student situation in Venice as a whole.

#### **4.6.3 Data Collection Schedule Overview**

Collecting the data from the *ESU* potentially could have happened at almost any point early on in the project, however this portion of data archival occurred midway through the project. Two groups members were assigned to this task while the rest were available to pursue other avenues of data collection.

#### **4.6.4 Data Archival Methods**

This information was incorporated both into the primary access database of non-resident housing and into its own separate database to help future studies that may deal strictly with the student situation.

#### **4.6.5 Deliverables**

Access databases containing all pertinent information on this subject have been submitted with the final report to the *Osservatorio Casa*. Map layers of the



entire non-resident population, which include the student information, as well as a separate layer, linked to the access database, containing only the student population were created. These allow for easy visibility of trends and the distribution. Map layers showing the locations of all university buildings have been included so as to cover all obvious places to post apartment ads.

## **4.7 Ratio Linking Hotel and Apartment Residence**

The analysis of the real estate market is a complex procedure that requires a multitude of different tasks. Two of the most important goals of this project were to identify the physical locations of dwellings and also to identify who is making use of these dwellings. These two tasks provide a means for the formulation of supply vs. demand. The previous sections outlined the process of identifying the physical locations of the dwellings whereas this section discusses the process of establishing the proportionality of usage of rental apartments amongst the non-resident population. The process of characterizing the non-residents was done through a comprehensive survey of the population.

### **4.7.1 Preliminary Information**

The process of characterizing the non-resident population involved many steps. There are fundamental pieces of information that needed to be collected in order to form a clear picture of non-residents and their demand for housing. A determination of their length of stay, location of their temporary residence, and the type of dwelling they are living in needed to be established first. If the person being surveyed stayed in an apartment, further details pertinent to our collection of data in regards to approximate location and price were obtained in the survey.

#### **4.7.2 Existing Non-Resident Data**

The data required for the characterization of non-residents was available from multiple sources. An examination of past WPI projects provided a point from which to begin. These past studies contained limited amounts of information in the categories required due to the nature of these previous studies. The next resource available through the government was the *Questura*, which as previously stated was unavailable. This set of forms, held locally by the police, contains the nationality and other such detailed information needed to create a comprehensive database. The final method that has been employed is a direct survey of the non-residents within the city. Through a prudent examination of these numerous sources, a compilation of the information may be created.

First, data from previous WPI projects has been reviewed for any existing characterizations. Depending on the relevancy of these characterizations, the same format was followed in an attempt to create conformity between the past projects, the current project, and government studies. The approach used by previous groups has not been sufficient in the characterization of the specific population being studied here. These categorizations included a physical description of the types of non-residents for identification reasons. These classifications dealt mostly with day tourists and other excursionists, whereas our study pertained to tourists staying overnight. The past WPI projects also contained some entry-level quantities of the number of non-residents and types of each residing in the city. Given that the past projects dealt with different percentages of the population, it was necessary to retrieve only certain portions of the data available. The known WPI projects contained a similar methodology that provided some ideas for the classification of these non-residents. These reports contained information on the number of students and

workers, but this information was not detailed enough for this study but did help to provide some general patterns and overviews.

Another source of demographical data included government agencies that have already collected some of this information. One such database includes the records held by the police in the *Questura*. The police department keeps this record on the population of non-residents staying within the city for more than a few days. The *Questura* contains information on the nationality, location of temporary residence and other pertinent data for use in the overall characterization of the non-residents. These records contain useful information regarding the characterization, as well as providing additional information on the location of rental houses in Venice. Unfortunately the data held by the *Questura* is not computerized and was withheld due to privacy issues.

The final means for acquiring information on the non-residents is directly from the tourists themselves by means of a survey. The survey was conducted in a variety of locations that are routinely frequented by non-residents. The survey, as described in more detail in the following section, asked simple questions, i.e. yes or no style, in a variety of languages to accommodate a large percentage of the tourists visiting Venice.

### **4.7.3 Non-Resident Survey**

To obtain the data needed to classify non-residents into smaller categories, it was necessary to conduct a survey. It is a simple, written survey created in order to sample a large number of individuals in a short period of time. The survey, as seen in Appendix E, attempted to convey the length of stay, the characteristics of their dwelling, and the location of their stay. It contains questions such as: Where are you

staying? How long are you staying? What business are you conducting (i.e. Are you a student? worker? tourist?)? From what country are you visiting? etc. Such questions provided some details as to the types of visitors and their purpose for visiting the city.

#### **4.7.4 Collection of Existing and Survey Data**

The characterization of the non-residents was one of the more difficult tasks of this project due to the difficulties of obtaining consistent data and the overall language barrier. The process of collecting the required data from the aforementioned sources has taken place concurrently with locating the non-resident dwellings. All the data from existing sources was retrieved by the beginning of the third week in June, while this information has been attained early on it was not actually utilized and analyzed until further on in the project when more time was available for analysis. The survey was conducted starting the first week in July and continued into mid-July. There were sampling periods, each designed to maximize the number of non-residents reached. Since we did not do a survey of the entire population it was not necessary to randomly select individuals. Instead, our numbers were found to be better and more consistent when we spoke only with obvious non-residents. The three collection periods included a morning, late afternoon, and night session.

#### **4.7.5 Overview of Non-Resident Survey**

As mentioned previously, the survey was a difficult task. These sections provide an in depth explanation of the exact nature of the survey conducted in Venice. A copy of this survey has been included for reference in Appendix E - Population Survey Forms of this report. Each subsection outlines the fundamental aspects of this survey.

#### 4.7.5.1 Respondents

The survey focused on non-residents staying in the Commune of Venice, Italy. From initial data, the respondent pool cannot be determined exactly. However, a rough approximation placed the non-resident population at twenty percent of the total population. In regards to tourists in general, overnight tourist constitute approximately thirty percent. In an effort to specifically target non-residents who are staying overnight, the survey was conducted at such hours and locations as to emphasize this portion of the population. All types of people were targeted by this survey. Certain groups were emphasized at different locations, but the combination of sample locations canceled out these biases.

#### 4.7.5.2 Sampling Design

The success of any survey depends on the combination of several properties. This survey needed a high response rate and a large enough sample size in order to obtain a low sampling error. The projected sampling error for this survey is  $\pm 5\%$ . The format is a face-to-face questioning. The sampling size was approximated at three hundred respondents. The sample size was approximated using the following equation:

$$N = [p(1-p) * Z_{(1+L)/2}^2] / d^2 \quad (1)$$

In the equation, “d” represents the margin of error, which was chosen to be  $\pm 5\%$ , and “p” represents the population size, is unknown. The term “p(1-p)” was approximated using 0.25, the upper bound margin. This estimation yields a sample size that is too large and thereby counter balances any error encountered during actual data collection. Also, “l” represents the confidence level by which the population is being approximated. With a confidence level of 0.9,  $Z_{0.95} = 1.645$ . In regards to the sampling method, a process of randomness combined with a pre-determined

selectivity was employed. The selection of individuals to sample was done at random.

#### **4.7.5.3 Survey Questions**

The survey for this project was designed to determine key characteristics of non-residents staying within the *Centro Storico* of Venice. The overall question structure is geared toward people spending the night in Venice. In fact, respondents were initially asked if they were staying overnight. If they replied with no, they were not surveyed. The first five questions gathered general information about each respondent regardless of their location of residence. Questions six through ten gathered information in regards to price and physical condition of their apartments. Many of the survey questions were of the yes or no type, which kept the process of surveying simple and straightforward for respondents. Pre-testing was conducted at the Rialto Bridge area, various *ACTV* boat stops, and *Piazza di San Marco*. The results of these pre-tests revealed that the survey is much more difficult than originally thought. Pre-testing conducted on Thursday July 5<sup>th</sup> yielded a total of three people staying in apartments out of a total survey size of sixty-five people. This is a hit ratio of 4.6%. As a result of these poor results the survey sites were reconfigured in an effort to survey more people staying in apartments. Areas such as *Campo San Margarita* and various shopping markets are now the focus of the survey. Complete results of the pre-testing period are wholly contained in Chapter 5 Results and Analysis.

The following is a list of questions that the survey answered.

1. Are you staying overnight in Venice?

This question separated day-tourists from overnight tourists and residents. It also served to end interviews with residents quickly. Initially, respondents were asked

if they were staying overnight. This question served to catch any respondents that might have misunderstood our initial verbal questioning.

2. How would you characterize yourself?

The general characteristic of each respondent was attained with this question. Respondents were given a choice of tourist, worker, or student for simplicity of classification.

3. Where is your permanent residence (Country and City)?

The origin of each respondent allowed the overnight non-resident population to be generally characterized. This data was compared with hotel data, and therefore was extrapolated over a whole years time.

4. Are you staying in an apartment?

Our study was primarily concerned with those non-residents occupying apartments in the historical center of Venice. Respondents staying overnight were divided into those staying in apartments and those staying in other types of residences. Depending on the response provided, the survey would be offered for further research. The number of respondents staying in other dwellings was compared in Chapter 5 Results and Analysis of this report.

5. How many nights are you staying in Venice?

This question allowed the respondent to reply with the number of nights they would be staying in the city. By not presenting time categories on the survey, we were left with flexibility in the presentation of these findings.

6. What is the general location of your residence in Venice?

Though doubtful, the exact address of the respondent's dwelling was sought; it was more probable that they would provide us with the general location, such as the nearest *campo* or other landmark. At worst, the respondent provided merely the *sestiere* where their apartment was located.

7. How many people are staying in your apartment?

This question was coupled with questions found later in the survey. When combined with the number of beds and bedrooms, a clear picture of the housing situation was presented. For example, a student apartment might have only two bedrooms but has ten people packed into it to defray the cost.

8. How much are you paying (in Italian *lire*)?

If possible, the approximate price paid for the respondent's apartment was collected for comparison and further analysis.

9. What is the apartment's approximate size?

This question was combined with the previous question regarding apartment size in order to determine a figure for price per square meter. Such information was used in the analysis of the overall housing market. Comparisons were made between, similar apartments in different *sestieri*.

10. Apartment Characteristics

This was a general section containing characteristics deemed necessary from past data collection. These particulars about the respondents' apartments was later included in the apartment database along with the listings found via other methods. This section has provided the details about the respondents' apartments that could not be gathered in any other way.

#### **4.7.5.4 Survey Locations/Schedule**

The survey was conducted at specific sites throughout the city. These sites include local university hangouts, clubs, bars, and tourist attractions. The locations have been chosen based upon their estimated percentage of non-residents. Time does not wish to be wasted surveying excursionist and day tourists. The three collection periods include a morning, late afternoon, and night session. The morning session took place around 8:00am at the *Rialto* market and various boat stops located along the Grand Canal that naturally attract people buying items necessary for living in Venice and those traveling by boat to sights around Venice. The late afternoon session took place around 4:00pm, which includes supermarkets such as the *Standa* on the *Strada Nova* and tourist attractions such as St. Marks Square. The supermarkets catch those buying items necessary for residency. The waiting lines at tourist attractions naturally provided idle individuals willing to answer questions. The last collection period was the most exhaustive and took place late at night around or after 10:00pm. Major locations included high traffic, tourist oriented points such as the Rialto Bridge and St. Marks's Square. In addition, several other, smaller squares throughout the city were targeted.



#### **4.7.5.5 Limitations**

This survey was extremely limited in the number of responses collected and the extent to which all non-residents could be surveyed. In response to these general limitations, our focus was directed to actively targeting non-residents. To a certain extent, our survey is limited to non-residents who venture out of their homes at the times specified previously. There are numerous biases inherent in the survey. The biggest bias is our assumption that people are non-residents. It is possible that many of the non-residents are actually Italians from other parts of the country that do not readily appear to be non-residents. This bias may show itself after the survey data has been analyzed. If the number of apartments locations available does not align with the number of people renting, then this bias could be the cause. .

## 5. Results and Analysis

The final product of our data collection has been culminated in the following results and analysis section. These products have been presented in the following subsections in the form of graphs, charts, maps and other such visual representations of the accumulated figures for ease of comparison and understanding.

### 5.1 Officially Reported Non-Resident Housing Data

An investigation of pre-existing data sources yielding little useful data, as none of the government agencies were willing to cooperate due to issues of privacy. The official data collected came from utility companies and past studies done through the *Osservatorio Casa* of Venice.

#### 5.1.1 Publicly Owned Housing Data

The role of the *Osservatorio Casa* is to monitor the housing situation in the Commune of Venice. A major aspect of their mission is to understand and track how publicly owned housing is being utilized. In 1999, the *Osservatorio Casa* commissioned a graduate student, Emanuele Pierobon, attending the *IUAV* to compile a list of houses in the historic center of Venice that were owned by public companies. The data collected in his study has been included in this report in an effort to complete the picture of the housing market. A comparison between public housing and known non-resident housing shows patterns in how housing is distributed throughout the entire historic center of Venice. For the most part publicly owned housing is used as subsidized housing for low-income families. In a few rare cases, public companies such as *ENEL* use their housing to temporarily house workers. *ATER*, the regional

public housing authority, owns the majority of publicly owned houses within the *Centro Storico*.

### **5.1.2 Utility Consumption Data**

Individual datasets provided by the utility companies have proven to be unusable. The datasets were often undecipherable and incomplete. One significant problem that exists with utility data is that the owner's address has been listed in the database, not the address of the building for which the utilities are being provided. The owner does not necessarily live within the dwelling; only the billing address was provided by this database. Similar information made available through the *Osservatorio Casa* was used in place of the consumption data from the utility companies. For details of its use and significance, refer to Chapter 3 Background and Literature Review of this report.

## **5.2 Identification of Non-Reported Non-Resident Dwellings**

The process of identifying the location of the non-resident dwellings through the visitation real estate agencies and review of posted ads produced a comprehensive database of apartment listings. Also, numerous map layers and graphs representing the current situation were produced.

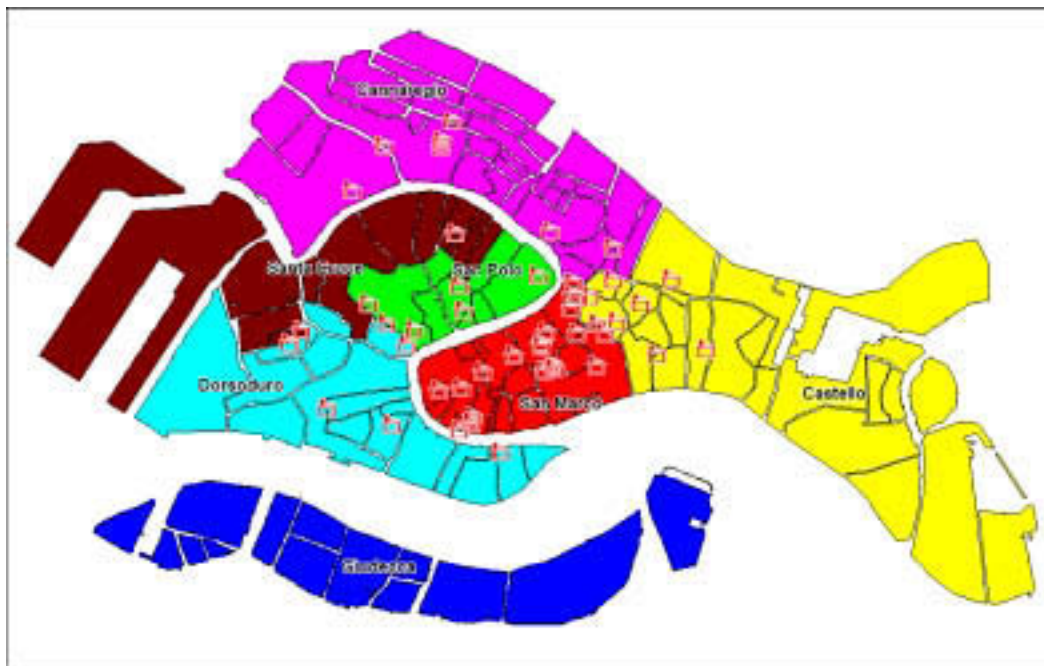
### **5.2.1 Databases**

Our study of the non-resident rental market has concerned itself with apartment rentals only. All listings collected through a variety of methods as outlined in Section 4.5 Identification of Non-Reported Non-Resident Dwellings, have been cataloged in a database titled *apartments.mdb*. The field structure of this database is presented in Appendix C - Database Descriptions of this report. There is also a

database containing a list of the real estate agencies and their pertinent information in Appendix D.1 - Real Estate Visitation Schedule.

### 5.2.2 Real Estate Agency Distribution

The initial step involved in the location of the non-resident dwellings required locating all real estate agencies situated in the historic center of Venice. The total

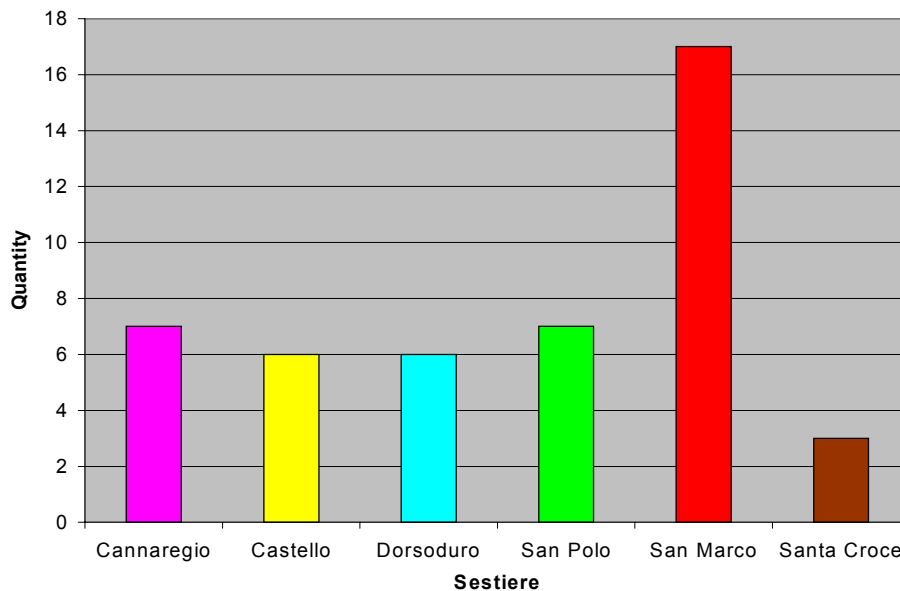


**Figure 8 - Real Estate Agency Locations**

count of agencies is forty-six. Figure 8 shows the exact location of each of these agencies. The map layer shows that the agencies are situated in close proximity to one another. The location of an agency is generally governed by its proximity to business centers and high traffic areas. No agencies were located on *Giudecca* and there were no agencies located in the outlying regions of the *Centro Storico*. These areas included *Tronchetto*, northwest *Cannaregio*, and areas east of the *Arsenale* in *Castello*.

