The Economic Impact of The ZOO on the Northwest Florida Regional Economy

Final Report

Commissioned by: The Gulf Coast Zoological Society
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Executive Summary

The ZOO in Gulf Breeze has a considerable economic impact on the Northwest Florida region. The existence of The ZOO provides not only quantifiable economic impacts on the region but it also provides numerous educational and cultural services that are beneficial to the area but difficult to measure in dollar terms. This report identifies the spending activities that would not occur in the region were it not for the presence of The ZOO. These estimates capture the local economic impact generated by The ZOO's operating and capital budget, spending of wages paid to ZOO employees, and expenditures of ZOO visitors who come into the area from outside the Northwest Florida region. Standard multiplier techniques have been applied to these data to estimate the overall magnitude of the economic impact that The ZOO exerts on the various sectors of the local economy, and to trace the relative impact on each industry sector.

The primary characteristics that differentiate the out-of-area tourist that visits The ZOO from the tourist that does not, are that the ZOO visitor stays in the area longer and sees more attractions; The ZOO visitor visits the area more often; and The ZOO visitor spends more money while here. These characteristics make the ZOO visitor a valuable market segment from an economic impact point of view.

Basic findings of this study are that when The ZOO's operating budget outlays are combined with the spending of out-of-area visitors, The ZOO in Gulf Breeze:

- has an overall economic impact of approximately $6.5 million in spending generated each year in the Northwest Florida economy;
- directly or indirectly supports approximately 99 jobs in the area;
- supports local household incomes of approximately $2.55 million across a variety of industry sectors;
- generates state and local tax revenues of over $300,000 annually.

This study *underestimates* the full economic impact of The ZOO, as it does not measure the impact of many of the educational, professional, or cultural benefits that are available to the region due to the local presence of The ZOO. In addition to the quantifiable economic impact associated with The ZOO, there are also numerous intangible benefits. These benefits include the contribution that The ZOO makes as an educational institution for children and adults alike in ways unattainable in the traditional classroom environment. The ZOO is at once a living laboratory, science center, botanical garden and wildlife preserve. Its programs appeal to every imaginable group while fostering an increased knowledge, awareness and appreciation for the natural world. Moreover, The ZOO's association with Pensacola Junior College and The University of West Florida provide these institutions with internship and job opportunities, as well as a variety of opportunities to conduct applied research and to enhance student educational experiences.

The ZOO and ZOO staff actively share in activities and support the Symphony, Opera, Little Theatre, Interstate Fair and many other community activities in Northwest Florida. The ZOO contributes over $30,000 annually to our community's charities, civic clubs, and other local groups. It also serves as an important community builder through outreach programs that enrich our hospitals, churches, schools, and other community endeavors. One example is the animal assisted therapy program where trained zoo staff members conduct sessions at local mental health facilities that unite zoo animals with developmentally delayed and behaviorally challenged youth. The goal of the therapy is to utilize a wide variety of zoo animals as therapeutic facilitators for the clients, while at the same time providing enrichment to the animals.

In addition to its regional and local school conservation education programs, The ZOO is actively involved in a number of international efforts to conserve endangered species, prevent illegal poaching of animals, preserve rare plant life and other programs that are making a difference in the world.

In an era in which communities are actively seeking a highly skilled workforce to fill jobs in the "new economy" industries, the ability to attract and retain skilled workers is becoming a major issue. The ZOO contributes to an increasingly important factor in business location decisions: cultural amenities and quality of life. A plethora of professional, social, and cultural events would not occur in the area without the support and direction of The Zoo. These events enhance our community's image, draw tourists into the area, and by making the area more attractive they encourage new private investment. Each of these contributions has a significant but difficult to measure economic impact on the regional economy, which was not included in this analysis.

Current ZOO plans include the development of a Master Plan identifying a number of new exhibits as well as a Conservation and Science Learning Center operated in partnership with regional school districts and other agencies. This Master Plan may include portions of an 80 acre property adjacent to The ZOO which is owned by the City of Gulf Breeze. The proposed $3-5 million Master Plan would represent a substantial increase in capital investment, which could produce a corresponding increase in attendance. We estimate that the increased value resulting from this investment, combined with the forecast increases in population and tourism could increase ZOO attendance from its current level of 142,278 visitors a year to between 261,000 and 274,000 visitors annually in 2009.

By examining The ZOO's many dimensions, this report documents its role as an economic engine for the community—generating jobs for its residents, markets for its businesses, education and recreation for its citizens, and, in the process, making the Pensacola area an even better place to live.

The report begins by introducing the definitions, concepts, and scope of this regional economic impact analysis. We then describe the local economy to emphasize the economic importance of tourism to the Pensacola region. Then, we illustrate the characteristics of a ZOO visitor that determine his economic impact. Next, we identify those spending activities that would not occur in the region were it not for the presence of The ZOO, and clarify the impact that ZOO activities have on the other industry sectors in the region. We then list some of the social and cultural impacts that in some ways are even more important to the long-term economic vitality of the region's economy. Estimates of ZOO attendance that might be expected in 5 years following proposed capital investment projects are provided in the final section of the report.

Introduction

Purpose, Definitions and Scope

Each day millions of people visit one of our nation's zoos. Zoos attract over 134 million visitors each year, while providing families, students, teachers, and communities with an impressive array of social, cultural, educational and economic benefits. Approximately nine million students each year participate in the living classrooms and hands-on education programs offered by their local zoo. Their teachers, almost 85,000 each year, participate in training workshops and use teaching materials provided by our nation's zoos. Nationwide, zoos dedicate $52 million a year to education programs. Non-school programs serve every imaginable sector of society. Zoos offer special camps, overnight stays, community events and classes that appeal to preschool children, families, scouts, churches, teens, adults, singles and seniors.

Zoos contribute to a community's quality of life by sponsoring a variety of arts and cultural activities, and in so doing they enhance their community's attractiveness as a place to live, work, meet, and operate a business. They instill in citizens an awareness of biodiversity and an appreciation for the natural world. Over 58,000 volunteers enrich their lives by investing over three million hours of their time assisting their local zoo in every aspect of zoo operations.

Zoos also serve as powerful economic generators. Nationwide, zoos carry over $1.5 billion in operating budgets while employing over 45,000 workers who receive $400 million annually in wages. Zoos enhance their community's tourism industry by attracting millions of out of town visitors.

Tourism has long been an important contributor to the Pensacola regional economy. Activities that induce tourists to increase their length of stay in the area have recently gained recognition as important elements in the overall tourism impact. The purpose of this report is to present calculations of the magnitude of changes in economic activity that are attributable to The ZOO at Gulf Breeze. This report provides an excellent opportunity to examine the economic role that The ZOO plays in the regional economy and to enhance understanding of that role. This analysis identifies those spending activities that would not occur in the region were it not for the presence of The ZOO, and clarifies the impact that ZOO-related spending activities have on the other industry sectors in the region. Additionally, this report provides calculations of the increase in spending activity that could result from development of the proposed Master Plan at The ZOO.

A regional economic analysis begins by identifying the relationships among different industry sectors in a region and then applying the appropriate multipliers in order to determine the amount of impact a change in input to one industry sector will cause in the output of that sector and subsequent sectors. This multiplying affect demonstrates how one dollar is spent and re-spent within the same region. Several measures of economic activity are estimated, including total spending, income, tax revenues, and employment. *Total spending* is the value of production by industry related to ZOO and botanical garden activities for one calendar year of production. Total spending includes the total value of purchases by intermediate (business to business) and final consumers (ZOO visitors and households). The *income* figures that are reported are the sum of proprietor's income and wages and salaries accruing to workers in all local businesses that support the ZOO and botanical garden. *Employment* figures represent the number of jobs supported by sales of goods and services to ZOO visitors and by the increased level of inter-industry transactions resulting from ZOO activities. The job estimates given include full time, part time and seasonal jobs.

