Business Perceptions of the Worcester Region

Worcester Polytechnic Institute and the Worcester Community Project Center

Submitted on December 18, 2001 by:
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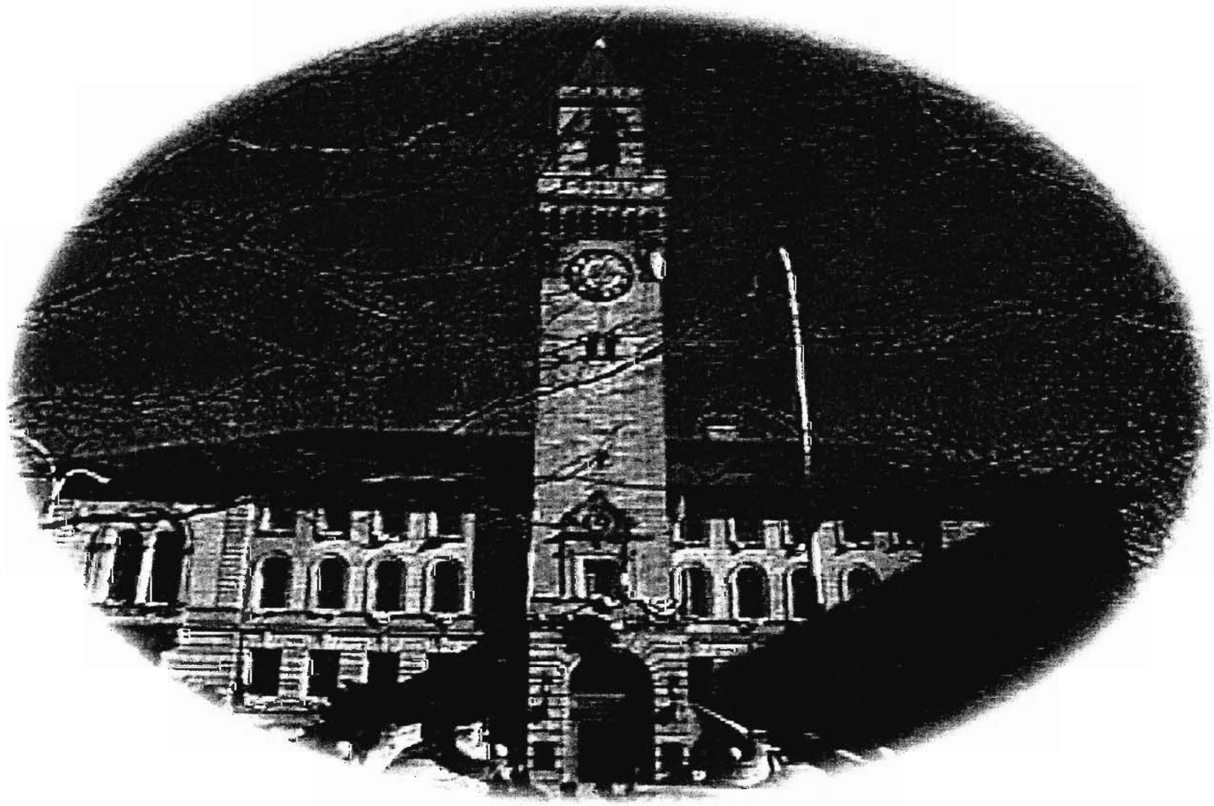

BUSINESS PERCEPTIONS OF THE WORCESTER REGION

An Interactive Qualifying Project Report

Submitted to the Faculty

of the

WORCESTER POLYTECHNIC INSTITUTE

in a partial fulfillment of the requirements for the

Degree of Bachelor of Science

by

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Executive Summary	John
Literature Review	All of us
Methodology	All of us
Results and Data	Mike
Charts and Tables for Results and Data	Phil and Austen
Analyses	Mike
Conclusion	Mike
Appendix A	Mike
Appendix B	Phil
Appendix C	All of us
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Methodology	All of us
Results and Data	All of us
Analyses	John
Conclusion	John
Appendix A	All of us
Appendix B	Not needed
Appendix C	All of us
Appendix D	Austen
Appendix E	Phil
Appendix F	Not needed
Appendix G	Phil, Austen, Mike
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Appendix J	Mike

Research Processes

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Making survey	All of us
Contacting businesses	All of us
Interview 1	Mike
Interview 2	John and Austen
Interview 3	Austen and John
Archival research	Mike
Businesses outside the region	John and Phil

Abstract

The purpose of this project was to determine the perceptions that business people have of the Worcester region. The study was sponsored by the Worcester Regional Chamber of Commerce, in conjunction with Worcester's Executive Office for Economic Development. The primary tool utilized to uncover these perceptions was a survey. Questions were asked pertaining to how the respondents felt about local government, quality of life, transportation, location, technology, and the labor market. The responses to these surveys were analyzed to discover the areas of the region that needed better marketing or actual improvement. We recommended that the city improve its marketing in the areas of transportation, location, and assistance that is offered to businesses.

Executive Summary

The Worcester Regional Chamber of Commerce (WRCC), in cooperation with Worcester's Office for Economic Development, sponsored this project in order to discover how businesses view the Worcester region. This was done with the hopes of being able to correct any misperceptions, or actual problems with the area.

This report reflects the research that we completed during this Interactive Qualifying Project (IQP) for Worcester Polytechnic Institute (WPI). Chapter 1, the Introduction, details the importance of our research processes and results. Perceptions need to be accurately portrayed, so that the City can improve negative perceptions and ineffective marketing techniques.

Chapter 2, the Literature Review, relies upon background information to determine which factors are most important in developing these perceptions. Citizens' perceptions of Worcester, reasons why businesses locate, historical perceptions of Worcester, and urban marketing techniques are examined. We determine that the seven most important factors are: location, local government, overall economy, technology, quality of life, transportation, and labor market.

The third chapter, Methodology, explains that a survey is the most useful tool for developing the business perceptions. The survey asked business executives to rank their perceptions of the economics, local government, quality of life, transportation, location, technology, and labor market in the Worcester region. Businesses selected for the survey were in the fields of biotechnology, distribution, finance and investment, government, higher education, healthcare, information technology, manufacturing, and retail. Lists of contacts were randomly selected from the member list for the WRCC. For each of these contacts, we made preliminary phone calls then sent surveys to the respective businesses. In order to gain more perceptions from outside the region, contacts were picked at random from neighboring cities. The following topics briefly summarize the various results and analyses that were gathered during this IQP:

Economics:

The survey revealed that, in general, businesses perceive the tax rate as being too high. However, they also felt that the relative economy and cost of living was average in comparison to other cities in the Northeast. Our recommendations for improving these perceptions include improving the awareness of tax increment financing, as well as implementing a lower tax rate.

Local Government:

The majority of respondents view the local government as being less than helpful. Those that thought the City was helpful were in business types that the government may be specifically trying to reach out to. Our recommendation is to offer more broad assistance, so as not to alienate any type of business while aiding another.

Quality of Life:

The quality of life in the region was perceived as being fairly positive. The educational opportunities were thought to be one of the most significant attributes. Since there was no severe deficiency in this area, we do not suggest any changes in policy.

Transportation:

The availability of transportation in the region was perceived as being about average. The highway system was given high marks, and passenger air travel was usually rated as below average. It is our recommendation that this aspect of air travel be improved by making it more affordable, increasing the number of destinations, and by making it more accessible.

Location:

Locating in the region was believed to be a benefit by those who responded. We suggest that the regional marketers use this to their advantage in advertising, as well as stressing the overwhelming availability of space to businesses looking for a location.

Technology:

This study showed that businesses perceive the level of technology available in the region as being extremely high. In particular, the Internet was viewed as being a positive aspect of the technology in the area. There are no recommendations made here, only the suggestion to maintain current efforts toward technological progress.

Labor Market:

The skill level of the region's workforce was shown to be perceived as being average, and the availability of labor as slightly below. Although this information is relatively inconclusive, it is positive to see that there is no evidence that would indicate the presence of a skills gap.

Chapter 6, Conclusions, summarizes the details of our report and provides a lead into future studies. Our study is the first of its kind for the City of Worcester, but should not be the last. As the City evolves, so do the business perceptions. Also, we have not fully developed outside business perceptions; therefore, future studies should repeat this project in neighboring New England cities, as well as repeating our study of businesses in the region.

Acknowledgements

This project would not have gotten off its feet if it were not for the help of many great people. At every step of this project, from writing the proposal, to pre-testing the survey, to analyzing our results, we always had the assistance of professors, peers, and the many people of the Worcester Regional Chamber of Commerce and the City of Worcester.

First, we would like to thank all of the Worcester Polytechnic Institute (WPI) professors that have seen this project through and helped us along the way. Professor James Doyle, our advisor, was with us from the start, assisting us with the proposal for this project and every step through completion. Professor John Anderson, our co-advisor, was also a great help throughout this project, assisting us with his immense knowledge of Worcester. Professor James Demetry helped during the proposal-writing portion of this project, always providing a different angle from which we could examine the work that we were doing. Lastly, from WPI, we would like to thank Assistant Provost Lance Schachterle for his great assistance in locating retired businessmen with whom we could pre-test our survey.

Next, we would like to thank everyone at the Worcester Regional Chamber of Commerce (WRCC). Julie Jacobson was always willing to assist us with any questions that we had, finding the multitudes of information that we needed in order to start the contacting process. Mark Love was also of great assistance, always finding time in his busy schedule to meet with us and talk about how our project was going, while giving us some direction. The administrative assistants were also helpful, as they were always willing to help us with anything that we needed.

From the city, we would like to thank Phil Niddrie, for helping us to locate some business outside of the Worcester region that we could contact, as well as finding us some contact names in the businesses that we had on the list from the WRCC. We would not have gotten the "Business Retention and Attraction Strategies" report if it were not for Paul Morano, so we would like to thank him as well. The many administrative assistants at the City Manager's Office greatly assisted us, teaching us how to use the many different machines in the office that we needed to use in order to be able to contact the many businesses that we surveyed.

We would also like to thank the other IQP teams from WPI. We could not have created a report of this caliber without the help of our peers at WPI. We met with the other IQP teams weekly, and each time we got valuable insight into their projects and ways that we could improve ours. Also, they gave us feedback on how they felt our IQP was coming along.

Lastly, we would like to thank all the businesses that completed our survey and took part in our interviews. This report is based on the information that was gained during the surveys and interviews. If it were not for the many businesses that answered our questionnaire, we would not have such a high comfort level in our results, and our report would not be taken seriously.

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Chapter 1:
Introduction

Historically, Worcester's location has been important to its economic vitality. The region is a federally designated inland port, at the crossroads of many important Massachusetts highways. Worcester is the third largest city in New England and home to the second largest art museum in New England. Overall, it is rated in the 70th percentile of places to live in the country (Places Rated Almanac, 1981-2000), renowned for its excellent medical facilities, and for its high quality of life.

Despite having all of these alluring qualities, many of the industrial buildings in the Worcester region presently stand vacant. The goal of the Worcester Regional Chamber of Commerce (WRCC) and the City's Executive Office for Economic Development (EOED), our sponsors[1], is to attract new businesses to fill these empty warehouses and stimulate the economy. In particular, the City has recently focused their efforts on attracting various businesses within the following fields: biotechnology, wholesale distribution, finance, investment, government, health care, higher education, information technology, manufacturing, and retail (Black, 2001). Ideally, these types of companies can help the city become a buzzing 21st century urban center.

To do so, the WRCC and the EOED must develop a positive perception of Worcester for these businesses. The most obvious way to attract specific companies is to meet their business needs. Metaphorically, a city is one large retail company. They must make their product better and market it as being better than what the competition has to offer. In order to improve their own sales, they must determine what the buyer likes or dislikes in their current products. For Worcester, the products are the qualities that the

[1] Our representative liaisons from these sponsoring organizations are Julie Jacobson and Mark Love, from the WRCC, and Philip Niddrie from the EOED. For more information on our liaisons, and our sponsoring organizations.

businesses seek from a city, and the competitors are the other cities. The current business perceptions are an obvious measurement of the buyers' likes and dislikes.

If businesses perceive Worcester as not having what they need, then they will not move to the region. These negative perceptions may be reality or myth. In the former case, the region is lacking the particular qualities that the business wants. As for the latter case, some of the desired qualities may be present, but the City has insufficiently marketed itself to the business. A positive perception must be developed for business attraction.

The main goal of this project is to measure the current perceptions that businesses have of the Worcester region. We have surveyed firms to determine where our sponsors should focus their business retention and attraction strategies. Due to time constraints, the primary sub-goal is to determine perceptions from the businesses that are already members of the WRCC and within the specified business categories. We randomly selected 400 businesses from this list of 1400. Assuming a final response rate near 50%, the perceptions are measured within an error range of 5%. We have also interviewed several important business representatives to solidify all research results.

Our other sub-goal is to expand the project parameters, including perceptions of Worcester from the businesses in other New England cities. This is an overwhelming task that cannot be completed by one seven-week project. However, we have begun the process by sampling a few businesses from the six largest cities. Future research groups should follow up with detailed perceptions projects for each city.

Regardless of our project constraints, with the information that we give them, the City's officials can begin to make any necessary changes. This report's outline can also be used as a guide for future research groups. The following chapters review related literary resources, discuss our research design, present all results, and provide some conclusions.

Chapter 2, the Literature Review, discusses existing data related to our project. The information in this section was collected from various sources including magazine articles and other research data. We have analyzed Worcester's economic history, why businesses relocate, historical business perceptions of Worcester, and urban marketing techniques. From these analyses, we developed the following regional qualities that affect business perceptions: economy, education, environmental quality, clustering capabilities, technology, transportation, and location.

Following the Literature Review is Chapter 3, Methodology. This section discusses, in detail, our research plan for achieving our goal and necessary objectives. All methods are documented carefully, so that they can be used as a guide for future research groups.

The fourth chapter follows up the research plan with the corresponding results. This section displays all data relating to the business perceptions that we have received. We show how business type, size, and location change the perceptions. We also determine the various qualities that are important for developing positive business perceptions. Charts and graphs effectively present most of the valuable data.

Based upon these results, we formulate analyses and conclusions in Chapters 5 and 6. Most importantly, we suggest how the perceptions might be improved for each business type. Among other analyses, we also provide leadoffs for future research. What we have created is a beginning without an end. All metropolitan areas are evolutionary.

As Worcester changes, so do the business perceptions; therefore, this project should be expanded and repeated.

Chapter 2:
Literature Review

In order to study business perceptions of the Worcester region, as well as factors that could draw businesses to Worcester, we conducted background research. We searched literary resources for information pertaining to business perceptions. The former Director of Marketing for the City of Worcester, Susan Black, gave us valuable advice and several research resources. However, we also explored the Internet, library archives, and resources given to us by the Executive Office for Economic Development. We did not have the benefit of past Interactive Qualifying Project (IQP) information, since our project is the first of its kind. Regardless of this obstacle, we were able to piece together enough literature to address the following topics:

1) Worcester's economic history. By comparing plans of growth that Worcester published in the past to future plans, we gained knowledge into the direction that Worcester is heading and saw what parts of Worcester need further growth.

2) Why businesses locate. This analysis primarily consisted of determining what qualities a firm seeks from a city when relocating. Also taken into consideration were reasons why recent businesses have located in Worcester.

3) Historical perceptions of Worcester. In particular, we noted any changes in business perceptions over time.

4) Urban marketing techniques. We compared professionals' suggestions to the urban marketing techniques for the Worcester region.

5) A review of the City of Worcester's "Business Retention and Attraction Strategies" research report (City Manager's Executive Office, 1996). This is very similar to the one that we have done, so the data proved to be useful for our research methodology and analyses.

2.1: Studies of the Past and Plans for the Future of Worcester

There are a few documents and books that outline citizen perceptions of the region. Through these perceptions, we have gained knowledge into the strengths and weaknesses of Worcester. Although these are not business perceptions they are still very valuable research resources. Our project examines this list to see if businesses have the same perceptions as the citizens.

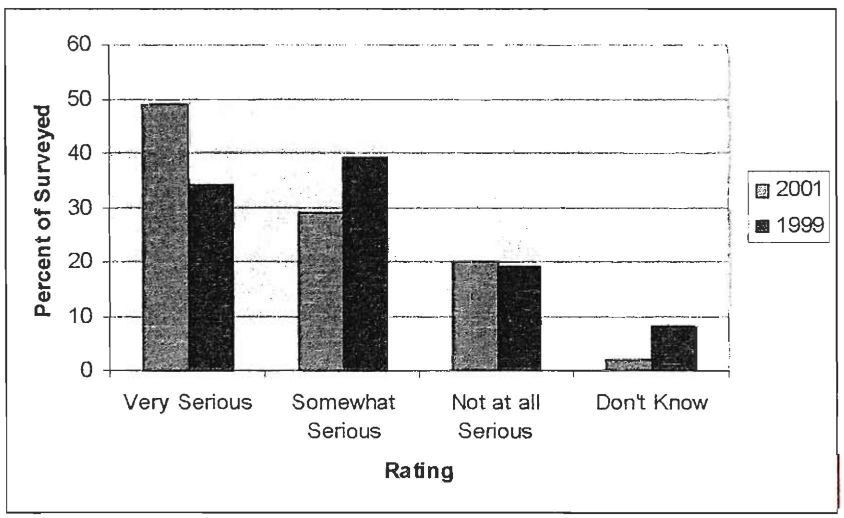
The Worcester Master Plan is one work that proposed a plan of citywide improvement. Through technical studies, workshops and meetings, the views of Worcester were explored. The study concluded that Worcester had many strengths and some weaknesses (Worcester Master Plan, v).

The region has a strong and diversified economy, coupled with numerous transportation resources. In 1987, 25% of the city's population worked outside the city limits (Worcester Master Plan, v). One of the deciding factors influencing business relocation is the strength of the economy within the prospective region (see section 2.3). Another selling point for Worcester is its transportation system. Worcester is located at the intersection of five Interstates and three state highways (Benchmarking Worcester's Future, section III). As stated, "All roads lead to Worcester" (Black, 2001). Railways also add to the abundance of transportation resources found in the region. Centrally located, the region is equally distanced from Boston, Providence, Hartford, and Springfield (Benchmarking Worcester's Future, section III). Worcester's location and transportation resources allow regional marketers to truthfully say that the city is within nine hours of one-third of the United States population (Black, 2001).

Worcester has weaknesses as well. To this date, as described in the Worcester Master Plan, there are several manufacturing districts in Worcester that need a considerable amount of work to make them more desirable for industrial, commercial, and residential uses. There are many physical problems and related safety issues with the old manufacturing buildings. The downtown section of Worcester has many abandoned buildings in disrepair. In order to improve the perception of Worcester, these abandoned buildings may need to be cleaned up, renovated, and occupied (Worcester Master Plan, 18).

Public dislike for the abandoned buildings has risen, even since the city council published the Worcester Master Plan. The results of the "2001 Annual Citizen Survey[2]" show that the public awareness of problems caused by abandoned buildings has increased. *Figure 2.1* shows the results from a survey question, asking for the citizens' perceptions of the abandoned buildings. As can be seen, 49% of the population, in 2001, believed that the building problems were a serious issue, as opposed to 34% in 1999 (Benchmarking Worcester's Future, 2001). Evidently something needs to be done with these buildings. The businesses are likely aware of these abandoned buildings; therefore, this could lead to a negative perception of the region.

Figure 2.1 – Results of survey asking perceptions of the seriousness of abandoned buildings in Worcester

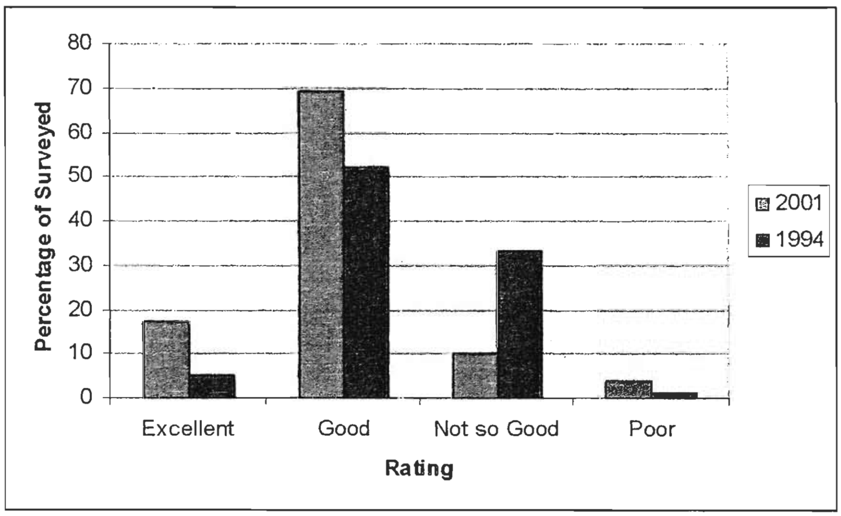


Courtesy of Benchmarking Worcester's Future (Appendix)

[2] We are very confident that the results of the survey are valid. The survey was professionally designed by Dr. John C. Blydenburgh of Clark University, and has been run for 7 consecutive years. It has constantly been improved upon throughout those seven years. However, the survey is only used to provide us some guidance for our project, so the validity of it is not a strong factor in influencing our report.

However, not all of the survey results were negative. *Figure 2.2* shows the results from another survey question, asking, "Overall, how would you rate Worcester as a place to live?" In 2001, 17% of the surveyed population believed that Worcester was an excellent place to live, as compared to only 5% in 1999. The percentage of the population that felt Worcester was a "good" place to live increased from 52% to 69%. Furthermore, the percentage of the population that believed Worcester was a "not so good" place to live dropped from 33% to 10% (Benchmarking Worcester's Future, 2001).

Figure 2.2 – Results of Survey asking, "Overall, how would you rate Worcester as a place to live?"



Courtesy of Benchmarking Worcester's Future (Appendix)

In addition to the citizen surveys, Benchmarking Worcester's Future outlines the plans for city growth. Two objectives of these plans that parallel our project are: 1) "to strengthen the City's financial condition through business incentives," and 2) "to improve business development opportunities by addressing underutilized property" (Benchmarking Worcester's Future, 50-53). Through the survey, one clearly sees that the abandoned buildings are a problem the city should address. If those buildings are renovated and repaired, many new businesses may have a place to locate. Many of the downtown buildings, occupied and vacant, are already wired for cheap broadband Internet access, and have reliable electrical infrastructures. This infrastructure has recently been expanded in preparation for possible business growth (Benchmarking Worcester's Future, 47-50).

Are the businesses ready to locate in Worcester? We have compiled only citizens' views of Worcester. So far, we are able to conclude that the people of Worcester see their region as having a strong economy, abundant transportation systems, favorable location, and an infrastructure that is suitable for business growth, which may effectively renovate the empty buildings. Since citizens' interests may also be business interests, we are able to consider economy, transportation, location, and infrastructure as categories for exploring business perceptions. In order to confirm that researching within these categories is useful in determining whether a business may or may not move to Worcester, we must further understand why a business chooses a region.

2.2: Why a Firm Chooses a Location

Many variables influence a firm's location decision. In order to compile a complete list of the most important variables, we must explore why businesses locate in general, and, more specifically, in Worcester. The location of a business influences their success. Many references document why a firm has decided to stay at a specific location or relocate. Overall, companies will choose the specific sites that maximize their potential for success.