The distribution of real estate agencies by *sestiere* is not even. Chart 4 illustrates the unequal distribution of agencies throughout the historic center. The

*Sestiere di San Marco* contains more than twice, seventeen in fact, as many agencies as the next highest *sestiere*. Considering the relative distribution of other businesses, this statistic makes sense. All other *sestieri* contain fairly equal number of agencies except *Giudecca*, which contains no agencies. The absence of real estate agencies from *Giudecca* is logical based on its separation from the historic center, high amount of publicly owned housing, and low degree of tourist traffic.

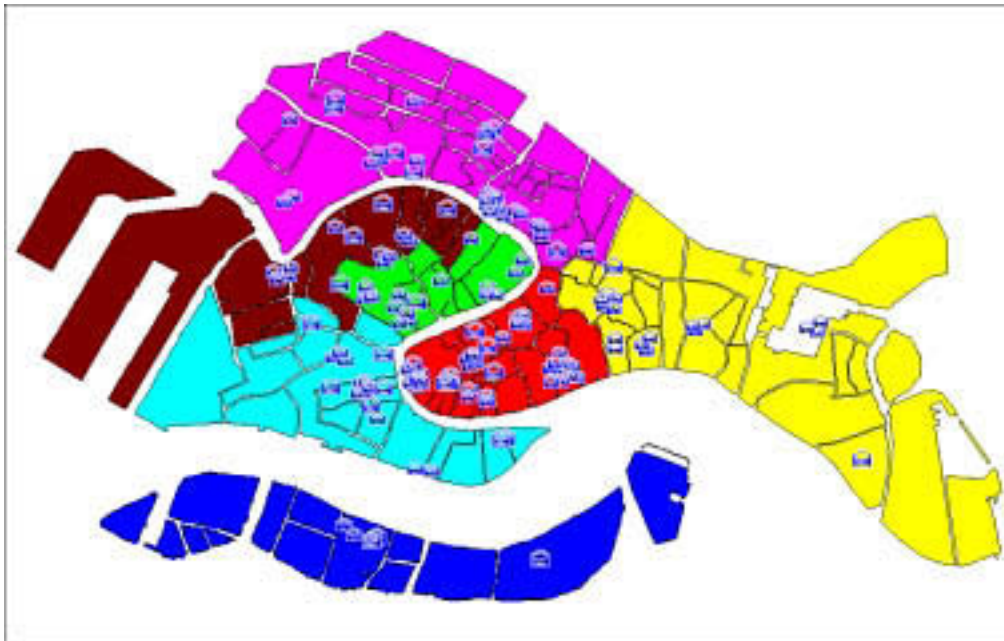


**Chart 5 - Real Estate Agency Distribution by *Sestiere***

### 5.2.3 Apartment Listing Distribution

Locating apartments available for non-residents required a combination of triangulation methods. The final result is shown in Figure 9. This map layer is only an approximation of the actual locations of apartment listings. Each house icon corresponds to one listing. This distribution represents a sample of the entire market.

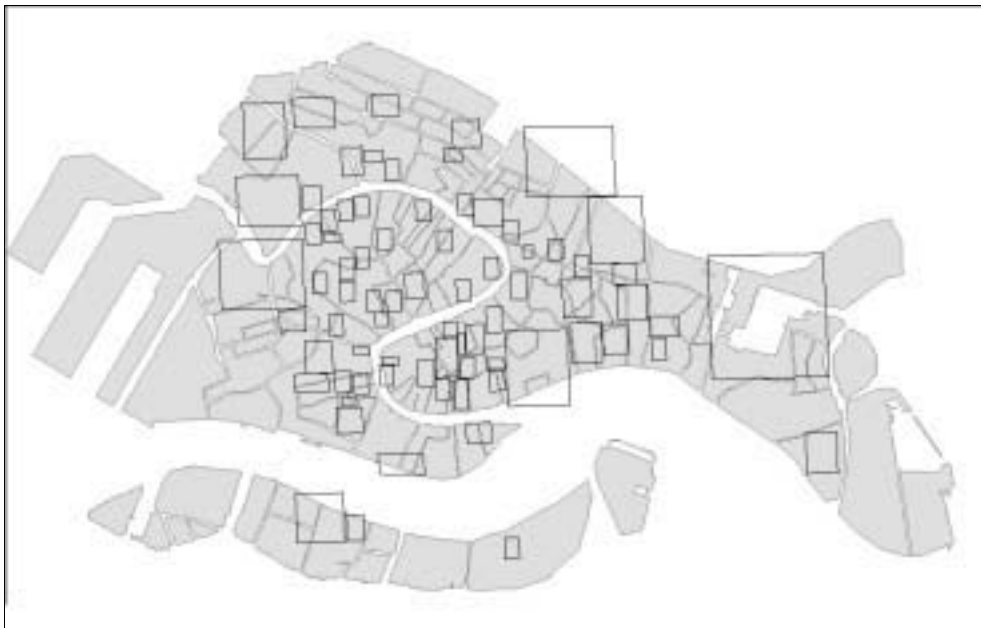
All apartment listings that were discovered have been included in this map. The count of listings is two hundred sixteen.



**Figure 9 - Approximate Apartment Listing Locations**

The address system in Venice is based on a *sestiere* designation, a number, and a letter designation. All addresses include a *sestiere* and number, however they may or may not contain a letter. Originally it was thought that exact address would be available for all listings. The reality was that real estate agencies do not provide exact address for any listings. The only way to discover the exact location of a listing was to accompany a realtor to the dwelling. The alternative method for positioning the acquired listings was the creation of a grid system for the historic center. Figure 10 shows the grid system devised for this project. Each grid represents the location of a campo or major landmark. Listing locations are provided in reference to nearby landmarks. The size of each grid is based on its proximity to other grids and the proximity to other *campi* and landmarks. Large grids surround areas with few major landmarks. Grids do not cover the entire historic center; rather they only cover areas in which listings were located. The grid system was created using the grid function in

MapInfo. This system attaches real world coordinates to each specific grid, however the drawback of this function is that MapInfo stipulates that the grids must be squares.



**Figure 10 - Grid System for Apartment Location Approximation**

Therefore as one will notice from Figure 10, some grids contain water as well as land. There is some room for error in this system, for example: St. Mark's Square. Many listings in the *Sestiere di San Marco* are listed as being located near St. Mark's Square. In reality, they are probably located closer to some smaller, more obscure landmark. This error in identifying their location is made for the benefit of non-residents unfamiliar with Venice, but decrease the accuracy of this study.

For further analysis of the price arrangement of the apartments throughout the city, we have created our own region system, as seen in Figure 11. The regional classifications allow for in-depth understanding of the specifics for a given section of the city. Similarly, the Commune of Venice has already subdivided the *Centro Storico* into three homogenous zones seen in Figure 12, which have micro-zones within each. We believe our smaller regions, established around tourism focal points, have provided a means for further analysis.



Figure 11 - Real Estate Regions

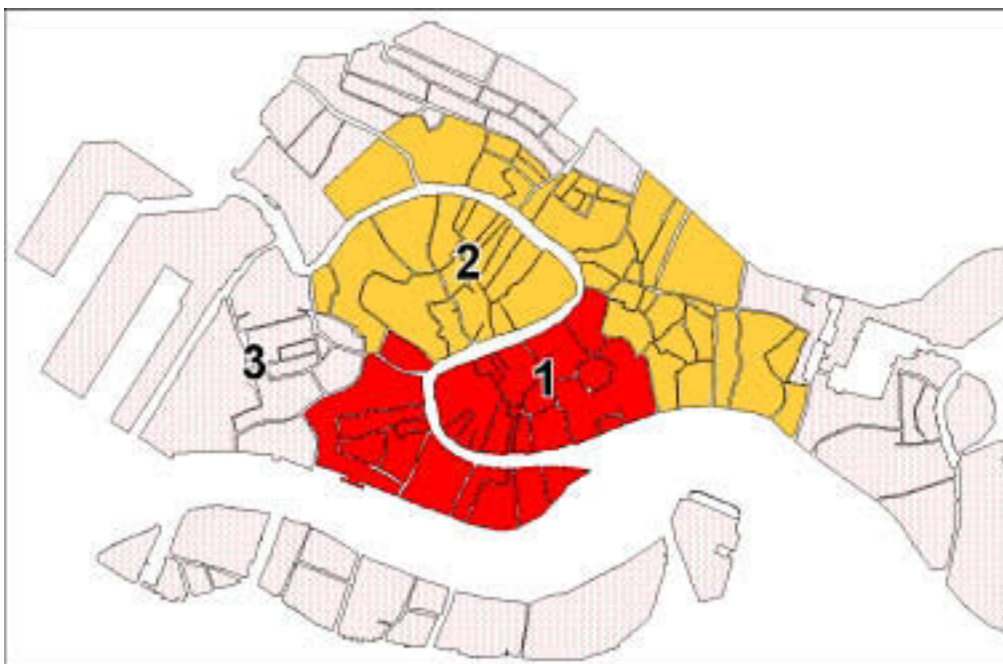


Figure 12 - Homogeneous Zones

#### 5.2.4 Breakdown Collection Methods

The breakdown of collection methods and number of listings per *sestiere* is shown in Figure 13. This map layer colors each *sestiere* in order of total apartment



listings. *San Marco* contains sixty-seven listings followed by *Cannaregio* with thirty-six and *San Polo* with thirty. The number of listings per *sestiere* reflects only the total number acquired through the search outlined previously. It is assumed that many more listings exist based on these results and the overall tourist situation. The pie charts on the map layer represent a breakdown of the methods used to find listings in



**Figure 13 - Collection Methods and Listings by *Sestiere***

each *sestiere*. The slices indicate the relative success of each acquisition method. The size of each chart in relation to one another indicates which *sestiere* contains more listings. The scenarios method provided the most listings in all *sestiere* because more time was spent on this method. The web however, produced the second highest amount of listings and was the most time efficient.

Chart 6 illustrates the number of listings each method of acquisition yielded. Scenario #1 proved ineffective because real estate agents are unwilling to rent to students unless they cannot find another tenant. Scenario #2 produced the most listings among the scenarios based on the fact that more apartments were requested for a shorter amount of time. These two factors are highly desirable to real estate

agents. Scenario #3 was least successful due to the high amount of lead-time on the request. This scenario requested apartments for almost a year in advance. It was discovered that real estate agencies generally only accept reservations approximately six months in advance. If an agent thinks they will make a sale, they are more willing to provide apartment-listing information.

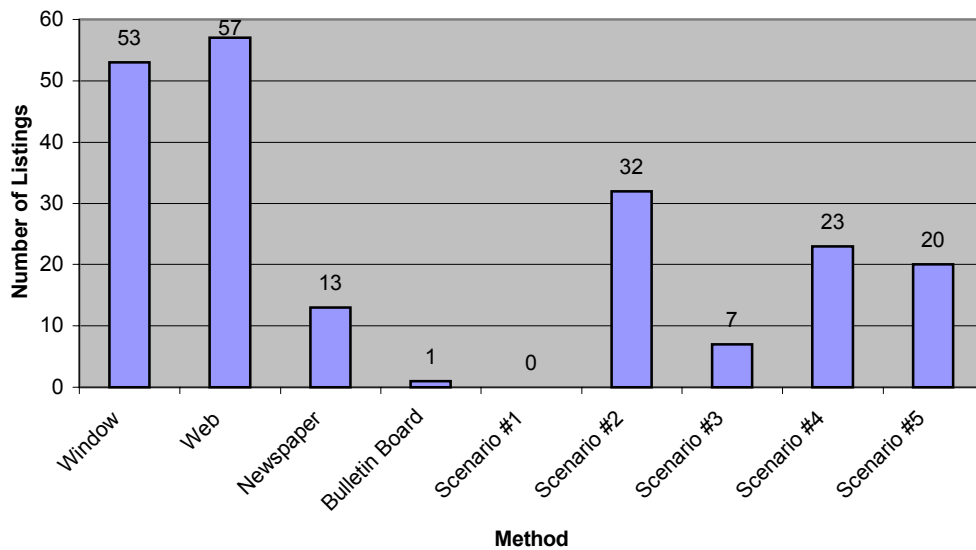


Chart 6 - Apartment Listings by Acquisition Method

### 5.2.5 Apartment Listing Location Statistics

It is interesting to note that approximately a third of all the apartment listings are located in the *Sestiere di San Marco*. In one sense, this is unusual in that *San Marco* is not a residential area. However, tourists are more likely to pay more and live next to St. Mark's Square than live farther away. *Cannaregio* is a quite large and so it makes sense that it contains a high percentage of residential space. Figure 14 shows the division of listings by *sestiere*.

## Number of Apartment Listings by Sestiere

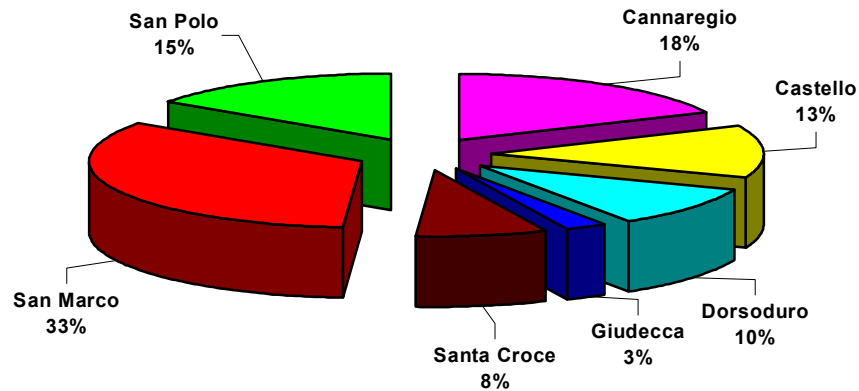


Figure 14 - Apartment Listings by *Sestiere*

Sestiere	CN	CS	DD	GD	SC	SM	SP
Listings	39	26	20	5	14	73	32

Table 8 - Total Listings Identified per *Sestiere*

The distribution of where apartment listings were collected from is important because the majority of listings were acquired from real estate agencies located in the *Sestiere di San Marco*. Figure 15 illustrates this distribution. Seen in this map is a breakdown

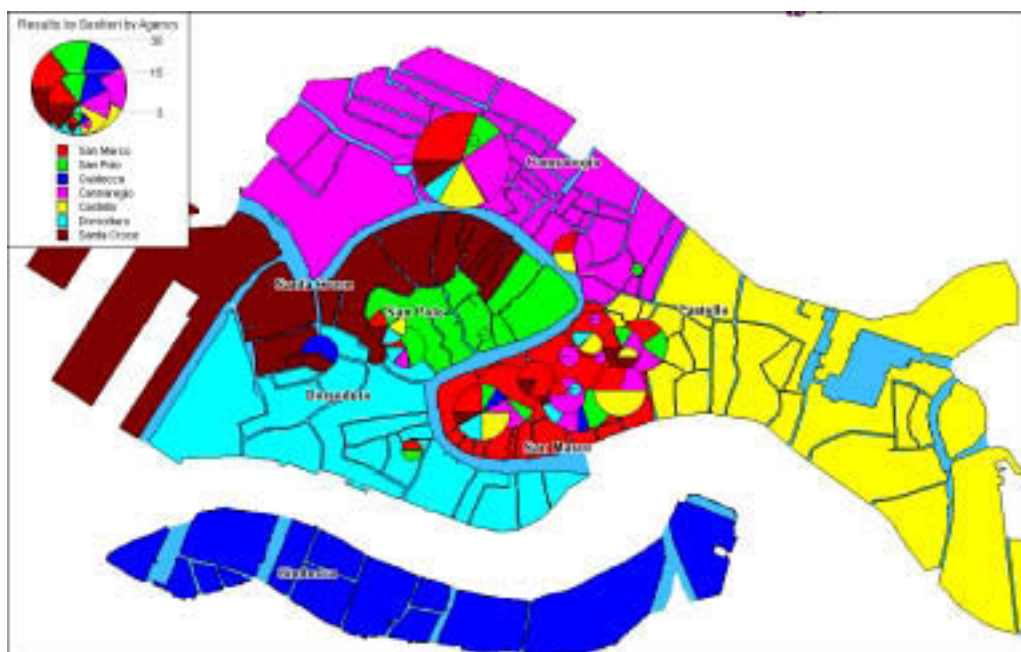
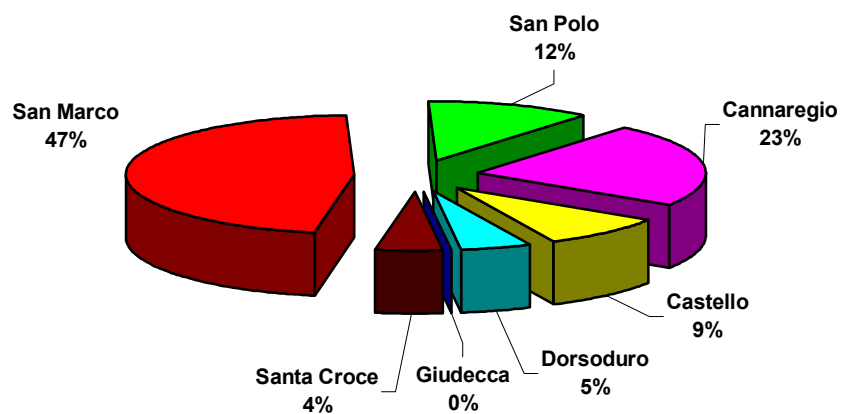


Figure 15 - Apartment Listings by *Sestiere* and Agency

of the relative proportion of listings per *sestiere* by real estate agency. Also, each agency is ranked according to the total number of listings they provided. This map clearly shows that except for one outlier in *Cannaregio*, the majority of listings came from agencies in *San Marco*.

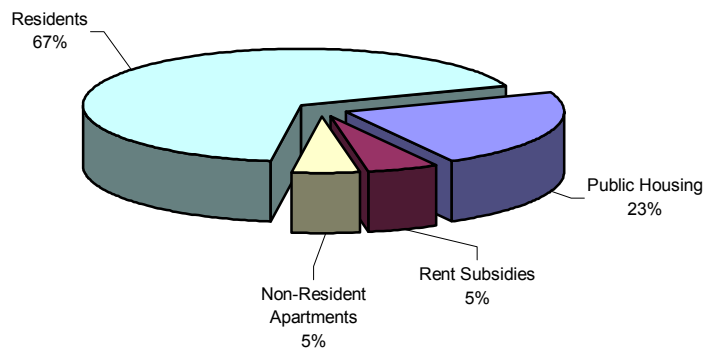
The breakdown of listings by the agencies *sestiere* is shown in Figure 16. The combination of this information with the last map layer shows that almost half of the



**Figure 16 - Apartment Listings by Agency Location**

total number of collected listings were from agencies located in *San Marco*, while the percentage of real estate agencies located in *San Marco* stands at only thirty-six percent. Also, the distribution of listings by agency is fairly uniform. Agencies do not deal only with apartments located in their own *sestiere*. Rather they deal with all *sestieri* in an effort to maximize their coverage area. This seems to suggest that future studies could concentrate their efforts in the *Sestiere di San Marco* and achieve accurate results for the entire historic center.