For these economic impact calculations the region of interest is the Pensacola MSA, which includes two counties: Escambia and Santa Rosa. The selection of a particular geographic region influences both the amount of spending by local businesses that is captured and the size of the multiplier effects. In these calculations, only spending that takes place within the Pensacola MSA is included as stimulating the changes in economic activity, and all measures of impacts pertain to businesses and households located in the MSA.

Each of the measures of economic impact reflects the value generated by industry for one year of production. In actuality, most of the local economic impact associated with local spending changes will have occurred within this one-year time frame.

This report does not attempt to quantify quality of life issues, whether positive or negative, which may result from the tourism industry. This report estimates only the gross impact of financial (spending) flows, ignoring ancillary non-financial costs and benefits that may be associated with tourism. These non-financial contributions may have a significant economic impact on the region, which was not included in this analysis.

The visitor spending and visitor characteristic data used in this report were generated from surveys administered by participating Visitor Information Centers in the Pensacola area over the period September 22, 1998 through October 4, 2002. Visitors to Pensacola completed 9,151 usable surveys over this period providing information on several broad areas, including basic visitor demographics, information on planning the area visit, characteristics of the area visit, as well as in-area spending patterns. Visitor-reported daily spending for lodging, restaurant meals, shopping and entertainment, as well as other information were used to estimate total ZOO-visitor spending impact. The responses of visitors who indicated that their stay in the area would exceed nine days were not used in this study, as it is assumed that their spending patterns would be different from the average overnight visitor. Additionally, it should be noted that surveys are distributed at area visitor information centers, and do not represent a completely random sampling of the visitor population. Because of this, the survey responses that this analysis relies upon may not be representative of the entire visitor population.

The visitor spending data were entered into a computer input-output model to estimate the overall magnitude of the economic impact that spending related to the ZOO and botanical gardens would exert on the various sectors of the local economy. Use of these standard multiplier techniques permit the generation of estimates of total local economic impact, including total inter-industry spending, employment, tax revenue and incomes associated with spending that will be driven by ZOO and botanical garden activities.

Understanding Economic Multipliers

There are several key concepts that must be used to get a correct estimate of the total economic impact arising from ZOO and botanical garden related spending. One of these is a regional purchase coefficient. The Regional Purchase Coefficient (RPC) represents the proportion of local demand purchased from local producers. For example, an RPC of 0.25 for a given commodity means that for each $1 of local demand, 25% will be purchased from local producers. RPC's are based on the characteristics of the region and describe the actual trade flows for the region mathematically. The greater the RPC, the greater the level of local economic activity that is occurring, and the larger the economic multiplier will be. The RPC's used in this study indicate the percentage of visitor spending that occurs within the Pensacola MSA. Spending that occurs outside the Pensacola MSA is not included in the reported economic impacts.

Another key concept of impact analysis is the price margin that separates wholesale from retail prices. Since this analysis involves retail prices in some spending categories and wholesale prices in others, the total spending (final demand) values needed to be subdivided into either retail or wholesale prices. Wholesale prices are those paid in business-to-business transactions, retail prices are those paid at the consumer level. Margins represent the difference between producer and purchaser prices. Margining assigns direct expenditures to the correct industry sector multipliers by splitting a purchaser price into the appropriate producer values. In this study the dollar value of impacts resulting from purchase by retail consumers are split appropriately so as to capture the portion going to the retailer, to the wholesaler, to transportation providers, and to the manufacturer.

Economic impact analysis describes the effects of tourism using economic measures such as spending, employment, labor income, and tax revenue. Economic activities such as tourism generate spending in our local area, and cause jobs to be created that pay income to area residents and generate tax revenue that flows to government. However, quantifying these effects can be difficult, and the calculated economic impact should be considered an estimate based the best information available at the time.

Conceptually, the total economic impact of an event can be separated into three different types of effects. First is the direct effect of spending; which is the impact of new spending on first tier suppliers. Thus, ten dollars spent by a visitor at a local restaurant counts as a direct effect of ten dollars. This direct spending has the advantage that it can be counted relatively easily, but it does not capture the “multiplier effect” of the additional economic activity set in motion by the purchase of the meal.

To the direct effect must be added the indirect effect of spending. In order to produce the ten-dollar meal, the restaurant must purchase certain inputs from other businesses. To the extent that these inputs are local, these purchases represent additional local spending. For example, the restaurant may purchase two dollars worth of food inputs from the local produce market for every ten-dollar meal sold. The produce market may have paid a local farmer one dollar for the goods that are then sold to the restaurant, and the farmer may have paid 10 cents for local inputs into the farm. The indirect effect measures the cumulative local purchases from other businesses that are generated from the ten dollars spent on the meal. Because much of this spending goes either immediately or eventually to businesses outside of the local area, the indirect effect tends to be smaller than the direct effect. A reasonable estimate of the indirect effect of a ten-dollar meal might be five dollars.

To the direct and indirect effects must be added the induced effect, which measures the additional spending that occurs across the economy because of the income paid by all of the businesses involved, directly or indirectly, in producing the meal. There is a flow of wages received by the waiters, cooks, produce store clerks, and others who play a part in putting that meal in front of the visitor. These people receive most of those wages as take-home pay, and they spend most of that take-home pay and save some. To the extent that their spending generates jobs in the local economy, there is additional economic impact attributable to the meal. However, much of that pay may go to a mortgage or car payment that leaves the local economy. In fact, most of the grocery store spending will leave the local economy to pay for food produced elsewhere in the country. But the part that pays the local banker administering the car loan, or the clerk at the local store, or other local employees, represents a local economic impact of that ten-dollar meal. A reasonable value for the induced effect might be three dollars.

Thus, the total local economic impact of the ten dollar meal would be eighteen dollars, representing the initial purchase (the direct effect), plus the local purchases made from other businesses in producing the meal (the indirect effect), plus the local purchases resulting from the spending by households who received wage income while producing the meal (the induced effect). Here, “the multiplier” is said to be 1.8, meaning that every dollar spent on that category (restaurant meals) has a total impact of $1.80 on the local economy, once the direct, indirect and induced effects are accounted for.

The multiplier effect can also be seen in the number of jobs created by visitor spending. The number of jobs created includes those employees working directly in businesses that serve visitors, people working for companies that support operations of these businesses, and those who become employed as a result of the wage base associated with the tourism industry locally.

In order to say that the multiplier is 1.8 (versus some other number like 1.2 or 3.7), the U.S. Department of Commerce, Bureau of Economic Analysis, uses actual historical data, specific to each county in the country, to describe how goods and services are produced in each county. These tables show the amount of inputs from other industries used to produce a dollar’s worth of output in a particular industry. A number of commercial firms have elaborated on these basic input-output tables and used them to produce software that models these economic relationships. These are called economic impact models, or Input-Output models. This analysis uses the *IMPLAN Professional Social Accounting & Impact Analysis Software* (IMPLAN), which is the most widely used model in economic impact studies of this type.