2.2.1: General Variables that Influence Locating Decisions

Local politics may influence location choice. An example of this is Florida A&M University's new law school in Orlando. The decision to have the school in Orlando has started a political battle between Orlando area politicians and officials from competing cities. State lawmakers representing the other cities are eagerly trying to dissuade the Legislature from financing the construction. However, Tom Feeney, Speaker of the Florida House of Representatives, opposes these lawmakers. He and Orlando area lawmakers encourage the school's move to the city. Feeney's political support has influenced Florida A&M University's decision to move to Orlando (Schmidt, 2000).

Along with politics, benefits from the surrounding area are also a major factor in deciding a business location. As of 1998, only 2% of Florida's Lawyers were black, and 6% were Hispanic. Orlando's large black population could help remedy this by enrolling more blacks into the new law school. For the benefit of the surrounding area, many law firms have pledged to offer internships, mentors, and jobs to the black students (Schmidt, 2000).

NASA's construction of the Ames Research Center in Silicon Valley is another good example of the surrounding area benefiting an incoming business. Silicon Valley's abundance of technological resources is encouraging universities and industry to join the Ames Research Center. The Center is negotiating deals with three universities: Carnegie Mellon, San Jose State, and the University of California, Santa Cruz. While assisting NASA, the schools have access to high-tech research equipment (Lawler, 2001).

Aerospace leader, Lockheed-Martin, may accompany the Ames Center in the near future. In exchange for free land, Lockheed would build a $40 million NASA Laboratory for Advanced Science and Research. Sun Microsystems, Oracle, Intel, Apple, and Raytheon are also interested in teaming up with Lockheed and NASA. This joint relationship between multiple institutions, known as clustering, would greatly increase their overall research capabilities. The opportunity for clustering in a region encourages many businesses to locate (Lawler, 2001).

Clustering, politics, and localized benefits are just a few of many variables that any company may examine when relocating. *Table 2.3* provides a rated list of other variables. A low average rank means that the businesses place a high priority on the variable (or amenity).

Table 2.3 - Environmental Quality and High Technology Location

High Technology Firms			**All Firms**	
Amenity	*Average Rank*		*Amenity*	*Average Rank*
Environmental Quality	3.00		Good Schools	2.11
Cost of Housing	3.24		Public Safety	3.89
Cost of Living	3.38		Environmental Quality	4.22
Good Schools	3.50		Cultural Amenities	4.56
Easy Commute	3.50		Proximity of Housing	4.89
Recreational Amenities	3.63		Easy Commute	4.89
Climate	3.75		Cost of Housing	5.00
Cultural Amenities	4.13		Recreational Amenities	5.22
Government Services	4.50		Climate	5.89
CEO Preference	4.50		Government Services	6.22
Public Safety	5.25		Cost of Living	6.67
Proximity of Housing	5.25		CEO Preference	6.78

Courtesy of Paul Gottlieb, 1994

Although rank obviously varies from one type of business to another, there are specific categories that rate high for most. For instance, all firms agree that environmental quality and education are important factors. As for the categories that citizens considered as strengths for Worcester, high tech firms prioritize economy (cost of living/cost of housing) and transportation (easy commute).

Those categories that are prioritized for business location are examined in our research. Accurate business perceptions of Worcester for each category can determine what factors attract businesses. Therefore, we are researching the following categories: economy, education, environmental quality, clustering capabilities, politics, and geographical benefits. Expanding upon this list, we must consider a particular category that has proven to attract businesses to Worcester.

2.2.2: Attracting Businesses to Worcester

Over the past several years many firms have inquired about the city of Worcester. Some have chosen to come, but many have chosen to go elsewhere. One of the factors forcing companies to go elsewhere has been changed into a factor that attracts companies. This factor is the cost of networking.

In 1998, a T1 line or server connection in Worcester cost over $1000 per month. In 1997, a monthly T1 bill of $1,800 forced Steve Rothschild to move his 16 year-old furniture business out of Worcester (Maxwell, 2000). Tom Wharton, another business owner, also strayed away from Worcester due to these high expenses. Wharton bought a bankrupt Internet service provider in 1998 and wanted to base it in Worcester. The charges were estimated at $6,000 a month for connections, so he went to Providence, collocating his servers for $250 a month. Wharton thought it was unfortunate he couldn't locate his business in his hometown of Worcester, so he wrote a letter to the editor of the daily newspaper (Maxwell, 2000).

Inspired by the letter, the Worcester Regional Chamber of Commerce hired Wharton to improve the city's technology infrastructure. After hearing about Wharton's efforts, NEESCom, a private-sector builder of fiber-optic networks, offered to wire

Worcester at their own expense. The city would make a good hub for their new regional fiber-optic network. Since the completion of this project, Worcester has been idealized as "Americas #1 Cyber City" (Maxwell, 2000). It is estimated that about 10 new start-ups have located in Worcester to benefit from the new network. One of these businesses is Steve Rothschild's Bulbs.com. He now pays $168 a month for a T1 connection (Maxwell, 2000).

Evidently, these 10 start-ups perceive Worcester as a positive place to locate. Based upon this review, we can hypothesize that Worcester's improved networking strengthens the business perception of Worcester. Our research explores the validity of this hypothesis by including technological infrastructure as a category. For this particular category, we already have a general conclusion that business perceptions were negative in the past; therefore, we can infer that a positive perception is a recently strengthened business perception of Worcester. To make similar inferences in the other categories, we have gathered more historical perceptions.

2.3: Historical Perceptions of Worcester

For researching the past perceptions of Worcester there are a number of potentially useful statistical collections. Two such sources are <u>The Almanac of the 50 States</u> and <u>199 American Cities Compared</u>. Both of these references have compiled information about the Worcester region. The primary problem with using such sources is that they are only available for a specific year. <u>The Places Rated Almanac</u>, on the other hand, is updated every few years.

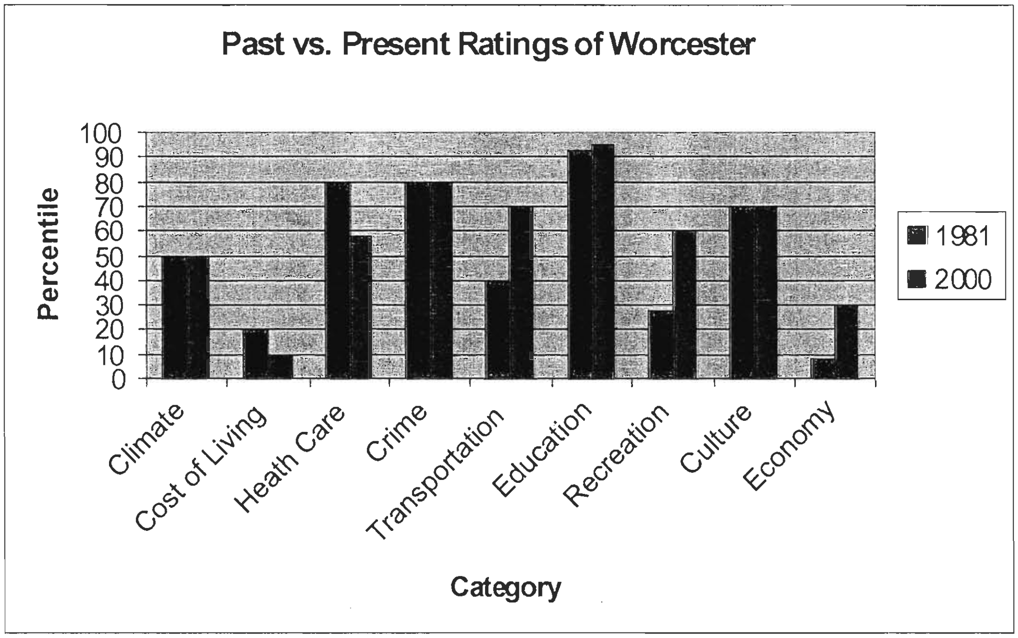
Along with having multiple publications, the <u>Almanac</u> has several other advantages. Each edition of this reference is created on the same guidelines as the previous issues. This allows the researcher to compare information, showing the trends in any category of interest. The multitude of categories provides enough information from the past to get an adequate historical perspective. At the same time, it can be used as a tool for future studies to find the effectiveness of policy changes. Displayed are the statistics for all the major metropolitan areas in the country. Next to these statistics are rankings for each area according to an overall desirability of living and working (Places Rated Almanac, 1981-2000).

Most importantly, The Places Rated Almanac provides information for people, or businesses, looking to relocate. The listed factors are: climate, housing, healthcare, environment, crime, transportation, education, recreation, the arts, and economics. The U.S. Census Bureau compiled most of the data that was used in this statistical analysis (Places Rated Almanac, 1981-2000).

The Almanac uses a points system to devise the ranks in each category. This system is the same for each publication,[3] allowing for reliable comparisons of data. Based upon the ranking value, Worcester is given a percentile rating in comparison to other cities. *Figure 2.4* compares the city's ratings for 1981 and 2000.

[3] Refer to the Places Rated Almanac for a full explanation of ranking processes for each listed category.

Figure 2.4



The chart shows that Worcester's historical strengths are in the education system, low crime rates, arts/culture, and healthcare. The high cost of living, economy, and recreation are weaknesses. The area's ranking for transportation and recreation has dramatically improved. Improved marketing of the region as an inland port may have caused the higher transportation perceptions. The redevelopment of the Worcester Centrum, which brought a professional hockey team to the region, has likely increased the recreation perception. The region is given a 70th percentile rating for its cumulative rank in these categories. This means that Worcester is rated better overall than 70% of the other American cities (Places Rated Almanac, 1981 & 2000).

These data are useful to our research because they display the overall history of the specific categories, as shown in *Figure 2.4*. These categories are represented as either positive or negative aspects of the region, as perceived by businesses; therefore, we can draw comparisons between these given data and our own research results. We have confirmed why we are researching economy, education, environmental quality, and geographical benefits. For economy and education, we have these categories to draw upon for historical perceptions. As for environmental quality or geographical benefits, the climate, health care, crime, and transportation perceptions may tie into these categories. The two research categories that we do not have historical perceptions for are clustering capabilities and politics.

We have reviewed enough literature to conclude that there are at least seven major categories for which we research business perceptions. A business perception is a variable that depends upon each category. Urban marketing is a concept that intervenes in this dependent relationship, since it influences business perceptions. We must further explore urban marketing to understand how it may relate to our researched perceptions.

2.4: Urban Marketing Techniques

Every marketing professional has their own view on the ways in which a city must sell itself, because urban marketing depends upon so many independent variables. For example, location is a variable that is unique for every city in the world. To benefit our project, we analyze the following variables: availability of information, extent of technology, tax incentives, type of workforce, transportation availability, and location. First, several journal entries are examined, noting how specific variables may influence urban marketing. Secondly, the journalists' conclusions are compared to Worcester's marketing techniques. The successful business redevelopment of Chicago and Denver will also be considered in these comparisons to Worcester. Lastly, we connect urban marketing concepts to the goals of our project.

The way in which a city sells itself depends upon several key variables. One journal entry has noted that the amount of information that an urban marketer has compiled on marketing brochures is important. This shows a company what the city has to offer (Ward, 2000). Besides the availability of information, recent articles have documented the importance of technology. Critics suggest that the best way to display a city's high-tech level of technology is to use advanced web pages as marketing brochures (Bates, 2000). Yet, another journalist warns that the level of today's high-tech infrastructures is leading to the globalization of technology, burdening many urban centers. To avoid this hazard, one must rebuild the downtown into an area that promotes technological growth (Blakely, 135).

Is technology the main variable that sells a region in today's economy? One critic for The Journal of the American Planning Association agrees that extent of technology is a key variable, but tax incentives will always have the greatest impact. No matter how strong an economy may be, a shopper will almost always buy into the best bargain (Scott, 141-2).

As for Susan Black, the former head of the Worcester Marketing Department, she considers tax incentives, extent of technology, and availability of information as some of the variables that sell the Worcester region. Black notes that tax incentives sell Worcester over Boston, since costs are less in central Massachusetts. Although she agrees that the technological infrastructure is not as strong as it is in Boston, it is the second best in New England. Since Worcester has these technological advances and tax incentives, Black has recently published brochures, making this information apparent to prospective businesses. These brochures also sell Worcester's transportation resources, quality of life, and location advantages. Black markets the appeal of Worcester for being a city bordered by wilderness, but still within an hour's commute of the four largest New England cities (Black, 2001).

Since Worcester is trying to sell itself for revitalizing specific regional sectors (Black, 2001), we must consider the marketing techniques that have succeeded in targeting re-growth for other cities. Denver, for instance, has restructured its public image by building new sports stadiums, libraries, and museums throughout the local region (Hofman, 2000). Chicago, on the other hand, improved specific private districts, by giving local residents and businesses Tax-Increment Financing (TIF) (Hofman, 2000). TIF is a business attraction strategy, which lowers the tax rate in a sector of a city, easing the financial burdens given during relocation and renovations. Both of these cities have used techniques to attract new business growth for these metropolitan areas, but would either invite new businesses to Worcester? The expansion of the Centrum Center and the development of the Northworks Complex are examples of public and private sector growth in Worcester.

As for finding the variables that will result in possibly inviting new businesses to Worcester, we must explore business perceptions. By listing the variables that are targeted in urban marketing, we have laid out specific concepts for which we have conducted research. To see if Worcester has effectively sold itself as a high-tech, relatively inexpensive place to locate, we have found business perceptions of technology and costs of locating in the Worcester region. Similarly, to see if recent public and private sector growth receives a positive view from businesses, we have researched these categories.

By outlining the urban marketing variables that should sell as positive perceptions for the city of Worcester, we have been able expand upon a list of research categories. Our research has focused on business perceptions for the following categories:

1) Economy, including tax incentives from the public and private sectors
2) Education
3) Environmental quality
4) Clustering capabilities[4]
5) Technology
6) Transportation
7) Location[5]

Interestingly, the "Business Retention and Attraction Strategies" research report, completed in 1996 by the City Manager's Executive Office of Planning and Community Development, explored business perceptions for these seven factors, so the results have proven to be a fairly valuable resource.

2.5: Review of "Business Retention and Attraction Strategies"[6]

The main purpose of this study was "to gauge the needs of existing businesses located in the City of Worcester and to identify existing programs as well as establish new programs which can help meet these needs" (City Manager's Executive Office, 1). For reaching this goal, the researchers sent 4500 surveys to businesses in the Worcester area. The response rate was 6%, with 300 completed surveys sent back. With a rate this low, the margin for non-response error is very significant, since those businesses that did not respond may have differing views from those who did. Exploring the results assists

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[4] Clustering capabilities is a specific category that may be related to transportation and technology. Easy transport access and technological services may allow for multiple businesses to cluster in one region.
[5] Location is a broad category that will be researched specifically to see if businesses still see value in Worcester as being a centralized inland port.
[6] The graphed results are published in Appendix I.

our own research analyses, but we must consider that some data may be obscured by non-response bias.

Most respondents were displeased with the high tax rate and the lack of tax incentives for their specific businesses. Nearly 64% of the surveys noted that business' tax rates were too high. These companies also noted that they were in need of financial assistance in the form of commercial loans or grants. The researchers have noted that Tax Increment Financing may be the solution that will lower taxes and give loans to the needy commercial sectors. Also, they suggested that businesses can improve their chances for receiving benefits if they become politically active, voicing their needs to city and state officials (City Manager's Executive Office, 6-11).

However, the participating businesses often noted that the local politicians were not sufficiently responding to requests from the commercial sectors. They suggested that the regulating and permitting departments were the weakest sectors of the city government. Therefore, the Executive Office for Planning and Community Development presented these issues to the licensing and human resource departments (City Manager's Executive Office, 13). If our research concludes that businesses are still displeased with the government's lack of action, then city officials may need to make further action.

As for the business perceptions of education, the research results do not specify the need for or lack of higher education, but businesses disliked the skill level of the workforce in Worcester. Drawing the conclusion that weak educational systems may lead to an unskilled workforce, the city officials planned to diagnose the effectiveness of educational programs in local institutions (City Manager's Executive Office, 8). In our studies, we must separate education and skill level of the workforce into two factors, so that we can develop perceptions for each. There may be enough sources for education, but the people who are looking for jobs do not have the appropriate skills.

The last set of business perceptions taken from the 1995 survey relate to transportation and clustering factors. A noted strength for the region is its inland port facilities: highways, railways, and airways. Many businesses were pleased that all freight could be exported easily and inexpensively, but the airports and railways were not inviting to passengers (City Manager's Executive Office, 12). These transport problems and the lack of technological infrastructure were the main reasons why businesses were deciding to locate in business clusters outside of Worcester five years ago (City Manager's Executive Office, 13-17).

As is the case with technological infrastructure, and may be a similar case with other business perception factors, the City has made many changes since 1995 to suit companies' needs. The region is constantly evolving, trying to meet the demands of new and old businesses. We have updated and improved upon the results that were given from this past survey. Most importantly, we have eliminated some of the non-response bias with a higher response rate. The following chapter presents the research methodology that we have used to reach these and other objectives.

Chapter 3:
Methodology

As previously stated, this project measures business perceptions of the Worcester region. The following chapter presents the research design and associated methodologies used to accomplish this goal. Section 3.1 outlines the objectives and questions. The final four sections provide the answers, systematically detailing our methodology.

3.1: Research Objectives and Questions

There were two main objectives that we had to fulfill:

1) To determine business perceptions of the Worcester region,

2) To produce results that are helpful to the Worcester Regional Chamber of Commerce (WRCC).

In the process of reaching these objectives, we proposed and answered several research questions. The following questions affected our research methodology:

1) What is the specific region for which we are measuring the perceptions?

2) What types of businesses are we seeking perceptions from?

3) What types of research processes are best for gathering all needed data?

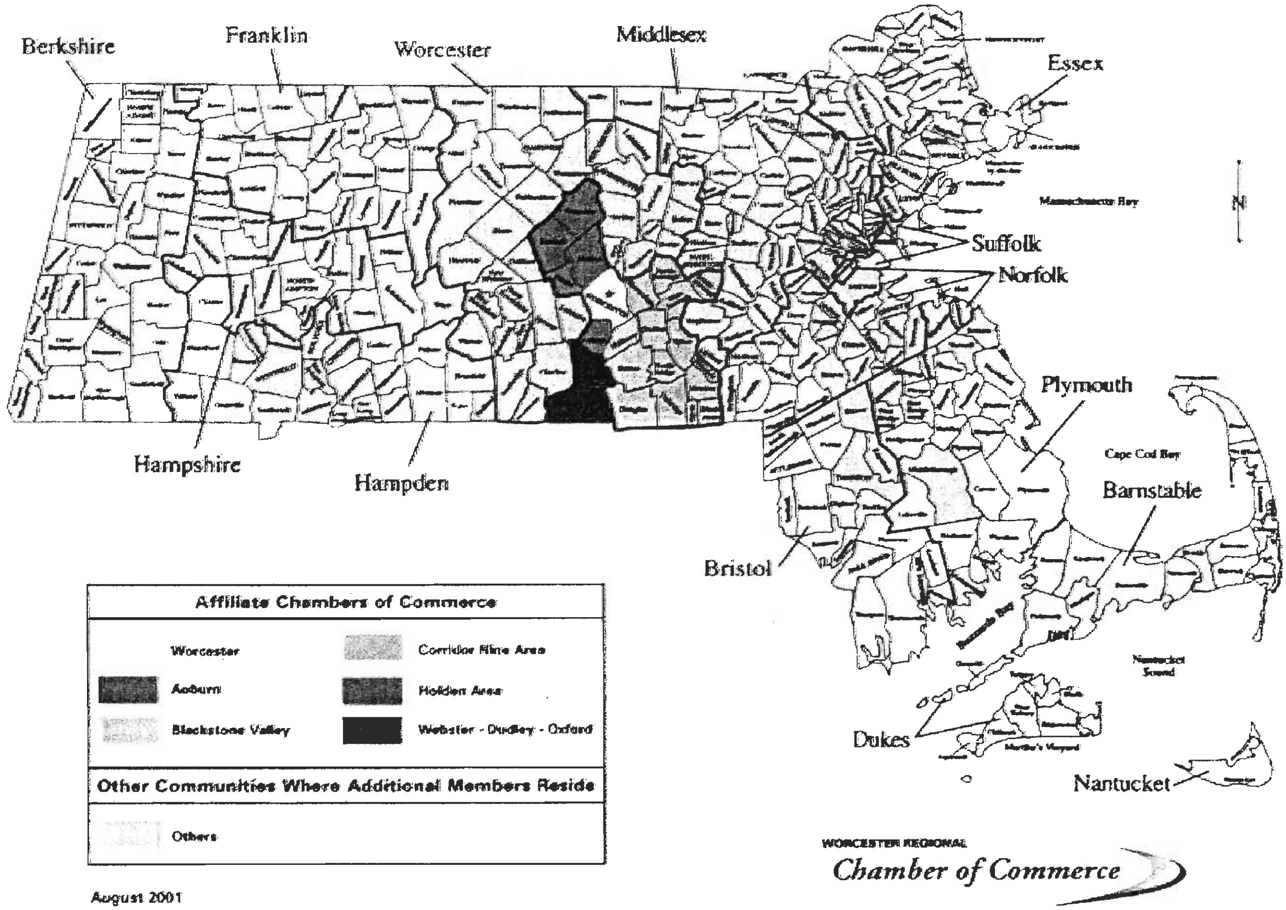
4) How large of a group are we sampling?

5) How much time should we give ourselves for each part of the research process?

6) What types of questions are we answering in the Data and Results sections of our report?

The following sections of the Methodology are organized to provide subsequent answers to these questions.

Figure 3.1 – Map of the Worcester Region (see enlarged view in Appendix B)



Courtesy of the Worcester Regional Chamber of Commerce

3.2: The Worcester Region

The Worcester region is the geographical area for which the perceptions are measured. *Figure 3.1* highlights the boundary of the communities, which includes:

1) Worcester
2) Auburn
3) The Upper Blackstone Valley- Grafton, Millbury, Sutton, Northbridge, Upton
4) Corridor Nine- Shrewsbury, Northborough, Westborough, Southborough
5) South Holden Area- Holden and Paxton
6) Other communities- West Boylston, Boylston, and Leicester

The original map, provided by the WRCC, includes all of the towns within the thick red border. These towns were initially included because they each contain affiliated chambers of commerce. However, three abutting towns, Boylston, W. Boylston, and Leicester were left out of the "region." We have included those towns in the Worcester region because they affect Worcester's economy. For example, any business that moves into Boylston will stimulate Worcester's economy by using the goods and services from Worcester. On the same note, we feel that a few of the towns that were initially included in the Worcester region should not be included in our study. Millville and Blackstone are bordering Rhode Island and do not directly affect Worcester.

Now that the region is defined, we must define the units of analysis. These units are the businesses from whom "perceptions of Worcester" can be measured. The following section specifies these businesses as well as our sampling size.