## 5.2.6 *Centro Storico* Apartment Rental Market



**Figure 17 - Venetian Rental Market**

The rental market in the *Centro Storico* section of Venice can be broken down into four basic segments. The segments are public housing, rent subsidized housing, non-resident apartments, and apartments for residents. Figure 17 illustrates this breakdown. The *Osservatorio Casa* tracks the first two markets. As of June 2001, there were two thousand one hundred three dwellings used for public housing as well as four hundred ninety-three rent-subsidized dwellings. The number of non-resident apartments was approximated based upon a non-resident survey and current hotel data, with the approximation being four hundred forty-two. The remaining number of apartments has been assumed to belong to residents.

## 5.2.7 Average Affordable Rent

In order to fully understand the price levels that are being dealt with in this study it was necessary to compute the average monthly rate that a Venetian can afford to spend on housing. This figure is based upon data retrieved from ISTAT, the national statistics office for Italy.

Year			Income per Capita (Lire x1000)	Income Per Capita per Month (Lire)
<b>Venezia</b>	1989		19,862	1,655,167
	1990	21	818	1,818,167
	1991	24	822	2,068,500
	1992	26	426	2,202,167
	1993	27	606	2,300,500
	1994		29,921	2,493,417
	1995	33	001	2,750,083
	1996	(b)	35,202	2,933,500
	1997	(b)	36,531	3,044,250
	1998	38	911	3,242,590
	1999	41	022	3,418,536
	2000	43	134	3,594,482
	2001		45,245	3,770,428

**Table 9 - Population Income Data<sup>27</sup>**

Table 9 shows the 1997 population income figures for Venice. The data beyond 1997 has been extrapolated based on past data. Even though the data has been extrapolated to 2001, the figures for 1999 have been used because population size data is only available up until 1999. According to this data the average per capita income per month for 1999 was 3,418,536 *lire* in Venice. The average size family was then computed in order to obtain the average income per family per month, this figure came out to 2.06 persons per family. The average family size was then multiplied by the average monthly income to yield a net income per family per month

Average per capita income per year (Lire x1000)	Average per Capita income per month (Lire)	Average Family Size (Persons)		Total Income Per Family (Lire)	Affordable Rent Rate (Lire) (23% of Income)
41,022	3,418,536	2.06	Gross	7,034,300	1,617,889
			Net (Less 42.5% for taxes)	4,051,757	<b>931,904</b>

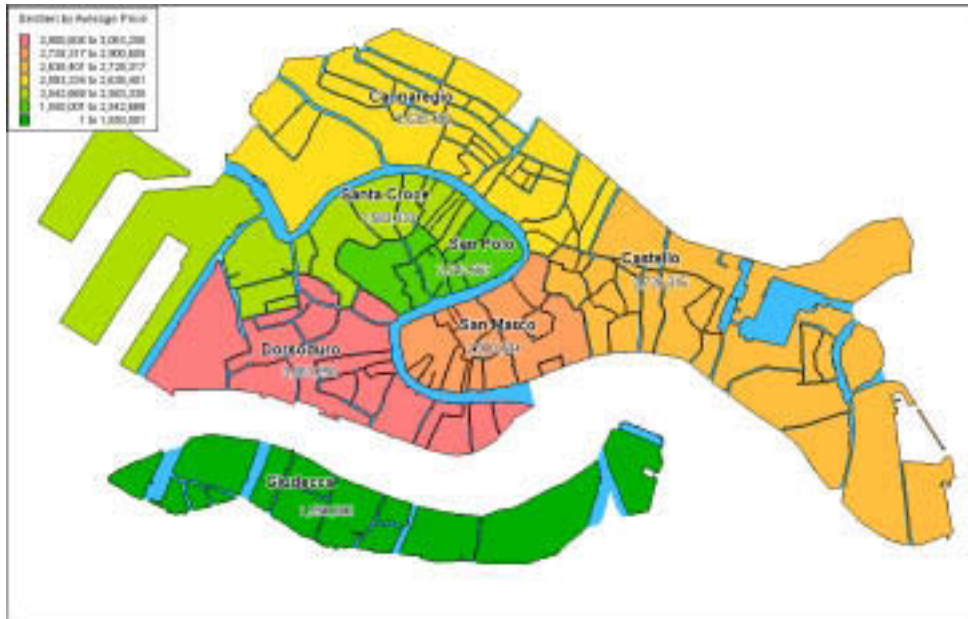
**Table 10 - Affordable Rent Rate**

<sup>27</sup> ISTAT 1997

of 7,034,300 *lire*, this net value represents the income before taxes. The average amount of taxes paid by Venetians for 1999 was 42.5% and so the income per month after taxes is 4,051,757 *lire*. Finally, the average monthly affordable rent rate was calculated based on a statistics figure that stated twenty-three percent of Venetians income was spent on housing yielding an affordable rate calculated at 931,904 *lire* per month. These calculations have been summarized in Table 10. The figure for the affordable rental rate has been used in this study in various price comparisons. The most noteworthy being that the apartment listings collected cannot possibly be directed towards residents. On average the apartment listings collected herein are three hundred percent higher than the affordable rate, leaving it impossible for the average Venetian to rent these dwellings without some form of financial assistance. The affordable rate has also been compared to prices regulations stipulated by the city of Venice according to Law 431, discussed in Section 3.1 Housing Laws and Regulations of the Background.

### **5.2.8 Apartment Price Distribution**

The price distribution of non-resident apartments in the *Centro Storico* region of Venice is quite complex and needed to be analyzed from many different angles. The most basic breakdown of apartment prices is shown in Figure 18, showing the average price per month by *sestiere*. This distribution of prices was somewhat similar to what has been expected. *San Marco* and *Dorsoduro* are the most expensive while *Giudecca* is the cheapest. The middle-ranged values, however, were not believed to be correct and so it was decided that the *Centro Storico* should be analyzed differently.



**Figure 18 - Average Price by *Sestiere***

The primary source of error in this price breakdown is due to the fact that *sestieri* are antiquated breakdowns of the city not based upon homogeneity of any type. As such within each of the *sestieri* there exists micro zones, which once separated in a logical sense produce a more accurate picture of the housing market. Also, the average function was believed to yield an inaccurate figure for prices and so for future calculations and analyses the median function, which is the middle value of a set of numbers, is used to provide a real number and therefore be more accurate.



### 5.2.8.1 Sestiere Prices

The median price was used throughout these calculations because of the fact it

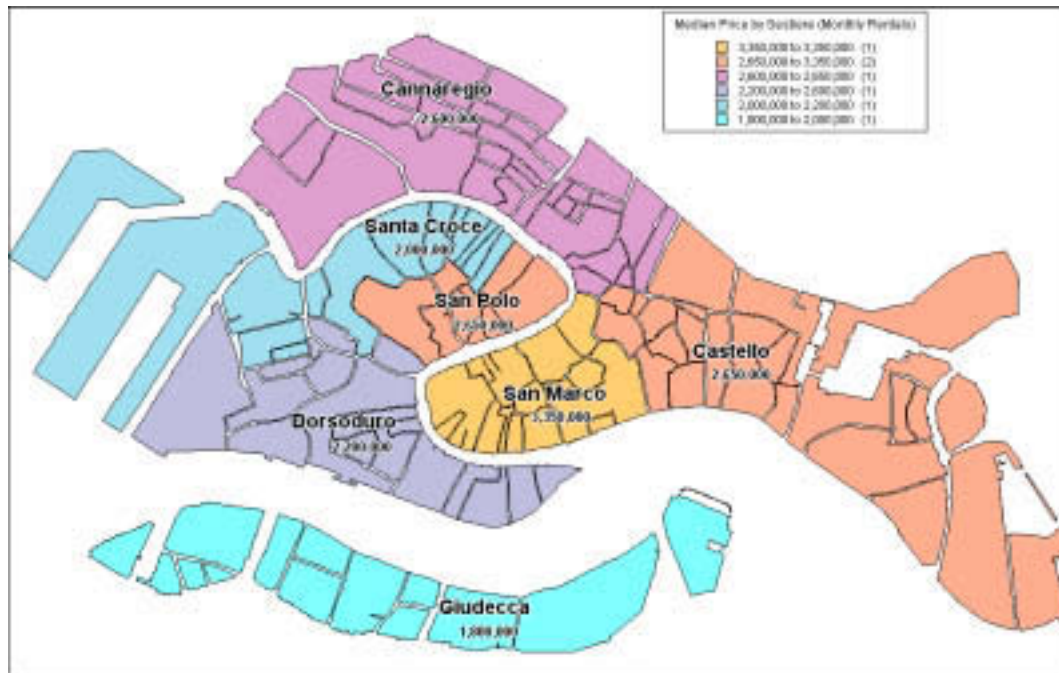
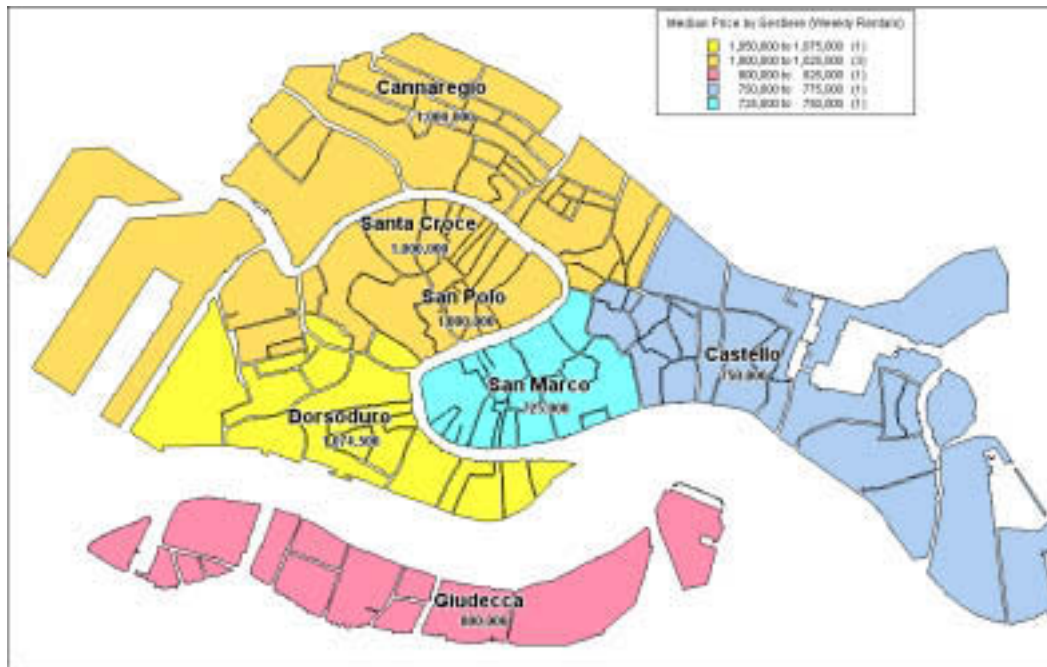


Figure 19 - Median Price by *Sestiere* (Monthly Rentals)

provides a real value, a number that was actually collected and pertains to an exact listing in the apartment database. Also, apartment listings have been broken down into those rented on a monthly basis and those rented on a weekly basis with separate analyses for each time-span. When the apartments were separated into monthlies and weeklies a definite trend arose. Monthly apartments are the most expensive within *San Marco* and around the Grand Canal as seen in Figure 19. They decrease in price the farther away one moves from the center of Venice, as defined by the Grand Canal. The exact opposite is true for weekly rentals with *San Marco* being the cheapest area and apartments becoming more expensive as one moves away from this region. These two trends, as well as exact median prices for each *sestiere*, are illustrated in Figure 19.

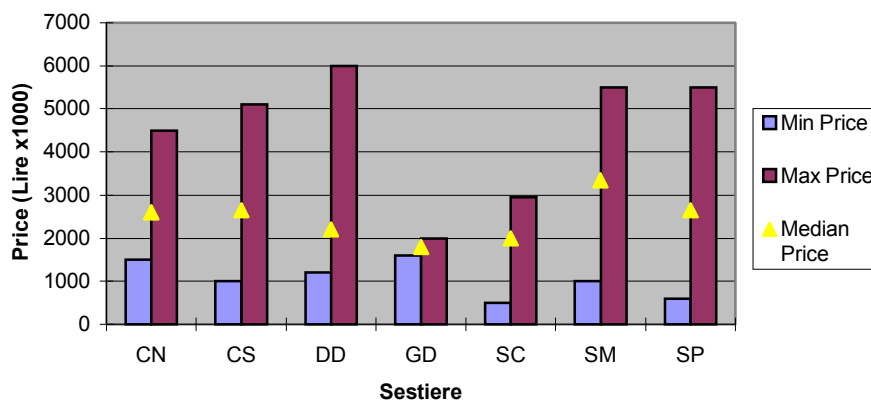
Apartments rented on weekly basis are more expensive in areas farther from the city's main attraction, *San Marco*. Figure 20 shows the exact median price for

weekly rentals. It is clear that in contrast with monthly rentals, *San Marco* is the most affordable area. *Dorsoduro* is the most expensive area, while *San Polo*, *Santa Croce* and *Cannaregio* exhibit the same range median prices.



**Figure 20 - Median Price by Sestiere (Weekly Rentals)**

For the *San Polo* area, although the median price for monthly rentals is lower than *San Marco*, Chart 7 shows that the maximum rental price in both *sestiere* are almost identical. The *Castello* area also shows the same trend as *San Marco*. Monthly rental in *Castello* is expensive when compared to other *sestiere*, while



**Chart 7 - Minimum and Maximum Price by Sestiere (Monthly Rentals)**

weekly rentals are the second most affordable throughout the *Centro Storico*.

From Chart 8, it is seen that all the median prices for weekly rentals are close to their average prices, except in the *Cannaregio* area. This graph shows that the prices are not equally distributed in *Cannaregio*. Although the rental prices vary from about 400,000 to 6,900,000 *lire* in this area, the median price illustrates that most of the apartments are rented in the low price range.

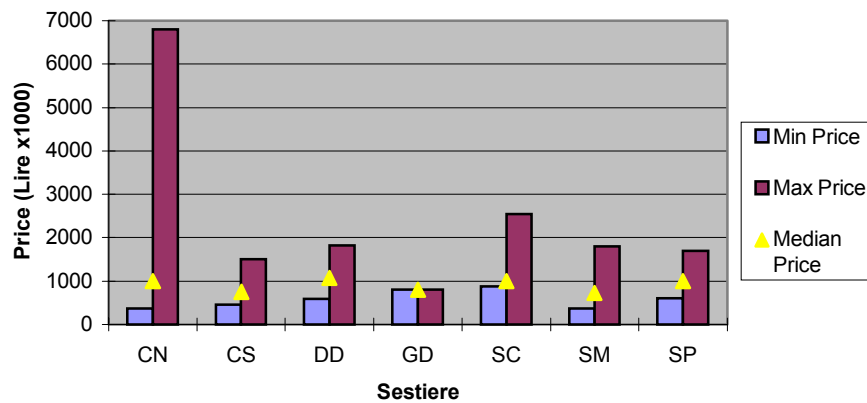
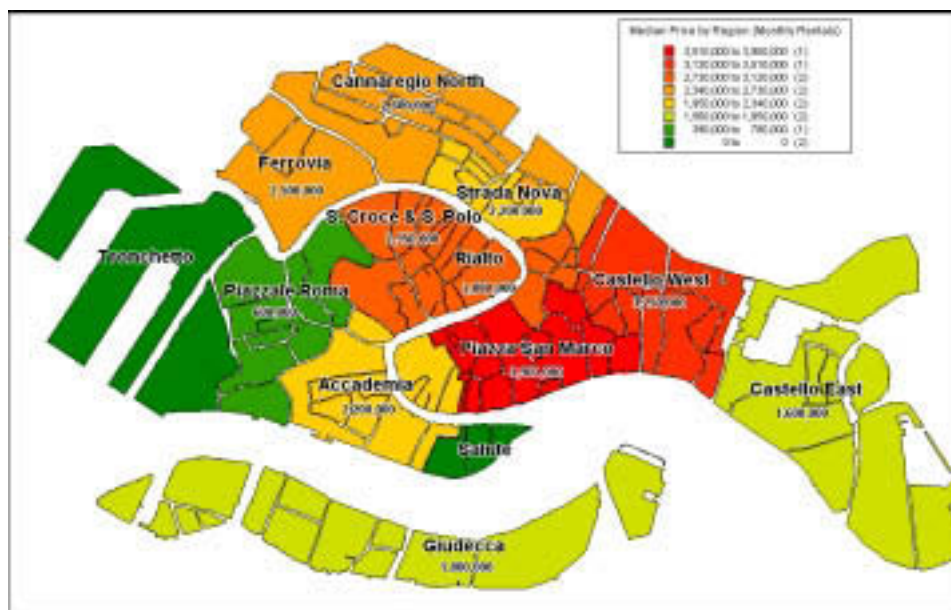


Chart 8 - Minimum and Maximum Price by *Sestiere* (Weekly Rentals)

### 5.2.8.2 Region Prices

For monthly rentals, the median price by region shows that *San Marco* is the most expensive area. This result had been foreseen based on the assumption that this is the most well known area by tourists. The *Tronchetto* and *Salute*, come out to be the least attractive areas. No apartments were found in the *Tronchetto* area, as this is the initial point where cargo deliveries for the Commune of Venice take place. Since this is the main storage and shipping area, *Tronchetto* is the busiest place for cargo delivery boats. Thus, it makes sense that *Tronchetto* is not the area where tourists will want to stay. From *Tronchetto*, the median price seems to increase as one moves closer to the *San Marco* area. This trend can be seen as we analyze the median price from *Tronchetto* to *San Marco* through *Piazalle Roma*, *Accademia*, *Santa Croce* and

*San Polo*, and *Rialto* area. *Castello West* is the second most expensive area since it is somewhat close to *San Marco* and *Rialto* area. *Giudecca* and *Castello East*, as predicted, are affordable areas. Although some apartments are found in those areas, the prices are relatively low since they are not strategically located. *Cannaregio North*, *Ferrovia*, *Strada Nova*, and *Accademia*, are the medium priced areas. This median price pattern can be seen from Figure 21.