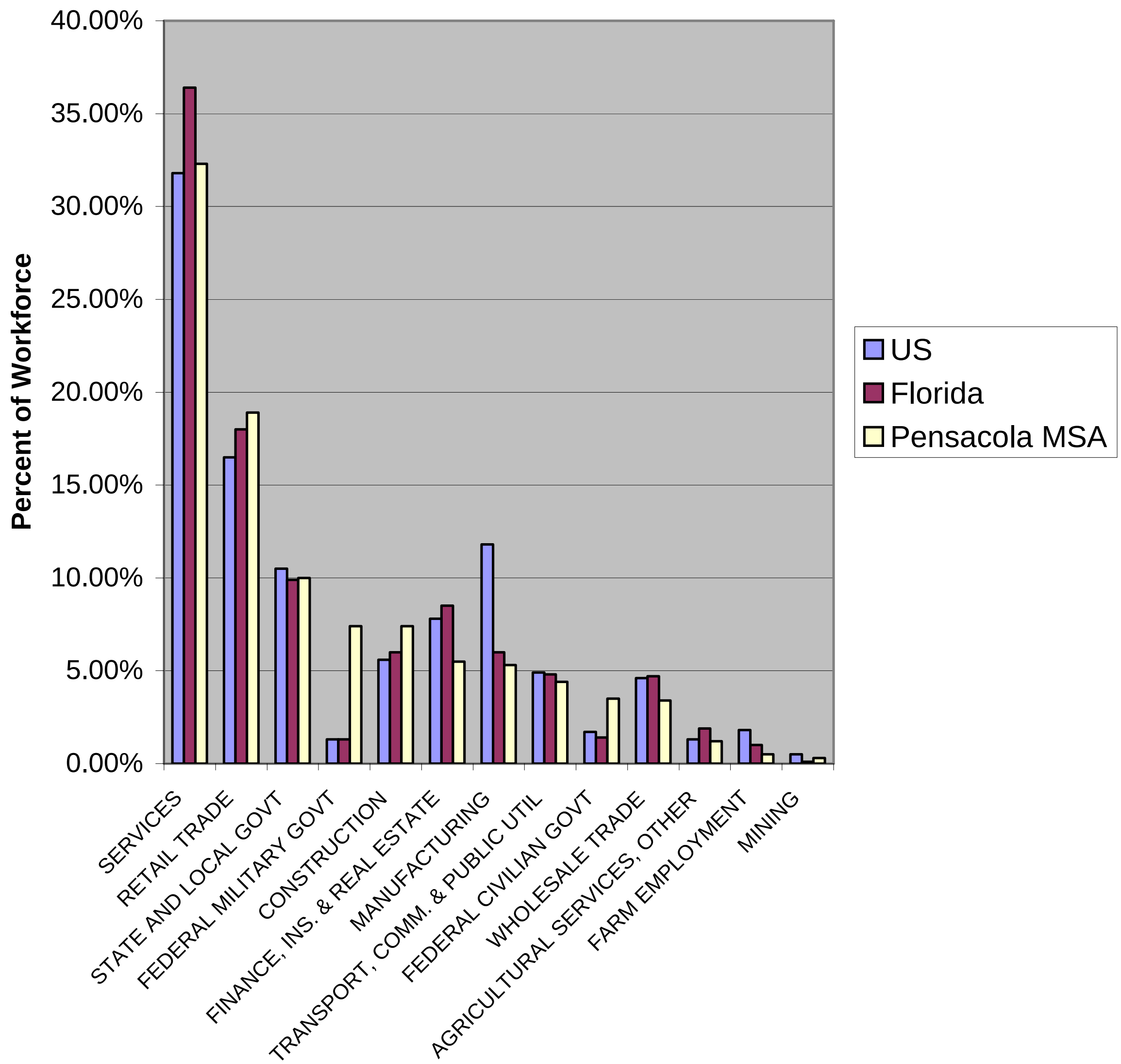
Overview of Pensacola Area Economy

The Pensacola Metropolitan Statistical Area (MSA) consists of two counties, Escambia and Santa Rosa. Pensacola MSA has an estimated 2004 population of 437,730, with approximately 162,450 households and a mean household income of $71,218. Average annual employment for the area is 228,080 persons, who receive $9,522,196,000 in total earnings. Total industry output for the MSA is approximately $19,870,053,000[1]. The largest industry sector is the services sector, which employs an annual average of 77,600 persons, followed by retail trade (43,360), military/DoD Civilians (23,446),[2] state and local government (21,710), and construction (16,470).

A review of employment data is a good way to identify and understand Pensacola's key industries. Employment data provides the number of people whose incomes depend directly on each particular industry. Employment data is also shown to provide an indication of which industries are growing and which are declining, as well as to reveal the relative importance of each industry to the local economy. Figure 1 compares relative employment by industry sector for the United States, Florida, and the Pensacola MSA. It shows the service industry employs the largest share of the MSA's workforce, and that the retail trade, government, and construction industries are also significant employers. The retail trade, military, and federal civilian sectors employ a larger percentage of the local workforce than is true for the State or Nation as a whole.

[1] IMPLAN Professional Social Accounting & Impact analysis Software
[2] Claritas, Inc. Custom Summary Report of Escambia and Santa Rosa; Woods and Poole Economics; C.O. NAS Pensacola letter dated November 14, 2001.
Note: Highly dynamic military population with 36,000 student throughput annually.

Figure 1 - Employment by Industry Sector for the U.S., Florida, and Pensacola

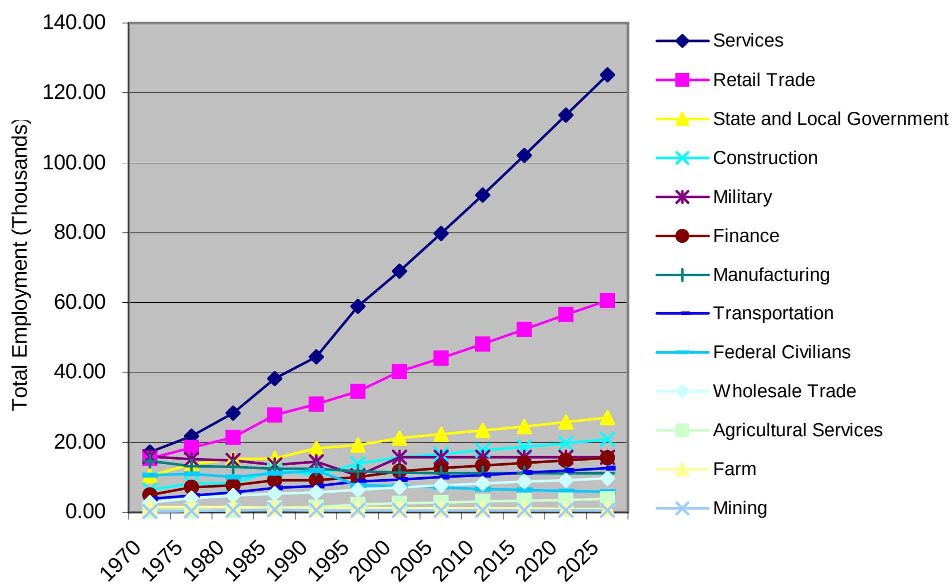


Source: Woods and Poole Economics 2000

Employment Trends

Figure 2 below show trends in employment from 1970 to present, and projections to 2025, broken out by major industry sector. While sectors such as manufacturing, federal civilians, and transportation, communication and public utilities are projected to stay relatively stable over this period; other sectors are forecast to grow substantially, both on sheer numbers and as a share of Pensacola employment. Most notable in Figure 2 is the expansion of employment over the past few decades in services, construction, and retail trade. Each of these industries are beneficiaries of tourist spending. Growth trends in these industries are projected to continue into the next decade.