3.3: Units of Analysis

Our liaisons outlined a list of business types that we focused our research on. This list includes:

1) Higher education – education beyond the secondary level, especially education at the college or university level.
2) Health care - medical and allied health professions that prevent, treat, and manage illnesses and preserve mental and physical well being.
3) Finance/investment – manages money and other assets.
4) Manufacturing – makes or processes a raw material into a finished product.
5) Retail – sells good or commodities in small quantities directly to consumers

6) Biotechnology – uses microorganisms and other biological substances to produce goods that aid the healthcare industry.

7) Information technology (InfoTech) – develops, installs, and implements computer systems and applications.

8) Distribution centers – markets and supplies goods to retail businesses.

Our research processes, detailed in the following section, aid in measuring the perceptions that these types of businesses have about the Worcester region.

3.4: Main Research Processes

Measuring the perceptions of businesses located within[7] and outside[8] the Worcester region is our primary research objective. To reach this objective, we had to choose a specific research methodology.

3.4.1: Measuring Business Perceptions

For measuring business perceptions, we listed categories that affect these perceptions. A perception may be dependent upon thousands of factors. Our project cannot and does not measure all reasoning for business perceptions, but we have used our Literature Review to determine the seven most important factors: economy, education, quality of life, clustering capabilities, technology, transportation, and location.

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[7] By researching businesses located within the Worcester region we can analyze why they came to Worcester and find out whether they are pleased with the current conditions. The WRCC is just as interested in keeping businesses in the region as they are in inviting new businesses. By scientifically measuring the perceptions of these regional businesses, the WRCC will have a better understanding of the current conditions of Worcester from an inside view.

[8] By researching businesses outside of the Worcester region, we can analyze the external perceptions of the region. If a business was once contemplating a move to Worcester, but moved to another site instead, we can explore why that business chose the other site over Worcester. On the other hand, if a business is looking at Worcester as a potential site for relocation, we can examine what that company perceives of Worcester. By scientifically measuring the perceptions of business outside of the Worcester region, the

Our research methodology enables us to thoroughly explore the factors that a business looks for in a new location, and how perception affects their choice. In order to properly measure business perceptions we have used questionnaire surveys, personal interviews, and archival research. We gathered some perceptions through interviews, personally questioning individuals. However, personal interviews give so much data that we were only able to provide the results of a few interviews in one report (Singleton, 260). Most often, questionnaire surveys are more suitable for perceptions projects. These surveys, if constructed properly, provide accurate perceptions and limit the research data, allowing us to measure more business perceptions (Singleton, 260).

Prior to making our final determination of primary methodological techniques, we weighed the overall positives and negatives for each. *Table 3.2* shows these as advantages and disadvantages for surveys, interviews, and archival research.

WRCC can gain a better understanding of how Worcester is perceived from businesses outside of the region.

Table 3.2 – Advantages and disadvantages of our different research methods

Technique	Advantages	Disadvantages
Survey	• Can send out many in a short period of time. • Can be replicable. • Close-ended answers will provide for easier analysis. • Population is given freedom as to type of survey (telephone, mail, or e-mail).	• May have a low response rate. • Population may not give full attention when answering survey. • Not able to explore every facet of a business's perception.
Interview	• Information is gathered first-hand, in person. • Probing questions can be asked to gain more information. • A more in depth answer can be obtained.	• Not always replicable (same follow up questions may not always be asked). • Documentation of open-ended answers can be time consuming. • Answers are hard to compare and analyze.
Archival Research	• Information has already been gathered. • Builds off other's work instead of starting from scratch.	• Hard to find existing data. • Data forms are not always consistent, or comparable.

The following sub-sections (*Surveys, Interviews,* and *Archival Research*) determine why and how each research technique is used in our project.

3.4.2: Surveys

Since we had only seven weeks to gather and analyze data, a close-ended survey, our main research method, was used to quickly compile results. This survey style allowed us to numerically categorize data. A close-ended survey is a questionnaire that has pre-set choices for an answer, such as "strongly disagree", "disagree", "neutral", "agree", "strongly agree." Each of these answers has a numerical value. For example, the scale may run from 1-5, where 1 equals "strongly disagree" and 5 equals "strongly agree." With this we could create the charts that showed how many businesses answered in each choice and find an average of their responses.

The creation of a close-ended survey is a tedious process. Knowing that we only had about ten days to produce a survey, we made our first draft on our first day at the research office. The next day we edited the questions, individually. The following three days consisted of sending multiple edited copies to our liaisons, advisors, and other colleagues for repetitive revisions. The next three days we pre-tested the survey on former business representatives. Finally, we spent two days compiling the final product (*see Appendix C*).

Producing the Appropriate Survey Questionnaire:

On our first day at the research office, we focused on putting our general research topics and questions into order on one general questionnaire. We formulated the following categories and respective questions that we were seeking to find answers to from the research population:

1) General Information- Where are the businesses located? What types of businesses are answering our questions? What type of business representative does the business have filling out the questionnaire? What size is the business that we have answering our surveys?

2) Economy- What is the perception of Worcester's economy, tax rates, and cost of living in comparison to other metropolitan regions in the Northeast United States? Do companies know that they may be able to receive tax incentives? Are the current incentives accommodating to businesses in the Worcester region?

3) Local Government- For those companies that actively cooperate with local government, do they feel that Worcester's government is sufficiently cooperating with businesses?

4) Quality of Life- What factors of quality of life are the most important to the various businesses? In particular, how do the companies rate the availability of recreation, culture, and entertainment?

5) Transportation- What types of transportation are most needed by businesses and how do the businesses perceive the availability of each type in the region?

6) Location- Is Worcester's location an economic advantage for companies? What types of businesses want clusters, and, for these types, do they perceive Worcester as a place that promotes clustering?

7) Technology- What types of technology are most beneficial to the businesses and how do they rate the availability of technology for Worcester?

8) Labor Market- Does Worcester have a skilled workforce? Are there enough available workers?

9) Overall Perception- What categories, of those listed above, are the most important in developing the various business' perceptions?

The next step of the process involved editing and redesigning the questionnaire into an appropriate format. Through conversing with our advisor and liaison, we were able to expand upon and restructure the questions that we have listed above. For some questions, we concluded that the easiest questionnaire format was fill-in-the-blank. For example, by asking a respondent to fill in their business zip code, we would know the general area in which the business was located. Some questions were completely open-ended, where we determined that responses would probably differ for every survey respondent. For most of the "General Information" questions, we decided to have the business select the category that best describes their business (e.g. Business Size: 1-10 employees, 11-25, 26-50, 51-100, 101-1000, or over 1000). However, most questions were either "yes/no", or in the "rate from 1 to 5" format that we have previously mentioned. During this process, we produced multiple drafts, constantly restructuring questions. Eventually, we determined to use the following formats for the corresponding questions of the survey[9]:

1) Fill-in-the-blank- What is the business zip code? What is the respondent's job title?

2) Open-Ended- What types of new education programs should be introduced to the region? What are some specific concerns relating to the business perception of the Worcester region?

3) Select One from the List- What is the business size by number of employees? What is the business type? When was the last time the business looked into expanding or relocating?

4) Yes or No- Is the business located in the Worcester region? Has the business considered Worcester region as a business location? Does the business have relations with the Worcester region? Is the business aware of tax incentives? Is the respondent politically active? Is local government involved in the business's activities? Does local government affect the business's location decisions? Does the business find a need for clustering?

5) Rate from 1 to 5*- Rate business's perception of the economy. Rate how accommodating the tax incentives are. Rate the tax rates. Rate the cost of living. Rate the governmental involvement with business interactions. Rate the quality of life. Rate the abundance of recreation, entertainment, and cultural events. Rate the available educational institutions attract new businesses. Rate the availability for all modes of transportation. Rate how well the region can support clustering. Rate how advantageous the region's location is in relation to the economy. Rate the skill level of the workforce. Rate the availability of skilled labor.
   (*For each rating, we specified that they were to be made for the Worcester region.)

After formulating these questions with the help of our liaisons and advisors, we pre-tested the survey for more editing insight. The pre-test population consisted of our colleagues in the Worcester Community Project Center and two anonymous business executives, both of whom being WPI Alum. Since many of our colleagues were currently formulating their own survey and interview questionnaires, they were able to give some valuable insight. Several of these students noted specific ways to simplify the

[9] The final version of the survey questionnaire is shown in Appendix C.

wording in our survey. For example, at the beginning of each survey section, we were told to specify exactly what we are seeking from the respondent in that section.

Furthermore, the two business executives concluded that we should add two new sub-sections for the benefit of our research analysis. For the quality of life category, we were told to list all determining factors for quality of life, and have respondents rank these in order of importance, for determining the overall quality. Lastly, and of most importance, one pre-tested executive determined that we should have survey respondents numerically rank, in order of importance, all surveyed factors for determining their perception. In other words, the higher ranked categories are the most important factors for developing a business perception.

Taking these pre-testing results and recommendations into consideration, we produced the final draft of the survey, as shown in Appendix C. The next stage of our survey research consisted of implementing the survey into the sampling population.

Survey Sampling and Implementation:

Prior to the actual implementation processes, we had to determine the appropriate sampling size. These surveys have been utilized for a large sampling size, therefore allowing for us to use random sampling. Random sampling gives more accurate results, and is scientifically more acceptable (Singleton, 143).

The Worcester Regional Chamber of Commerce gave us the research population. Julie Jacobson and her colleagues gave us a total of 1400 businesses to research. On this list, an executive name, address, phone number, fax number, and email address was given for each business. Unfortunately, this list inhibited us from being able to make a completely random sample. The businesses were only members of the WRCC.

Therefore, any businesses in and around the region that are not members were not included in the survey population. Despite this problem, we had to research from this list, because we did not have the time to compile a complete list of all businesses.

From the Chamber's list, we calculated a proper sampling size helping ensure that our survey data were reliable and valid. We determined that we should make our confidence interval at about 95%. Therefore, assuming that there was no non-response bias, our maximum error would be 5%. This would require about 200 survey responses out of the 1400 businesses on the list (Salant, 55). Due to the time constraints, we decided to send the surveys to 400 randomly selected[10] businesses, hoping for a 50% response rate. Receiving a rate this high requires personal contact to all businesses, along with follow-ups to all businesses that do not answer the survey several days after application.

Our form of personal contacts consisted of phone calls or email messages. For five days, we attempted to call the 400 businesses. Each person on our research team took 100 names from the randomly selected sample. The first round of calls consisted of contacting, in person or by voicemail, the executive listed by the WRCC. We were able to make most contacts the first time through the list, but if we did not actually talk with the person, we sent an email. These initial contacts consisted of telling the business representatives what we were doing and that they would be receiving a survey.

Based upon the business' requests, we emailed, mailed, or faxed the surveys shortly after making the initial contact. We designed a group email location, so that all

[10] The random selection consisted of giving separate numbers to the firms within each business category. Since we knew that we needed a fraction of 400 to 1400, we had a random number generator select two out of every seven numbers in each list. Therefore, 2/7 of each business type was represented in our survey research.

surveys would be sent and received in one location. For mailing, we sent professionally copied forms of the survey to the businesses at the end of each business day. For faxing, we had a copied "fax" version of the survey that we immediately sent over to the business fax number after the initial contact was made. Along with the survey, we sent a cover letter instating the survey's purpose and importance.

After sending the surveys to the businesses, we followed-up with contacts from the businesses that did not respond within a week's time period. In most research processes, the follow-ups should come a few weeks or a month after initial contact, but we did not have the time to do so for our IQP. Therefore, we made our second contacts approximately a week later, stating that our response rate was still lower than expected and each individual's response was valuable to our research. These follow-ups were repeated to all businesses, unless we received the survey or we got a response clearly defining the firm's unwillingness to take our survey.

As described in more detail in the Data Analysis section and Chapter 4, the final stage of survey research consisted of compiling the responses. To support this survey data, we also conducted interviews and retrieved archival data.

3.4.3: Interviews

There are both pros and cons to this method (discussed in *figure 3.2*). For our benefit, we were able to further analyze the specific sources that could give us valuable information. For example, a CEO from Massachusetts Biomedical Initiatives (MBI) was interviewed because he was the head marketer and representative for many biotechnology firms located in the Worcester area. The interviewee was able to give his own detailed perceptions along with those from the firms that he consulted. During the course of our research, we also interviewed an executive at the newly formed Commonwealth National Bank and an executive for the expanding retail firm, Tatnuck Bookseller and Sons. Both sources were interviewed for valuable information relating to their business' decisions to relocate or expand.

3.4.4: Archival Research

The analysis of publications printed by businesses can be very valuable to any project. We would have been most pleased to find news articles or business reports describing why some firms have moved to or from the Worcester region. However, the main archival source used during our research processes was the "Business Retention and Attraction Strategies" report, outlined in Chapter 2. This source is used in the results, analyses, and conclusions, as a comparative measure to our survey research.

3.5: Data Analysis

In order to analyze the data, which we gathered from our methodological techniques, we used Microsoft Excel and Access. We used Access for data entry due to its simplicity. In Access, we produced a form that looked like our survey; this made it easy to enter our data into a matrix and to follow our results. We then transported the matrix into Excel for further analysis. In Excel, it was very easy to sort the data for our needs, and to then take that data and create both charts and tables to express the results in a more aesthetically pleasing manner.

The use of close-ended surveys as our main research method provided for efficient data analysis. All of the survey-takers choices for each question had a certain numerical value. From this, we created graphs or charts that outlined the perceptions of the business about a certain aspect of the region. Since most of our research data has been compiled from the surveys, we have organized the following chapter, Results and Data, in the same format as the surveys. Essentially, we have provided the statistical perceptions of the Worcester region, as determined by the business' answers to our survey. The results of our interviews and archival research provide us a basis for comparisons to our own results.

Chapter 4:
Results and Data

The result of this study is both quantitative and qualitative data that have been compiled from surveys, interviews, and archival research. The survey was distributed from November 9, to December 3, 2001. It has provided the data necessary to compile graphs, charts, and tables. Open-ended components of the survey, as well as personal interviews, support our numbers with qualitative data.

Most of the data in this section only pertains to the WRCC member survey and the interview responses. Archival research, displayed in the 1996, "Business Retention and Attraction Strategies" report (City Manager's Executive Office, 1996), provided more survey data, shown in Appendix I. As for the data from the survey sampling of businesses in other New England cities, these are documented in Appendix H. All data represented in this chapter and the appendices have been used for analyses and conclusions, detailed in Chapters 5 and 6. Any charts or information that we did not feel fit in these sections has been displayed in Appendices D and E.

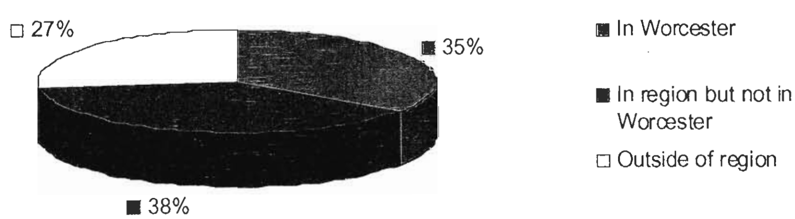
4.1: General Business Information

General information questions were used to determine the background and vantage point of the companies being surveyed. These questions asked the respondents' location, job title, business size, and the extent of their connections to the Worcester region. This was done in order to infer possible explanations as to why they gave a certain response. Of the 400 businesses that were selected in our survey's random sample, 144 responded within the allotted response time. This yields a response rate of 36%, 14% under our initial goal of 50%. Based upon this rate, assuming an absence of non-response bias, there is an estimated sampling error of 7.5%.

4.1.1. Location

The majority of the businesses (105 out of 144, or 73%) that completed the survey were from within the Worcester region. Appendix E denotes the various businesses zip codes and the number of establishments from each. Interviews were conducted with three different companies. Of these three, one was looking at relocating, another at expanding, and the third was altogether new. *Figure* 4.1.1 shows the distribution of respondents inside, as opposed to outside the city and region.

Figure 4.1.1 - Business Locations



4.1.2: Job Title

The respondent's job title was a variable that we sought from all interview and survey participants. Of the survey participants, 117 listed their job title. Most respondents were presidents, managers, or owners. *Table 4.1.2* outlines the five most common job titles and the number of each that returned survey responses. The interviewees were: a chief marketer for a biotechnical/biomedical firm, the owner and president of a book-selling retail chain, and a business executive for a regional bank.

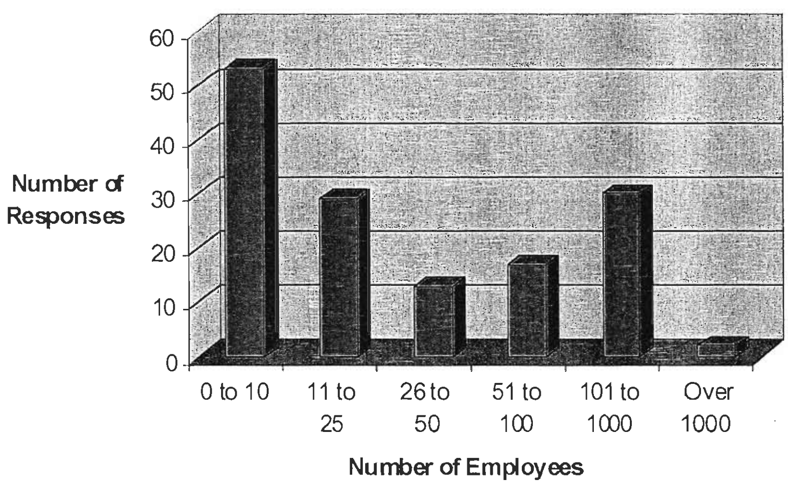
Table 4.1.2 – Most Common Job Titles

Job Title	Amount
President	47
Owner	17
Manager	16
Vice President	12
Director	6

4.1.3: Business Size

Business size was sorted by the following six categories: 0-10, 11-25, 26-50, 51-100, 101-1000, or over 1000 employees. *Figure 4.1.3* shows that most of those surveyed were either between the 0-25, or the 101-1000 employee range. The interviewed businesses stated that they were within the 0-10, 101-1000, and 26-50 employee range for the respective biotechnical, retail, and financial firms.

Figure 4.1.3 – Number of Businesses within each Business Size, Determined by the Number of Employees



4.1.4: Connections to the Worcester Region

As previously noted, 40 survey respondents were located outside the Worcester region. It is important to note that 62% of these firms still had business relations from within the region. 41% have also considered the region as a possible place for relocating or expanding their companies. These specific businesses most likely have developed their perceptions from connections or interactions with people inside the region. The predominant reason for this line of questioning is to be able to compare the perceptions of businesses that have dealings with the area, to those that might not be familiar with it. This category, along with the other three that we explored in the "General Information" section of the survey, allow for our analyses contained in Chapter 5.

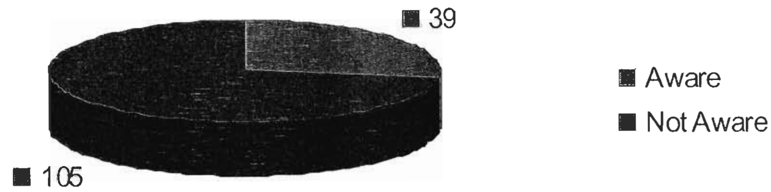
4.2: Economy

Numerous variables usually come to mind when one is formulating a perception about the economy of an area. For the purposes of simplification, the questions we asked pertained to tax rate, cost of living, and tax incentive programs.

4.2.1: Availability of Tax Incentives

In general, businesses that were aware of tax incentive programs offered by the City stated that these programs do not sufficiently meet their companies' needs. Of the 144 respondents, 39 are aware of tax incentive programs, and 75% of these businesses believe the incentives are not accommodating. In the interview with the head marketer for biomedical and biotechnology businesses, O'Sullivan stated that he believes that the City needs to offer more tax incentives if the community wants to have new businesses occupy the vacant buildings (Appendix G, Marketing Director for MBI, 2001).

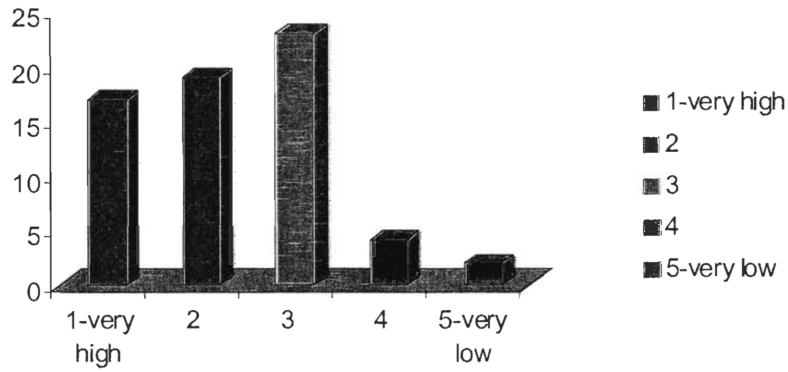
Figure 4.2.1 – Business Awareness of Tax Incentive Programs in the Worcester Region (values represent number of businesses for each response)



4.2.2: Tax Rate

A majority of the businesses and interviewees responded negatively towards the tax rate in the region. Worcester's tax rates were noted as being the main reason why biotech businesses have avoided locating in the City. The overall cost of being located in Worcester's metropolitan area is suggested as being higher than most in the Northeast (Appendix G, Marketing Director for MBI, 2001). Supporting this conclusion, 55% of the survey respondents that had knowledge of the region's tax rate circled "high" or "extremely high," in answering this question: "In your opinion, how does Worcester's tax rate compare with that of other cities in the Northeast US of comparable size?" All percentages for answers to this question are summarized in *Figure 4.2.2*. Appendix E has a table focusing on how businesses from each Worcester region zip code answered this question.

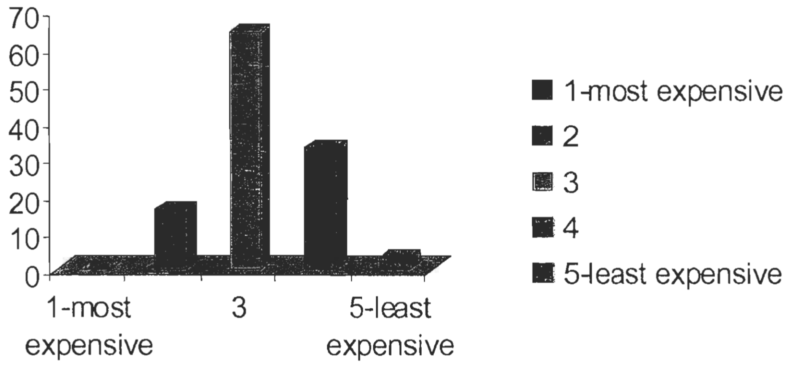
Figure 4.2.2 – Perceptions of Worcester's Tax Rate in Comparison with Other Cities in the Northeast US



4.2.3: Cost of Living

Research dictates that businesses may shy away from an area if they view the cost of living as being excessive. The data, as detailed in *Figure 4.2.1*, shows that 14% of the respondents who had knowledge of the cost of living in Worcester believe that it is expensive when compared to other cities in the Northeast US. For these data and most that we have determined thus far, we must note that these numbers are ratings representing business perceptions; therefore, the perception may or may not be a representation of the truth. Chapter 6 further explains why these perceptions are important measures regardless of whether or not they represent reality.

Figure 4.2.3 – Rated Cost of Living in Worcester in comparison with other cities in the Northeast U.S.