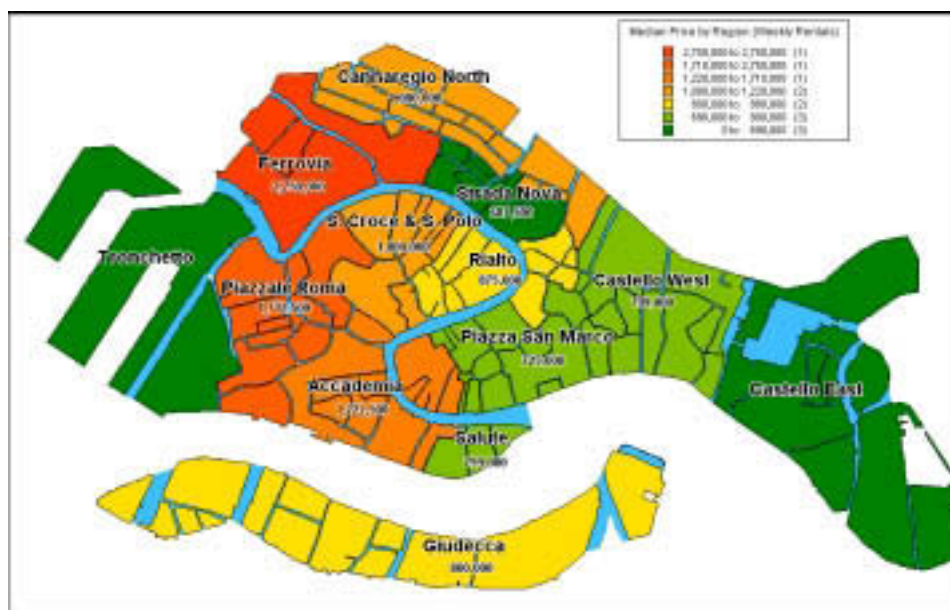


**Figure 21 - Median Price by Region (Monthly Rentals)**

Based on weekly rentals, shown in Figure 22, it clear that *San Marco* and *Castello West* areas become the second most affordable area. As we have seen from the monthly rental analysis, *Tronchetto* and *Castello East* are areas with low price of rental. *Cannaregio North*, *Santa Croce* and *San Polo*, and *Accademia* show the same patterns, where median rental prices are shown in these areas. The most expensive area is *Ferrovia*, followed by *Piazzale Roma*. One possible explanation is that most of apartments in this area are for monthly rentals. Therefore by looking at it based on

weekly rental this area happens to be the most expensive area based on our median price analysis.

As we compared the median price for monthly to weekly basis, we noticed the tendency of a dramatic decrease in price for most regions, except for *Ferrovia*, which actually increases in median price. The *Strada Nova* area apparently is the most affordable area based on weekly rental basis. This area somewhat shows the tendencies of weekly rental.



**Figure 22 - Median Price by Region (Weekly Rentals)**

Shown in Figure 23 is the distribution of monthly prices by region per square meter. This is believed to be a more accurate picture of the price distribution because the prices have been normalized by surface area. You will notice from the map that the price distribution is very similar to previous maps. The most expensive apartments are located around *San Marco*.

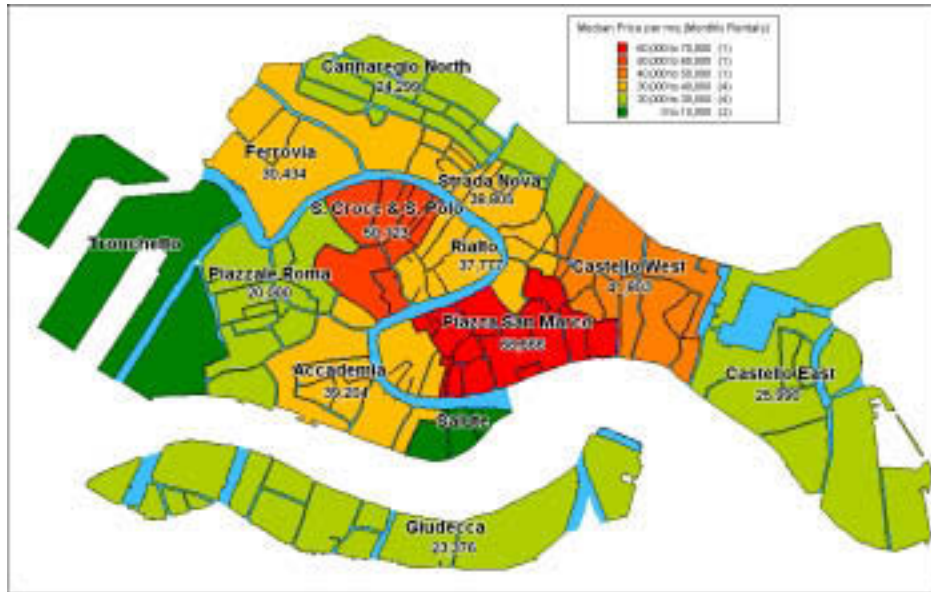


Figure 23 - Median Price per Square Meter by Region (Monthly Rentals)

Figure 24 illustrates the same price distribution except it is for weekly rentals. Weekly rentals prices are somewhat evenly distribution except for the *Ferrovia* area. This outlier is the result of a set of very expensive listings. In this distribution the *San Marco* region not the cheapest, but is near the bottom.

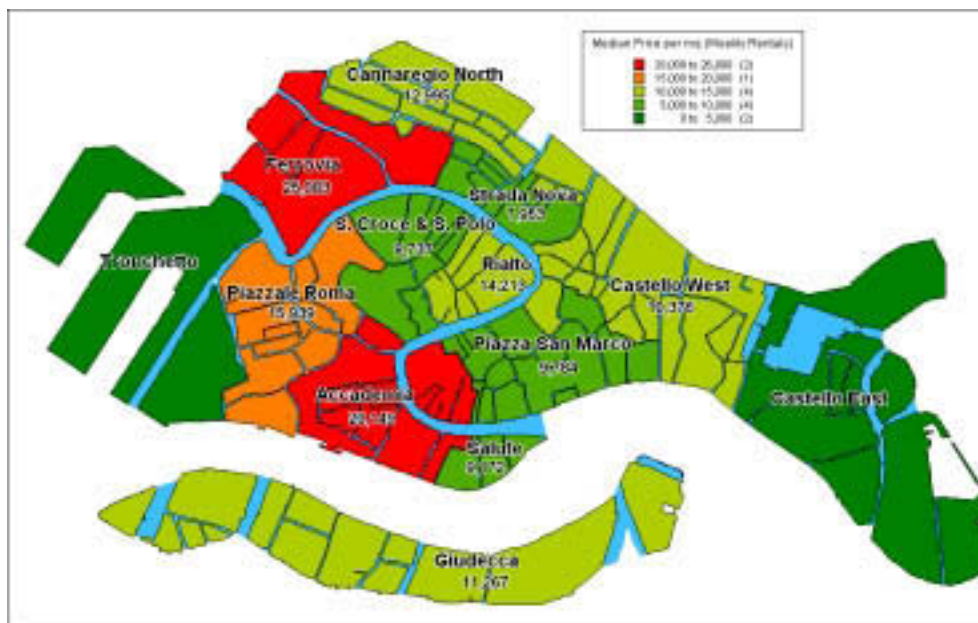


Figure 24 - Median Price per Square Meter by Region (Weekly Rentals)

When examining a median price distribution it is interesting to note the data range one is working with. Chart 9 is a bar graph showing the price range of each region as well as median price for monthly rentals. Every region appears to have a great deal of variation.

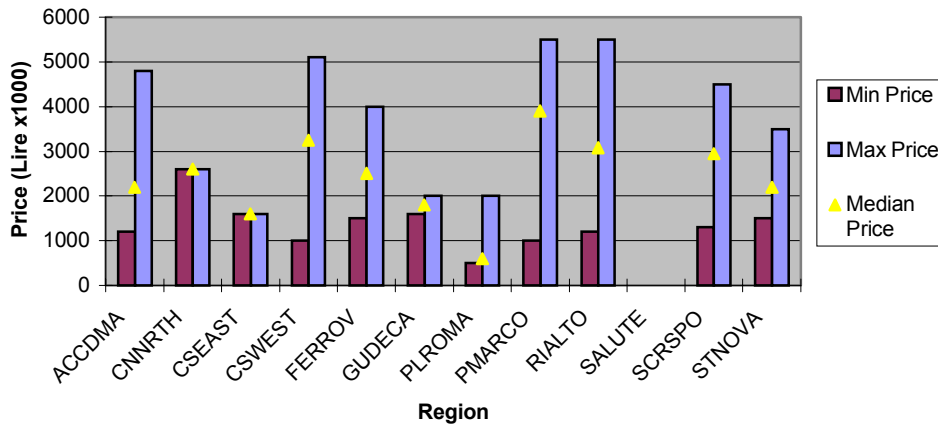


Chart 9 - Price Range by Region (Monthly Rentals)

Chart 10 shows the same information for weekly rentals. The price range for these rentals appears to be smaller because of the outlier in *Ferrovia*.

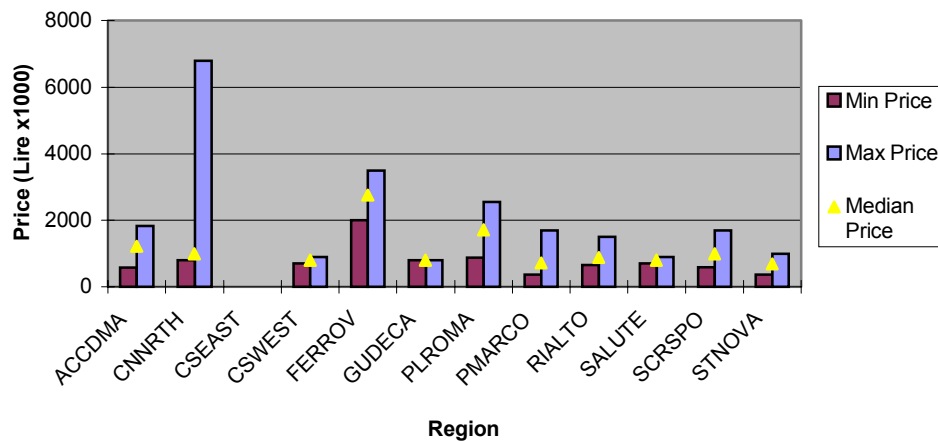


Chart 10 - Price Range by Region (Weekly Rentals)

### 5.2.8.3 Homogeneous Zone Prices

The third method for analyzing the price distribution of apartments in the *Centro Storico* of Venice was by homogeneous zone. These are three zones,

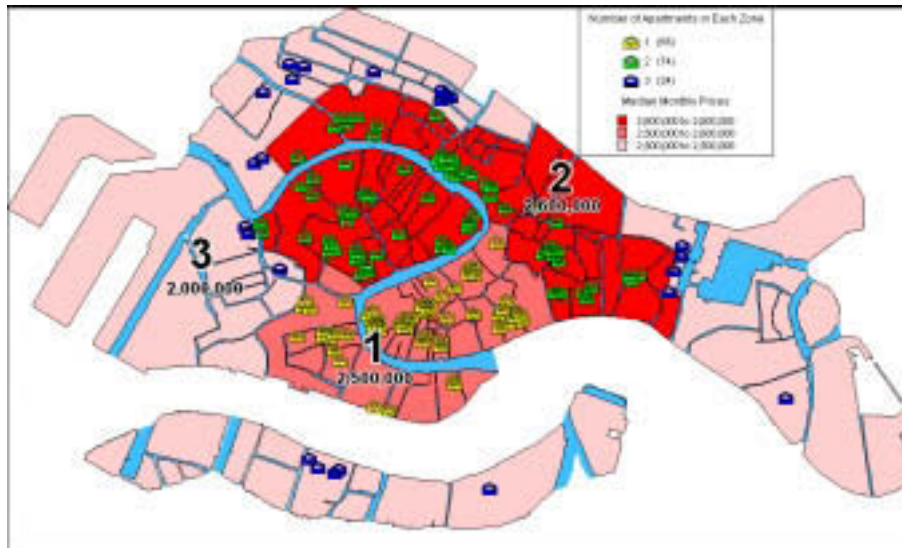


Figure 25 - Price by Homogeneous Zone (Monthly Rentals)

displayed in Figure 12, that were created by Law 431 to be used in rentals regulated by the city. Apartments in each of these regions have been assigned a value by the city that is approximately seventy-five percent of the estimated market value.

Figure 25 and Figure 26 show the distributions for monthly rentals. In each case, Regions 1 and 2 are very similar in price. The city has assumed Region 1 to be

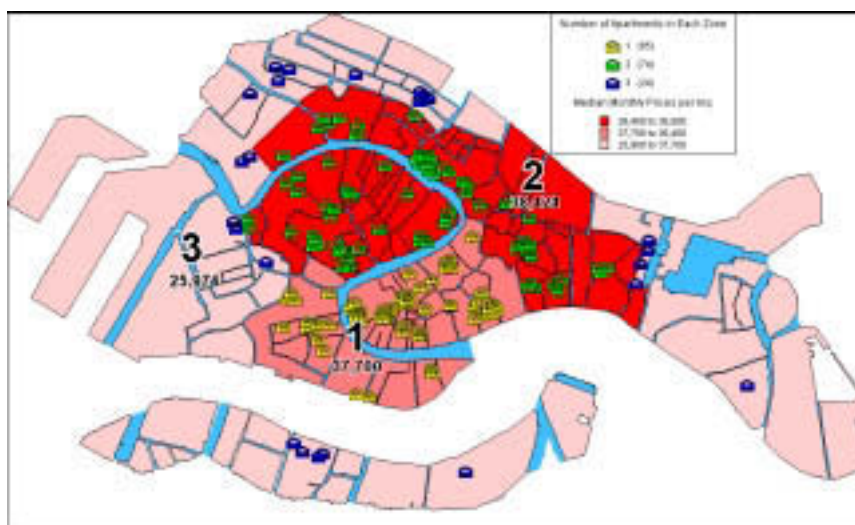
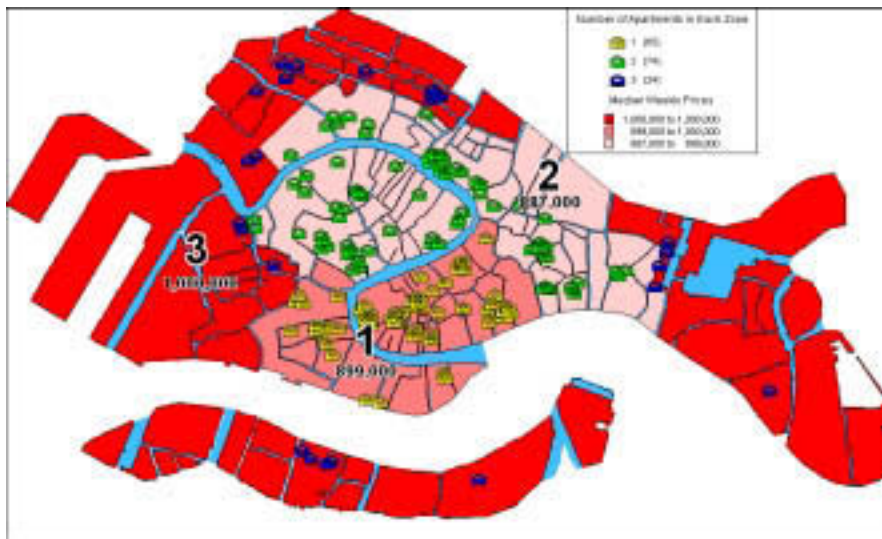


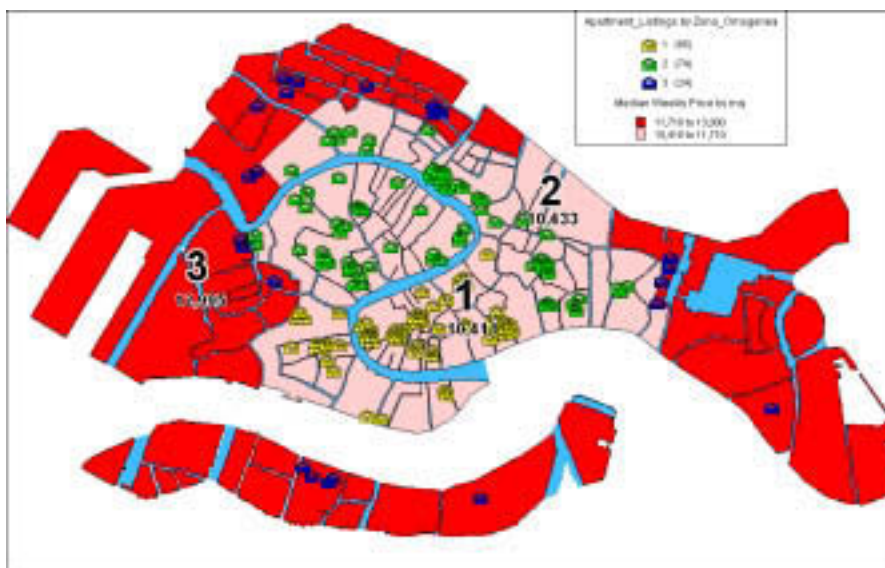
Figure 26 - Price per Square Meter by Homogeneous Zone (Monthly Rentals)



the highest valued region, while our data shows that Region 2 is actually a little higher. Region 3 is the cheapest in each case.



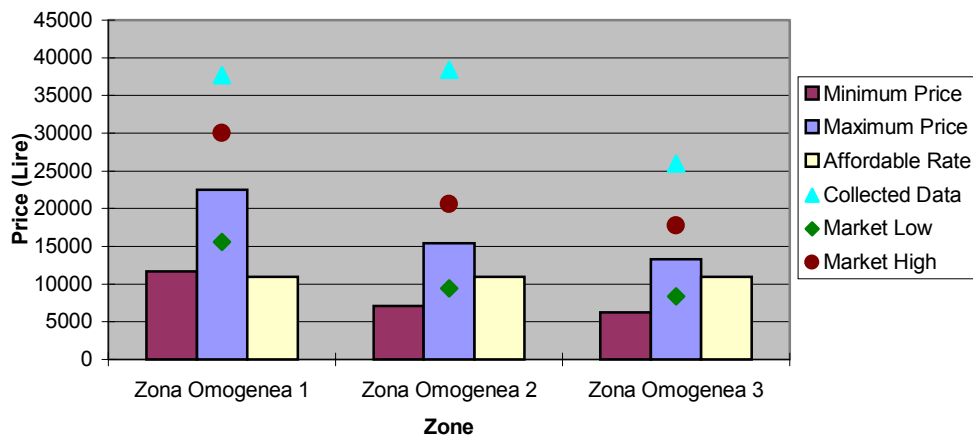
**Figure 27 - Price by Homogeneous Zone (Weekly Rentals)**



**Figure 28 - Price per Square Meter by Homogenous Zone (Weekly Rentals)**

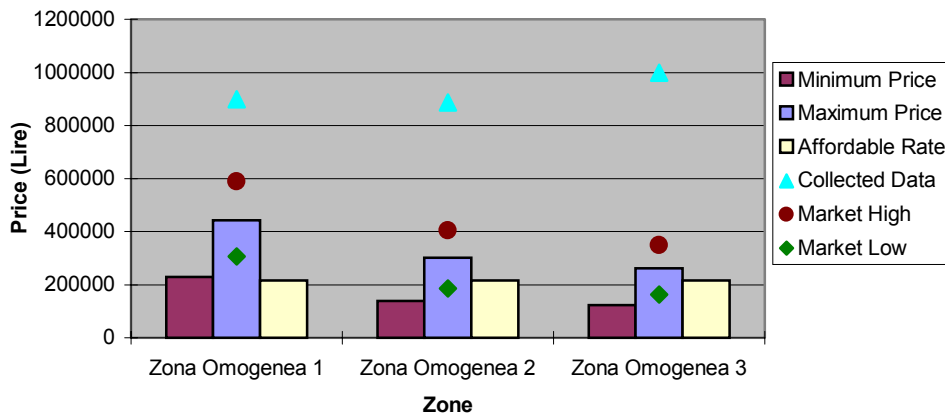
The same distribution for weekly rentals is illustrated in Figure 27 and Figure 28. These two maps show that the opposite trend is true for weekly rentals. Weekly rentals become more expensive in Region 3. Again, Regions 1 and 2 are very close in price.