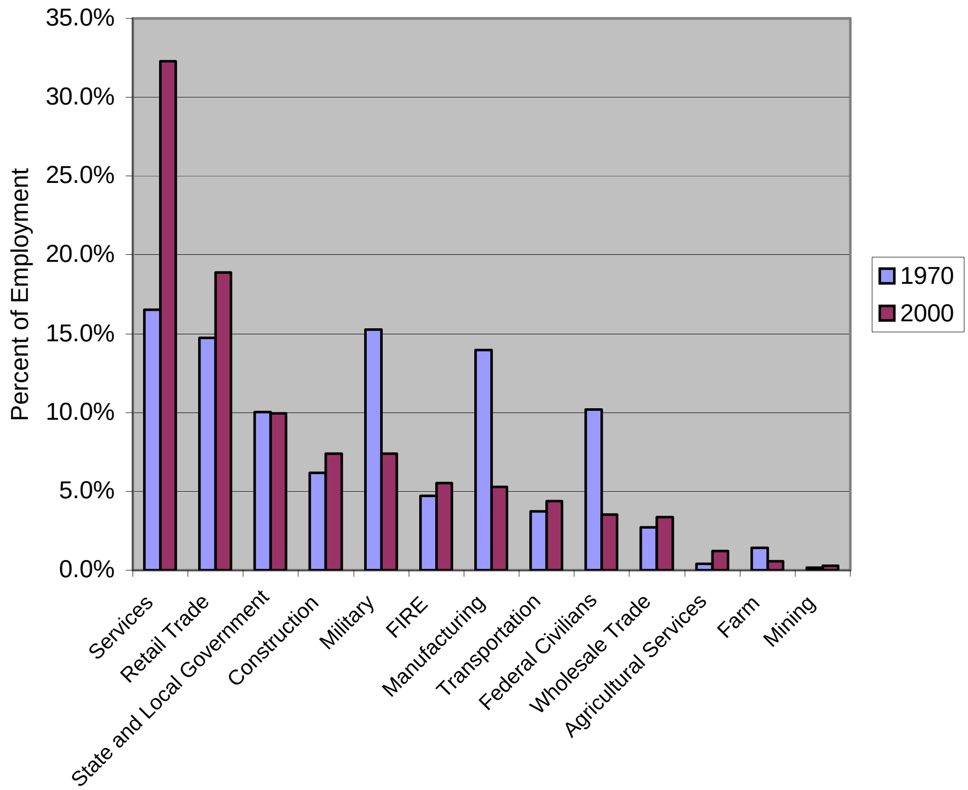
Figure 2 - Pensacola Employment Projections Through 2025 by Industry



Source: Woods and Poole Economics 2000

Figure 3 below shows what this differential job growth has meant for the share of MSA employment for different sectors. Here, the 1970-2000 period is shown. Over the past three decades, manufacturing employment has dropped from 14.0% of total employment to only 5.3% of employment. Meanwhile, employment in retail trade has increased over time (eating and drinking places are included under retail trade), and the share of retail in total employment has grown from 14% to 18%. The share of service employment, which includes lodging places, as well as a wide variety of business services, grew by more than half, from 16.5% to 32.3% of total MSA employment over the period. In addition, construction and finance, insurance and real estate sectors grew slightly as a share of total employment, while military and federal civilian share of total employment dropped sharply.

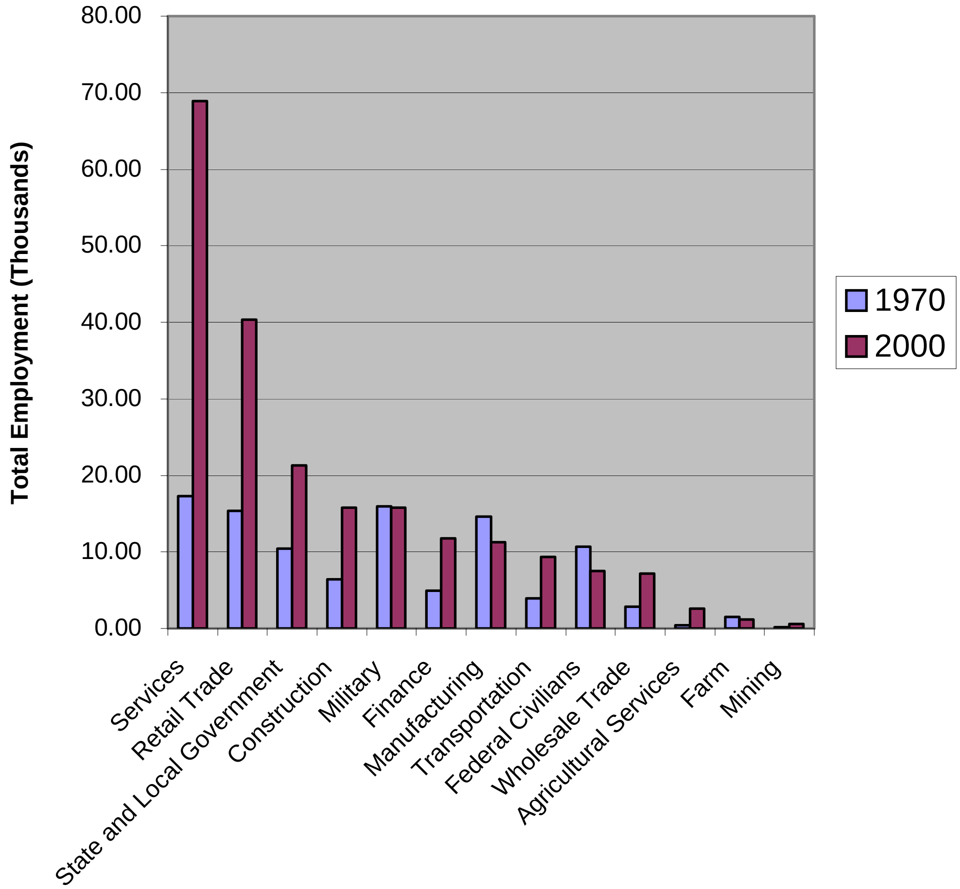
Figure 3 - Changes in Percent of Employment by Industry Sector, 1970-2000



Source: Woods and Poole Economics 2000

Figure 4 shows changes in the actual number of persons employed during the same 1970 through 2000 time-period for each major industry sector in the Pensacola area.

Figure 4 – Changes in Number of Persons Employed by Industry Between 1970-2000



Population Trends

Changes in population and demographic composition have important implications for both public and private sector planning, and are believed to affect the demands for recreation and amusement activities.

Population and employment in the Southeastern United States are forecast to increase more rapidly than the U.S. average over the next two decades. Employment is forecast to grow at an average annual rate of 1.42% from 1997 to 2025 and population is expected to grow 0.99% per year on average in the Southeastern U.S. Florida, one of the fastest growing states in the Southeast, is expected to grow at an average annual rate of 1.31% from 1997 to 2025. This represents the eighth fastest projected population growth rate for any state in the nation. This 1.31% annual population growth rate signifies a decrease from the 1970 to 1997 growth rate of 2.85% a year, but is still well above the national average. Florida's strong and diverse manufacturing and agricultural economy coupled with a steady inflow of retirees provide a stable basis for population growth.

Rapid population growth in Florida has been accompanied by dramatic changes in the demographic composition of the population. The proportion of Florida's under age 15 population has declined from 26.2% in 1950 to 18.9% in 1999, while the proportion older than age 65 rose from 8.6% to 18.3% during the same time period. Florida's Black population also declined from 21.7% to 13.9% during the 1950-1999 time period.

The population of the Pensacola MSA is forecast to grow from an estimated 410,220 persons in 2000 to a projected 478,470 in 2010 (see Table 1). The proportion of Pensacola's MSA population over 65 is forecast to increase from 12.9% to 14.2% between 2000 and 2010, whereas the proportion aged 0-19 years is forecast to decline from 29.6% to 27.8% of the population during the same time period. Working aged adults between 20 and 64 years are expected to increase slightly from 57.5% of the population to 58% between 2000 and 2010, while males will remain approximately 49% of the population and females 51%.