As noted in Section 2.4, "Urban Marketing Techniques", local governments sometimes support business' economic needs through offering tax incentives to some firms. The next section of results deals with how businesses perceive the local government in the Worcester area.

4.3: Local Government

In an effort to determine the perceived effectiveness of Worcester government, four questions were asked of survey and interview participants:

1. Are you politically active?
2. Do local governments assist your business in any normal business activities?
3. Has or will local government affect your decision in a location?
4. Please evaluate Worcester's governmental involvement with your business interactions.

The respondents were instructed to give a yes or no answer to the first three questions, and were given space to elaborate if they said yes to question #3. 27% were politically active, 16% answered that local governments assisted their business activities, and 23% determined that local government has or will affect their location decision.

Listed in Appendix E are some explanations to the "yes" answers to question #3. *Figure 4.3.1* shows how businesses rated their interactions with the Worcester government. *Table 4.3.2* shows the same responses broken down by business type.

Figure 4.3.1 - Worcester's Governmental Involvement Rated by the Surveyed Businesses

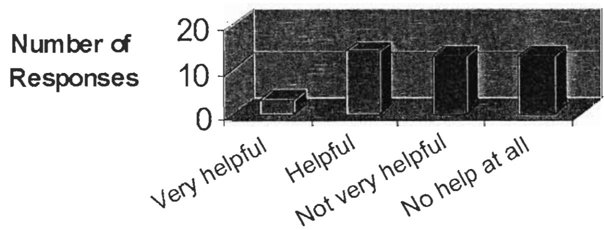


Table 4.3.2 – Worcester's Governmental Involvement Rated by Business Type*

Business Type	1-Very Helpful	2-Helpful	3-Not Very Helpful	4-No Help At All	Average Rating
Biotechnology	1	1	0	0	1.5
Distribution	0	2	1	3	3.2
Finance/Investment	0	6	1	5	2.9
Government	0	0	1	0	3
Health Care	1	2	2	1	2.5
Higher Education	0	1	1	0	2.5
Information Technology	0	0	1	0	3
Manufacturing	1	1	1	2	2.8
Retail	0	1	4	2	3.1

*Each value represents the number of responding businesses from each type that have given the specified rating. For instance, the value of 1 in the first entry box means that one biotechnology business felt that the government is helpful. The average rating is then calculated for the respective business type. For example, one biotech business gave a 1 rating, representing "very helpful", and one biotech business gave a 2 rating, representing "very helpful", so the average rating of these two entries is 1.5

4.4: Quality of Life

For the purposes of this survey, the "quality of life" category was itemized into a list of possible factors. These were: culture, dining, shopping, entertainment, transportation, indoor recreation, outdoor recreation, education, crime rate, and climate. The respondents ranked the significance of each in order from 1-10, with 1 being most important. *Table 4.4.1* shows the average ranking given for each category by respondents. Another graph, located in Appendix E, separates the rankings from technology and non-technology firms.

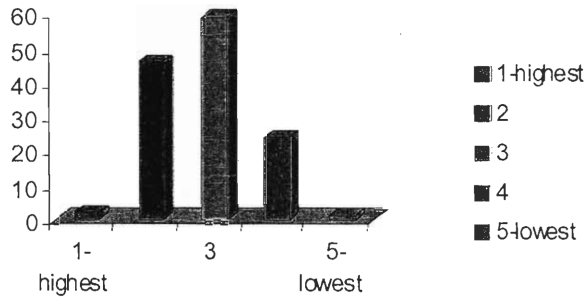
Table 4.4.1 – Average Rankings for Importance of Factors Influencing Quality of Life

Aspect	Average*
Education	1.98
Crime Rate	3.14
Culture	4.63
Transportation	5.27
Dining	5.27
Entertainment	5.81
Shopping	6.2
Outdoor Recreation	6.6
Climate	7.37
Indoor Recreation	8.07

*The numbers represent the average ranking given to each category by all responding businesses, under the guidelines that each respondent ranked each category, in order of importance, from 1 to 10 with 1 being the most important ranking.

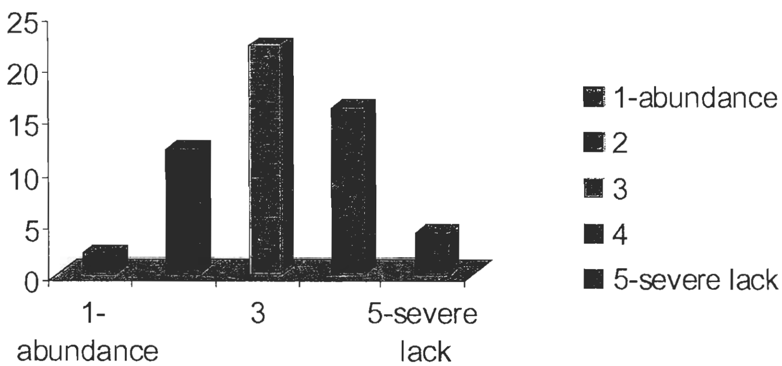
Based upon these factors for determining quality of life, businesses concluded that the quality is relatively good in the Worcester region. *Figure 4.4.2* shows that 37% rated the quality of life as being high in the Worcester region. Of the firms located within the city of Worcester, 38% gave a "high" or "extremely high rating." As for the technology firms (which includes biotechnology and information technology), 32% listed a high rating, compared to 33% of non-technology firms.

Figure 4.4.2 – Ratings for Quality of Life in the Worcester Region Compared to Other Cities in the Northeast US



Upon analyzing the business' views of recreation, culture, and entertainment, it is evident that there is a perceived deficiency. 36% of all participating businesses determined that there are not enough activities ("not enough" is defined by a 4 or 5 rating, meaning that the perceptions are for these opportunities as being "lacking" or "severely lacking").

Figure 4.4.3 - The Worcester Region's Opportunities for Recreation, Entertainment, and Cultural Events, as Rated by Responding Businesses



Various educational facilities are also important to each industry. The presence of an institution can be a major boon to a business in need of personnel. For this reason we asked respondents to share which type of institution is most important to them. *Table 4.4.4* tabulates the percentage of businesses that find a need for each type of institution.

The survey responses rate how well educational facilities attract businesses. Overall, 47% agree that the institutions do attract businesses. This value is at 44% for businesses located outside of the Worcester region, but who have considered or are considering a move to a location within the region. Lastly, a few companies noted some new types of educational programs that should be introduced to the Worcester region. These open-ended responses are located in Appendix F.

Table 4.4.4 – Types of Schools that Respondents Thought to be Important (values are percentage of respondents that selected each type of school)

Type of School	% of Firms
None	20.3
Vocational/Trade Schools	28.6
High-technology Bases Institutes	28.6
Liberal Arts	21.1
Business/management Higher Education	42.9
Graduate Programs	30.1
Public School Systems	38.3

4.5: Transportation

The research for the perceptions of the transportation systems has been divided into six major categories: buses, highway, air-freight, air-passenger, train-freight, and train-passenger. Of these categories, the business demand for each type is presented in *Figure 4.5.1*. *Table 4.5.1* denotes each business' needs for these types of transportation. *Table 4.5.2* provides the answers to the question, "How available are the following types of transportation in the Worcester region?" The answers for this question are also shown by business type in Appendix E. Businesses often gave a "Don't Know" response, which indicates that they do not need that type of transportation.

Figure 4.5.1 – Daily Transportation Needs, Based Upon Number of Responses by Survey Participants

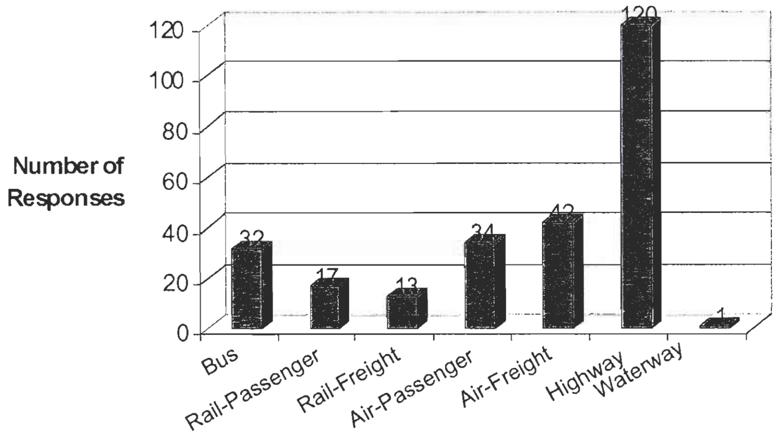


*Table 4.5.1 – Responses for Daily Transportation Needs by Business Type**

Business Type	Bus	Rail-Passenger	Rail-Freight	Air-Passenger	Air-Freight	Highway	Waterway
Biotechnology	0	1	1	1	2	2	0
Distribution	2	1	3	1	3	12	0
Finance/Investment	8	3	0	14	2	27	0
Healthcare	6	1	0	1	5	14	0
Higher Education	8	3	0	2	1	13	0
Information Technology	0	3	0	8	6	15	0
Manufacturing	3	1	7	8	17	25	1
Retail	6	4	2	3	7	18	0

*Please note that these numbers divide the results by responses given in each business type, where the values represent the number of respondents within their specified business type selecting the denoted transportation category. Of most importance, the numbers show that all firms demand highway transportation, while finance/investment firms show an overwhelming demand for air-passenger services, and manufacturing firms have an overwhelming demand for air-freight services.

*Table 4.5.2 – Rated Availability of Transportation in the Worcester Region**

Mode	1-Readily Available	2	3	4	5-Not Available	Average Value
Bus	33	28	25	14	4	2.3
Rail-Passenger	14	17	26	32	1	2.9
Rail-Freight	11	16	19	6	2	2.5
Air-Passenger	10	17	36	36	14	3.2
Air-Freight	17	15	22	18	5	2.7
Highway	63	57	6	4	1	1.6

*Similar to the previous table, the values in these tables represent the number of survey participants that selected the respective rating.

In a personal interview, one respondent noted that the abundance of Worcester's rail and highway systems overcomes its limited amount of air travel resources. He stated that most highways and railways go directly from Worcester to Providence or Boston; therefore, freight or passengers can easily be transported to the airports in these neighboring cities. Various firms in Worcester's biotech industry regularly take advantage of this (Appendix G, MBI, 2001).

This interviewee also noted that Worcester's transportation system can directly benefit from the City's central location among Northeast cities. This issue is dealt with in the next section.

4.6: Location

The survey and interview questions regarding location sought to uncover the demand and availability for business clustering. They also served to find the perceived economic benefits in relation to the region's location. The demand for clustering among most businesses is relatively low. However, 57 firms have determined that they would benefit from locating among other businesses. Overall, these businesses do not have a strong opinion on whether the Worcester region has sufficient areas for clustering. 39% of respondents that have knowledge of Worcester's general location suggest that it is an economic advantage for companies located in the region.

4.7: Technology

The questions dealing with technology focused on determining the types that are of need, as well as the respondents' perception of the availability for each in the Worcester region. *Figure 4.7.1* shows that, overall, the businesses demand Internet services and wireless communications the most. *Table 4.7.2* shows that the Internet is of utmost demand by both technical and non-technical firms. Focusing in more detail, Table *4.7.3* represents the business perceptions for the availability of each technology infrastructure. Overwhelming, the respondents show that there is a sufficient availability for all of the infrastructures. Overall, the Internet is rated as being most available.

Figure 4.7.1 – Comparing Importance of Types of Technology for Businesses

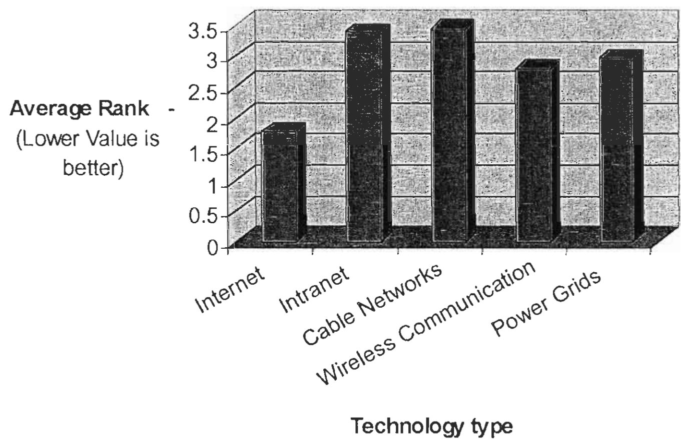


Table 4.7.2 – Comparing Importance of Types of Technology for Tech and Non-Tech Firms*

	Internet	**Intranet**	**Cable Networks**	**Wireless Communication**	**Power Grids**
Technology	1.59	3	3.5	3	3.75
Non-Technology	1.99	3.41	3.43	2.7	2.75

*The lower average rating means that, overall, the businesses find that specific infrastructure as being the most important for their business. The technology firms find more of a need for internet and intranet services than the non-technology firms. However, the non-tech need wireless communication and power grids more. Overall, cable networks are not of least importance, compared to the other listed infrastructures.

*Table 4.7.3 – Rated Availability of Technology Types in the Worcester Region**

Technology	1-Highly Available	2	3	4	5-Not Available
Internet	37	39	18	4	0
Intranet	17	21	18	4	0
Cable Networks	22	38	19	3	1
Wireless Comm.	23	35	21	5	0
Power Grids	17	38	16	1	0

*This data shows that all infrastructures are given an overall perception of being available or highly available.

4.8: Labor Market

Our studies have also analyzed the labor market in order to accumulate perceptions of Worcester's workforce skill level and availability of labor. As illustrated in *Figure 4.8.1*, most of the businesses view the workforce as having an average skill level. *Figure 4.8.2* shows that that the availability of labor is also perceived as being average for the Worcester region. However, more businesses perceive this availability as lacking than those who do perceive an abundance of skilled labor.

Figure 4.8.1 - Rated Skill Level of the Workforce in the Worcester Region

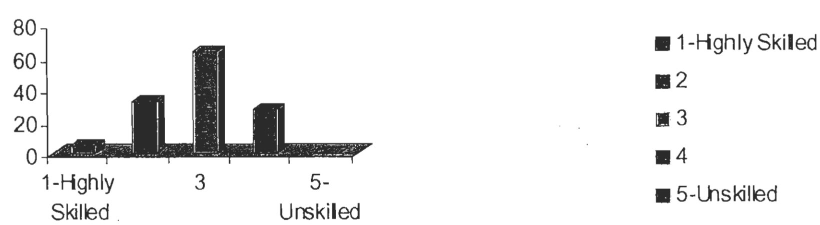
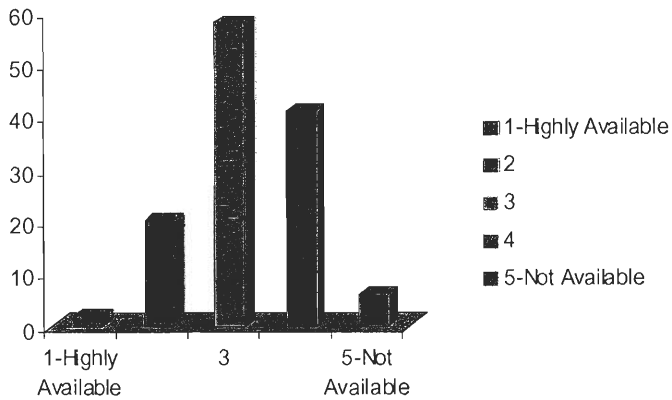


Figure 4.8.2 – Rated Availability of Skilled Labor in the Worcester Region



4.9: Overall Business Perceptions

The final section of the survey was designed as a tool for analysis. It weighed which factors are most important to each business. The highest rated factor is strength of economy, followed by geographical location and labor market. Of least importance to the participating businesses are local politics and tax incentives. The larger businesses, with a size of over 100 employees, view education as the most important factor. In comparison, the smaller businesses see geographical location as being the most important factor. For the tech businesses, technology is seen as being most important. Furthermore, the non-tech businesses perceive strength of economy as being the highest determining factor. The various tabulated data of Table *4.9* provide a summary for analyzing the results of this section.

Table 4.9 – Ranked Importance of Each Factor's Influence on a Business' Perception of a Location (each value is the average rank, with the lower value being of most importance)

Aspect	Average
Strength of Economy	4
Geographical Location	4.04
Labor Market	4.34
Quality of Life	4.38
Education	4.79
Tax Rates	5.64
Technology	5.76
Transportation	5.91
Tax Incentives	6.96
Local Politics	8.46

Chapter 5:
Analyses

Several weeks of reviewing literature and researching has provided us with the data necessary for these analyses. We have received many survey responses presenting general business perceptions. The perceptions were analyzed and suggestions are made for our project sponsors. Section 5.1 focuses on the survey results that were highlighted in Chapter 4. As is the case with any research project, especially surveys, there are many sources for error. Section 5.2 addresses these sources of error and discusses how they may be prevented in future projects. We analyze the interviews in Section 5.3 so that we can further understand some of the business perceptions. In Section 5.4, we draw comparisons to the results and suggestions given in the "Business Retention and Attraction Strategies" report (Appendix I, City Manager's Executive Office, 1996).

5.1: Survey Response Analysis

Regardless of any errors, we were able to make some overall analyses from our selected research population. Based upon the survey results, we have discovered some general business perceptions. These are supported by suggestions for improving any factors that may be perceived as negative by a significant number of respondents. The following analyses and conclusions focus on the researched results from each survey category.

5.1.1: Economy

Of the three major areas for which we researched economic perceptions, two received negative perceptions. Most respondents were not even aware of available tax incentives, and only _ of those who were, determined that the incentives were accommodating to their business' needs. Also, a majority of the responding businesses thought that the tax rate was high in comparison to other cities in the Northeast. In spite of these negative perceptions, a convincing 86% determined that the cost of living was average or below in comparison to other Northeast cities. Based upon these results, one can conclude that the cost of having a business in Worcester is perceived as being more of an economic burden than the cost of living in the region.

One possible suggestion for eliminating these negative perceptions is to offer Tax Increment Financing (TIF) in specific sectors. For the areas in which business growth is of demand, the regional governments may be able to promote expansion by lowering the tax rate for several years. A lowering of the tax rate may encourage new growth and retention of businesses that normally perceive the tax rate as being too high. These businesses may then believe that the tax incentives are more accommodating. Section 4.9 provides evidence that the overall economy has been noted as a key factor in determining the business' overall perceptions.

However, we must understand that when one is given the chance to lower taxes, it is human nature to do so, no matter what their overall perception may be. By "saying" that they think the tax rates are too high and the tax incentives are not accommodating, some businesses know that they may get an overall cut in taxes. 56% of respondents did say that the rates were high, but we must not rule out this aforementioned factor.

5.1.2: Local Government

Responses on the effectiveness of local government have led to very few conclusions. Basically, we cannot make any convincing arguments because most businesses noted that they were neither politically active nor involved in business interactions with the local government. However, we can note that most of the businesses viewing Worcester's government as being helpful were biotechnology, finance/investment, or information technology. Our research has not been sufficient enough to make any solid conclusions as to why these trends were observed; however, we can suggest that the government should expand its involvements with the other firms that perceive a lack of governmental involvement.

5.1.3: Quality of Life

In the quality of life category, the businesses were very convincing in their responses. It is fairly evident that education, crime rate, and culture are the three most outstanding categories in determining business perceptions for quality of life. The clear-cut most important factor was education. Therefore, if the quality of life needs to be improved, one should focus on the education system first, making any needed changes.

Based upon these determined factors and the corresponding research results, the quality of life is perceived as being good in the Worcester region. Many businesses perceived the quality of life and education as being good, as opposed to very few perceiving each as being bad. Although many respondents have suggested that all schools are important to their business's educational needs, of most importance are public schools and business/management collages.

The respondents have clearly perceived that there is not a sufficient amount of recreational, entertainment, and cultural opportunities in the region. If the City government and area marketers want to improve the region's overall perception for the quality of life, they should focus their improvements upon making the recreational and cultural opportunities more accommodating to the people. Recently, the City has focused on developing some new recreational opportunities (Black, 2001), so maybe the respective marketing strategies should focus on selling these new amenities to the unaware business people.

5.1.4: Transportation Systems

In contrast to culture and recreation, the transportation system is perceived as being fairly suitable for the respondents' needs. The highway system, was clearly defined as being of necessity by almost all businesses, and was given an overall ranking of above average. As for the other transportation modes, the passenger bus system was the only other mode that was clearly ranked above average. Given an average rating, were the passenger rail and air-freight transport systems. Rail-freight and passenger air travel were given a below average rating; however, due to possibilities for research error, this conclusion is relatively unconvincing, since there was not an overwhelming majority of businesses with negative perceptions.

Regardless of this inconclusiveness, if the City wants to improve upon the overall transportation availability, we can suggest that the rail and airline systems have the highest need for upgrades. As previously mentioned, businesses have clearly noted that the highway system is a strength for the region. Although a lesser number of businesses perceive a need for the rail and airway systems, those who do are less convinced that the systems are adequate. Most often, the larger businesses need more rail and airway demands, so if the region's outlook is to invite large business companies, the government officials may need to look further into the availability of these transportation systems.

5.1.5: Location

In order to be designated as an inland port, the region needs the available transportation systems, along with being an ideal location for distribution. For the former aspect, the distribution companies in the Worcester region have unsurprisingly determined that the highways are important and they meet most of their business demands. As for the latter aspect, the distribution firms believe that the location is only average in respect to how advantageous it is for their economic benefits. This feedback is of particular concern, because companies have determined that geographical location is of second most importance when developing their overall perception of a region.

Possibly these results are lower than expected, because there are too many distribution firms already located in the Worcester region. Most of the responding companies commented that they don't like business clustering, because it is an economic burden (see Appendix F). Therefore, too many distribution companies may lead to an overall negative view of the location's economic benefits.

Not all respondents viewed clustering as being a disadvantage. Most of the biotech and Information Technology companies perceived a need for clustering among corresponding businesses. These businesses are inconclusive as to the level of adequacy relating to the provisions for clustering given within the region. However, in retrospect, these "technology" businesses do perceive the region's location as being an overall economic benefit. This conclusion may have been made because of the benefits provided by the high level of technology in the region. The following sub-section highlights the positive perceptions given for technology.

5.1.6: Technology

As we have documented in the "Overall Perceptions" results, technology is of utmost importance to the biotech and Information Technology companies when they are making a location decision. Obviously, these businesses demand the infrastructure for all of the following types of technology: Internet, intranet, wireless communications, cable networks, and power grids. Overall, the responding businesses, including high tech and non-tech, believe that the Internet services are of most importance when evaluating the various technology infrastructures. An overwhelming majority of survey participants have noted that all technology infrastructures are rated as being conveniently available. Referring back to the Literature Review, Tom Wharton's efforts towards making the Internet more convenient for all Worcester-based companies have evidently resulted in improved perceptions.

5.2: Sources for Research Error

Research errors can come from all research processes, but we have noted the three most common sources for error in our studies. Since we have used a random sampling, there are several sources for sampling errors, and there may be some non-response bias. Furthermore, we, the survey researchers could have made some errors.