To obtain a clear picture of the overall price situation in these three regions it is necessary to examine multiple sets of data at one time. The next four graphs attempt to illustrate the current state of prices for these regions. Six sets of data are shown here. First, the minimum and maximum prices that have been defined for each region are illustrated using bars. These are prices set by the Commune for rental contracts that are regulated. The third bar is the calculated affordable rate mentioned early in Section 5.2.7 Average Affordable Rent. This rate has been calculated using census and statistical data. The triangular points indicate median price data collected from our study. The other two data points represent the estimated minimum and maximum market values for real estate in each zone. The market values were calculated based on the fact that the regulated prices for each zone are supposed to be twenty-five percent below market value.

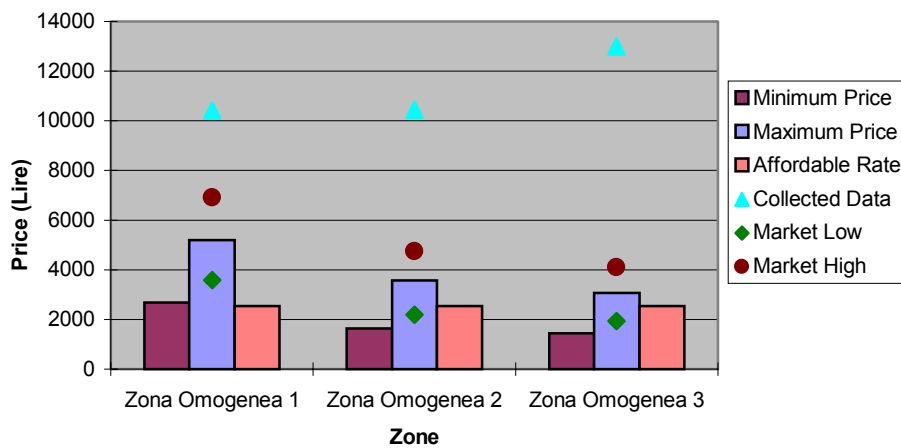


**Chart 11 - Price per Square Meter by Homogeneous Zone (Monthly Rentals)**

Chart 11 shows the figures for monthly rentals. Once the prices have been normalized by area, the collected data is always higher. This shows that prices charged to non-residents are unaffordable for residents, and help to drive up market value. The data also shows that it is unaffordable for a Venetian to live in Zone One.



**Chart 12 - Price per Homogeneous Zone (Weekly Rentals)**



**Chart 13 - Price per Square Meter by Homogeneous Zone (Weekly Rentals)**

Chart 12 and Chart 13 each relate weekly rentals in a similar manner as above. These two charts also illustrate similar price excessiveness. The data shown here are not completely accurate though. All data, except the collected data, have been extrapolated from the monthly data shown above.

#### 5.2.8.4 Prices per Bed

One of the most interesting analyses performed included an evaluation of the median price per bed throughout the *Centro Storico*. The variation in price per bed for monthly rentals throughout the highly frequented regions, such as *San Marco*, *Castello West* and *Accademia*, differ by only a hundred thousand *lire*. The *Piazzale Roma* region is the only region that does not follow this trend, due in part to a low cost for monthly housing in this region. Figure 29 relates the comparison of these

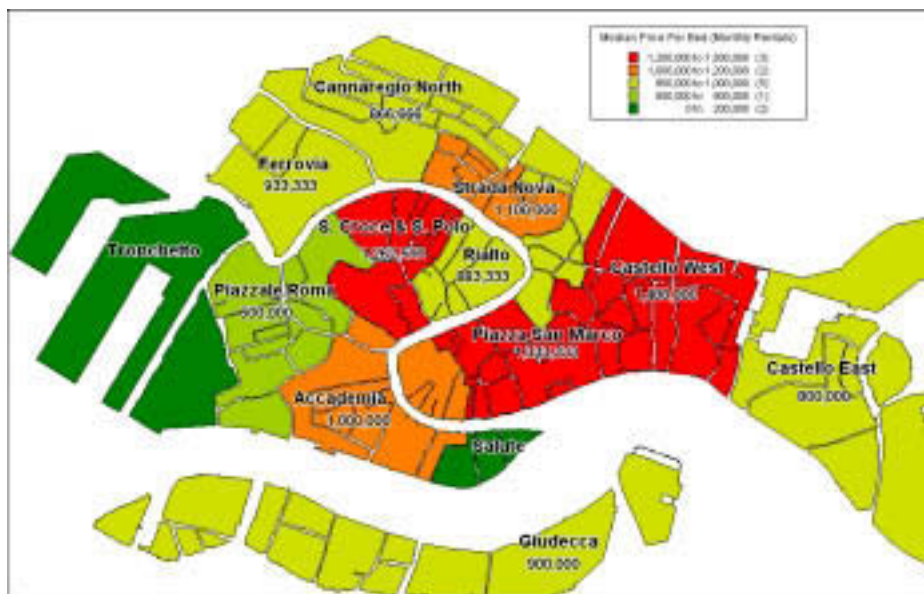
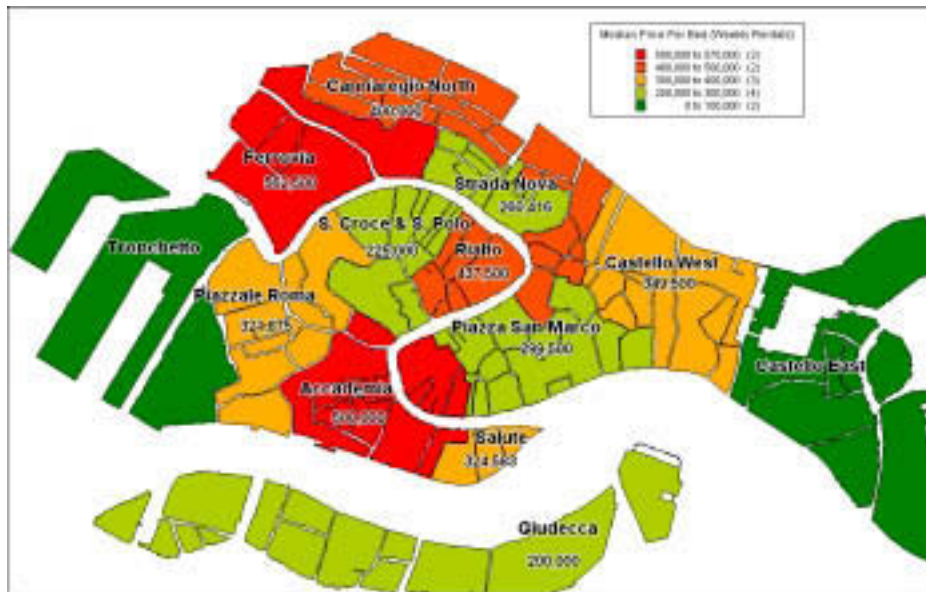


Figure 29 - Median Price per Bed (Monthly Rentals)

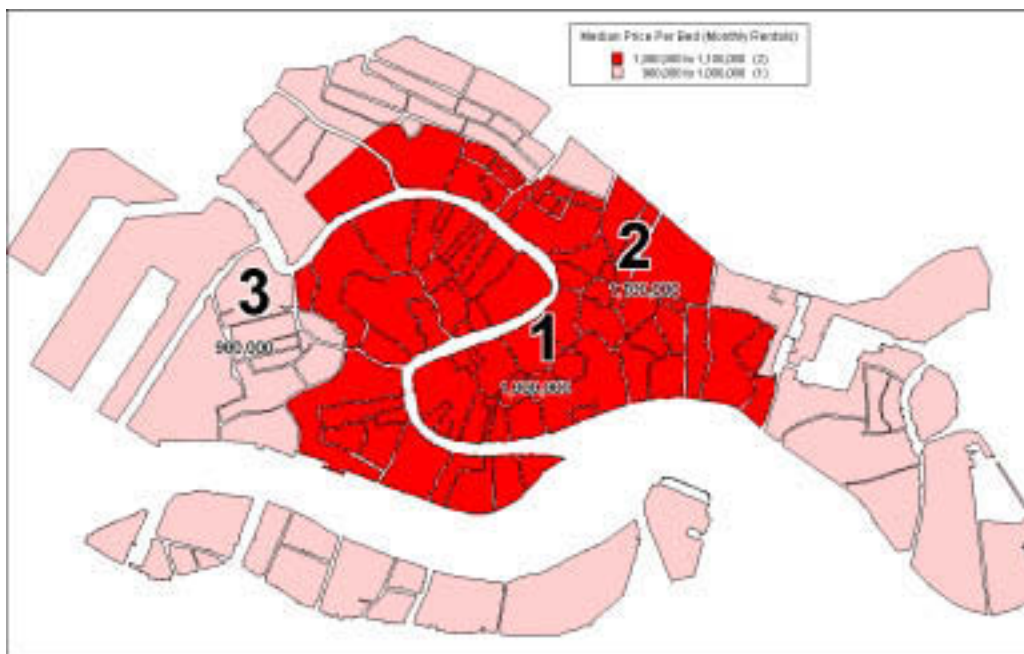
prices by region. The variation of the prices per bed by region for monthly rentals is a little more extreme per week (Figure 30).



**Figure 30 - Median Price per Bed (Weekly Rentals)**

In addition to analyzing the median price per bed according to the regions we created, the median price per bed by the government’s homogeneous zones was analyzed.

Figure 31 shows the price breakdown by zone per bed. This map shows that the difference between the maximum and minimum is only 200,000 *lire*. In comparison



**Figure 31 - Median Price per bed by Zone (Monthly Rentals)**

to the previous breakdown by our regions, the prices seem somewhat closer together. It is believed that these homogeneous zones are too large and do not serve well for market analysis because they encompass real estate regions that are too widely

separated in overall value. Figure 32 shows the median price per bed by homogeneous zone. One can see from this map that the price range per bed between zones is even smaller than for monthly rentals. Weekly rentals only differ by less than 120,000 *lire*. Again, in comparison to the previous breakdown by region, we see that these homogeneous zones are incapable of accurately describing the rental market.

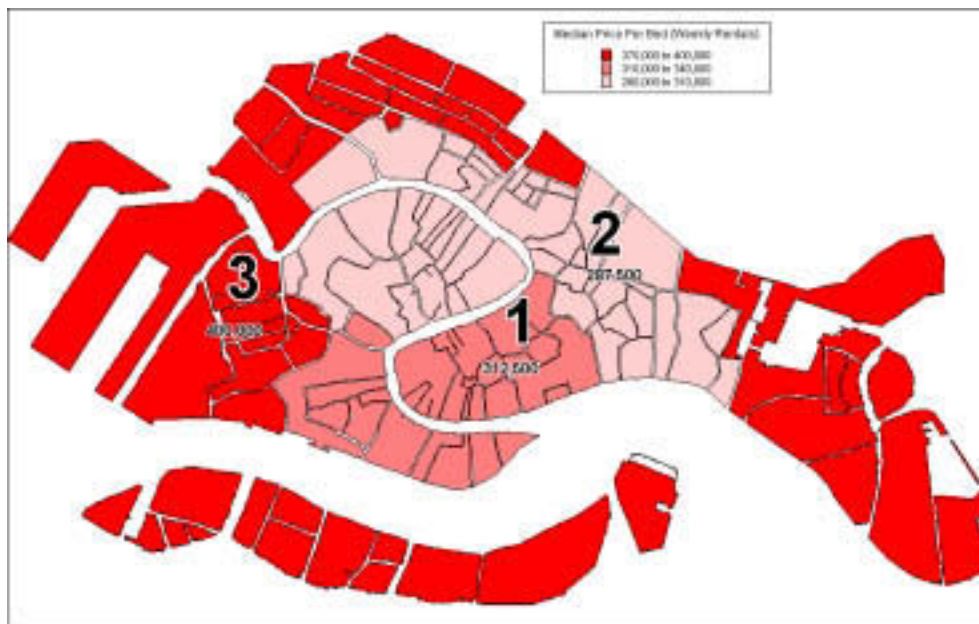


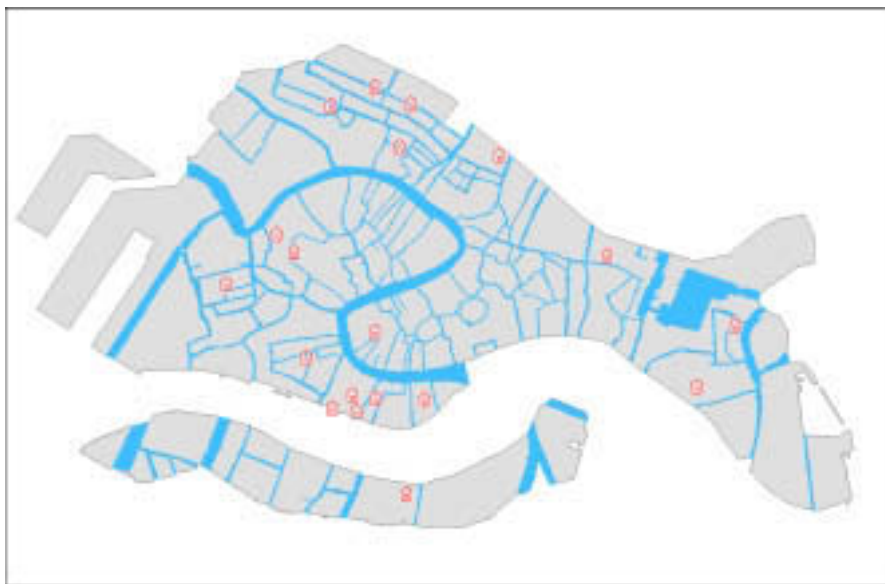
Figure 32 - Median Price per bed by Zone (Weekly Rentals)

### 5.2.9 Total Non-Resident Apartment Stock Extrapolation

The approximation of the non-resident housing stock is covered in detail in Section 5.4.4 Approximate Number of Non-Residents below. Based on the survey outlined in the methodology and hotel data, the non-resident rental housing stock is approximately four hundred forty-two. This number represents only an estimation of what is available.

### 5.3 Student Residencies within the *Centro Storico*

Our conclusion concerning student housing within in the *Centro Storico* was that almost no student, or a very small percentage, rent apartments. The student scenario outlined in our methodology section produced no apartment listings. Any student that rents an apartment in the *Centro Storico* most likely does so through ads posted on bulletin boards or through hearsay. The student apartment market is largely a black market, with under the table deals not completed through real estate agencies. Real estate agencies will only rent to students as a last resort. The majority of students that do live within the *Centro Storico* area do so in *ESU*/university run dormitories. Figure 33 is a map showing all the locations of such student residence halls. The total occupancy for all these facilities is five hundred sixty persons. This



**Figure 33 - Student Dormitory Residences**

number is approximately one third of the total beds required for all university students. The total number of university students attending school in Venice is approximately fourteen hundred. Therefore, it can be seen that the majority of university students must therefore find a place of residence on the mainland.

## 5.4 Extrapolation of the Non-Resident Population

The results section concerning the characterization of the non-resident population includes numerous graphs, map layers, and a database detailing our findings.

### 5.4.1 Non-Resident Database

The survey conducted to characterize the non-resident population resulted in an archival database of all survey records. It includes all information collected through the survey as well as data recording the success and total number of people surveyed.

### 5.4.2 Overall Survey Outcome

The result from the non-resident characterization survey was inconclusive due to the low number of people staying in apartments in comparison to tourists staying in hotels. This survey could not be used to characterize the non-resident population given that only two percent of the people who took part in the survey lived in apartments. The total number of survey responses was four hundred eighteen. The responses have been broken down by site in Table 11.

<b>Site Re</b>	<b>sponses</b>
St. Mark's Square	297
Rialto	30
Accademia 25	
Vallareso 26	
Scalzi 25	
San Luca	12
Strada Nova	3
<b>Total 418</b>	

**Table 11 - Survey Response Breakdown**

The total number of survey responses represents the total number of people questioned. St. Mark's Square is very high because that is the only area in which the



Vela team conducted their survey. The *Strada Nova* site is low because it was quickly realized that the people here were unwilling to be surveyed. This survey was performed at the *Standa Market* at the west end of the *Strada Nova*. The response rate, an important indicator of survey validity, was seventy percent.

### 5.4.3 Inconclusive Survey Results

The survey was inconclusive in its original purpose due to the fact that out of four hundred eighteen people surveyed, only nine were found to be staying in apartments. This number was too low to draw conclusions from about the non-resident apartment population, so a proportion between apartment dwellers and hotel dwellers was devised. The breakdown of the survey responses is shown in Table 12. The ratio between day tourists and overnight tourists is sixty percent, but is not believed to be very accurate since our survey targeted overnight visitors.

Day Tourists	Overnight in C.S.	Residents	Hotels	Apartments
239	159	8	150	9

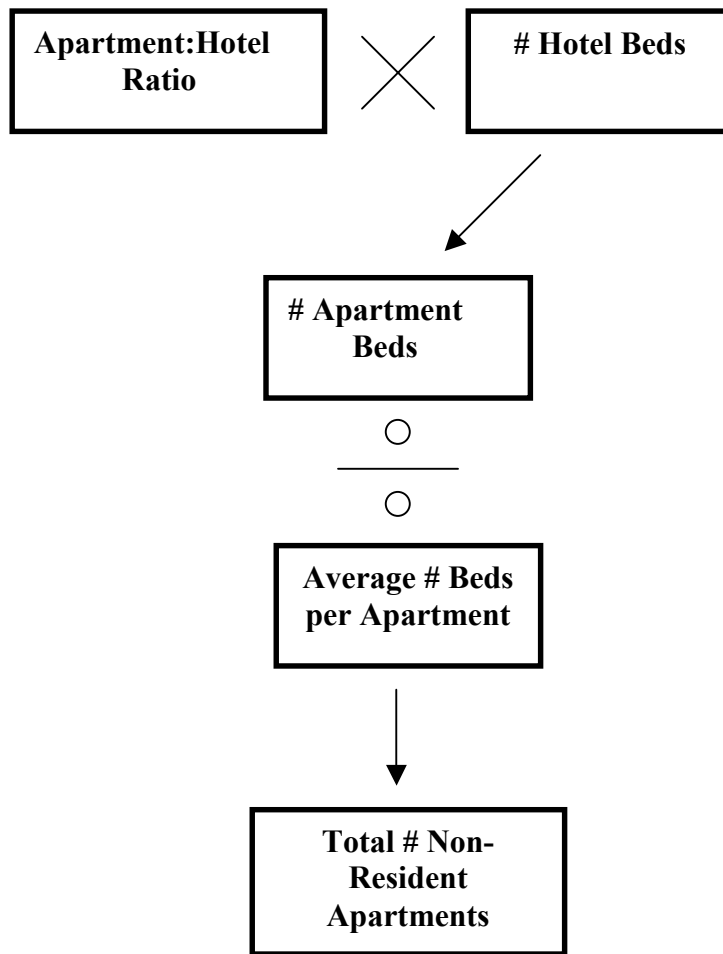
Table 12 - Survey Types

Given the sample size of overnight tourists and the results of our pretest, we are ninety-seven percent confident that the error in the hotel/apartment ratio figure is no more than  $\pm 5.00\%$ .