Table 1 - Population and Demographic Forecasts for the Pensacola MSA

Pensacola MSA Population	2000	2005	2010	Percent Change 2000-2005	Percent Change 2005-2010
TOTAL POPULATION	410,218	444,546	478,470	8.4%	7.6%
UNDER 5 YEARS	27,721	28,611	30,812	3.2%	7.7%
5 TO 9 YEARS	30,644	30,436	31,222	-0.7%	2.6%
10 TO 14 YEARS	32,642	34,618	34,324	6.1%	-0.8%

Pensacola MSA Population	2000	2005	2010	Percent Change 2000-2005	Percent Change 2005-2010
15 TO 19 YEARS	30,479	34,794	36,686	14.2%	5.4%
20 TO 24 YEARS	28,102	31,368	35,364	11.6%	12.7%
25 TO 29 YEARS	25,170	27,390	30,554	8.8%	11.6%
30 TO 34 YEARS	25,985	26,132	28,264	0.6%	8.2%
35 TO 39 YEARS	30,596	26,374	26,575	-13.8%	0.8%
40 TO 44 YEARS	32,518	33,052	28,365	1.6%	-14.2%
45 TO 49 YEARS	29,725	34,743	35,098	16.9%	1.0%
50 TO 54 YEARS	27,330	31,935	37,096	16.8%	16.2%
55 TO 59 YEARS	20,907	27,029	31,569	29.3%	16.8%
60 TO 64 YEARS	15,489	19,163	24,804	23.7%	29.4%
65 TO 69 YEARS	16,081	17,030	21,026	5.9%	23.5%
70 TO 74 YEARS	13,743	14,127	15,052	2.8%	6.5%
75 TO 79 YEARS	10,814	12,142	12,626	12.3%	4.0%
80 TO 84 YEARS	6,572	8,186	9,305	24.6%	13.7%
85 YEARS AND OVER	5,700	7,416	9,728	30.1%	31.2%
WHITE POPULATION	319,766	339,741	358,045	6.2%	5.4%
BLACK POPULATION	73,575	83,028	92,880	12.8%	11.9%
OTHER POPULATION	16,877	21,777	27,545	29.0%	26.5%
HISPANIC POPULATION, ANY RACE	12,209	15,733	21,274	28.9%	35.2%
POPULATION 0-19 YEARS	121,486	128,459	133,044	5.7%	3.6%
POPULATION AGE 20-64 YEARS	235,822	257,186	277,689	9.1%	8.0%
POPULATION AGE 65 YRS AND OVER	52,910	58,901	67,737	11.3%	15.0%
MALE POPULATION	200,774	217,427	233,636	8.3%	7.5%
FEMALE POPULATION	209,444	227,119	244,834	8.4%	7.8%
POPULATION AGE 16 YRS AND OVER	312,956	343,550	375,121	9.8%	9.2%
MEDIAN AGE OF POPULATION (YEARS)	35.75	36.69	37.32	2.6%	1.7%
NUMBER OF HOUSEHOLDS	151,652	165,099	177,870	8.9%	7.7%
W&P WEALTH INDEX (U.S. = 100)	83.03	82.56	82.50	-0.6%	-0.1%

Source: Woods and Poole Economics

Tourism Overview

Tourism is an important factor in our national economy. According to the Travel Industry of America, tourism contributed $555 billion to the U.S. economy in 2001, making it the country's third largest retail industry behind automotive dealers and food stores. Travel and tourism provided more than 7.9 million jobs nationwide, and indirectly supported another 9.2 million.[3] Tourism is a primary focus of economic development efforts nationwide, with 44% of local governments reporting that tourism revenues are "important" or "very important" relative to other local industries[4]. It is in fact the first, second or third largest employer in 29 states.

The research department for VISIT FLORIDA, the state's tourism marketing office, reports that tourism is Florida's number one industry – generated $50.8 billion in total tourism related taxable sales for the state's economy in 2002. In 2002, some 75.5 million tourists visited Florida, and spending generated by these tourists supports 843,400 jobs statewide.

The Haas Center for Business Research at the University of West Florida reports that approximately 1.8 million people visit the two county Pensacola Metropolitan Statistical Area, generating a total economic impact of approximately $838 million annually, which includes $285 million in household incomes. This tourism related spending supports nearly 18,207 jobs in the region. Each year, visitor spending generates an estimated $84 million in local, state, and federal tax revenues to help pay for streets, parks, law enforcement, and other public services.[5] The Haas Center bases its estimates on visitor spending and other visitor characteristic data derived from surveys collected since 1998 by participating Visitor Information Centers in the Pensacola area.

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[3] Travel Industry Association of America, Bureau of Economic Analysis/U.S. Department of Commerce @ http://www.tia.org/travel/EconImpact.asp

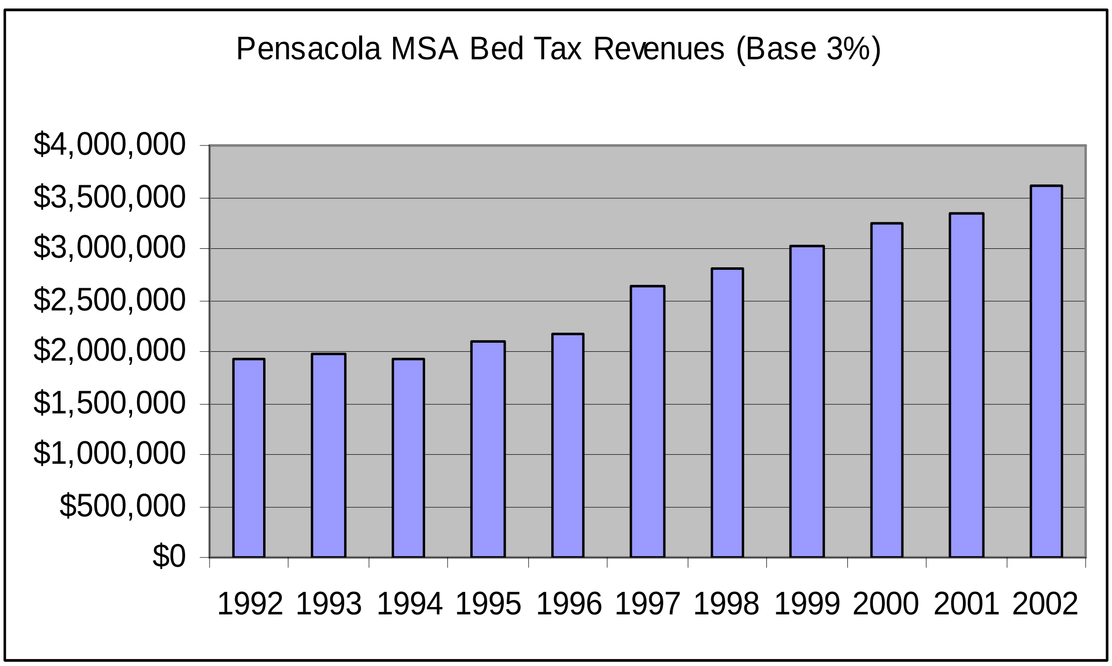
[4] *Tourism-Based Economic Development Activities in Local Governments*, International City/County Management Association, 1996.

[5] Tourism estimates reported by the Haas Center for Business Research and Economic Development at the University of West Florida, May 2002.

Haas Center spending estimates are supported by Florida Department of Revenue reports of tourism related taxable sales in the Pensacola MSA of $773.7 million in 2000.