5.2.1: Sampling Errors and Non-Response Biases

The overall results of our perceptions studies are inhibited by our selection of survey population. Ideally, a study of business perceptions would include all businesses within the researched area. Therefore, when researching the businesses within the region, one should include all businesses within the specified types. Realistically, we were only able to survey a selected group of businesses that were provided by the WRCC. Our research cannot develop the perception on behalf of those companies that were not within our chosen population.

Contributing to the chances for non-response bias, are the businesses not having enough time to complete the survey. In particular, we noticed that many retail or distribution companies were very busy due to increased holiday activities. We have further speculated that the businesses that are pleased with the region may have been less motivated to fill out a survey than those businesses who wanted to voice their complaints. Unless the entire population completes the survey, one can only hope that the respondents have voiced the non-respondent's perceptions.

Overall, we do not believe that any non-response biases should have substantial effects on our research results. The one problem with the non-respondents is that we have no evidence as to exactly how they felt, so we cannot be 100% sure that their perceptions are represented by our survey. However, we have a substantial response rate of 36%, so we are fairly confident that the perceptions are representative of the entire population. When dividing the response rate by business type, we have noticed that the rates are as shown in *Table 5.1*. Therefore, the firms' results that have more of a chance for biases are retail and healthcare; however, we are fairly confident that there are no substantial biases for the higher education, biotechnology and finance/investment businesses.

Table 5.1 – Response Rates by Business Types

Business Type	Response Rate
Biotechnology	50%
Distribution	46.40%
Finance/Investment	50%
Government	33.30%
Health Care	26.90%
Higher Education	85.70%
Information Technology	26.60%
Manufacturing	35.70%
Retail	22.50%

5.2.2: Researcher Errors

Besides the sampling error, we, as the researchers, could have erred as well. For instance, one survey respondent noted that he "hadn't thought that hard since he took the SAT's." Although he may have been sarcastic in saying this, there is a possibility that some of the questions were too thought provoking for a survey questionnaire. We must note that students and business executives subjected the survey to a rigorous pre-testing process. Despite our best efforts it is still possible that some of the wordings did not fully express our intentions. For future research purposes, any replications of the survey may need to be pre-tested on a larger population.

The extent of detail in the interviewer's comments is directly dependent upon their alertness and motivation on that particular day. Moreover, the interviewer can read a response in the wrong way from which it was intended. We did try to minimize this error by reciting the interview responses to see if the interviewee agreed to what was written.

Lastly, there were several limitations to our research due to the time-constrained processes that we had to use. For instance, to get a true measure of perceptions from businesses outside of the region, we would need to select one area and research its entire population. This procedure would have to be repeated for each area that the sponsors are interested in finding perceptions from. As previously mentioned, we did not get a completely random sample from all businesses within the Worcester region, so we did not focus much of our research on developing appropriate "outside" perceptions. The time constraints also contributed to the lower response rate and minimal number of conducted interviews. All of these attributes have led to a higher chance of errors in our research results and analyses.

5.3: Analyzing Interview Responses

Each of the three interviews were conducted for the same purpose: to receive some qualitative data, enhancing the quantitative analysis of the surveys. Basically, we wanted words to back up our numbers. However, we realize that three business representatives could not speak for the whole; therefore, we chose the three that were of the most help to our studies. An executive at Massachusetts Biomedical Initiatives (MBI) was interviewed, because the firm is the marketer of many businesses locating or thinking of locating in the Worcester area. The owner of Tatnuck Bookseller was interviewed, because the business is a well-established Worcester retail chain that is currently expanding. Lastly, an executive at Commonwealth National Bank was questioned for the purpose of understanding why they had recently located their office in the City. This section analyzes the responses in agreement or disagreement with the survey results.

5.3.1: Interview with a Head Marketer at MBI (11/19/01)

O'Sullivan from MBI was generally in agreement with the survey results. He concluded that the overall cost of owning a business (tax rates, building fees, utilities…)

is very high for the Worcester region. As a solution for reducing this problem, he suggests that the City should be more open to becoming a bookend of the Boston-Worcester corridor. If the City stopped trying to compete with their larger neighbor, they could benefit from the other's larger economy.

He also stated that the weaknesses of the airport should not be seen as such. As stated in Chapter 4, the interviewee has determined that the businesses he represents send their products to neighboring New England cities' airports. If this solution can be performed by all businesses in need of a better airport, then the City does not need to upgrade its air travel systems. The rest of Worcester's transportation systems are advanced enough to carry all passengers and freights to the other airports, if necessary.

Lastly, O'Sullivan has remained consistent with the surveyed biotech businesses, by complimenting the local government's responsiveness. The locating biotech businesses that he represents have always been pleased with the responsiveness of the local government and public services. In particular, the City was most encouraging when MBI decided to locate at St. Vincent's Hospital.

5.3.2: Interview with the Owner of Tatnuck Bookseller (11/27/01)

Our second interviewee was not as pleased with the local government. Abramoff's perception was that the government does not help businesses in a concrete way. Throughout the past he has heard the Worcester government say they would help improve the quality of business interactions, but have yet to follow through with their plans.

For example, the current Tatnuck Bookseller main store is stationed in a poorly located, out-of-date building. He states that the government is insufficiently supporting him by charging "unreasonably high" taxes. This complaint is indicative of the results obtained from the surveyed businesses. He said, "Taxes are high, but the issue would not be as pressing if the business location and building provided a more substantial return on the investment."

Abramoff has seen that the government is slowly improving, chiefly in the realm of health and business code inspections. He also does not believe that they have a plan for business growth. The government should look into this problem, perhaps giving TIF to businesses that have a location such as the one owned by Tatnuck. If the business cannot make up the customer base to overpower the high taxes, they should lower the taxes for that business; therefore, allowing them a little more financial freedom for expansion.

5.3.3: Interview with the Vice President of Commonwealth National Bank (11/30/01)

The last interview respondent was less opinionated of Worcester. Since Commonwealth National Bank is a recent start-up business, they did not have any outstanding perceptions of Worcester. However, we were able to explore why they chose to locate in Worcester.

Mainly, Commonwealth located based upon business and citizen demand, as well as geographical location. Certain people in Worcester felt that larger banks were no longer personal with their customers. Of equal importance, Commonwealth chose to locate in Worcester because of its central location in New England, and its proximity to many surrounding towns. The interviewee, Trifari, viewed Worcester's location as being a strong selling point, since it is located near the focus of many businesses.

All three respondents have chosen to stay in Worcester or move to Worcester because of the advantages given from this centralized location. If the City wants to invite new businesses, it should continue to promote itself as an "ideal" business location.

5.4: Comparisons to the "Business Retention and Attraction Strategies," 1996 Study

We have compared our results with that of the 1996 study of businesses within Worcester, to see if improvements have been made since then, as well as to determine where they still need to be made. Our response rate was much higher than the one received for the 1996 study. Their response rate of 6% yields much greater odd of a non-response bias than our rate of 35%. Therefore, some of the results that were gained from the 1996 study might have values that are not as accurate as the ones that we gained from our study.

Also, another difference between our study and the one done in 1996 is that we surveyed WRCC businesses inside and outside of the region, whereas the 1996 study only focused on all businesses in Worcester. In this manner, we may have a few different results from the 1996 study, since we were trying to get perceptions from the outside businesses, as well. Also, we focused on 8 specified types of businesses, while the other study focused on all businesses.

Still, many of our results paralleled the results that were gained from the 1996 study. We had very similar conclusions on many questions pertaining to the economy. Both studies show that the tax rate in the region is high. Perhaps this is true because some of the goals for fixing the problem were not reached. Abramoff stated that there has been a vote to lower the business taxes in Worcester. This has been approached in city meetings for 4 years in a row, but it has never been passed (Abramoff, 2001). This shows that the desire for change is there, but has yet to follow through.

Similarly, the 1996 study noted that businesses were in need of financial assistance and grants, and that they believed there was a lack of tax incentives. Many of the businesses that we surveyed noted that they were unaware of tax incentives, or, if they were, the incentives were not accommodating in the Worcester region. Either the City does not have the economic base to offer more incentives or they are unaware of which businesses have the most needs.

Another similarity between the two studies relates to local governmental involvement with businesses. In 1996, businesses complained that the government was not sufficiently responding to requests from the service sectors. The conclusions to that study had suggested a redefining of the governmental offices, so that they could focus on meeting more business' needs. The biotech and Information Technology companies have replied to our survey with pleasing reviews, but many businesses are still unhappy with the local government.

After the previous study, suggestions were made to diagnose the effectiveness of educational programs, seeing if this led to a low skill level in the workforce. Our results have gone that extra step, determining that the businesses have positive views for the density of educational institutions in Worcester. We have noted that the businesses feel the skill level of the workers as well as the availability of skilled labor is about average; therefore, our studies conclude that there are no significant skills gaps in the labor market.

Further stated in the 1996 study, was that the airport and railways were not inviting to passengers. Our study shows that there is still a negative perception of the availability of passenger air travel in Worcester. Yet, the values rated for highways are very good. It has been suggested that the lack of air-transport can easily be made up for with the strength of the highways and rails in Worcester (O'Sullivan, 2001).

Lastly, we have compared the business' views of technology in Worcester as determined by the two studies. Since the previous study, the perception of the technological infrastructure has greatly improved. This, more than likely, is due to the improvements and reduction in cost of Internet access in Worcester (see Chapter 2, Section 2.2.2).

The analyses made in this chapter are not all that can be made from our research results. Chapter 4 and the Appendices provide for a lot of valuable data contributing to more analyses that may be of importance for other research. What we have documented are the analyses that best support our research purposes finding overall business perceptions of the Worcester region. The following chapter provides some conclusive remarks and suggestions in regards to these findings

Chapter 6:
Conclusions

A single business in the Worcester region is similar to being 1 student in a class of hundreds. The student's name is often unknown to the teacher; however, that one person's grades have an impact on the average score of every test, reflecting how well the teacher has presented the material. Most businesses are just another one of many, not known by many members of the regional government; yet, each business develops the overall perception of the area, portraying how well the city sells itself. In order for Worcester's urban marketers to understand how well they are selling the City, they must know the business perceptions. Our research has acted as a measuring device for these perceptions.

The following sections summarize our research processes and reflect upon our accomplishments.

6.1: Research Summary

At the beginning of our research processes we determined that our goal was to research business perceptions of the Worcester region. As these processes progressed, we took a more realistic path: determining perceptions of the Worcester region from businesses that are members of the Worcester Regional Chamber of Commerce (WRCC). These businesses were to be from the types that the WRCC, as well as the City's Executive Office for Economic Development, felt were most important to examine for business retention and attraction purposes. The first five chapters of the report have systematically developed these business' perceptions.

During our background research, we were sent on a blind journey. We were told by our former liaison, Susan Black, that the City had never committed to a business perceptions project; therefore, we had to lead the way. We collected many literary resources, piecing together the appropriate path to take. This review allowed us to examine the specific perception factors, which we were to examine in the weeks of research.

Then we formulated and implemented a research methodology that would find the most accurate perceptions. It was at this stage that we realized we could not find all business perceptions of the Worcester region. We were given a list of 1400 businesses of WRCC members, so we used this as the research population. From this population, we sampled their survey responses to the various aspects that affect their perceptions. For comparative measures, we also interviewed three business executives and examined the results of the 1996 "Business Retention and Attraction Strategies Report," conducted by members of the City's Executive Office for Economic Development.

What type of results did we get? We got data that allowed us to compile many graphs and tables. Furthermore, we were able to make many analyses of this quantitative data, as well as drawing the comparisons to the interviews and 1996 study.

Have we produced valuable results? Our project is the first of its kind, so the results will prove to be very valuable to our liaisons and future research groups. However, as highlighted in Section 5.2, there are several possible errors or loopholes in our research results. This is a price that one often pays when conducting survey research. The point of a survey is to draw conclusions and analyses from a sampling of the population. Who is to say that the sampling represents the whole? We cannot say that our results are 100% representative of all business perceptions within our research population, but we have received a high response rate, near 50%, for almost all business types. Therefore, we have assumed that most perceptions are reasonably representative of the whole.

In the analytical stage of our research we have reflected upon our main goal, answering the question: What are the business perceptions of the Worcester region? We have determined that the area is viewed positively in many aspects, but negatively for a few others. The overall quality of life, technology, education system, and skill level of the workforce are all given average to above average ratings. In contrast, the airway transportation, governmental involvements, and tax incentive programs are viewed negatively.

For all negative perceptions, recommendations have been given based upon the survey's open-ended responses, interviews, and archival research. Most importantly, we feel that many businesses are unaware of tax incentives, leading to their negative view of the tax rates; therefore, the City must sell these incentives more to the businesses. Also, the City needs to improve the views of the air transport system by marketing the proximity to other airports or improving the Worcester Airport. In Chapter 5, these recommendations, along with many others, are documented more in-depth.

Whether these recommendations should be implemented leads to our next question:

6.2: Perceptions: Are They Myth or Reality?

In some cases, we have reasons to assume that the perceptions do not reflect the reality of the situation in the Worcester region. For instance, many firms have concluded that there are not enough cultural and entertainment opportunities in the Worcester region; however, our Literature Review has told us that Worcester has been statistically determined as being fully abundant of these opportunities (Places Rated Almanac, 2000). For this perception, and others, we may assume that the perception does not completely mirror "reality" in the region.

Are these perceptions reality or myth? Our main goal has been to uncover business perceptions of the region, so we have not focused on composing an answer to this question. We do recommend that efforts be made to influence the perceptions regardless of whether or not they reflect the truth. The City should consider making some physical changes to improve on actual deficiencies, and better market itself to be rid of the false perceptions. As we noted in Section 2.4, "Urban Marketing Techniques", one way to improve upon the perceptions of a region is to better the government's marketing techniques.

6.3: The Building Block

This study does not claim to have determined all business perceptions of Worcester, but rather, it is our hope that it is representative of them. We have specifically found the perceptions given from a sampling of businesses that were on the list of 1400 members to the WRCC. The results and analyses should be of great help to the WRCC and the City of Worcester. Our research processes have also created a mold for future replications. Changes in local government and policy are inevitable. Officials will need a method for measuring the effectiveness of these changes; therefore, the study must be repeated in Worcester for years to come.

If the City wants to discover the perceptions from outside of the region, we suggest that independent studies focus on specific areas. Appendix H has the few survey responses that we have received from some larger businesses in the neighboring cities of New England. However, we have not gone far enough to be able to expose the overall business perceptions of Worcester that are representative of these cities. We do speculate that developing accurate perceptions from these regions in the future can be of great benefit to our liaisons and the rest of the Worcester region. Improving the negative perceptions and marketing for the positive perceptions can possibly invite new businesses to the Worcester region from these nearby cities.

Our accomplishments, as well as our mistakes, can be taken as building blocks for the development and improvement of these future studies.

Appendix A:
Project Sponsors

A.0. Introduction

The Worcester Regional Chamber of Commerce (WRCC) and the City of Worcester are the two participating sponsors for this project. The Chamber of Commerce cooperates with our efforts towards researching businesses that are members of their organization. The Executive Office of Economic Development for the City of Worcester cooperates in researching these businesses along with giving us valuable workspace and necessary office materials.

A.1. Worcester Regional Chamber of Commerce

A large portion of this project has been spent working with and for the city's Chamber of Commerce. The WRCC is considered a regional facility, because it reaches outside the boundaries of Worcester, including a direct affiliation with other nearby regional chambers. The project research and results are directly benefiting the WRCC, and the regional participants. If the Chamber of Commerce can better understand how the businesses feel and what they need, then they can appropriately address these concerns.

The Worcester Regional Chamber of Commerce is located at 339 Main Street, abutting the historic Mechanics Hall and within three blocks of the City Hall. The three sponsoring directors located at this building are: President and CEO, Mark L. Love; Director of Regional Business Development, Julie A. Jacobson; and Director of Government and Public Affairs, Paul F. Matthews.

The motto of the WRCC states that, "The region's success is our business." Their mission is to support current business trends and growth for the benefit of the city and surrounding communities. Their offered benefits to chamber members include: insurance discounts, free newsletter promotions, website listings, employee education opportunities, and reduced costs at public and private facilities. Also, the participating businesses are invited to chamber sponsored events, strengthening connections within Worcester's commercial and industrial sectors.

Improving upon regional business connections, the WRCC affiliates itself with several regional chambers of commerce. Auburn, Blackstone Valley, Corridor Nine, Holden, and Webster-Dudley-Oxford are the affiliated regional chambers. The supporting communities are as follows: Auburn, Millbury, Grafton, Upton, Hopedale, Northbridge, Sutton, Douglas, Uxbridge, Mendon, Millville, Blackstone, Shrewsbury, Westborough, Northborough, Southborough, Holden, Paxton, Princeton, Rutland, Oxford, Dudley, and Webster. The businesses in these affiliated communities have direct and indirect impacts on the city of Worcester.

A.2. City of Worcester- Executive Office for Economic Development

The City of Worcester's Executive Office for Economic Development works in cooperation with the Worcester Regional Chamber of Commerce. Philip J. Niddrie, the Chief Development Officer, works in cooperation with the City Manager. Niddrie, our liaison for the City of Worcester, and the Economic Development offices are located at the Worcester City Hall, 455 Main Street, Worcester, MA.

He and his staff members are primarily concerned with the expansion, retention, and relocation of businesses in Worcester. Their "Mission Statement" is as follows:

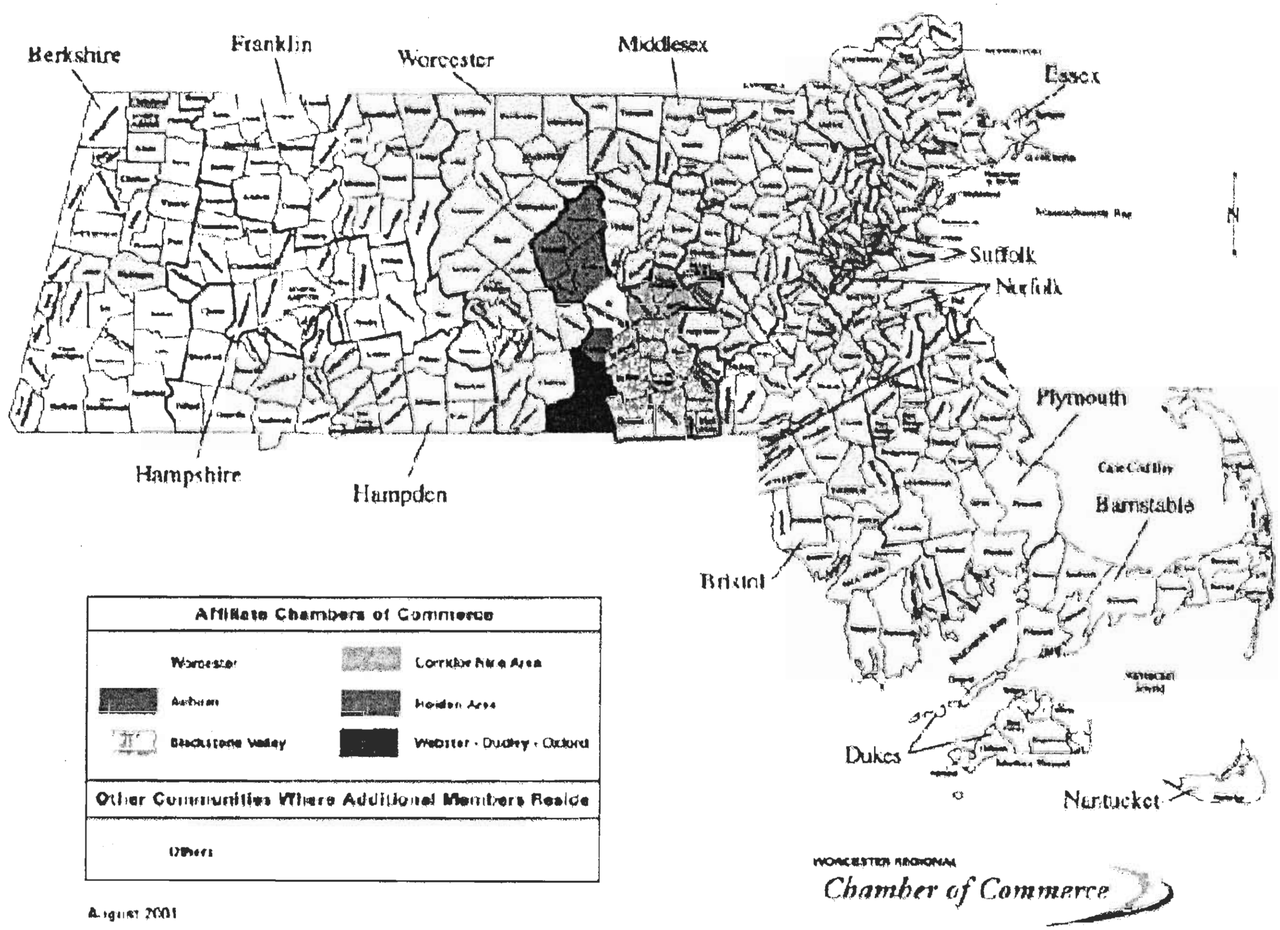
> "To coordinate and facilitate the investment of private capital through business recruitment, retention, and expansion in the City of Worcester in order to create quality, meaningful jobs for Worcester residents and to expand the City's tax and revenue base. To leverage private investments through use of the City's Economic Development Incentive Program and through the promotion of strategic and prudent public investments."

The Economic Development Incentive Program is a tax incentive program, designed to encourage the growth and relocating of businesses in Worcester. The Executive Office for Economic Development believes that these tax incentives, along with other private and public investments, will improve upon business perceptions of Worcester.

Effective as of 2001, The Executive Office of Economic Development is one of three departments that have replaced the former Executive Office of Planning and Community Development. The other departments are the Executive Office of Neighborhood Services and the Information Services Department. The new structure is organized so that the Chief Development Officer directs only economic development, while the executives for the other offices direct the other aspects involved in community planning and development.

As suggested in their primary goals, both sponsors have been important cooperative liaisons for this research project. The Worcester Regional Chamber of Commerce has background information for businesses that are already members of their facility. Since most businesses in the Worcester region are affiliated members of the WRCC, we could effectively use their member list for potential survey businesses from the Worcester region. As for the Executive Office for Economic Development, we have used their resources for office space and supplies. Most importantly, our research results will help both sponsors in developing the overall business perceptions of Worcester, so that they can make necessary changes to improve upon any negative feedback.