### 5.4.4 Approximate Number of Non-Residents

Even though the non-resident survey proved ineffective for its original intended purpose, it was still useful for a different method of analysis. The survey told us that the majority of people staying overnight in the *Centro Storico* were staying in hotels. Since hotels in Venice must report occupancy statistics to the Commune, it was decided that a ratio of apartment dwellers to hotel dwellers should be developed in order to extrapolate the entire non-resident rental market. In addition

to occupancy statistics the hotels report on their total rooms, total beds, and other physical characteristics. This data is published with the Commune's yearly population statistics. In comparing our data with hotel data various assumptions have been made. It is believed that the sum of these assumptions cancels out any bias in the end. A major assumption is that all non-residents who stay in apartments have closely similar characteristics as those who occupy hotels. This assumption accounts for overnight tourists and business workers staying for only a very short time in Venice. A ratio of apartment to hotel dwellers of 9:150 from our survey combined with the Vela team's survey, yielded a percentage of six percent of the people spending the night in Venice are doing so in non-resident apartments.



**Figure 34 - Apartment Extrapolation Flowchart**

The flowchart shown above outlines the method developed to extrapolate the total number non-resident apartments, which was four hundred forty-two. Given the error in the survey of  $\pm 5\%$ , this figure could range anywhere from 420 to 464 non-

Ratio	Percentage	Hotel Beds	Apartment Beds	Total Apartments	Percentage of Apartments located
(9:150)	6.00%	13423	805	424	52.84%

**Table 13 - Extrapolated Parameters**

resident apartments. Given that the average number of beds per apartments is 1.9, the total number of occupancies for this number of apartments cannot exceed 289,936 occupants per year. This figure however does not represent the number of non-residents who stay in an apartment over the course of a year. Two other issues must be factored in to obtain an estimation of the total non-residents per year. The first is

the average length of stay. The average length of stay obtained from hotel for hotel stays is 2.38 nights per person. This average appears to be too low for apartment stays. Based on the data acquired from real estate agencies regarding apartment listings, the average length of stay for non-residents in apartments might be closer to four to six nights per person. The second factor to be considered is the occupancy rate. That is the percentage that apartments are occupied on average for an entire year. Hotels in Venice have an occupancy rate of seventy-two percent. This number was assumed to be the same for apartments. Given these two figures, the estimated number of non-residents staying in apartments during one year is 41,512 persons per year.

<b>Non-Resident Apartment Population</b>	41,512
<b>Hotel Occupancy*</b>	1,451,447
<b>S.C. Population*</b>	66,945

(\*1999 Data)

**Table 14 - Population Comparison**

## **6. Proposals and Recommendations**

The herein contained proposals are aimed at helping the *Osservatorio Casa* with their routine inquiries into the housing market of Venice, as well as any other study group that may be conducting comparable research in the future. In order for this study to provide a model methodology, proposals have been considered to be a necessary portion of the report. These proposals for future work involve plans for the inclusion of government cooperation along with recommendations for other courses of action that will ease and simplify the collection and assessment of data pertinent to the non-resident housing market within the Commune of Venice.

Before a routinely accurate method of approximating the housing market can be developed, an accurate initial assessment and study needs to be completed. Time restrictions for this project have limited the accuracy of the evaluation provided by this report. Ideally, a yearlong study that investigates both reported and unreported rental apartments, regardless of its inhabitants, would provide the best starting point for future studies. Contained in the following sections are proposals and recommendations on, what we feel, would be the best method of collecting this data.

### **6.1 Proposals to Official Sources**

As described in Chapter 4 Methodology, the official sources and records contained within the Commune of Venice were unavailable for reference and research purposes. These sources would have provided a simple means of gathering a large amount of information regarding the rental housing market present within the city. For this approach to work, access to several databases would be required as cross-

referencing of these files would be necessary to confirm the accuracy of the various records.

Each of the government agencies would need to alter their operations slightly, if at all in some instances, to facilitate the annual studies of the *Osservatorio Casa*. The following sections outline the required adaptations by each of these agencies.

### **6.1.1 Questura Data**

The *Guardia di Finanza* holds records of all non-residents staying longer than one week, all contained wholly within the *Questura*. The police have denied the request for access to their data due to issues of privacy. If this information were made available, the records could be reviewed to acquire the needed details regarding characteristics of the renters as well as the location of the apartments. Also, these records are not currently computerized. The filing of these records electronically would benefit the police to aid them in their reports, as well as a variety of other aspects of their job. The computerization of these records would constitute a step forward in the overall housing assessment situation. Through the computerization of the records, some of these privacy issues could be circumvented. Information made public could be censored in such a manner as to decouple renter's identities from specific apartment addresses, thus allowing the details regarding residency and origin of the non-residents to be shared with the *Osservatorio Casa*. The *Questura* data is the most efficient, logical, and precise method for determining the state of non-resident housing in the historical center of Venice.

### **6.1.2 Ufficio Tributi – ICI**

The *Ufficio Tributi – ICI* contains information that is pertinent to the rental housing market. From Section 3.1.3 Italian National Laws, recall that the *Ufficio*

*Tributi – ICI* is a local tax that is assessed to property owners. Such a resource could provide many details pertinent to our search for rental apartments within the city. First, this source could provide information as to who owns more than one apartment or house in Venice. If one individual owns more than one dwelling in the city, chances are that one is their residence while the remaining apartments are rented out. These records would yield the approximate location of rental apartments, therefore leaving the task of determining which are used for non-residents. The simple addition of a question asking the purpose of each dwelling would greatly increase the ease of this assessment. Secondly, if the tax form were modified to include the permanent address of the owner (not just the mailing address as it is distributed now), then any non-residents using apartments as second houses could be determined.

### **6.1.3 *Registro Immobiliare***

The *Registro Immobiliare*, as described in Chapter 3 Background and Literature Review, is responsible for recording all real estate transactions. These transactions, recorded in the *Catasto*, include the sale and rental of all properties within the city. The city, in turn, uses these records to assess taxes to the owners of the properties. Not all rental property owners register with the *Registro Immobiliare* in an effort to avoid taxation. Regardless of this fact, the remaining properties that are registered would have provided an initial sampling of apartments that are currently being used for rental. The records contained within the *Catasto* would also allow for cross-referencing those apartments that are not registered for rental use with any listings found via other means. In short, the city could assess taxes, and quite possibly fines, on any properties that are not registered properly.

## 6.2 Recommendations for Future Assessments

Once fieldwork and data collection have been completed, the actual methodological approach used in a study must be re-examined. Through systematic evaluation and simple observation, the following guidelines and recommendations have been created to aid future studies in the area of non-resident housing.

### 6.2.1 Proposed Governmental Methodology

Section 6.1 Proposals to Official Sources has outlined the individual changes that the government agencies need to make in order to simplify the collection of data pertinent to the non-resident housing market. Following these changes to the government agencies, the possibility and feasibility of working in cooperation towards common goals in the field of non-resident dwellings would be achievable. Only then could a complete or accurate picture of the housing market in Venice be attained. Within this section, a methodology will be proposed for the chance of such an occurrence.

The *Registro Immobiliare*, with its somewhat detailed contract information regarding legal rentals, would provide the first aspect of determining the non-resident market. Legal rentals are recorded in a chronological order and are maintained in an orderly fashion, as opposed to the *Questura*, for the reason that these records are public but can only be accessed on a limited basis. With cooperation from this organization, a good portion of the market can be found with very little difficulty and reasonably high accuracy.

Following the gathering of the information from the *Registro Immobiliare* it would then be best to move onto the *ICI* tax, set to be computerized by the end of the summer of 2001. Ownership data can now be collected to divulge the dwellings that



are owned by non-residents as second homes. Secondary homes are extremely likely to be rented out rather than kept empty and as such can be more easily cross-referenced with other sources.

With legal rentals and secondary vacation homes assessed, the daunting task of discerning the illegal and unreported rentals can now begin. Here the data held within the *Questura* must be reviewed. Depending on the length and intensity of the study being conducted, it may be more feasible to computerize the many documents held within this registry before beginning to work. This in itself could be a proposal made to the *Guardia di Finanza* as to why they should cooperate in a joint study. Whether or not the data is computerized beforehand or manually reviewed, limitations must be set in the way that only entries following a certain point in time are looked at, as the documents can date back approximately thirty years. First, this data can be cross-referenced with the information obtained from the *ICI* tax to determine which secondary homes are empty or rented out. Utility consumption data, available from the *Osservatorio Casa*, can also be used for the purpose of discerning which secondary homes are vacant or being rented. Now, strictly illegal apartment rentals can be discovered by way of this data. People who rent out a portion of their own dwelling, own multiple homes under different names, or have some other inconsistency with their renting leaves the *Questura* as the only means by which to discover such locations.

Each organization involved in this potential study could be approached with the many benefits to both their organization directly and to the associated government agencies they work for. Those dealing with the *ICI* tax would be able to assess their levies more efficiently and completely. The *Questura* could be improved through computerization and conversion into a modern database, allowing for both ease of

data retrieval and data entry. At the registry of rentals, the *Registro Immobiliare* could reap such benefits as in an increase in their own revenue, considering they can now assess taxes to previously illegal rentals and preserve a more accurate picture of the market that they are charged with assessing.

## 7. Conclusions

Given the results and completed analyses of this study on the impact of non-resident housing within the Commune of Venice, the overall effects and dynamics of this phenomenon can be assessed.

Tourism in the Commune of Venice has been on the rise for several decades. As such, there is a natural tendency for the city and its surroundings to change as tourism becomes more and more integrated into its society. A fundamental aspect of tourism is the fact that those partaking are tourists, people leaving their own surroundings to observe and participate in a foreign culture. Tourists become temporary residents of the city they enter and must have a place within which they to reside. Hotels cater to the masses, providing a short-term living space; apartments however deal with long-term stays and those wishing more comfort, privacy and a further experience of cultural immersion. It can thus be concluded from the rise of tourism that the need for dwellings will also rise, increasing the number of non-resident apartments with time. Venice is a unique case in that there is no further housing being built within the *Centro Storico* itself. This, coupled with the rise in tourism and non-resident dwellings, suggests that the non-resident housing market will have an increasingly strong role upon the Venetian rental market.

Currently the non-resident segment of the rental market is estimated at approximately five percent of the total rental market. In other real estate markets this would not be a large enough market share to cause a significant impact, however the fact that the size of Venice's housing stock is fixed rules out an increasing supply canceling out an increasing demand. Therefore as the demand increases, which it has been doing for the last couple years, real estate prices will rise. There is already not

enough available housing in Venice for residents as well as extremely inflated prices for non-resident apartments (three hundred percent higher than what an average Venetian can afford).

Imposing regulations on rental apartments for non-residents, particularly Italian non-residents, seems nearly impossible. However, the situation could be balanced with the aid of official government agencies. Currently, the city and other public agencies own or maintain twenty three percent of the rental market in the form of public housing, in addition another five percent of the rental market is helped through rent subsidies. There is still a large quantity of apartments that could be brought into either of these categories. This might create one form of balance for the market. Another, more indirect, method would be by means of incentive programs for apartment owners, insuring that they rent to residents for some benefit, such as tax reductions. Caution must be taken however whenever additional dwellings are removed from the market. Public housing is critical because it provides affordable housing to the city, but is troublesome because it is housing that has essentially been taken off the market. Prices for this type of housing are no longer dependent on the traditional economic factors of supply and demand. An increase in public housing lowers the supply and raises the market value of other rental apartments. If care is not taken when dealing with public housing and rent subsidies, it is likely in the future that the government will be required to regulate the entire rental market.

The five percent of the rental market made up by non-resident apartments is having a definite effect upon the whole. It is still in a stage, however, where it has not become an overbearing presence within the marketplace. Further assessment of both the resident and non-resident rental markets must be completed in an effort to determine the extent of the actions that must be taken in order to balance the current

situation. If left alone, the non-resident market will have an increasingly dominant effect, which will be difficult to pull away from. Therefore, it would be beneficial to begin taking steps to maintain control over this market so that the residents of the Commune of Venice can continue to live and thrive within their cultural center.

## 8. Bibliography

1. Albertini, R. 2001. Windows on Italy. Site retrieved March 17, 2001 at <http://www.mi.cnr.it/WOI/deagosti/regions/veneto.html>
2. Cape Cod Commission. March 20, 2001. Cape Cod Commission. Site retrieved on March 24, 2001 at <http://www.capecodcommission.org/home.htm>
3. Caruso, Russell et al. An Assessment of the State of Tourism in Venice: A Quantitative and Characterization of Excursionist Tourist. Interactive Qualifying Project for Worcester Polytechnic Institute, 2000.
4. CIA World Fact Book. 2001. World Rover. Site retrieved on March 16, 2001 at <http://worldrover.com/vital/italy.html>
5. E-government in Venezia. 2001. Polo Est. Site retrieved on March 16, 2001 at <http://www.provincia.venezia.it>
6. European Union. 2001. EU Laws and Policies. Site retrieved March 24, 2001 at <http://www.eurunion.org/legislat/home.htm>
7. Goy, Richard J. Venetian Vernacular Architecture: Traditional housing in the Venetian lagoon. New York: Cambridge University Press, 1989.
8. Habitat for Humanity International. 2001. Habitat for Humanity International. Site retrieved on March 26, 2001 at <http://www.habitat.org>
9. Harak, Silvia and Howe, Simona. 1995. Embassy of Italy in the United States. Site retrieved on March 17, 2001 at <http://www.italyemb.org/ItalianGovernment.htm>
10. Harvard University. 2000. Harvard University News. Site retrieved on March 25, 2001 at [www.news.harvard.edu/community/housing/](http://www.news.harvard.edu/community/housing/)

11. Hughes, Henry Stuart. The United States and Italy. Cambridge: Harvard University Press, 1965.
12. Italian Government Tourist Office. 2001. Italia. Site retrieved March 24, 2001 at <http://www.italiantourism.com/>
13. Italian Realtors. 2001. Italian Real Estate. Site retrieved on March 16, 2001 at <http://www.italian-realestate.com>
14. Italian State Tourist Board. 2001. ENIT. Site retrieved March 25, 2001 at [http://www.enit.it/uk/otp\\_risultati.asp?sigla=VE](http://www.enit.it/uk/otp_risultati.asp?sigla=VE)
15. Legislazione Nazionale.1995. Regione Veneto. Site retrieved March 25, 2001 at <http://dbase1.ipzs.it/enit/agtu/veneleg.htm>
16. National Multi Housing Council. 1996. The High Cost of Rent Control. Site retrieved on March 25, 2001 at <http://www.rentalprop.com/rentcntrl.htm>
17. Padovani, Liliana. Urban Change and Housing Policies. Venice, Italy: DAEST, Ricerca n. 19, 1995.
18. Petrucelli, Joseph, et al. Applied Statistics for Engineers and Scientists. Upper Saddle River, New Jersey: Prentice Hall, 1999.
19. Santillo, Giuseppe. June 2000. Quinto rapporto. Comune di Venezia:  
Osservatorio  
Casa.
20. Sistema Statistico Nazionale. Il Censimento 1991 a Venezia. Venice, Italy:  
Ufficio Statistico, December 1994.
21. Sistema Statistico Nazionale. Informazioni Statistiche: Annuario 1999. Venice,  
Italy: Servizio Statistica e Ricerca, July 2000.

22. Stegman, Michael A. and Sumka, Howard J. Non-metropolitan Urban Housing: An Economic Analysis of Problems and Policies. Cambridge, MA: Ballinger Publishing Company, 1976.
23. University of Massachusetts. 1999. University of Massachusetts Publications. Site retrieved on March 25, 2001 at <http://www.donahue.umassp.edu/publications/housing/>
24. Unknown. 2001. Revitalizing Venice. Site retrieved on March 17, 2001 at [http://www.unesco.org/culture/heritage/tangible/venice/html\\_eng/resultatve.htm](http://www.unesco.org/culture/heritage/tangible/venice/html_eng/resultatve.htm)
25. U.S. Department of Housing and Urban Development. 2001. Homes and Communities – U.S. Department of Housing and Urban Development. Site retrieved on March 26, 2001 at <http://www.hud.gov>
26. Vedrenne, Elisabeth. Living in Venice. New York: Thames and Hudson, 1990.
27. Venice. 2001. veNETia. Site retrieved on March 17, 2001 at <http://www.Commune.venezia.it/index.asp>
28. Venice Realtors. 2001. Casa.it. Site retrieved on March 16, 2001 at <http://www.casa.it>
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30. Wolman, Harold L. Housing and Housing Policy in the U.S. and the U.K. Toronto: Lexington Books, 1975.
31. Worcester Office of Planning and Community Development. 1995. Worcester Consolidated Plan. Site retrieved on March 26, 2001 at <http://www.hud.gov/cpes/ma/worcesma.html>



# Appendix A - Annotated Bibliography

## A.1 Regulatory Sources

1. Cape Cod Commission. March 20, 2001. Cape Cod Commission. Site retrieved on March 24, 2001 at <http://www.capecodcommission.org/home.htm>

This is the homepage of the Cape Cod Commission, which has been established to regulate land development issues in Cape Cod. This organization may provide an excellent example for the establishment of a similar organization in Venice.

2. Downs, Anthony. Rental Housing in the 1980's. Washington, D.C.: The Brookings Institution, 1983.

This source evaluates the rental housing market of the 1980's in the United States, reviewing trends, demands and changes made in that time period. Source could be useful for comparison and for ideas for situation in Venice.

3. E-government in Venezia. 2001. Polo Est. Site retrieved on March 16, 2001 at <http://www.provincia.venezia.it>

This site may be the web site of the Commune of Venice. Provides information on the city including demographics and limited policies/regulations.

4. European Union. 2001. EU Laws and Policies. Site retrieved March 24, 2001 at <http://www.eurunion.org/legislat/home.htm>

This is the European Union law page. Provides detail overviews of EU policy areas, including legislative bases, and a comprehensive listing of links to EU policy and legislative resources in Europe.

5. Habitat for Humanity International. 2001. Habitat for Humanity International. Site retrieved on March 26, 2001 at <http://www.habitat.org>

This is the home page for Habitat for Humanity International. The goal of this organization is to construct homes for needy families. They help to foster an environment of giving and sharing by having the local community build a person's house with that person. Although

their mission is somewhat different than Venice's housing problem, any research that Habitat has done might be useful.