Visitor count estimates were obtained by analyzing bed tax data for visitors to the Pensacola MSA. The tourist occupancy tax (bed tax) is collected on all accommodations that are rented for periods of less than six months. The revenues are used to fund tourist-related projects. The Pensacola region has seen strong and steady growth in bed tax revenues over the past several years. Figure 1 below shows tourist occupancy tax (bed tax) revenue growth over the past decade in Pensacola. Tourist occupancy tax revenues grew from $1,934,272 in 1992 to $4,250,470 in 2001, a cumulative 120% increase during that time period. Local tourism experts see no reason for this growth in tourism to slow. Indeed, Northwest Florida was one of the few regions in the State to actually experience an increase in tourism in the year following the tragedy of 9/11/2001.

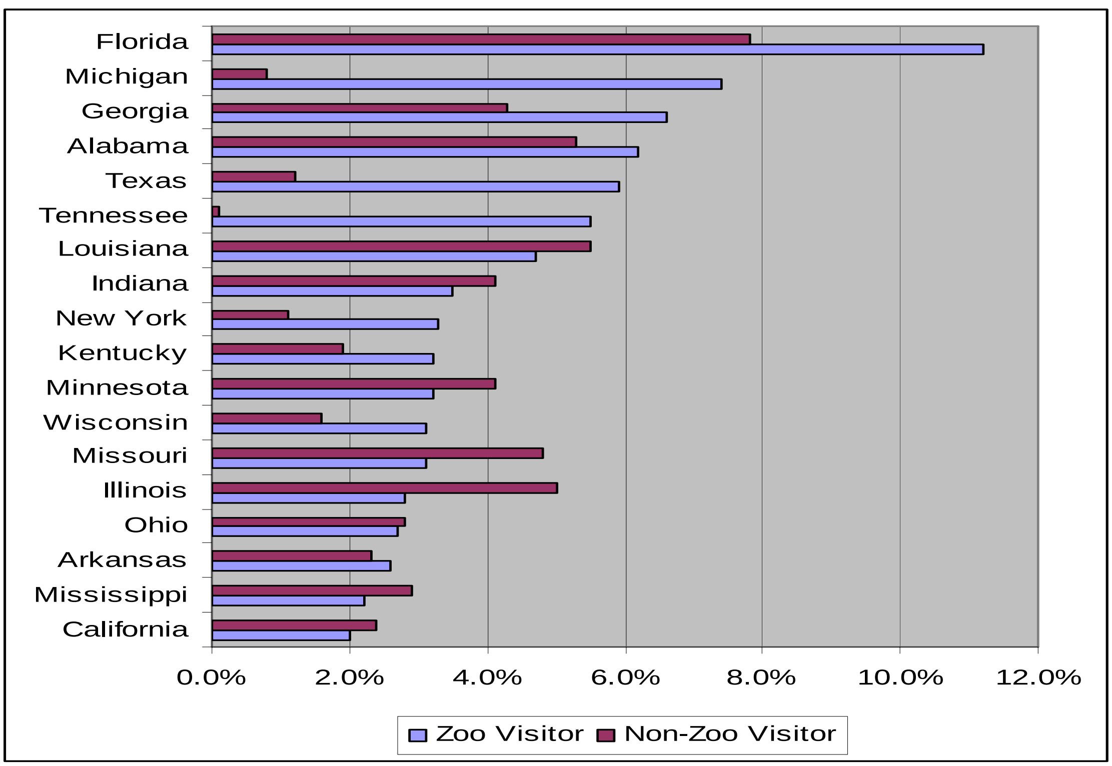
Figure 5 – Pensacola MSA Bed Tax Revenue Growth, 1992-2002



Characteristics of The ZOO Visitor

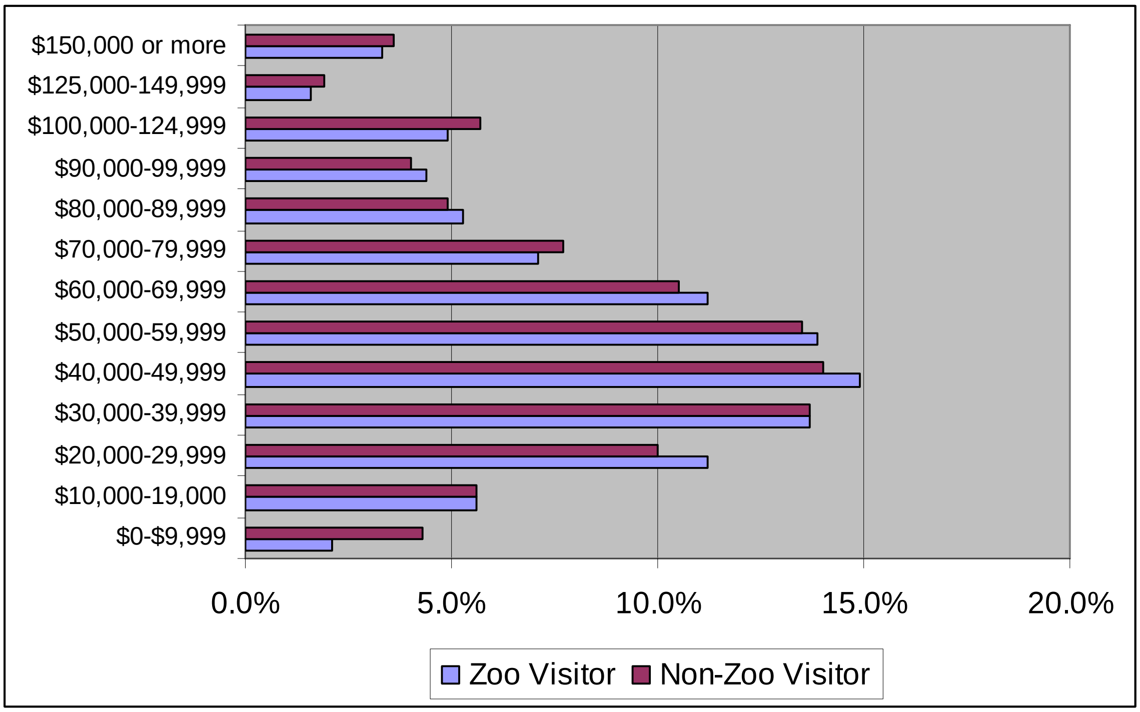
The visitor demographics, spending data, and other survey information collected from visitors to our area makes it possible to assess the characteristics of The ZOO visitor and their economic importance to the regional economy. Using tourism survey data collected under contract to the Pensacola Area Chamber of Commerce, we are able to describe The ZOO visitor, and show how ZOO visitors differ from area tourists who do not visit The ZOO in Gulf Breeze. For this analysis, a ZOO visitor is defined as one who indicated on the tourist survey questionnaire that they had visited or intended to visit The ZOO in Gulf Breeze. The non-zoo visitor is defined as those who indicated on the tourist survey questionnaire that they did not intend to visit The ZOO. Figure 6 below shows the top 25 states of origin for tourists that visit The ZOO Gulf Breeze during their stay in the area.

Figure 6 - State of Origin of Visitors



The primary characteristics that differentiate the tourist that visits The ZOO from the tourist that does not are that the ZOO visitor stays in the area longer and sees more attractions, he visits more often, and spends more while here.[6] These characteristics allow the ZOO visitor to have a larger impact on the local economy, and make ZOO visitors an attractive segment of the tourism market from an economic impact point of view.

Figure 7 - Total Household Income of ZOO Visitors



The average age of a ZOO visitor (head of the visiting party) is 45 years, compared to 49 for non-zoo visitors. Their average household income is about the same for both groups, approximately $54,804 (see Figure 7). ZOO visitors stay longer by .83 days, and spend more during their visit on restaurants, entertainment, shopping, groceries, and especially lodging. ZOO tourists spend an average of $227 per party per day, compared to $211 per party per day for non-zoo visitors.