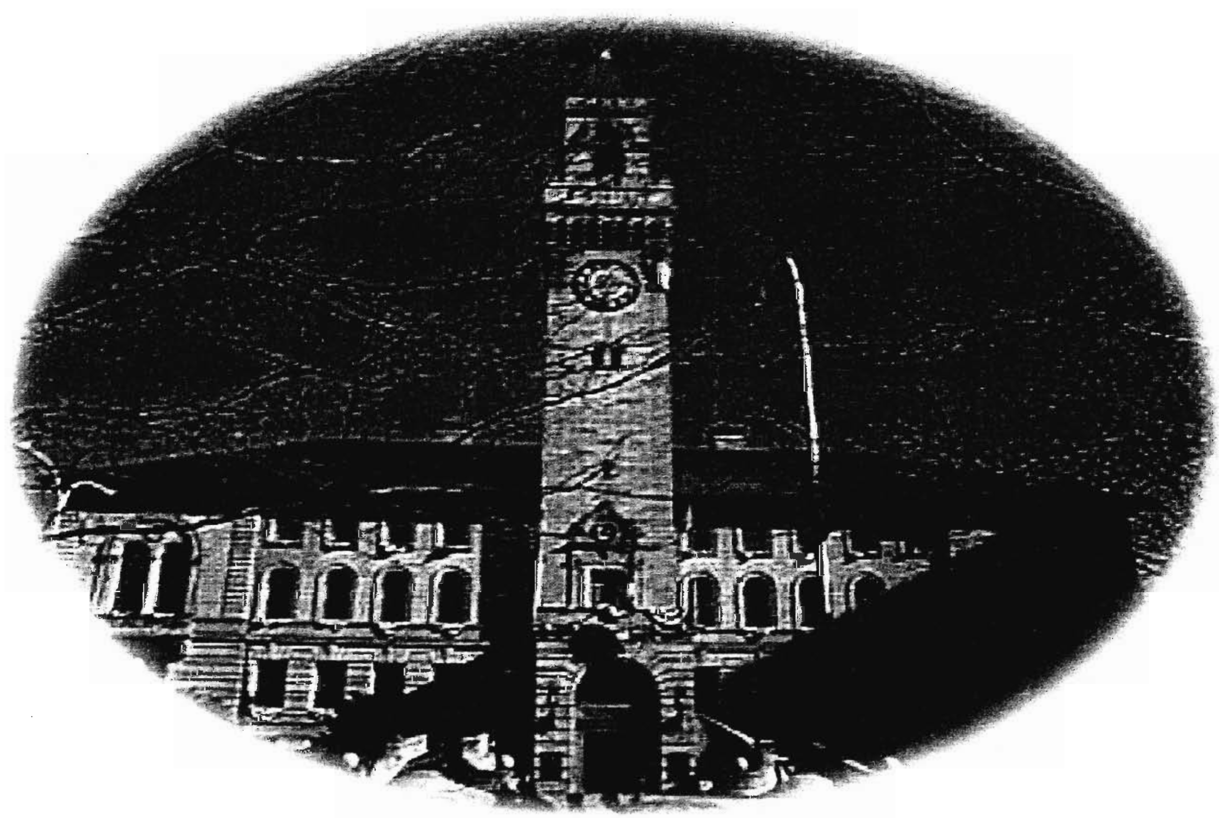
<u>Appendix B</u>:
Map of Massachusetts


Berkshire
Franklin
Worcester
Middlesex
Essex
Suffolk
Norfolk
Plymouth
Barnstable
Bristol
Dukes
Nantucket
Hampshire
Hampden
Affiliate Chambers of Commerce
Worcester
Corridor Nine Area
Auburn
Holden Area
Blackstone Valley
Webster - Dudley - Oxford
Other Communities Where Additional Members Reside
Others
August 2001
WORCESTER REGIONAL
Chamber of Commerce

Appendix C:
Final Survey Format

Business Perceptions Survey 2001

Worcester Polytechnic Institute and the Worcester Community Project Center



Business zip code: _____________
Survey Respondent's Job Title: ____________________________________

The following survey is used for research purposes only. Your individual answers will remain confidential. Please answer questions to the best of your knowledge. Unless noted otherwise, please check only one answer to each question.

NOTE: For use in this survey the Worcester region will include Worcester, Shrewsbury, Boylston, West Boylston, Holden, Paxton, Leicester, Auburn, Oxford, Millbury, Sutton, Northbridge, Grafton, Upton, Northborough, and Southborough. If your business is located in one of these communities, then it is considered as being in the Worcester region.

1) *General Business Information:*

These first few questions are designed to find out some general information about your business as well as your familiarity with the Worcester region.

a. *How many employees does your business have?*

___ 0-10
___ 11-25
___ 26-50
___ 51-100
___ 101-1000
___ Over 1000

b. *Which category best describes your business?*

___ Biotechnology
___ Distribution
___ Finance/Investment
___ Government
___ Health care
___ Higher education
___ Information technology
___ Manufacturing
___ Retail

c. *When was the last time your business looked into the possibility of a new location for either relocation or expansion?*

___ Within the last year
___ 1-5 years
___ 6-10 years
___ More than 10 years
___ Never

d. *Is your business currently located in the Worcester region?*

___ Yes ➔ *Please skip to section 2.*
___ No

e. *Have you considered the Worcester region for your business location?*

___ Yes
___ No

f. *Do you have any customers in, or business relations with the Worcester region?*

___ Yes
___ No

2) *Economics*:

The following questions are to find out your perceptions of the economy in the Worcester region. Please answer all questions to the best of your knowledge for each.

a. *Rate your perception of the relative economy in Worcester as compared to other cities in the Northeast US of similar size.*

1	2	3	4	5	don't know
most prosperous				least prosperous	

b. *Are you aware of any tax incentive programs in the Worcester region?*

___ Yes
___ No ➔ Please skip to 2d

c. *How accommodating to your business are the tax incentives offered in Worcester?*

1	2	3	4	5	don't know
most accommodating				not accommodating	

d. *In your opinion, how does Worcester's tax rate compare with that of other cities in the Northeast US of comparable size?*

1	2	3	4	5	don't know
extremely high				extremely low	

e. *Rate the cost of living in Worcester in comparison with other cities in the Northeast United States*

1 2 3 4 5 don't know

3) ***Local Government*:**

These questions are designed to evaluate the governmental involvement in businesses decisions.

a. *Are you politically active?*

___ Yes
___ No

b. *Do local governments assist your business in normal business activities?*

___ Yes
___ No

c. *Have or will local government affect your decision in a location?*

___ Yes. Briefly explain how:______________________________
____
___ No

d. *Please evaluate Worcester's governmental involvement with your business interactions.*

___ Very helpful
___ Helpful
___ Not very helpful
___ No help at all
___ No interactions

4) ***Quality of Life*:**

For this section, we are trying to find out your general opinions of the quality of life in the region.

a. *Please rank, in order of importance, these aspects of quality of life, with 1 being the most important. Please do not use the same value more than once.*

___ Culture
___ Dining
___ Shopping
___ Entertainment
___ Transportation
___ Indoor Recreation
___ Outdoor Recreation
___ Education
___ Crime rate

___ Climate
___ Other: ___________________

b. *Rate the quality of life in the Worcester region.*

1	2	3	4	5	don't know
highest quality				lowest quality	

c. *Do you feel that the Worcester region has a sufficient amount of opportunities for recreation, entertainment, and cultural events?*

1	2	3	4	5	don't know
abundance of activities				severely lacking	

d. *What types of schools would be influential to your location decision? Please check all that apply.*

___ None
___ Vocational/trade schools
___ High-technology based institutes
___ Liberal arts
___ Business/management higher education
___ Graduate Programs
___ Public School Systems
___ Other: ___________________________

e. *Please indicate how much you think that the Worcester region's educational institutions attract businesses to the area.*

1	2	3	4	5	don't know
highest attraction				no attraction	

f. *If not currently available, what new programs in higher education would you like to see in Worcester?*

____

____

5) ***Transportation***:

In this section you will be asked to answer a few questions about your company's transportation needs. This can involve the transfer of goods, or the transportation needs of employees and/or clients.

a. *Please check all modes of transportation that are necessary for your business' daily operations.*

___ Bus
___ Rail - Passenger
___ Rail - Freight
___ Air - Passenger

___ Air - Freight
___ Highway
___ Waterway

b. *Please rate the Worcester region's availability in each category of transportation. If you do not know, do not circle a value.*

	readily available				not available
Bus	1	2	3	4	5
Rail – Passenger	1	2	3	4	5
Rail – Freight	1	2	3	4	5
Air – Passenger	1	2	3	4	5
Air – Freight	1	2	3	4	5
Highway	1	2	3	4	5

6) *Location*:

The following questions are designed to determine how people view the location of the Worcester region. Your answers to the "rate" questions should be based upon your perception of the available space and other resources.

a. *In many cases, businesses prefer to locate near or among other, similar businesses, forming a cluster. Is this an important factor in your location choice?*

___ Yes
___ No. If no, please specify why not. ______________________
____
____

b. *Rate how capable you feel the Worcester region is at supporting these interdependent networks of businesses?*

1	2	3	4	5	don't know
most capable				not capable	

c. *Rate how much of an economic advantage the Worcester region's general location would be to your business.*

1	2	3	4	5	don't know
most advantageous				least advantageous	

7) *Technology*:

The purpose of this section is to determine perceptions of the technological capabilities present in the region. No knowledge of actual conditions is necessary; please base your answer on opinion.

a. *Which forms of technology are important for your business? Please rank them in order of importance, 1 being the most important, 5 being the least important. Please do not use the same value more than once.*

___ Internet
___ Intranet
___ Cable networks
___ Wireless communication
___ Power grids

b. *How would you rate the availability of each of the Worcester region's types of technology? If you do not know, do not circle a value.*

	highly available				not available
Internet	1	2	3	4	5
Intranet	1	2	3	4	5
Cable networks	1	2	3	4	5
Wireless communication	1	2	3	4	5
Power grids	1	2	3	4	5

8) *Labor Market*:

The next two questions will ask your opinion on the work force in the region.

a. *How do you rate the skill level of the workforce in the Worcester region?*

1	2	3	4	5	don't know
highly skilled				unskilled	

b. *How do you rate the availability of skilled labor in the Worcester region?*

1	2	3	4	5	don't know
highly available				not available	

9) *Overall Perception*:

This question is for the purpose of finding out which aspects of a location you deem to be most important.

a. *Taking into consideration all of the previous survey factors, rank in numerical order from 1 to 10 how important each factor is in determining your perception of a location. 1 being the most important, 10 being the least important. Please do not use the same number more than once.*

___ Strength of economy
___ Tax incentives
___ Tax rates
___ Local politics
___ Quality of life
___ Education
___ Transportation
___ Geographical location
___ Technology
___ Labor market

Thank you for completing this survey. If you have any specific concerns relating to your business perception of the Worcester Region, please write your comments below:

Appendix D:
Annotated Survey

NOTE: For most of the questions, numbers to the left of responses are percent of respondents who gave the respective answer to that question. For the rate questions, the percentage of the respondents that answered each value is displayed above the value. For the questions that required a list to be ranked, the numbers next to the responses are the average value ranked for the respective aspect. For the questions that required the respondent to check all options that are valid, the number to the left of the option is the percentage of the respondents that checked it. Note that some percentages do not sum to 100 due to rounding error.

1) General Business Information:

These first few questions are designed to find out some general information about your business as well as your familiarity with the Worcester region.

a. *How many employees does your business have?*

37_ 0-10
20_ 11-25
9_ 26-50
12_ 51-100
21_ 101-1000
1_ Over 1000

b. *Which category best describes your business?*

1_ Biotechnology
9_ Distribution
23_ Finance/Investment
.5_ Government
13_ Health care
10_ Higher education
12_ Information technology
17_ Manufacturing
14_ Retail

c. *When was the last time your business looked into the possibility of a new location for either relocation or expansion?*

32_ Within the last year
24_ 1-5 years
6_ 6-10 years
11_ More than 10 years
26_ Never

d. *Is your business currently located in the Worcester region?*

73_ Yes ➔ Please skip to section 2.
27_ No

e. *Have you considered the Worcester region for your business location?*

41_ Yes
59_ No

f. *Do you have any customers in, or business relations with the Worcester region?*

62_ Yes
38_ No

2) *Economics*:

The following questions are to find out your perceptions of the economy in the Worcester region. Please answer all questions to the best of your knowledge for each.

a. *Rate your perception of the relative economy in Worcester as compared to other cities in the Northeast US of similar size.*

0	**11**	**63**	**15**	**.5**	**10**
1	2	3	4	5	don't know
most prosperous				least prosperous	

b. *Are you aware of any tax incentive programs in the Worcester region?*

27_ Yes
73_ No ➔ Please skip to 2d

c. *How accommodating to your business are the tax incentives offered in Worcester?*

5	**5**	**15**	**13**	**38**	**21**
1	2	3	4	5	don't know
most accommodating				not accommodating	

d. *In your opinion, how does Worcester's tax rate compare with that of other cities in the Northeast US of comparable size?*

12	**13**	**16**	**3**	**1**	**55**
1	2	3	4	5	don't know
extremely high				extremely low	

e. *Rate the cost of living in Worcester in comparison with other cities in the Northeast United States.*

0	**11**	**44**	**23**	**2**	**19**
1	2	3	4	5	don't know
most expensive				least expensive	

3) *Local Government*:

These questions are designed to evaluate the governmental involvement in businesses decisions.

a. *Are you politically active?*

27_ Yes
73_ No

b. *Do local governments assist your business in normal business activities?*

16_ Yes
84_ No

c. *Have or will local government affect your decision in a location?*

23_ Yes. Briefly explain how:______________________
______*See answers in Appendix F*___________
77_ No

d. *Please evaluate Worcester's governmental involvement with your business interactions.*

2_ Very helpful
10_ Helpful
9_ Not very helpful
9_ No help at all
70_ No interactions

4) ***Quality of Life*:**

For this section, we are trying to find out your general opinions of the quality of life in the region.

g. *Please rank, in order of importance, these aspects of quality of life, with 1 being the most important. Please do not use the same value more than once.*

4.63_ Culture
5.27_ Dining
6.20_ Shopping
5.81_ Entertainment
5.27_ Transportation
8.07_ Indoor Recreation
6.60_ Outdoor Recreation
1.98_ Education
3.14_ Crime rate
7.37_ Climate
____ Other: ___*See answers in Appendix F*____

h. *Rate the quality of life in the Worcester region.*

1	**32**	**41**	**17**	**.5**	**8**
1	2	3	4	5	don't know
highest quality				lowest quality	

i. *Do you feel that the Worcester region has a sufficient amount of opportunities for recreation, entertainment, and cultural events?*

3	**24**	**38**	**24**	**4**	**7**
1	2	3	4	5	don't know
abundance of activities				severely lacking	

j. *What types of schools would be influential to your location decision? Please check all that apply.*

20_ None
29_ Vocational/trade schools
29_ High-technology based institutes
21_ Liberal arts
43_ Business/management higher education
30_ Graduate Programs
38_ Public School Systems
___ Other: ___*See answers in Appendix F*___

k. *Please indicate how much you think that the Worcester region's educational institutions attract businesses to the area.*

3	**44**	**23**	**15**	**2**	**13**
1	2	3	4	5	don't know
highest attraction				no attraction	

l. *If not currently available, what new programs in higher education would you like to see in Worcester?*

___________*See answers in Appendix F*_____________________

____

5) ***Transportation:***

In this section you will be asked to answer a few questions about your company's transportation needs. This can involve the transfer of goods, or the transportation needs of employees and/or clients.

a. *Please check all modes of transportation that are necessary for your business' daily operations.*

22_ Bus
12_ Rail - Passenger
9_ Rail - Freight
24_ Air - Passenger
29_ Air - Freight
83_ Highway
.5_ Waterway

b. *Please rate the Worcester region's availability in each category of transportation. If you do not know, do not circle a value.*

	readily available-1	2	3	4	5-not available
Bus	**23**	**19**	**17**	**10**	**3**
Rail – Passenger	**10**	**12**	**18**	**22**	**.5**
Rail – Freight	**8**	**11**	**13**	**4**	**1**
Air – Passenger	**7**	**12**	**25**	**25**	**10**
Air – Freight	**12**	**10**	**15**	**13**	**3**
Highway	**44**	**40**	**4**	**3**	**.5**

6) *Location*:

The following questions are designed to determine how people view the location of the Worcester region. Your answers to the "rate" questions should be based upon your perception of the available space and other resources.

a. *In many cases, businesses prefer to locate near or among other, similar businesses, forming a cluster. Is this an important factor in your location choice?*

40_ Yes
60_ No. If no, please specify why not. ____________________
_________*See answers in Appendix F*___________
____

b. *Rate how capable you feel the Worcester region is at supporting these interdependent networks of businesses?*

0	**14**	**39**	**10**	**0**	**37**
1	2	3	4	5	don't know
most capable				not capable	

c. *Rate how much of an economic advantage the Worcester region's general location would be to your business.*

5	**27**	**34**	**9**	**7**	**18**
1	2	3	4	5	don't know
most advantageous				least advantageous	

7) *Technology*:

The purpose of this section is to determine perceptions of the technological capabilities present in the region. No knowledge of actual conditions is necessary; please base your answer on opinion.

a. *Which forms of technology are important for your business? Please rank them in order of importance, 1 being the most important, 5 being the least important. Please do not use the same value more than once.*

1.8_ Internet
3.4_ Intranet
3.4_ Cable networks
2.8_ Wireless communication
3.0_ Power grids

b. *How would you rate the availability of each of the Worcester region's types of technology? If you do not know, do not circle a value.*

	highly available-1	2	3	4	5-not available
Internet	**28**	**31**	**13**	**3**	**0**
Intranet	**13**	**15**	**13**	**3**	**.5**
Cable networks	**18**	**28**	**15**	**2**	**.5**
Wireless communication	**19**	**26**	**16**	**3**	**0**
Power grids	**14**	**28**	**12**	**.5**	**0**

8) ***Labor Market***:

The next two questions will ask your opinion on the work force in the region.

a. *How do you rate the skill level of the workforce in the Worcester region?*

3	**22**	**44**	**19**	**0**	**12**
1	2	3	4	5	don't know
highly skilled				unskilled	

b. *How do you rate the availability of skilled labor in the Worcester region?*

1	**14**	**40**	**28**	**4**	**12**
1	2	3	4	5	don't know
highly available				not available	

9) ***Overall Perception***:

This question is for the purpose of finding out which aspects of a location you deem to be most important.

a. *Taking into consideration all of the previous survey factors, rank in numerical order from 1 to 10 how important each factor is in determining your perception of a location. 1 being the most important, 10 being the least important. Please do not use the same number more than once.*

4.0_ Strength of economy
7.0_ Tax incentives
5.6_ Tax rates
8.5_ Local politics
4.4_ Quality of life
4.8_ Education
5.9_ Transportation
4.0_ Geographical location
5.8_ Technology
4.3_ Labor market

<u>Appendix E</u>:
Miscellaneous Charts and Tables Representing Survey Results

Response rate by business type

Business Type	Response Rate
Biotechnology	50%
Distribution	46.40%
Finance/Investment	50%
Government	33.30%
Health Care	26.90%
Higher Education	85.70%
Information Technology	26.60%
Manufacturing	35.70%
Retail	22.50%

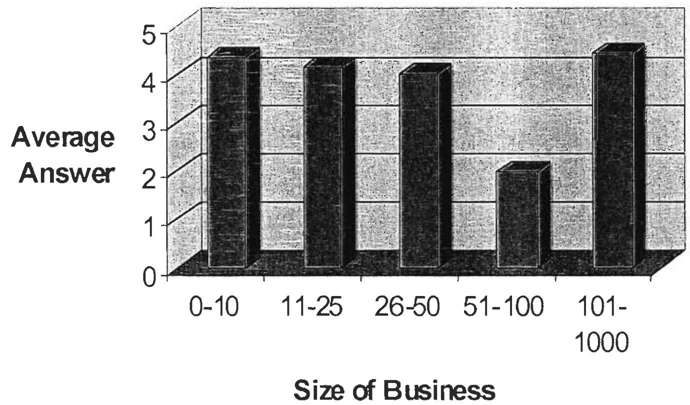
Answers to question 2d separated by Worcester zip codes.

Worcester Zip	0	1	2	3	4	5
01602	2	1	1	1	0	0
01603	2	2	0	2	1	0
01604	0	3	2	0	0	0
01605	4	1	0	0	0	0
01606	4	0	2	0	0	0
01608	4	2	1	1	0	0
01609	3	1	1	4	0	0
01610	0	2	1	0	0	0
01611	1	0	0	0	0	1

Answers to question 5b separated by business type.