6. Harvard University. 2000. Harvard University News. Site retrieved on March 25, 2001 at [www.news.harvard.edu/community/housing/](http://www.news.harvard.edu/community/housing/)

This contained a study being conducted on urban housing in the Boston-Cambridge area and how Harvard may be able to integrate itself into the re-establishment of the community.

7. Hughes, Henry Stuart. The United States and Italy. Cambridge: Harvard University Press, 1965.

This source contains information on the population development in Italy due to industrialization. This source is dated back in 1965; some of the information may be outdated, but provides some detail of recent growth within the city.

8. Legislazione Nazionale.1995. Regione Veneto. Site retrieved March 25, 2001 at <http://dbase1.ipzs.it/enit/agtu/veneleg.htm>

This source provides Veneto regulations and laws with respect to tourism and tourist housing.

9. Mendelson, Robert E. and Quinn, Michael A. The Politics of Housing in Older Urban Areas. New York: Praeger Publishers, 1976.

This source examines the various aspects of the politics of housing in older urban regions of the United States. Topics include urban planning, public policy and government interaction as it relates to housing. May provide valuable ideas for alternatives in Venice, not a directly valuable source.

10. National Multi Housing Council. 1996. The High Cost of Rent Control. Site retrieved on March 25, 2001 at <http://www.rentalprop.com/rentctrl.htm>

This article provided details on how many of the urban rent control projects throughout the United States have failed. It also provides insight on how these problems could be corrected. This may be valuable information to consider when presenting solutions to the Commune of Venice.

11. Padovani, Liliana. Urban Change and Housing Policies. Venice, Italy: DAEST, Ricerca n. 19, 1995.

This report contained valuable information used to verify some assumptions made on the housing situation in Venice. It contained data regarding the population decline, the housing situation and the change in economic base.

12. Stegman, Michael A. Housing and Economics: The American Dilemma. Cambridge, MA: The MIT Press, 1970.

This source relates a systematic approach for students interested in urban housing. Value of source still under examination due to length of the book.

13. Stegman, Michael A. and Sumka, Howard J. Non-metropolitan Urban Housing: An Economic Analysis of Problems and Policies. Cambridge, MA: Ballinger Publishing Company, 1976.

This source also examines policies addressing housing. Another source with similar concepts and ideas needed for our study. Further research needed to determine overall value of source.

14. Sistema Statistico Nazionale. Il Censimento 1991 a Venezia. Venice, Italy: Ufficio Statistico, December 1994.

This source provided statistical data pertaining to the census taken in for the Commune of Venice in 1991. The figures contained within this source were used for comparisons to our collected data along with other demographical information.

15. Sistema Statistico Nazionale. Informazioni Statistiche: Annuario 1999. Venice, Italy: Servizio Statistica e Ricerca, July 2000.

This source provided some statistical data pertaining to census data for the year of 1999 for the Commune of Venice. It was used to obtain information relevant to average family size, inflation statistics and other population demographics.

16. University of Massachusetts. 1999. University of Massachusetts Publications. Site retrieved on March 25, 2001 at

<http://www.donahue.umassp.edu/publications/housing/>

This site provided a case study, *A Profile of Housing in Massachusetts*. This study contained information on some irrelevant topics, such as

low-income housing, but also reviewed the overcrowding issue being presented in Boston.

17. Urban Land Institute: Research Division. Effect of Regulation on Housing Cost: two case studies: a report / prepared by the Research Division of the Urban Land Institute and Gruen & Gruen Associates; sponsored by the Urban Land Research Foundation. Washington: ULI, 1977.

This source provides case studies of the possible monetary impact of regulation on housing development, with examples from the project in Jacksonville, TN.

18. U.S. Department of Housing and Urban Development. 2001. Homes and Communities – U.S. Department of Housing and Urban Development. Site retrieved on March 26, 2001 at <http://www.hud.gov>

This is the home page for HUD – Department of Housing and Urban Development. This is a U.S. government agency whose main purpose is to provide affordable housing to low-income families. The site contains a searchable database of all public HUD documents.

19. Venice. 2001. veNETia. Site retrieved on March 17, 2001 at <http://www.Commune.venezia.it/index.asp>

This site is still being investigated (working on translation from Italian to English). May provide detailed information upon later examination.

20. Wolman, Harold L. Housing and Housing Policy in the U.S. and the U.K. Toronto: Lexington Books, 1975.

This source explains the public policy of housing as it relates to the government and its citizens, as well as international issues. Source provides valuable insight toward international housing concerns, however, may not be useful for specific issues being dealt with in Venice.

21. Worcester Office of Planning and Community Development. 1995. Worcester Consolidated Plan. Site retrieved on March 26, 2001 at <http://www.hud.gov/cpes/ma/worcesma.html>

This is a summary of the current (1995) housing situation in the City of Worcester, MA. It summarizes what is currently happening and the

five-year projection for the city. There are identical reports available on line from HUD for almost every major city in the U.S.

## A.2 Tourism

1. Harak, Silvia and Howe, Simona. 1995. Embassy of Italy in the United States. Site retrieved on March 17, 2001 at <http://www.italyemb.org/ItalianGovernment.htm>

This site provided limited information on the subject of housing, however it did provide a source for contact in Italy.
2. Italian Government Tourist Office. 2001. Italia. Site retrieved March 24, 2001 at <http://www.italiantourism.com/>

This source contains a list of travel agencies in United States and Canada. This is a website that is made by the Italian government, Office of Travel. This source might be useful to obtain information on the availability of rental housing in Venice
3. Italian Realtors. 2001. Italian Real Estate. Site retrieved on March 16, 2001 at <http://www.italian-realestate.com>

This site provides numerous links to real estate services in Italy. Many of the links don't work, limiting the resourcefulness of this site.
4. Italian State Tourist Board. 2001. ENIT. Site retrieved March 25, 2001 at [http://www.enit.it/uk/otp\\_risultati.asp?sigla=VE](http://www.enit.it/uk/otp_risultati.asp?sigla=VE)

This site contains a list of travel agencies in Venice. It also contains all the contact information that might be useful to conduct a survey in Venice.
5. Venice Realtors. 2001. Casa.it. Site retrieved on March 16, 2001 at <http://www.casa.it>

This source contains a database of housing listings throughout Italy. This could be used to compare housing prices between the Italian cities, as well as comparisons in the availability in other historic cities.

### A.3 Miscellaneous

32. Albertini, R. 2001. Windows on Italy. Site retrieved March 17, 2001 at

<http://www.mi.cnr.it/WOI/deagosti/regions/veneto.html>

This site contains some background about the region of Veneto, such as geographical position, natural environment, population and economy, and tourism.

33. CIA World Fact Book. 2001. World Rover. Site retrieved on March 16, 2001 at

<http://worldrover.com/vital/italy.html>

This site provides demographics on the city, including population, economics, government agencies and geographical features.

34. Goy, Richard J. Venetian Vernacular Architecture: Traditional housing in the Venetian lagoon. New York: Cambridge University Press, 1989.

This source provides details on housing architecture in various parts of the Commune of Venice. Does not provide any relevant information on the urban housing market.

35. Howells, William Dean. Venetian Life. New York: AMS Press, 1971.

This source offers ideas on the daily life of Venetians. It is a good resource to find out general information on Venice.

36. Kurnit, Scott. 2001. About: The Human Internet. Site retrieved on March 16, 2001 at <http://intljobs.about.com/careers/intljobs/library/weekly/aaitalya.htm>

This source provided an online fact book about Italy. Contains many helpful links to essays on different topics with respect to Italy, particularly from that of a non long-term occupant. Also many how-to reports and contact information on different subjects.

37. Pemble, John. Venice Rediscovered. Oxford: Clarendon Press; New York: Oxford University Press, 1995.

The main focus of this source is more on Venetian history and society in the 19<sup>th</sup> century. Limited amounts of information could be obtained from this text.

38. Unknown. 2001. Revitalizing Venice. Site retrieved on March 17, 2001 at

[http://www.unesco.org/culture/heritage/tangible/venice/html\\_eng/resultatve.htm](http://www.unesco.org/culture/heritage/tangible/venice/html_eng/resultatve.htm)

This source provided an article on the revitalization of the Commune of Venice. Provides a useful understanding of the concerns already being addressed within the city.

39. Vedrenne, Elisabeth. Living in Venice. New York: Thames and Hudson, 1990.

This source examines the lifestyle present in Venice and relates this to travelers and visitors to the city. Provides some insight for issues that have to be examined on this project.

40. Weideger, Paula. January 24, 1997. Death or Transfiguration? Site retrieved on March 16, 2001 at

[http://www.findarticles.com/m0FQP/n4318\\_v126/19223564/p1/article.jhtml](http://www.findarticles.com/m0FQP/n4318_v126/19223564/p1/article.jhtml)

This article provides some information about some possibilities about the decreasing population in Venice and its social implications.

41. Wiener, Samuel Gross. Venetian Houses and Details. New York: The Architectural Book Publishing Co., 1929.

This source contains drawings of Venetian houses and smaller villas near Venice. This book only provides architectural details and examples of the housing in Venice, not the housing market. Nothing was obtained from this source.

## **Appendix B - Official Documents/Forms**

Included here are official forms from various government agencies.

1. *ICI* Tax forms
2. *Ufficio Registro* – Rental Registration Form
3. *Questura* Forms



## Appendix C - Database Descriptions

### C.1 Housing Databases

#### C.1.1 Apartment Database

	Field Name	Type	Description
1	ID	Long Integer	Identification Number
2	Code	Text	Code describing individual apartment
3	Source	Text	Location of listing
4	Source Code	Text	Code of Source
5	Method	Text	Method of acquisition of listing
6	Sestiere	Text	Name of Sestiere
7	Sestiere Code	Text	Code of Sestiere
8	Location	Text	General location
9	Location Code	Text	Code of General Location
10	Address	Long Integer	Exact address
11	Date	Text	Date of listing acquisition
12	Price	Long Integer	Price of rental
13	Monthly Price	Long Integer	Price of monthly rentals
14	Weekly Price	Long Integer	Price of weekly rentals
15	Price per mq (weekly)	Double	Price per square meter for weekly rentals
16	Price per mq (monthly)	Double	Price per square meter for monthly rentals
17	Type	Text	Type of desired renters
18	Floor	Long Integer	Floor apartment is located on
19	Single Beds	Long Integer	Number of single beds
20	Double Beds	Long Integer	Number of double beds
21	Bathrooms	Long Integer	Number and type of bathrooms
22	Kitchen	Text	Size and type of Kitchen
23	Living Room	Yes/No	Includes living room
24	Actual Area	Long Integer	Area in square meters
25	Estimated Area	Double	Area in meters squared estimated by rooms
26	Other	Text	Miscellaneous inclusions
27	Region	Text	New regions for analysis
28	Region Code	Text	Region codes used to link regions to access for analysis
29	Numerazione Fogli Catastali	Text	Zones made by the Commune for rental prices
30	Zona Omogenea	Integer	Zones made by the Commune for rental prices

## C.1.2 Public Housing Database

	Field Name	Type	Description
1	FOGLIO	Integer	
2	MAPPALE	Text	
3	SUB	Text	
4	AREACIRCOLARE	Text	
5	Via_DESCR	Text	
6	NUMCIV	Integer	
7	BARRA	Text	
8	PIANO	Text	
9	INTERNO	Text	
10	CAP	Text	
11	Quartieri_DESCR	Text	
12	SVABI	Double	
13	COSTR	Text	

## C.2 University Databases

### C.2.1 University Facilities

	Field Name	Type	Description
1	Building Name	Text	Name of University Building
2	Code	Text	Code for each Building
3	Sestieri	Text	Name of Sestiere
4	Address	Text	Numerical Address of Building
5	Description	Text	Description of Facility
6	Type	Text	University that Building belongs to
7	MAPINFO_ID	Long Integer	Identification Number for MapInfo

### C.2.2 Student Housing

	Field Name	Type	Description
1	ID	Long Integer	Identification Number
2	Name	Text	Name of Facility
3	Sestiere Code	Text	Code for Sestiere
4	Codice	Text	Numerical Address
5	Address	Text	Address of Facility
6	Occupancy	Long Integer	Number of Occupancies in Facility
7	Telephone	Text	Telephone Number of Facility
8	Type	Text	Type of Facility

## C.3 Survey Databases

### C.3.1 Non-Resident Survey

	Field Name	Type	Description
1	ID	Long Integer	Identification Number
2	Time	Date/Time	Time of Survey
3	Date	Date/Time	Date of Survey
4	Location	Text	Location of Survey Administration
5	Total Surveyed	Long Integer	Total Number of People Surveyed
6	Refusals	Long Integer	Number of Refusals
7	Residents	Long Integer	Number of Residents Surveyed
8	Not-Staying Overnight	Long Integer	Number of People Not-Staying Overnight
9	Overnight	Long Integer	Number of People Staying Overnight
10	Surveyed	Long Integer	Number of People Surveyed
11	Not-Surveyed	Long Integer	Number of People Not-Surveyed

### C.3.2 Vela Survey

	Field Name	Type	Description
1	ID	Long Integer	Identification Number
2	Survey Number	Long Integer	
3	KIJM	Text	
4	Language	Text	
5	Date	Date/Time	
6	Time	Date/Time	
7	Location	Text	
8	01 Refusal	Text	
9	02 Sex	Text	
10	03 Age	Text	
11	04 Group size	Long Integer	
12	05 Children	Long Integer	
13	06 Infants	Text	
14	07a Luggage #	Long Integer	
15	07b Luggage Type	Text	
16	08 Stroller	Yes/No	
17	08 Wheelchair	Yes/No	
18	08 Walking Aid	Yes/No	
19	08 Pet	Yes/No	
20	08 Other	Text	
21	09 Wrong Bus	Text	
22	1 Italian	Yes/No	
23	1 English	Yes/No	
24	1 German	Yes/No	

25	1 French	Yes/No	
26	1 Spanish	Yes/No	
27	2 Nights	Long Integer	
28	2a Apartment	Text	
29	2b1 Sestieri	Text	
30	2b2 Landmark	Text	
31	3 Luggage	Long Integer	
32	4 Repeat Visit	Text	
33	5 With Group	Text	
34	5a Group Name	Text	
35	5b Group Size	Long Integer	
36	6 First Form	Text	

### C.4 Real Estate Agency Database

	Field Name	Type	Description
1	ID	Long Integer	Identification Number
2	Agency Number	Integer	Assigned Agency Number
3	Name	Text	Name of Real Estate Agency
4	Owner	Text	Owner of Agency
5	Address	Text	Address of Agency
6	Telephone	Text	Telephone Number of Agency
7	Fax	Text	Fax Number of Agency
8	E-mail	Text	E-mail Address of Agency
9	Web Page	Hyperlink	Web Page of Agency
10	Sestieri	Text	Name of Sestiere
11	Number	Text	Numerical Address of Agency
12	Code	Text	Code of Agency
13	Type	Text	Type of Agency
14	Hours	Text	Operating Hours of Agency
15	Street/Campo	Text	Location of Agency (landmark)
16	Street Window	Yes/No	Window Advertisements?

### C.5 Utility Consumption Database

	Field Name	Type	Description
1	Zona	Double	
2	Matricola	Double	
3	Gruppo	Double	
4	Codice Utente	Double	
5	Cognome e Nome	Text	
6	Nomevia	Text	
7	Via	Text	
8	Numero	Double	

<b>9</b>	Interno 1	Text	
<b>10</b>	Interno 2	Text	
<b>11</b>	Localita	Text	
<b>12</b>	Data Interruzione Servizio	Text	

## Appendix D - Associated Real Estate Files

### D.1 Real Estate Visitation Schedule

Agency	ID	Location	S - 1	S - 2	S - 3	S - 4
REAL ESTATE A.B.C.	1	SM5458	19-Jun	25-Jun	29-Jun	4-Jul
AGENCY OF TRANSACTIONS LEONARDO IMM.RE 2		DD2453	19-Jun	25-Jun	29-Jun	4-Jul
VENEZIA INTERMEDIAZIONI	3	SM5188	19-Jun	25-Jun	29-Jun	4-Jul
AFFARI IMMOBILIARI PRISMA	4	SP2008	20-Jun	26-Jun	2-Jul	5-Jul
SANT'ANGELO IMMOBILIARE	5	SM3818	20-Jun	26-Jun	2-Jul	5-Jul
MITWOHNZENTRALE ALLOGGI TEMPORANEI	6	CS5448	20-Jun	26-Jun	2-Jul	5-Jul
S.I.L. STUDIO IMMOBILIARE	7	SM4270	21-Jun	27-Jun	3-Jul	6-Jul
IMMOBILIARE TOLETTA	8	DD1183	21-Jun	27-Jun	3-Jul	6-Jul
AGENZIA NARDUZZI IMMOBILIARE	9	SM4578	21-Jun	27-Jun	3-Jul	6-Jul
IL TETTO IMMOBILIARE	10	CS6082	22-Jun	28-Jun	4-Jul	9-Jul
COSMOPOLITAN 13		SP3093	22-Jun	28-Jun	4-Jul	9-Jul
HOUSE DEAL CONSULTING	15	CS5274	25-Jun	29-Jun	5-Jul	10-Jul
GE.F.IM. 16		SM144	25-Jun	29-Jun	5-Jul	10-Jul
BROKER HOUSE IMMOBILIARE	17	SM2746	25-Jun	29-Jun	5-Jul	10-Jul
IMMOBILIARE CASE SERENA	18	SM4931	26-Jun	2-Jul	6-Jul	19-Jun
TARGET IMMOBILIARE	64	SP663	26-Jun	2-Jul	6-Jul	19-Jun
IMMOBILIARE G. & G.	20	SM1800	26-Jun	2-Jul	6-Jul	19-Jun
AGENZIA D'AFFARI MANIN	21	SM3717	27-Jun	3-Jul	9-Jul	20-Jun
AGENZIA D'AFFARI VENEZIA	26	CN1413	27-Jun	3-Jul	9-Jul	20-Jun
AGENZIA ESPRESSI PERSEVERANZA CONCESSIONE	27	SM5548	28-Jun	4-Jul	10-Jul	21-Jun
AGENZIA IMMOBILIARE CAMPANATI	32	CS4711	28-Jun	4-Jul	10-Jul	21-Jun
AGENZIA IMMOBILIARE IMMOBILVENETA	34	SP3132	28-Jun	4-Jul	10-Jul	21-Jun
AGENZIA IMMOBILIARE GIARETTA	37	SM514	29-Jun	5-Jul	19-Jun	22-Jun
AGENZIA IMMOBILIARE RF/MAX	38	SM1757	29-Jun	5-Jul	19-Jun	22-Jun
AGENZIA IMMOBILIARE VENICE REAL ESTATE	40	SM1130	29-Jun	5-Jul	19-Jun	22-Jun
FLAT & BUSINESS	43	DD3896	2-Jul	6-Jul	20-Jun	25-Jun
GABETTI OP.IMM	44	DD187	2-Jul	6-Jul	20-Jun	25-Jun
GABETTI OP.IMM	45	CN4385	3-Jul	9-Jul	21-Jun	26-Jun
CENTRO IMMOBILIARE NG	65	DD3066	3-Jul	9-Jul	21-Jun	26-Jun
CA'LEON IMMOBILIARE	47	CN1420	3-Jul	9-Jul	21-Jun	26-Jun
CENTROCASAVENEZIA 48		SC294	4-Jul	10-Jul	22-Jun	27-Jun
CERCA CASA	49	SM5414	4-Jul	10-Jul	22-Jun	27-Jun
GRUPPO S.E.I. - A.B.M. IMMOBILIARE	50	CN2684	4-Jul	10-Jul	22-Jun	27-Jun
HAUS - I.R.V.E.SRL	51	SM4467	5-Jul	19-Jun	25-Jun	28-Jun
IMMOBILIARE DUEMILA	52	SP61	5-Jul	19-Jun	25-Jun	28-Jun
IMMOBILIARE GUGLIE	53	CN1121	5-Jul	19-Jun	25-Jun	28-Jun
IMMOBILIARE LA FENICE	54	CS3457	6-Jul	20-Jun	26-Jun	29-Jun
IMMOBILIARE VENEZIA	55	CS5632	6-Jul	20-Jun	26-Jun	29-Jun