[6] Visitor Information Survey and Industry Tracking System (VISIT) September 22, 1998 through April 30, 2002

Figure 8 - Length of Stay in Local Area

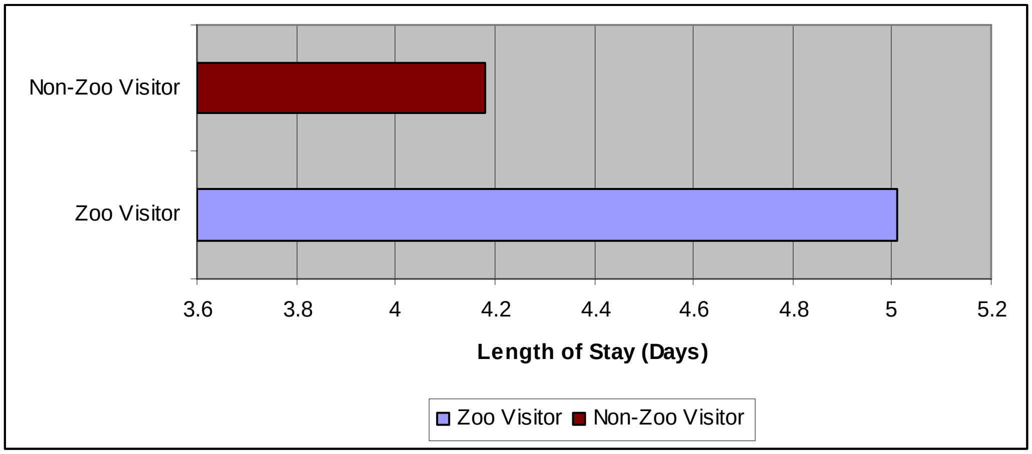
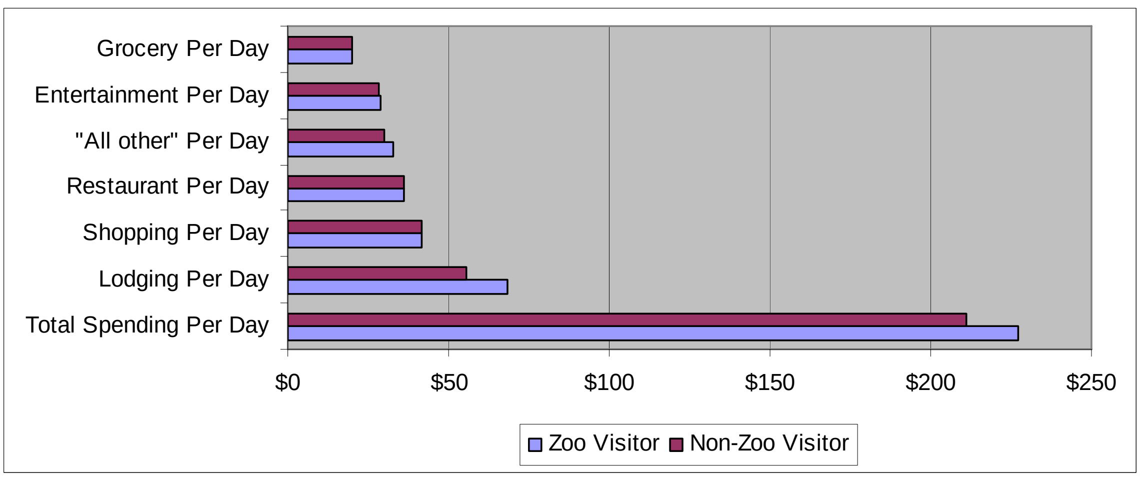
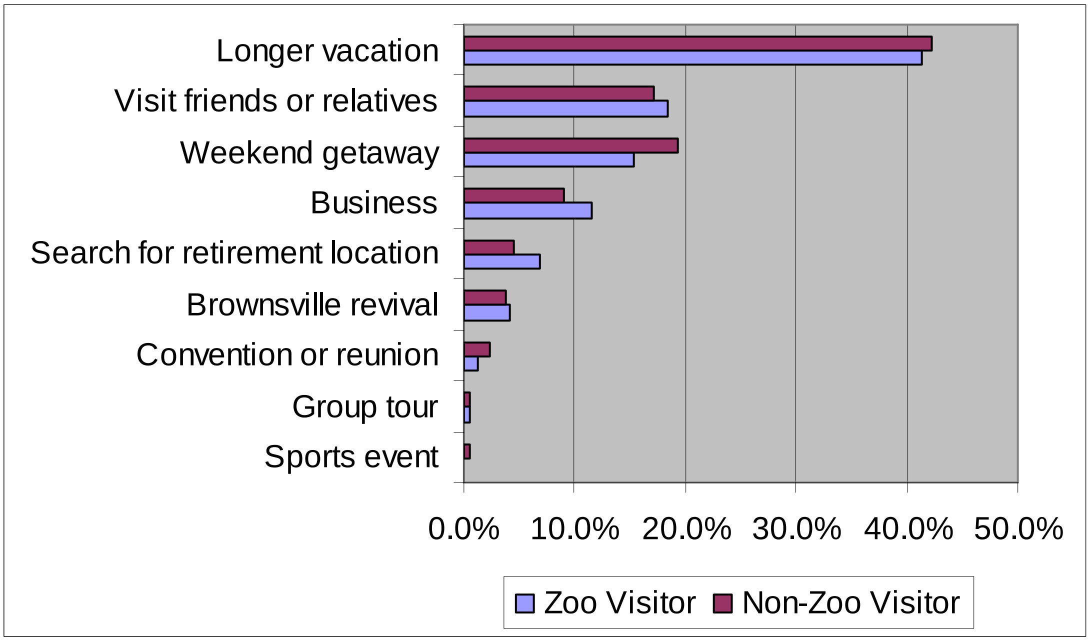


Figure 9 - Spending per Day by Travel Party



As illustrated in Figure 10 below, visitors of The ZOO are most likely to be in the area on an extended vacation. A smaller percentage are here to visit friends or relatives, for a weekend getaway, or for business purposes.

Figure 10 - Purpose of Visit to Area



While in the area, they are more likely to visit other attractions in addition to The ZOO Gulf Breeze, especially the beaches (87% versus 77%), the National Museum of Naval Aviation (69% versus 51%), and the shopping malls (62% versus 44%). This characteristic increases and more widely distributes their overall economic impact on the area (see Figure 12).