Business Type	Bus	Rail-Passenger	Rail-Freight	Air-Passenger	Air-Freight	Highway
Biotechnology	1	1	1	3.5	2.5	1.5
Distribution	3	3.38	3.14	3.5	2.86	1.77
Finance/Investment	2.46	3.21	2.7	3.54	3.4	1.66
Government	1	1	1	3	3	1
Healthcare	2.46	3.42	3.13	3.5	3.3	1.93
Higher Education	2.09	3	2.33	3.1	2.6	1.23
Information Technology	2.27	2.75	3	3.13	2.63	1.67
Manufacturing	2.17	2.44	1.93	3.23	2.11	1.44
Retail	2.28	2.56	2.33	2.88	2.4	1.94

Answers to question 2c, separated by size of business



Answers to question 2e, separated by Worcester zip codes

Zip Code	Average Answer
01602	3.25
01603	3.29
01604	3.2
01605	2.75
01606	3
01608	3.25
01609	3.25
01610	3
01611	3.5
01653	4

Answers to question 3d, separated by business size

Business Size	Average Answer
0-10	3
11-25	3.17
26-50	2.67
51-100	3.4
101-1000	2.92
Over 1000	2

Answers to question 4b, separated by Worcester zip codes

Zip Code	Average Answer
01602	2.8
01603	2.57
01604	2.4
01605	3
01606	2.8
01608	2.44
01609	3
01610	3.25
01611	3
01653	2

Answers to question 6b, separated by Worcester zip codes

Zip Code	Average Answer
01602	3.67
01603	3
01604	3.6
01605	3.33
01606	3.2
01608	2.78
01609	3
01610	3.5
01611	2.5

*Answers to question 9a, separated by business types**

Business Type	Strength of Economy	Tax Incentives	Tax Rates	Local Politics	Quality of Life	Education	Transportation	Geographical Location	Technology	Labor Market
Biotechnology	5	4	1.5	8.5	5.5	5.5	8	1.5	5	3.5
Distribution	4.36	7.3	4.1	7.25	3.69	5.23	5	4.91	6.27	4.27
Finance/Investment	3.62	8.12	6.52	8.8	4.4	4.8	6.2	2.73	5.96	3.83
Government	7	10	6	9	5	2	3	4	8	1
Health Care	3.53	7	5.82	8	3.71	4.82	5.47	4	6.71	5.59
Higher Education	1.5	8.3	7.4	8.6	2.9	1.73	7	3.4	8.18	5
Information Technology	5	5.71	5.64	9.38	6.05	4.2	6.33	5.36	2.67	4.14
Manufacturing	5.13	6.83	5.21	8.83	4.25	5.87	5.29	4.83	5.52	3.52
Retail	2.47	5.76	5.06	8	5	5.46	6.19	3.71	7.31	4.82

*NOTE: These values are averages, from a scale of 1 to 10, 1 being the best

Appendix F:
Open-Ended Survey Responses

Free responses to "yes" answer to #3c asking, "*Have or will local government affect your decision in a location?*"

- Work with local authorities, event planning
- Zoning
- Cooperative in a concrete way
- Encouraged move to St. V's
- Taxes and regulations
- Zoning, contracts
- Tax incentives
- Building permits
- Planning building cooperation and attitude towards business
- Zoning
- Being tax friendly, strong employment base, well educated population
- Cost of business fees, taxes
- Taxes and facilities and labor
- Business/tax incentives
- Recruitment vs. Retention
- Restrictions on locations
- Needs to be geographically aesthetic
- Tax rate
- Holden- Wach St Reservation
- Tax rate and services
- Licensing authorities cooperative
- Tax and infrastructure
- Taxation
- Being tax friendly, strong employment, base, well educated population
- I need people to travel into area to increase business
- Taxation

#4a, "*Please rank, in order of importance, these aspects of quality of life, with 1 being the most important.*" These are the responses listed as "Other":

- Medical Services
- Housing
- Highways
- Family
- Housing
- Skiing 20 Mi. average
- To be around family
- Medical services

#4d, "*What types of schools would be influential to your location decision?*" These are the responses listed as "Other":

- Private grade school
- Special needs prgm
- Nursing

- Private schools k-12
- Abundance of colleges
- Prep
- A job in higher education as this is my field

#4f, *"If not currently available, what new programs in higher education would you like to see in Worcester?"*
- Better vocational schools
- More nursing LPN or RN
- Dental- we tend to spread out and not be next door to the competition
- Don't want similar competition
- Involve students with the city such as tutoring local youth for academic credit. More internships in all kinds of local business, professional and governmental endeavor. Set up an office in the proposed arts district downtown for a citywide college student council to coordinate recreational programs and community service projects so as to get students together from all of the schools and into the town.
- More continuing education programs in the high-tech field, higher quality graduate programs, better educational programs for existing undergraduates in the internet and entrepreneurship fields.
- A LAW SCHOOL!!!!!
- Business law
- I think the issue is more adequate knowledge of what we have
- Life science certification programs
- No new programs- Insure quality of existing ones.
- Adult education for parishes
- Business management
- I don't know what is available
- Languages- history- art- geography (extensive teaching mandatory)
- Financial planning
- Continuing education for professionals
- Interpersonal communications/understanding others in business
- Financial planning
- Continuing education for professionals

#6a"*Is clustering an important factor in your locations choice?"*
- Don't need
- Less competition
- Service provider
- Similar businesses create competition. Why cluster with your competition?
- Self sufficient
- Our business has been established for over 20 years
- Customers need the products I sell... convenience is appreciated
- Better location to beat out our competitors
- It does not affect our revenue

- Not retail
- Less competition if I locate away
- We do not need to be located near other banks to be successful, as long as we are locate in an area that is visible, and easy to access for the public
- We do research in an industry where there is very little of it in New England.
- We go to public school classrooms.
- Not an industry that this occurs.
- We are a consulting business and travel to the clients.
- Do everything via UPS
- I like a private store
- The lower in the area the better
- Need to be in area but not clustered
- Creates competition for recruitment efforts
- No need
- I draw business from the whole county. Similar business would hurt me.
- Would create increased competition
- We deliver heating oil to houses
- Bank
- Wholesale distribution- National
- Office wholesaler- Telephone sales- Location not important
- We are a sales organization not manufacturing
- CPA firm providing services to other businesses- Don't want additional competition
- Closeness would not give options to people
- Business is a residential community for elders
- Not applicable to our distribution business
- Prefer to locate near customers
- Do not rely on similar industries
- Human services
- Banking field do not need other banks close by
- The industry is so small, not even really an option
- We don't do to much local business
- We're a destination business not an impulse business (optical retail)
- Our customer base national with very few local sales
- Our suppliers are diverse and our customer international
- We sell to 50 states- not Worcester
- Not a retail business
- Competition is not an issue. We feel there is sufficient market to survive and prosper
- We are not dependant on other companies in order to transact our business
- Prefer not to locate near competitors
- Ease of access
- Increased competition
- Competition
- Not enough active clients for competition

- Our business is not one in which we need others. Our customer base is scattered throughout the USA
- No advantage to a cluster
- Do everything via UPS
- We are a consulting business and travel to the clients
- N/A
- No advantage to cluster

Comments
- I chose my location because it is central to my New England region that I service
- Tax rate for commercial is too high. Gov't (local) is not as supportive of businesses as it could be. Too much "red tape," regulations, permits, etc. Local gov't too slow in making anything happen.
- My company is very dependent on the health of the Worcester region as you've defined it. I suggest that the region be broadened.

Appendix G:
Interview Summaries

First Interview- Kevin O'Sullivan

Interviewee Background:

The interviewee is a CEO for Massachusetts Biomedical Initiatives (MBI). MBI invites various biotechnology and health care firms into business clusters located in the Boston-Worcester corridor. As the CEO, the interviewee is the head marketer and representative of many biotechnology firms locating in and around the Worcester region.

Relocation of MBI:

The main branch of MBI has currently relocated its offices to St. Vincent's Hospital in Worcester. The location choice was made based upon location, tax incentives, and political assistance. Locating at St. Vincent's provided for centralization among the various biotechnology firms located in and around the city. The City of Worcester encouraged the move and offered Tax Increment Financing (TIF) to the business.

Positive Perceptions that Sell Worcester:

1) Quality of Life: Considering location, education, culture, and entertainment as the most important factors determining quality of life, the interviewee determines this as being a selling point for Worcester and the surrounding communities. He stresses the convenience of being located in an area that is within a short distance from Boston, Providence, Hartford, Springfield, and Manchester, NH. Also, the convenience of having WPI, UMass medical schools, and various vocational schools in Worcester pleases many biotechnology businesses. Lastly, many

qualified employees enjoy the life in Worcester, because both cultural and entertainment opportunities are plentiful.

2) Advanced Technology: The internet, intranet, wireless communication, and power grid infrastructures are all technological bases that are required for every day business within biotechnology firms. The interviewee sells these as being available and relatively cheap for the Worcester region. He has not received any substantial complaints in relation to technology from recently located firms.

3) Transportation: The abundance of various highways and railways leading to Worcester provide for easy freight and passenger access to the businesses. The region's proximity to the I-495 belt is viewed as a positive from biotechnology businesses. Since recent urban sprawl from Boston has been focused near I-495 and biotech firms have been of large demand in New England, the interviewee believes that the Worcester region should sell itself as being a bookend of this sprawl. Considering the recent business growth near the intersections of Interstate 495, the Massachusetts Turnpike, and Route 9, the city of Worcester can only better its image by calling itself the western most point of the MetroWest corridor. Although the airways leading out of Worcester are not advanced enough for all biotechnology demands, the train freight system allows the various businesses to send and receive goods from airports in other New England cities.

4) <u>Local Government and Public Facilities</u>: As of recent, the local government and public facilities have been of great assistance to several new biotechnology and biomedical companies in Worcester. The government has actually helped MBI in enticing various biological and health care facilities to come to the city. The police chief, fire department, and Executive Office for Economic Development are three city departments that are complimented for their responsiveness to various firms.

The Major Weakness for Worcester- Cost of Locating:

As a marketer of biotechnology and biomedical businesses, the interviewee notes the one quality that often detracts these firms is the overall cost of locating in the Worcester region. In comparison to other metropolitan regions, this region costs more. The cost of land, development, renovations, employee housing, and taxes are all considered as being unreasonably high. Two suggestions were given as possible solutions to this regional weakness:

1) Give more tax incentives or TIF opportunities to businesses that are expanding or renovating.

2) The City of Worcester should become more involved with the Boston metropolitan region. Cooperation between the Boston and Worcester economies will provide for a larger economic base in the Worcester region;

therefore, the city does not have to charge individual businesses as much money as they are now.

Second Interview-

In order to break the ice in the interview, we first gave Abramoff a copy of the survey to fill out. We informed him that he could take the survey, and then add additional comments to explain the rating that he gave to each section. The following is a summary of the answers that Abramoff gave on the survey, as well as the explanations that he gave.

Abramoff is the president of Tatnuck Bookseller and Sons, a retail business that sells books and has a restaurant connected to one of its stores. Abramoff said that his business is always looking for new places to expand to, recently becoming the bookseller for a few more of the region's colleges and universities.

Since the business is located in Worcester, Abramoff is aware of the tax incentives that are present, but do not believe they are very accommodating to his business at all. He also feels that the tax rate in Worcester is extremely high. Yet, he explained a little more about the taxes at this point. He stated that he would not mind the high tax rate, as long as there is a "return on investment" to go along with the high taxes. He explained that his main store and restaurant is located in an obsolete building in a poor location. Throughout the interior of the building, there are many exposed beams, which would make it difficult for any other business to utilize the building. He feels that this should be something that the Worcester government takes note of, and could possibly provide a tax incentive program for the bad building/location. If he were able to do enough business to counter-act the high taxes, this would not be an issue.

He says that government would definitely affect his decision, but they would need to be cooperative in a concrete way. In other words, they would need to do a little more than just say that they will help him out, as he believes the Worcester government does.

Abramoff believes that the quality of life in Worcester is average, compared to other cities in the Northeast US of similar size. He bases this view of quality of life on education, dining, shopping, culture, transportation, and crime rate, ranked in this order of importance. He believes that the many educational institutions in Worcester are an attraction for businesses that might locate in Worcester.

Of all of the modes of transportation, he believes that every one is well below par in Worcester. He is not aware of the strength of freight services via air or rail, since most of his customers are within Worcester.

Yet, even with the great schools and institutions in Worcester, Abramoff believes that the skill level of the workforce in Worcester is fairly unskilled. Also, he believes that skilled workers are not available in Worcester.

After finishing the survey, we asked Abramoff to explain a little more about his view of the taxes and government of Worcester. He explained about the tax rates, which we have already covered on the previous page, and talked about the government's lack of planning, as he sees it. He said that his perception is that the government does not have any concrete plans of action. He stated that it has been very hard to get the government to help out his business in the past. It still is difficult, but he believes that everything might be changing.

For the past 4 years, there has been a vote to lower business taxes. Even though this has never been passed, it still shows that there is some desire to lower the taxes.

Also, he has seen that the health and business code system has been improved. In the past, Tatnuck Bookseller and Sons has had difficulty getting their buildings inspected.

Yet, recently, the inspectors have been willing to come and do the inspection on the weekends, something that would be unheard of a couple of years ago.

So, in conclusion, while Abramoff sees that things are changing in Worcester, he believes that the government lacks a concrete plan to take them through the change.

Third Interview-

To start out this interview, we gave Trifari a copy of the survey and had her fill it out. Her response to the survey has been included in our results. After she finished the survey, we asked her a few questions about her businesses specific move to Worcester.

She stated that the bank started up fairly recently. The commonwealth bank on Waldo St. is the only one in Worcester, and the US, although it does have plans for expansion. It will need to get established in the area before it thinks about expansion.

The outline to the conversation that was had with Trifari is best explained in the survey that she filled out. Her results have been joined into the pool of other responses. Basically, Trifari believes that Worcester has a fairly strong economy. She does not believe that the taxes are extremely high in the area, as some of the survey respondents have stated.

Trifari stated that local government can affect her choice in a business location, as zoning and permitting are a very important part of locating a business. She said that the Worcester government has been helpful with Commonwealth's recent location, since they got the permit for their building without too many hassles.

Like a majority of the respondents that answered the surveys, Trifari believes that the quality of life is average, when compared to other cities in the Northeastern US. She also believes that Worcester is average in the amount of opportunities that it has for recreation, entertainment, and cultural events, which is a better rating then many of the other survey respondents gave.

Trifari also agrees that the educational institutions in Worcester are a very nice selling point to the city. The many colleges and universities make the city very attractive to incoming businesses, as well as the ones that are already located here.

Being a bank, Trifari stated that the only form of transportation that they would need would be highways, since that would be the way that employees would get to work. When asked to rate the highways in Worcester, Trifari gave it a "2" rating, which is good. She also stated that she believed that the air travel for passengers was average, and the passenger rail was not very good.

Lastly, Trifari stated she believes that the labor market is average. She believes that both the availability and sill level of the workforce are just that, average. Even with the abundance of colleges, she still believes that these values are average.

Appendix H:
Survey Information from Other New England Cities

In order to provide a basis for future studies, we surveyed several businesses from other cities in New England. The future studies should obviously have a larger sampling in order to provide accurate results. Listed below are some of the interesting results that we received from our limited sampling:

Hartford, Connecticut-

1) Distribution Firm: Overall, we have noted that this business does not know much about the Worcester region. Although they are unaware of the tax incentives offered in Worcester, they have perceived the overall tax rate and cost of living as being very high as compared to other cities in New England. Also, they have perceived that the transportation resources are low in availability, specifically noting that all other cities in New England have more efficient transportation systems for freight. All other survey entries were inconclusive.

2) Finance: This larger scale bank (101-1000 employees) has particularly noted that they do have business relations with Worcester; therefore, their perceptions may be fairly accurate as compared to the previous distribution firm. They have positive perceptions of the quality of life in Worcester, particularly noting that education resources are abundant in the region. However, they rate the airport and tax rates as being poor. The rest of the survey's ratings and perceptions were average; however, we have particularly noticed that the overall economy is this firm's main factor in determining their overall perception of a region (note that they perceived tax rates as being poor).

Boston, Massachusetts-

1) State Government: Since we have learned that the City is interested in inviting a branch of the State Government to Worcester, we have documented some perceptions from an executive at the State's Economic Development offices. The respondent noted that the department is obviously aware of the tax incentives offered throughout the Worcester Region, but elected not to comment on whether they are accommodating. He perceives the tax rates, transportation resources, and quality of life as being adequate for the region (respondent gave "average" responses). These perceptions are particularly important to document, because the firm rated overall economy, quality of life, and transportation as being the most important factors in determining their overall perceptions.

Springfield, Massachusetts-

1) Health Care: This particular respondent evidently had little time and concerns when completing the survey. All that they documented was their negative perceptions of the air transportation in Worcester and their determining factors for overall perception. Since they rated transportation as being the most important factor in developing their perception of a region, we have concluded that they probably have a negative view of Worcester.

Providence, Rhode Island-

1) Higher Education: This respondent, a member of the President's Office at Johnson & Wales University, has been singled out for a survey response, because

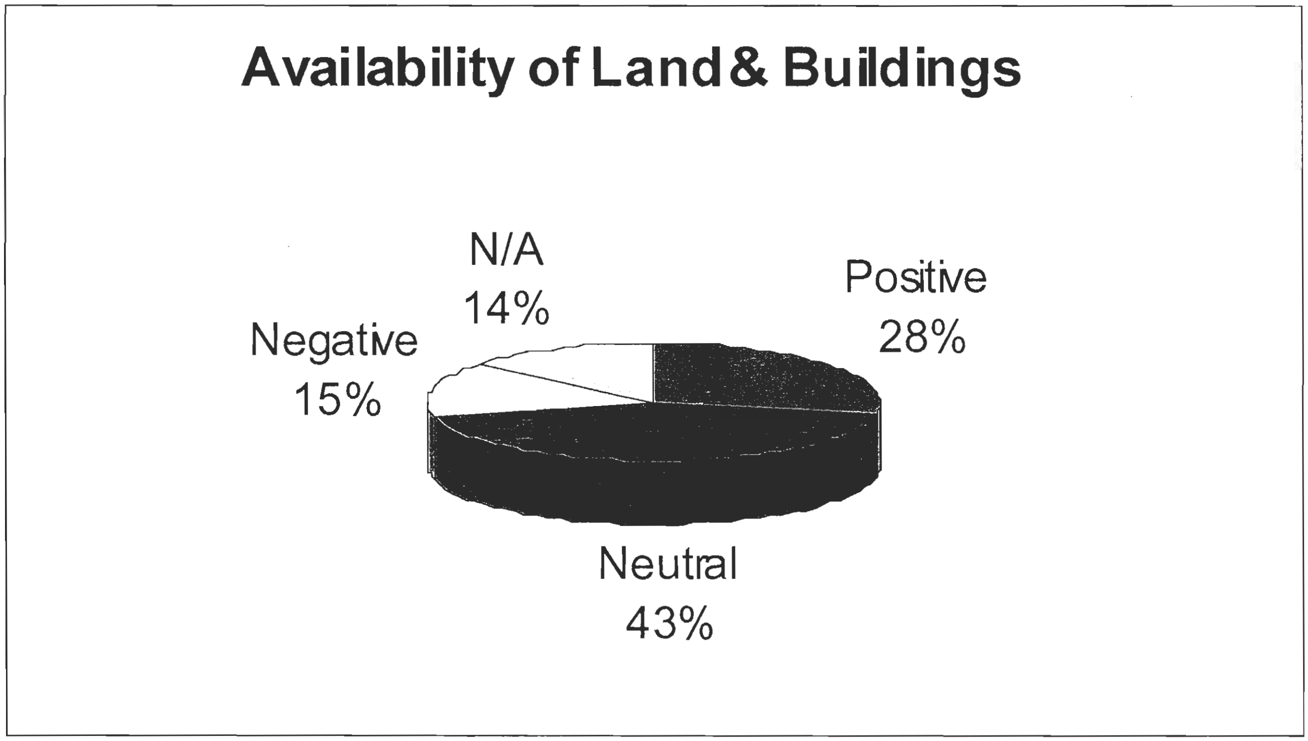
Susan Black noted in September, that Worcester would be most interested in inviting a branch of their law school to the City. However, the respondent does not have a positive perception of the region. They rated the air and rail transportation as being inadequate; although, highways were given an average rating. The quality of life factors, including education, were rated as below average for the region. Furthermore, these perceptions are important to note, because the respondent has documented quality of life, education, and transportation as the three most important factors in determining their perceptions of any area.

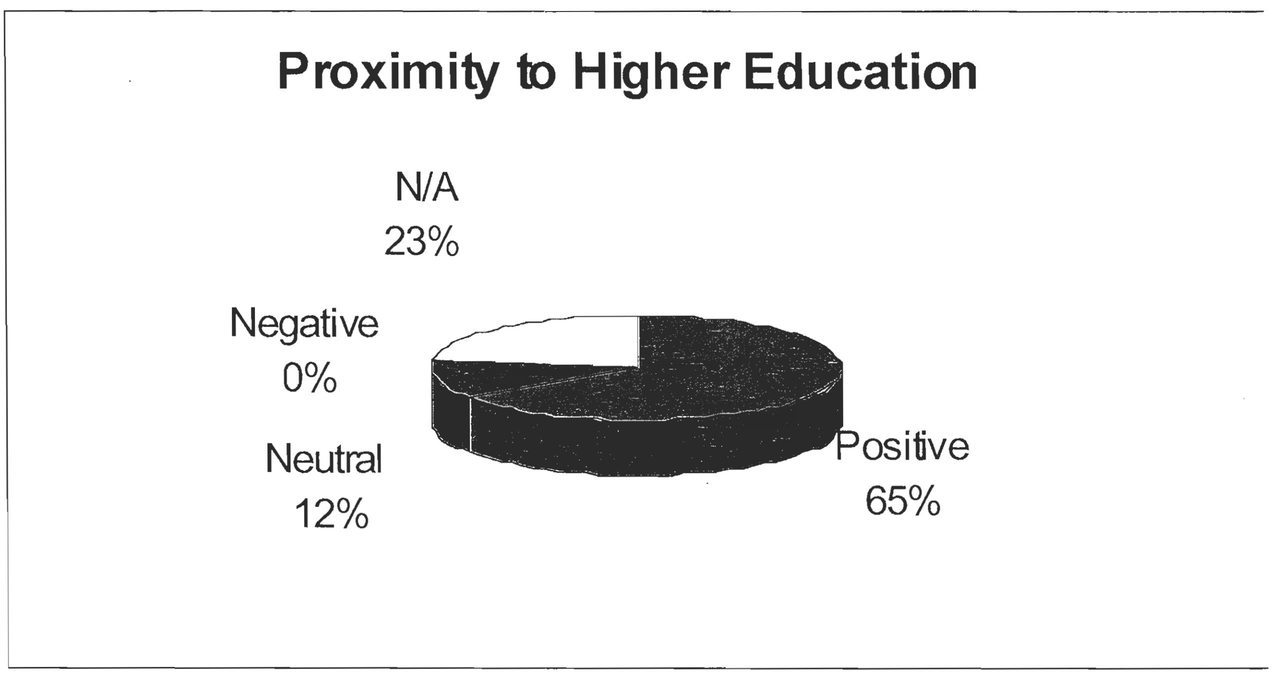
2) Information Technology: As opposed to most respondents from other cities, the Information Technology representative from Providence knew Worcester well and gave many positive perceptions. Since he took the time to document many open responses, we have concluded that his perceptions were well thought out. The responses gave positive perceptions for the taxes (low), tax incentives (accommodating), quality of life (very high), and transportation resources (very abundant for all but air transport). However, he has noted that the Worcester region would need more skilled labor in InfoTech fields before he would decide to move his business into the region.