SAI 57		CN369	6-Jul	20-Jun	26-Jun	29-Jun
SERVIZI IMMOBILIARI	58	SC1903	9-Jul	21-Jun	27-Jun	2-Jul
STEVENATO IMMOBILIARE	59	CN5398	9-Jul	21-Jun	27-Jun	2-Jul
STUDIO OPERAZIONI IMMOBILIARI	60	DD2633	9-Jul	21-Jun	27-Jun	2-Jul
VE.N.I.CE CERA	61	SM2956	10-Jul	22-Jun	28-Jun	3-Jul
ABITARE 62		SP2357	10-Jul	22-Jun	28-Jun	3-Jul
PUNTOCASA: CONSULENZA IMMOBILIARE	63	SP2871	10-Jul	22-Jun	28-Jun	3-Jul

## D.2 Window/Web Search

Agency	I.D.	Location	WINDOW	WEB
REAL ESTATE A.B.C.	1	SM5458	N/A N/A	
AGENCY OF TRANSACTIONS LEONARDO IMM.RE	2	DD2453	N/A N/A	
VENEZIA INTERMEDIAZIONI	3	SM5188	6/19/2001	N/A
AFFARI IMMOBILIARI PRISMA	4	SP2008	6/18/2001	N/A
SANT'ANGELO IMMOBILIARE	5	SM3818	6/14/2001	6/21/ 2001
MITWOHNZENTRALE ALLOGGI TEMPORANEI	6	CS5448	N/A N/A	
S.I.L. STUDIO IMMOBILIARE	7	SM4270	N/A N/A	
IMMOBILIARE TOLETTA	8	DD1183	6/22/2001	N/A
AGENZIA NARDUZZI IMMOBILIARE	9	SM4578	6/14/2001	N/A
IL TETTO IMMOBILIARE	10	CS6082	NA N/A	
COSMOPOLITAN 13		SP3093	6/18/2001	N/A
HOUSE DEAL CONSULTING	15	CS5274	NA 6/22/	2001
GE.F.IM. 16		SM144	NA 6/18/	2001
BROKER HOUSE IMMOBILIARE	17	SM2746	N/A N/A	
IMMOBILIARE CASE SERENA	18	SM4931	6/22/2001	N/A
TARGET IMMOBILIARE	64	SP663	6/21/2001	6/19/ 2001
IMMOBILIARE G. & G.	20	SM1800	6/21/2001	N/A
AGENZIA D'AFFARI MANIN	21	SM3717	6/14/2001	N/A
AGENZIA D'AFFARI VENEZIA	26	CN1413	6/26/2001	N/A
AGENZIA ESPRESSI PERSEVERANZA CONCESSIONE 27		SM5548	N/A N/A	
AGENZIA IMMOBILIARE CAMPANATI	32	CS4711	NA N/A	
AGENZIA IMMOBILIARE IMMOBILVENETA	34	SP3132	6/18/2001	N/A
AGENZIA IMMOBILIARE GIARETTA	37	SM514	6/20/2001	6/19/ 2001
AGENZIA IMMOBILIARE RF/MAX	38	SM1757	N/A 6/19/	2001
AGENZIA IMMOBILIARE VENICE REAL ESTATE	40	SM1130	N/A 6/19/	2001
FLAT & BUSINESS	43	DD3896	NA N/A	
GABETTI OP.IMM	44	DD187	N/A N/A	
GABETTI OP.IMM	45	CN4385	6/14/2001	6/21/ 2001
CENTRO IMMOBILIARE NG	65	DD3066	6/20/2001	N/A
CA'LEON IMMOBILIARE	47	CN1420	6/26/2001	6/21/ 2001
CENTROCASAVENEZIA 48		SC294	6/26/2001	N/A
CERCA CASA	49	SM5414	6/21/2001	N/A
GRUPPO S.E.I. - A.B.M. IMMOBILIARE	50	CN2684	6/19/2001	N/A
HAUS - I.R.V.E.SRL	51	SM4467	N/A 6/19/	2001
IMMOBILIARE DUEMILA	52	SP61	6/21/2001	N/A

IMMOBILIARE GUGLIE	53	CN1121	6/21/2001	N/A
IMMOBILIARE LA FENICE	54	CS3457	6/21/2001	N/A
IMMOBILIARE VENEZIA	55	CS5632	6/21/2001	N/A
SAI 57		CN369	N/A N/A	
SERVIZI IMMOBILIARI	58	SC1903	N/A N/A	
STEVENATO IMMOBILIARE	59	CN5398	N/A	
STUDIO OPERAZIONI IMMOBILIARI	60	DD2633	N/A N/A	
VE.N.I.CE CERA	61	SM2956	6/21/2001	6/19/ 2001
ABITARE 62		SP2357	6/18/2001	N/A
PUNTOCASA: CONSULENZA IMMOBILIARE	63	SP2871	6/18/2001	N/A



## D.3 Official Real Estate Request Letter



Buon giorno,

Siamo quattro studenti di Worcester Polytechnic Institute, un'università negli Stati Uniti. Siamo a Venezia per completare una tesi in collaborazione con L'Osservatorio Casa del Comune di Venezia. Facciamo ricerche sul mercato immobiliare per i non residenti a Venezia. Attualmente, stiamo raccogliendo data dai vari enti pubblici e privati di Venezia. Le saremmo grati per la sua assistenza nell'individuazione degli appartamenti utilizzati prevalentemente per l'affitto ai non residenti. Saremmo disposti a fornirvi i risultati finali della nostra ricerca in cambio della vostra collaborazione.

Grazie.

Jonathan Martin  
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Fabio Carrera  
Il Centro di Progetto per Venezia – WPI  
(041) 523 3209

## D.4 Real Estate Survey Form

Agency: _____	Type: _____
Address: _____	
Telephone No.: (041) _____	Hours of Operation: ____ to ____ / ____ to ____
Fax No.: (041) _____	Picture No.: _____

Source: _____	Method: _____	
-----		
Sestiere: _____	Location: _____	Floor: _____
Address (as applicable): _____		Condition: _____
Date: ____ / ____ / ____	Type: _____	Price: _____ per _____
No. Bedrooms: _____	No. Bathrooms: _____	Kitchen: _____
Living Room: _____	Other: _____	
Contact: _____		

Source: _____	Method: _____	
-----		
Sestiere: _____	Location: _____	Floor: _____
Address (as applicable): _____		Condition: _____
Date: ____ / ____ / ____	Type: _____	Price: _____ per _____
No. Bedrooms: _____	No. Bathrooms: _____	Kitchen: _____
Living Room: _____	Other: _____	
Contact: _____		

## Appendix E - Population Survey Forms

### E.1 Non-Resident Survey (English)

I am a university student studying the Venetian housing market. We would appreciate it if you answered the following questions.

1. Are you staying overnight in Venice? YES NO

2. Are you staying in an apartment? YES NO

If YES, continue.

3. How many nights are you staying in Venice? \_\_\_\_\_

4. What is the general location of your residence in Venice (e.g. San Marco: Near Campo San Angelo)? \_\_\_\_\_

5. How many people are staying in your apartment? \_\_\_\_\_

6. How much are you paying (in Italian Lire)?

per week \_\_\_\_\_ or per month \_\_\_\_\_

7. What is the apartment's approximate size?

sq. meters: \_\_\_\_\_ or sq. feet: \_\_\_\_\_

8. How would you characterize yourself?

Tourist     Student     Worker

9. Where is your permanent residence (Country and City)? \_\_\_\_\_

#### Apartment Characteristics

# of Bedrooms _____	Kitchen: YES NO
# of Double Beds _____	if YES: <input type="checkbox"/> Full Kitchen
# of Single Beds _____	<input type="checkbox"/> Kitchenette
# of Bathrooms _____	Is your kitchen in a separate room? YES NO
Living Room? YES NO	What floor is the apartment on?
	<input type="checkbox"/> Ground <input type="checkbox"/> 1 <sup>st</sup> <input type="checkbox"/> 2 <sup>nd</sup> <input type="checkbox"/> 3 <sup>rd</sup> <input type="checkbox"/> 4 <sup>th</sup> <input type="checkbox"/> 5 <sup>th</sup>

## E.2 Non-Resident Survey (Italian)

Sono uno studente universitario che studia il mercato della casa a Venezia. Le sarei grato se volesse rispondere alle seguenti domande.

1. Pernotta a Venezia? SÍ NO

2. Sta in un appartamento? SÍ NO

Se SÍ, continui.

3. Quante notti passerá a Venezia? \_\_\_\_\_

4. Dove si trova il suo appartamento a Venezia (Sestiere e Campo/Zona piú vicino) – Esempio: San Marco, vicino a Campo S. Angelo?  
\_\_\_\_\_

5. Quante persone dormono nel suo appartamento? \_\_\_\_\_

6. Quanto pagate (in Lire)?

per settimana \_\_\_\_\_ o per mese \_\_\_\_\_

7. Quanto grande è il vostro appartamento?

Metri quadri: \_\_\_\_\_

8. Come si auto-definirebbe?

Turista     Studente     Lavoratore

9. Dove è la sua residenza permanente (Nazione, Città, e Provincia )? \_\_\_\_\_

### Caratteristiche dell'Appartamento

N° Camere da letto _____	Kitchen: SÍ NO
N° Camere doppie/matrimoniali _____	se SÍ: <input type="checkbox"/> Cucina Abitabile
N° Camere singole _____	<input type="checkbox"/> Cucinino/Angolo Cottura
N° Bagni _____	La cucina è in una stanza separata? SÍ NO
Salotto: SÍ NO	A che piano è l'appartamento? <input type="checkbox"/> Terra <input type="checkbox"/> 1° <input type="checkbox"/> 2° <input type="checkbox"/> 3° <input type="checkbox"/> 4° <input type="checkbox"/> 5°

## E.3 Vela Survey

### QUESTIONNAIRE

#### Transportation Survey

No. \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Location \_\_\_\_\_

We are university students studying Venetian transportation. If you could answer the following quick questions we would greatly appreciate your time.

- Which of the following languages do you understand?
  - Italian     English     German     French     Spanish
- How many nights are you staying in Venice? \_\_\_\_\_
  - Are you staying in  Apartment     Hotel – Hostel     With Friends
  - (If apartment) What section of Venice are you staying in, or what landmark (campo, church or bridge) are you close to? \_\_\_\_\_
- How many pieces of luggage did you bring with you? \_\_\_\_\_
- Have you ever visited Venice before?    YES    NO
- Are you with an organized tour group?    YES    NO
 

If YES, what is the name of your tour agency? \_\_\_\_\_

If YES, how many people are in your tour group? \_\_\_\_\_
- What was the first form of transportation you used when you arrived in Venice?



Waterbus - Vaporetto



Water Taxi



Charter Boat – Gran Turismo

Walking

➤ Have you taken a waterbus?    YES    NO

➤ Why **did/didn't** you take a waterbus?

(Please rank your choices)

#### Rank #

- \_\_\_ Cost
- \_\_\_ Time
- \_\_\_ Sight Seeing
- \_\_\_ Knowledge of Options
  - Signs                     Guidebook
  - Previous Use     Word of Mouth
  - Tour Group
- \_\_\_ First thing you saw
- \_\_\_ Followed the crowd
- \_\_\_ Solicitation
- \_\_\_ Other \_\_\_\_\_

➤ How Satisfied were you with the service?

Not Satisfied     Neutral     Satisfied

#### Rank #

#### Why?

#### Why not?

- |                 |                                   |                                    |
|-----------------|-----------------------------------|------------------------------------|
| ___ Cost        | <input type="checkbox"/> Cheap    | <input type="checkbox"/> Expensive |
| ___ Time        | <input type="checkbox"/> Quick    | <input type="checkbox"/> Slow      |
| ___ Luggage     | <input type="checkbox"/> Help     | <input type="checkbox"/> No Space  |
| ___ Signs       | <input type="checkbox"/> Clear    | <input type="checkbox"/> Confusing |
| ___ Destination | <input type="checkbox"/> Correct  | <input type="checkbox"/> Incorrect |
| ___ Ride        | <input type="checkbox"/> Pleasing | <input type="checkbox"/> Crowded   |
| ___ Other       | _____                             | _____                              |

Would you take it again?    YES    NO

➤ Have you taken a water-taxi?    YES    NO

(if YES)What was the starting place of the trip?

\_\_\_\_\_

(If YES) What was the destination of the trip?

\_\_\_\_\_

➤ Why **did/didn't** you take a water-taxi?

(Please rank your choices)

#### Rank #

- \_\_\_ Cost
- \_\_\_ Time
- \_\_\_ Sight Seeing
- \_\_\_ Knowledge of Options
  - Signs                     Guidebook
  - Previous Use     Word of Mouth
  - Tour Group
- \_\_\_ First thing you saw
- \_\_\_ Followed the crowd
- \_\_\_ Solicitation
- \_\_\_ Other \_\_\_\_\_

➤ How Satisfied were you with the service?

Not Satisfied     Neutral     Satisfied

#### Rank #

#### Why?

#### Why not?

- |                 |                                   |                                    |
|-----------------|-----------------------------------|------------------------------------|
| ___ Cost        | <input type="checkbox"/> Cheap    | <input type="checkbox"/> Expensive |
| ___ Time        | <input type="checkbox"/> Quick    | <input type="checkbox"/> Slow      |
| ___ Luggage     | <input type="checkbox"/> Help     | <input type="checkbox"/> No Space  |
| ___ Destination | <input type="checkbox"/> Correct  | <input type="checkbox"/> Incorrect |
| ___ Ride        | <input type="checkbox"/> Pleasing | <input type="checkbox"/> Crowded   |
| ___ Other       | _____                             | _____                              |

Would you take it again?    YES    NO



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## **Appendix F – Law Texts and Contracts**

This appendix contains the texts of various laws and contracts referenced throughout this report

1. Law 431
2. Law 14
3. Law 9 (micro zones)
4. Habitation Requirements
5. Real Estate purchase aid requirements
6. Rent subsidy criteria

## Appendix G – *ESU* Documents

Contained in this appendix are relevant documents obtained from *ESU*.

1. *Corte Stupende*
2. *Cerco Casa*
3. New Law for Rentals
4. Student Dorms/Pensions
5. Youth Hostels
6. *Cerco Casa* Annual 200 Report
7. Law 431 – Rental Rates
8. *ESU* Service Form
9. Seminar Advertisement
10. *Torino* Booklet

## Appendix H – Newspaper Articles

Many newspapers pertaining to the Venetian real estate market were reviewed.

1. “The Evolution of Real Estate Market” – Ezio Micelli
2. “*Compriamo le case degli sfrattati*” – Il Gazzettino
3. “Arrival of Chinese and Indians” – Il Gazzettino
4. “*Sempre meno, sempre piu vecchi*” – Il Gazzettino



## **Appendix I – University Location Maps**

1. Ca'Foscari
2. IUAV

## **Appendix J – Osservatorio Casa Reports**

1. 2000 June Annual Report
2. 2001 First Semester Report
3. 1997 Commune Report

## **Appendix K – Survey Result Forms**

Contained here are the actual result forms from the non-resident survey.

## Appendix L – Web Pages

Project Proposal Web Site: <http://ece.wpi.edu/~geoffs>

## Appendix M - Relevant Past Data, Graphs, and Maps

### M.1 Real Estate Contracts in Venice and Other Main

#### Cities of Veneto (1991-99)

Main Cities	1991	1992	1993	1994	1995	1996	1997	1998					1999*				
Venezia	4394	3629	5374	4436	4124	4151	5386	5244	2679								
Verona	3090	2952	3107	3496	3583	3154	3076	3919	2273								
Vicenza	1558	1270	1186	1221	1374	1633	2233	2733	1625								
Padova	3163	2234	2536	2754	2431	3127	3162	3396	2174								
Treviso	910		840		773		872	1044	1313	1233	1294		972				
Rovigo	629	535	505	771	626	739	755	951	524								
Belluno	555	486	484	441	542	452	523	487	253								
<b>Veneto Total</b>	<b>14299</b>	<b>1194</b>	<b>6</b>	<b>1396</b>	<b>5</b>	<b>1399</b>	<b>1</b>	<b>1372</b>	<b>4</b>	<b>1456</b>	<b>9</b>	<b>1636</b>	<b>8</b>	<b>1802</b>	<b>4</b>	<b>1050</b>	<b>0</b>

\* First half (January - June 1999)

## **Appendix N - Full-Page Graphs, Maps and Tables**

## Appendix O - IQP Schedule

Sunday M	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1 Arrive in Venice	2 Finalize Background
3 Finalize Background and Methodology	4 Finalize Background and Methodology	5 Finalize Background and Methodology	6 Finalize Methodology	7 Finalize Methodology	8 Field Work Testing	9 Field Work Testing
10 Field Work Testing	11 Field Work Testing	12 Field Work	13 Field Work	14 Field Work	15 Field Work	16 Field Work
17 Field Work	18 Field Work	19 Field Work	20 Field Work	21 Field Work	22 Field Work	23 Field Work
24 Field Work	25 Field Work	26 Field Work	27 Field Work	28 Field Work	29 Field Work	30 Field Work
1 Field Work	2 Field Work	3 Field Work	4 Analysis	5 Analysis	6 Analysis	7 Analysis
8 Analysis	9 Analysis	10 Analysis	11 Commence Writing IQP	12 Writing IQP	13 Writing IQP	14 Writing IQP
15 Writing IQP	16 IQP First Draft	17 Conclusions / Recommendations	18 Conclusions / Recommendations	19 Conclusions / Recommendations	20 IQP Second Draft	21
22	23 Finalize IQP	24	25 Executive Summary	26 Executive Summary	27 Presentation	28 Presentation
29 Presentation	30 Present IQP	31 GO HOME!				