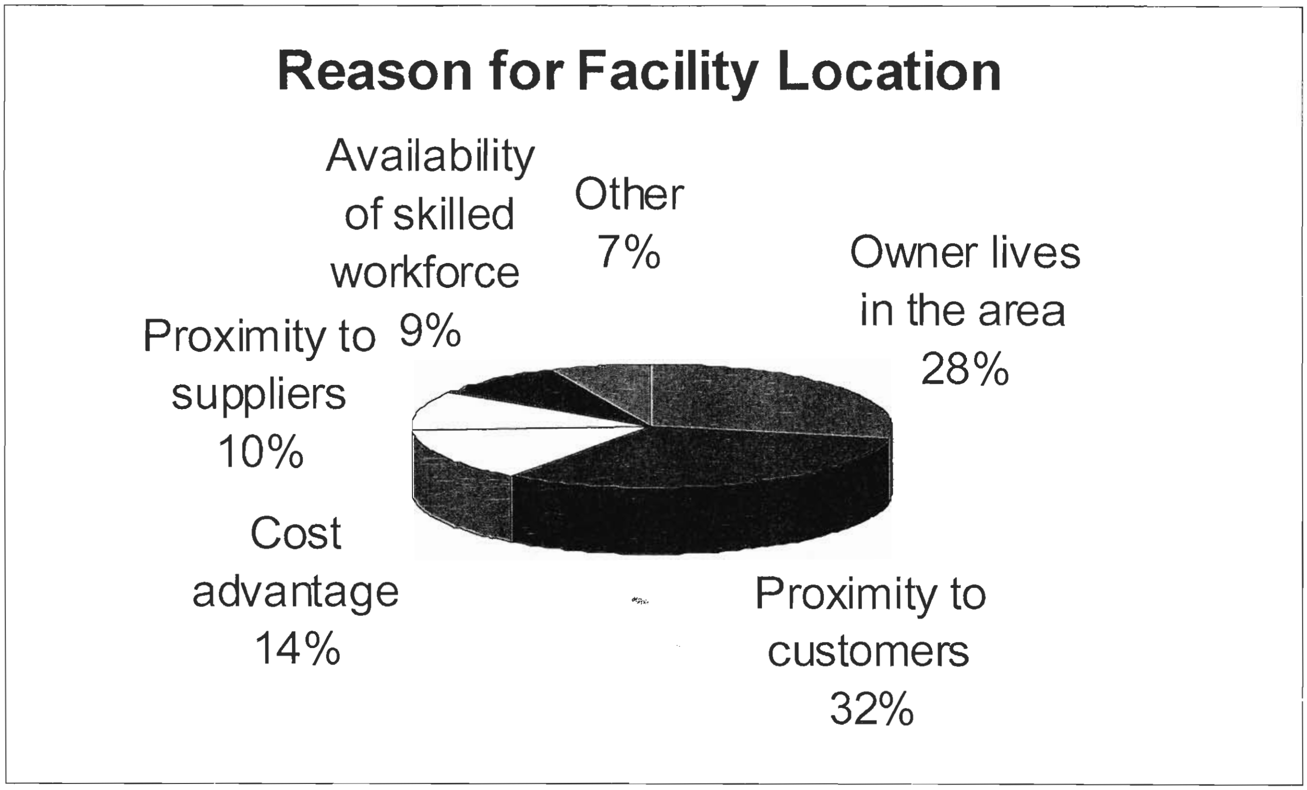
Conclusive Remarks:

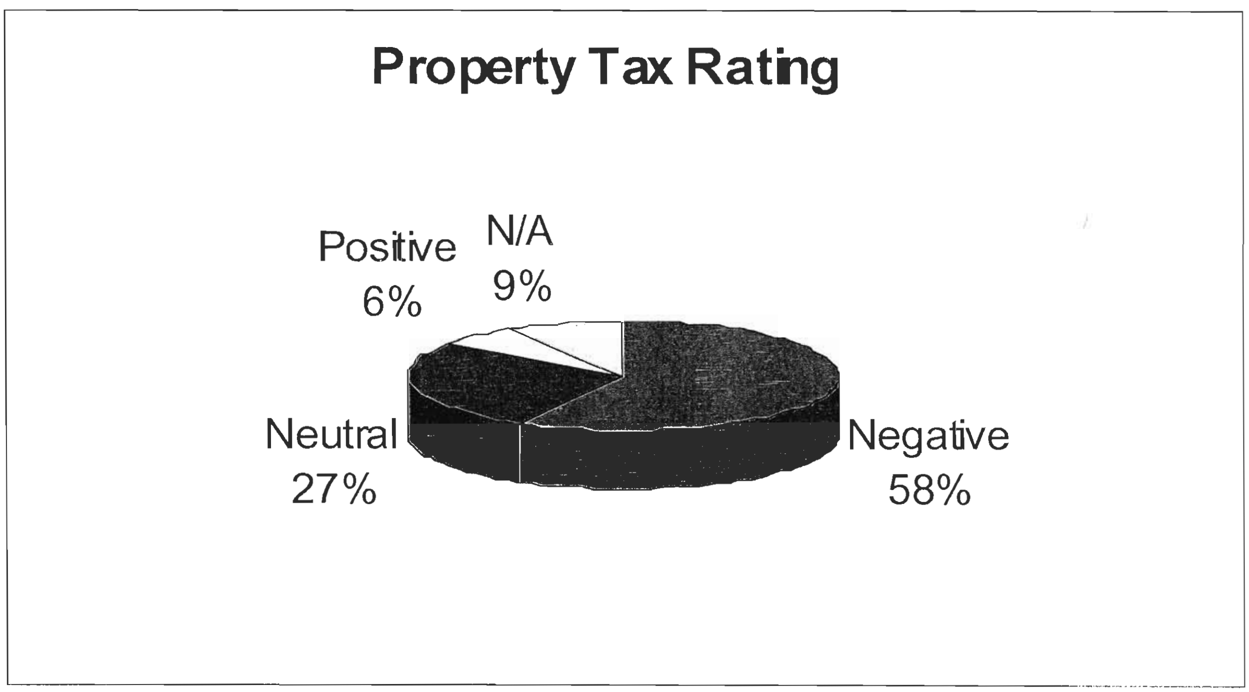
We have been discouraged by the lack of interest given by firms in these neighboring New England cities. Of the 15 contacts that we made, only 6 took the time to fill out the survey. Furthermore, all but two of those who did fill it out evidently took little time and effort in doing so. For future research, we suggest that the research groups focus their project goals on finding perceptions from only one city at a time. Also, the researchers should offer benefits to survey respondents, such as reasoning as to why the survey is beneficial to their business or actually giving physical rewards. In order to get a high response rate and sufficient responses, the costs of filling out the survey (time and effort)1 must be outweighed by the benefits.

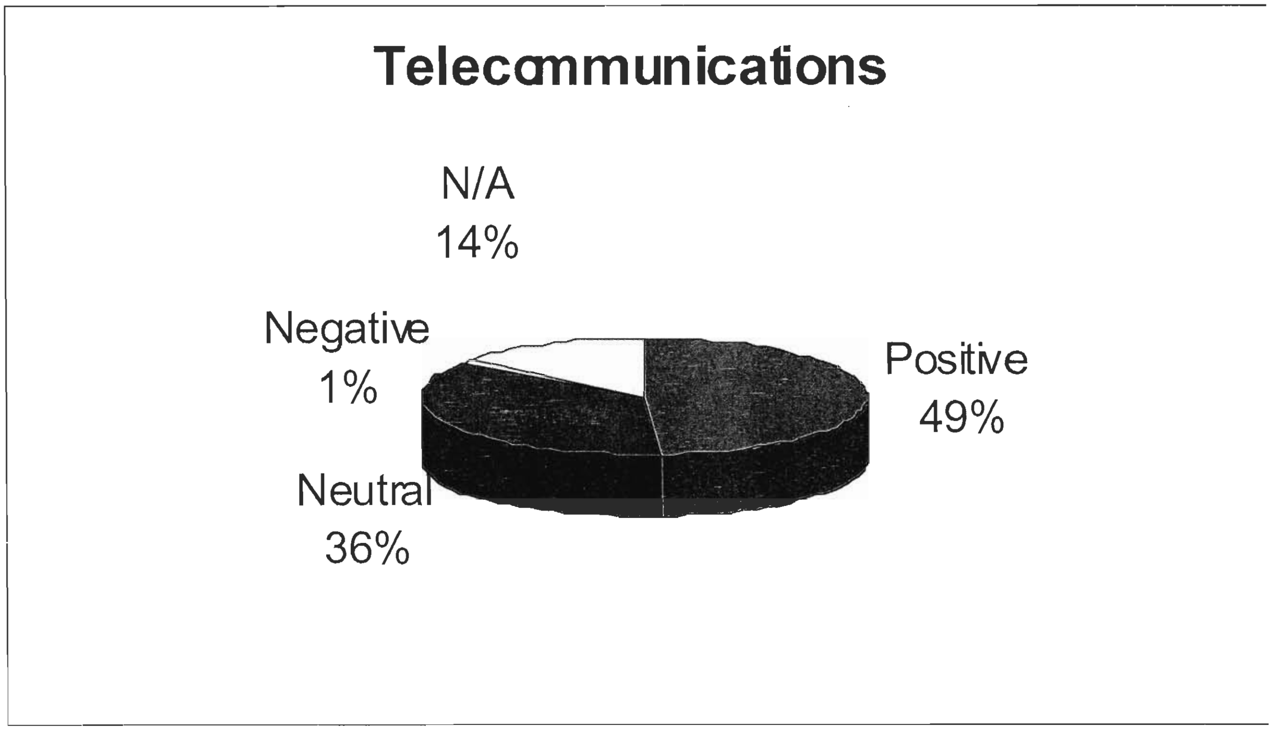
Appendix I:
Selected Charts Representing Perceptions From the "Business Retention And Attraction Strategies" Report (City Manager's Executive Office, 1996)

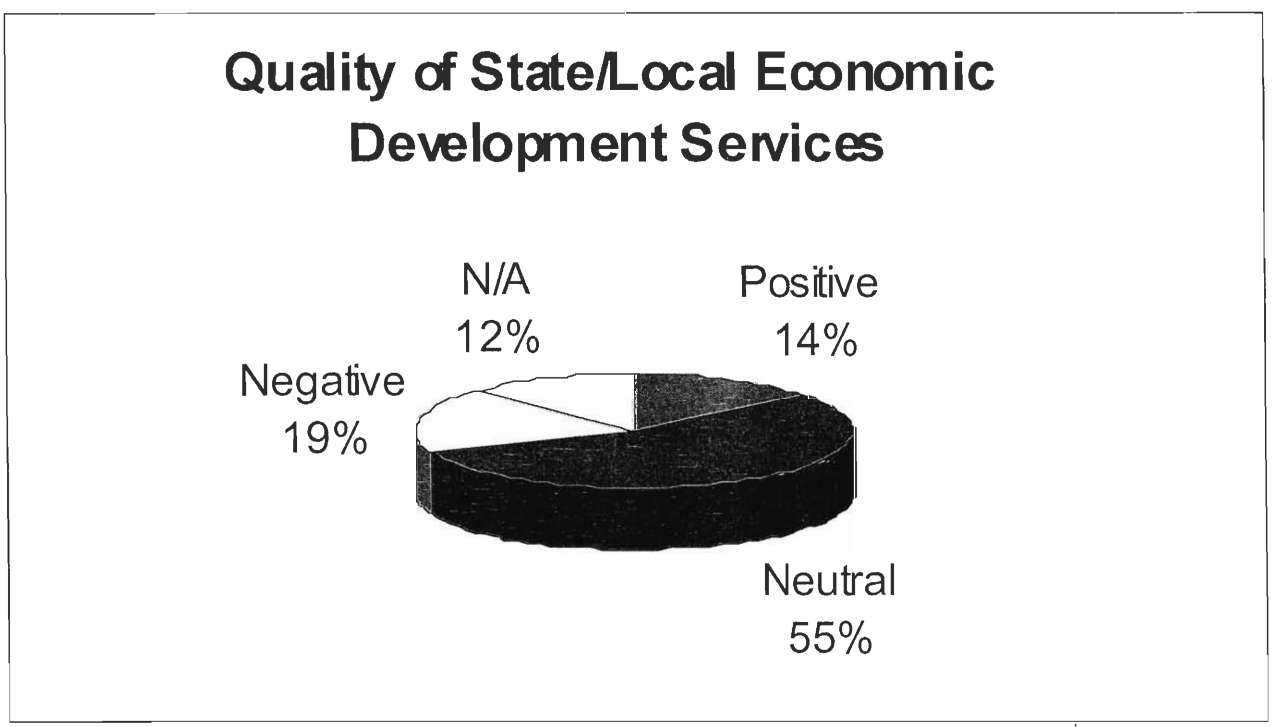

Availability of Land & Buildings
N/A
14%
Positive
28%
Negative
15%
Neutral
43%

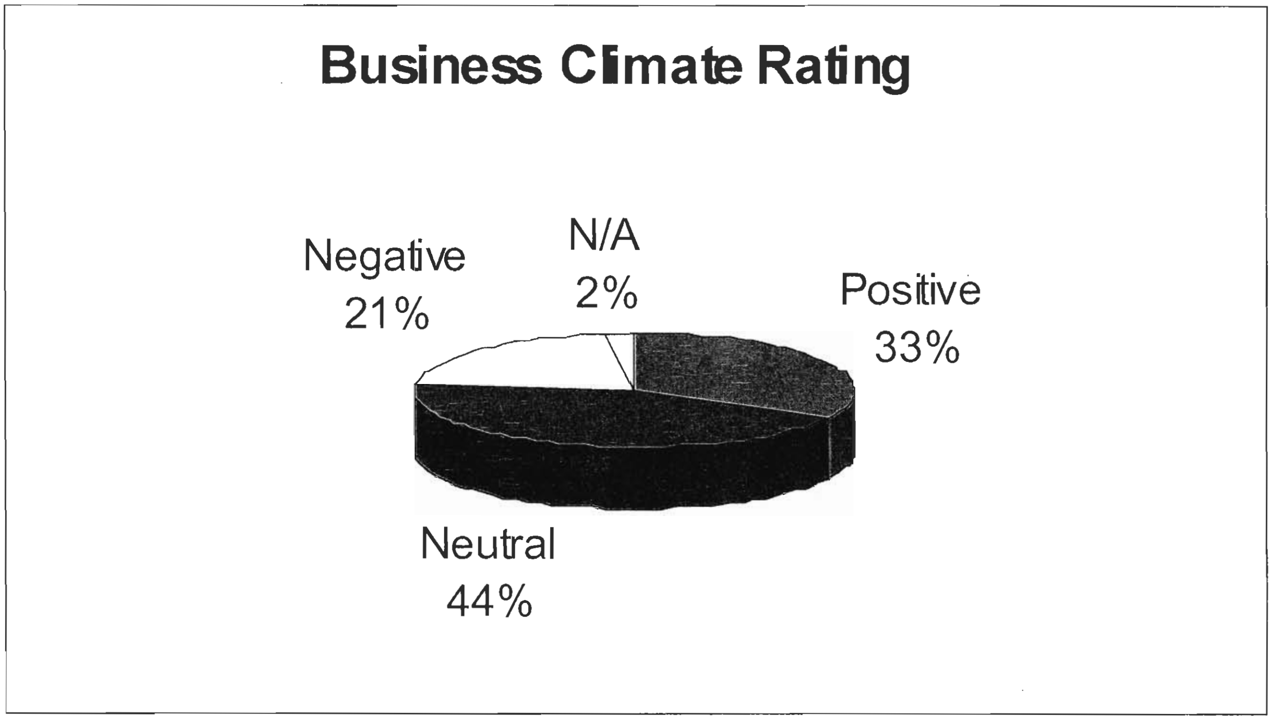

Proximity to Higher Education
N/A
23%
Negative
0%
Neutral
12%
Positive
65%

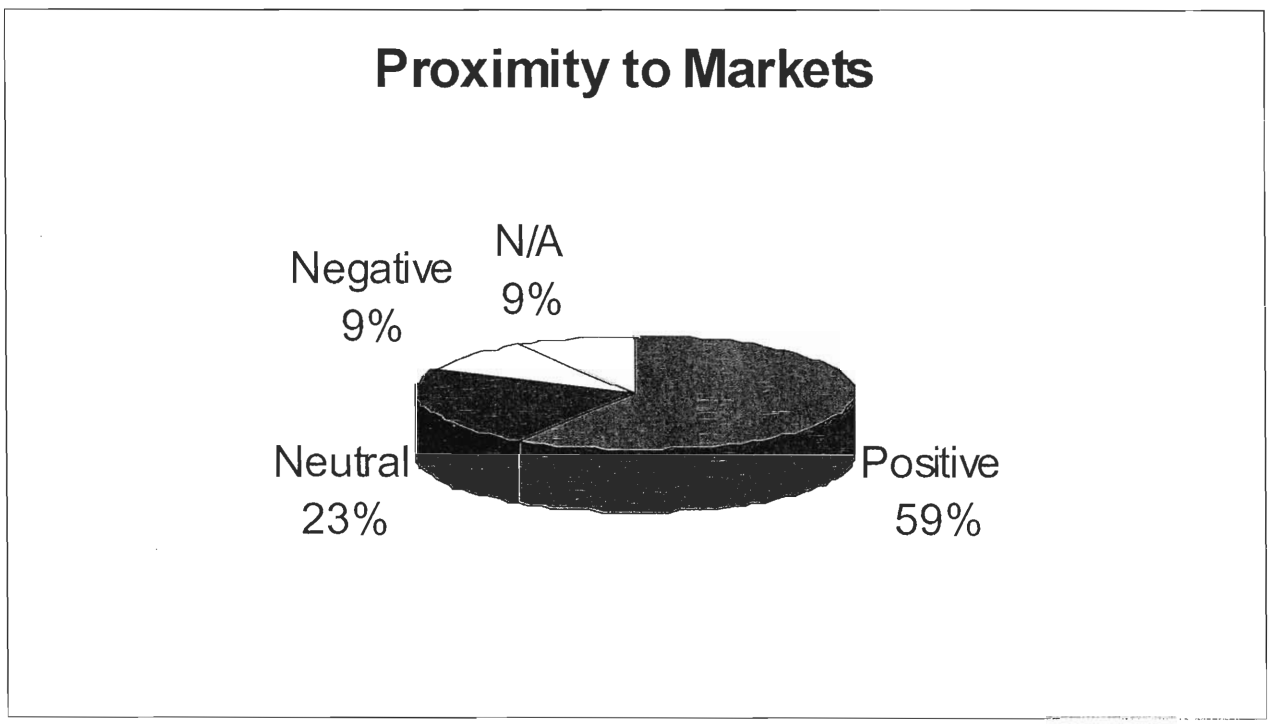

Reason for Facility Location
Availability of skilled workforce 9%
Other 7%
Owner lives in the area 28%
Proximity to suppliers 10%
Cost advantage 14%
Proximity to customers 32%

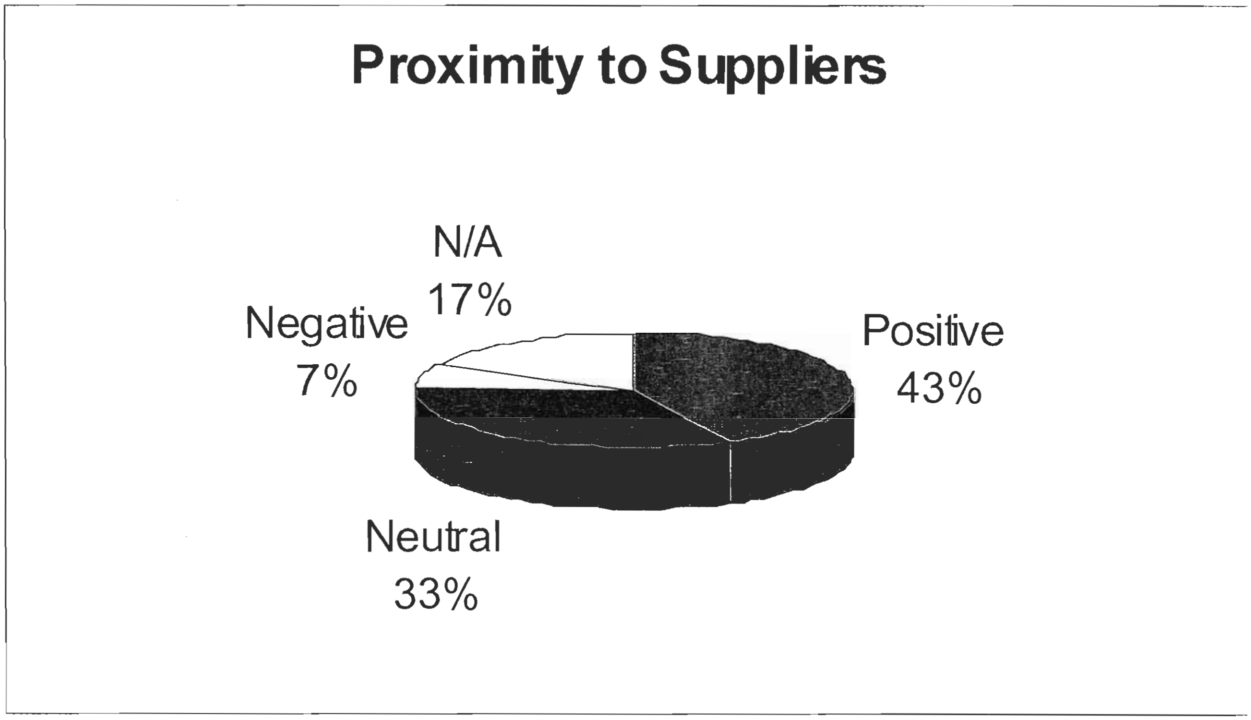

Property Tax Rating
Positive 6%
N/A 9%
Neutral 27%
Negative 58%

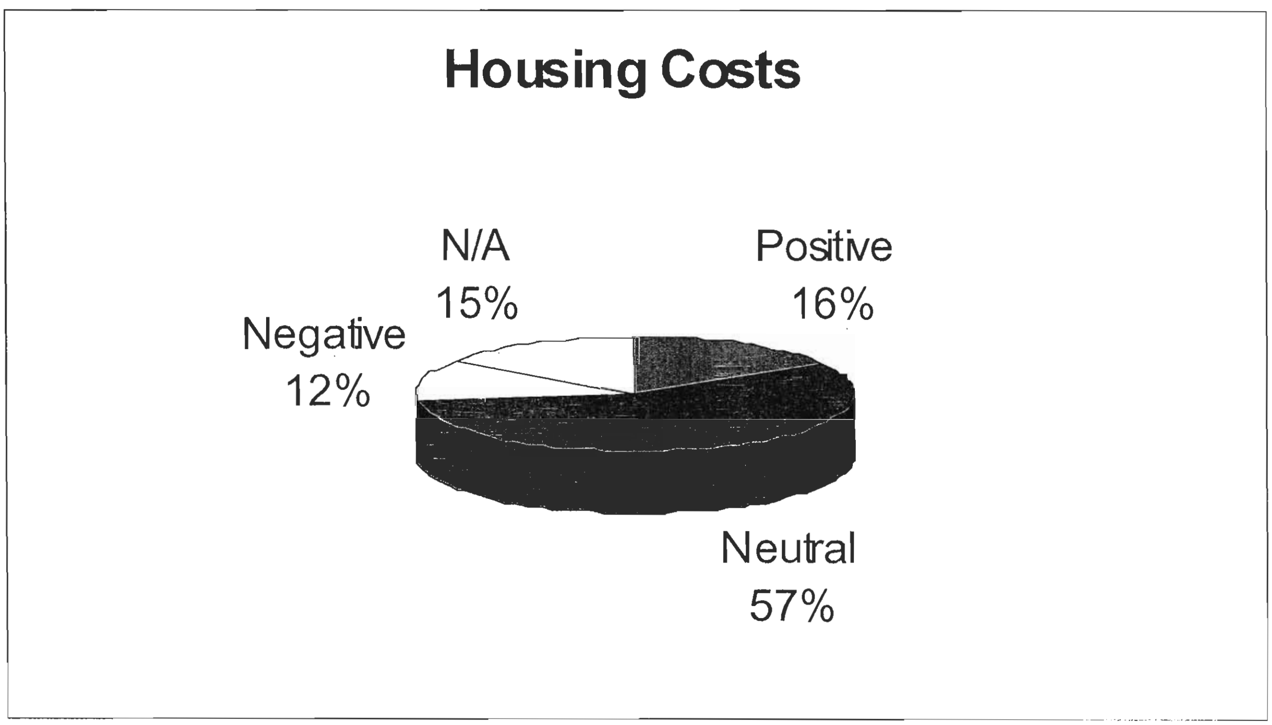

Telecommunications
N/A
14%
Negative
1%
Positive
49%
Neutral
36%


Quality of State/Local Economic
Development Services
N/A
12%
Positive
14%
Negative
19%
Neutral
55%


Business Climate Rating
Negative
21%
N/A
2%
Positive
33%
Neutral
44%


Proximity to Markets
Negative
9%
N/A
9%
Neutral
23%
Positive
59%


Proximity to Suppliers
N/A
17%
Negative
7%
Positive
43%
Neutral
33%


Housing Costs
N/A
15%
Positive
16%
Negative
12%
Neutral
57%

<u>Appendix J</u>:
Project Expenditures

Printing Surveys:

100 Duplications of Survey with Cover Page and Cover Letter
PrintSource...**$160.65**

Mailing Surveys:

Sending Envelopes, Stamped Return Envelopes, and Postage
Mail Boxes Etc...**$41.23**

Learning Accessories:

Book for Learning **Microsoft Access** *Databases*
Media Play..**$18.00**

Office Supplies:

Splitter for Phone Line
Radio Shack...**$6.81**

Printing and Binding Report:

Producing 10 Formally Written Reports
PrintSource.....................................**(estimated) $100.00**

Total: ***$326.69***

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