Figure 11 - Other Attractions Planning to Visit During Stay

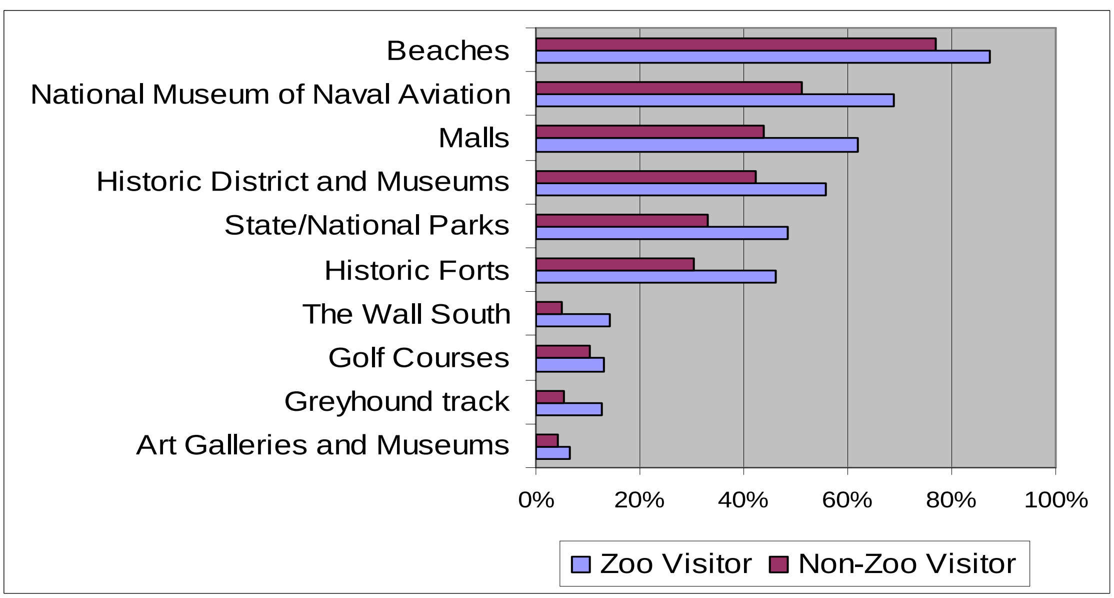


Figure 12 - Other Destinations Visiting on this Trip

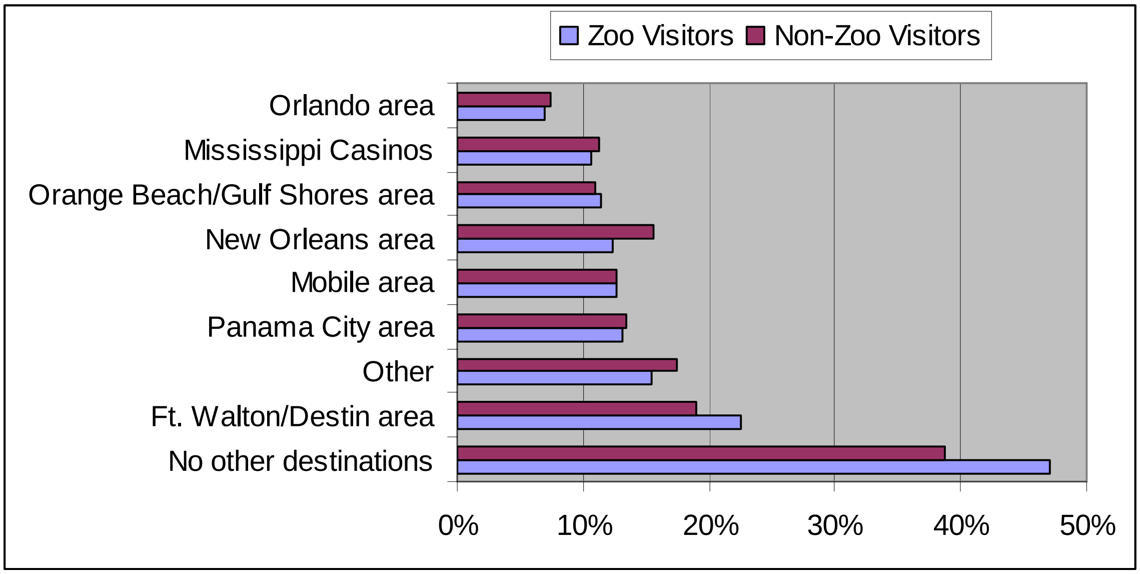
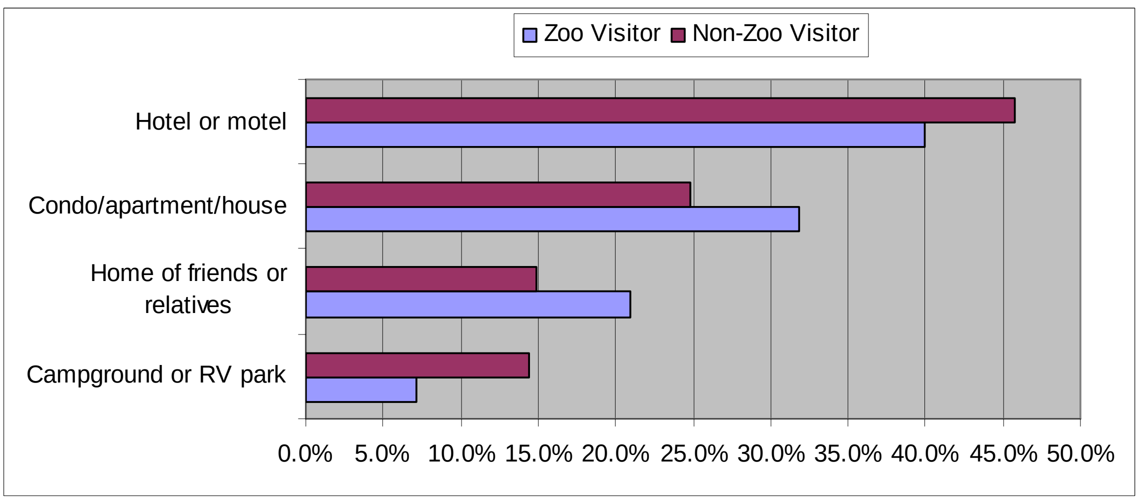
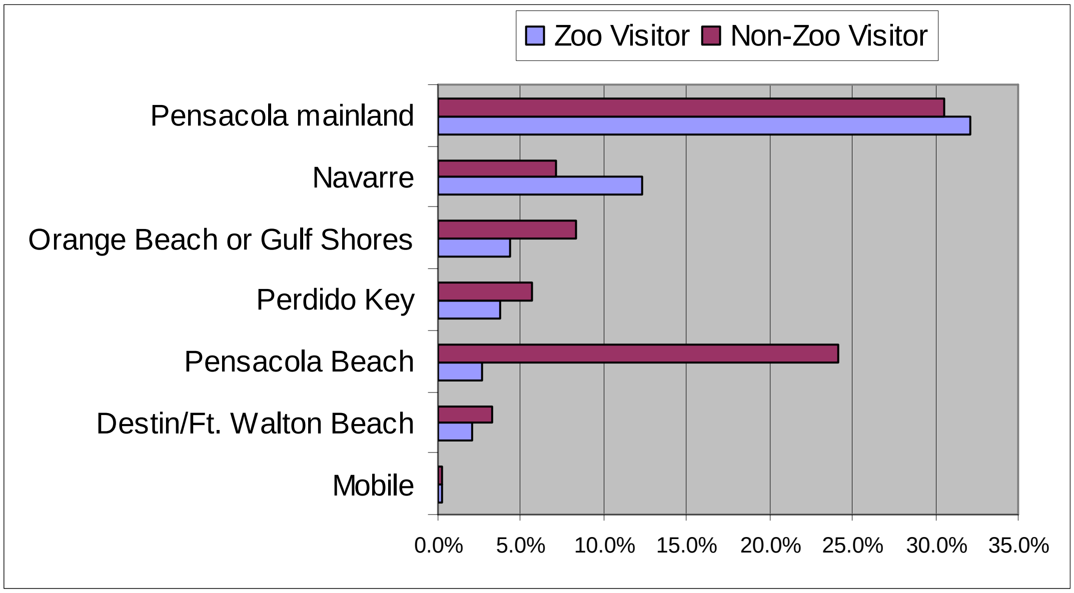


Figure 13 - What Type of Lodging Used



Most ZOO tourists will stay in a hotel or motel, but they are also more likely than non-zoo visitors to stay in a condominium, apartment, or house.

Figure 14 - Location of Lodging



Like all visitors to the area, they travel here primarily by automobile (83%), and list the beaches, climate, and the local natural beauty as the most important influences in their decision to visit this area. Almost 92% of ZOO visitors are White, 2.1% are African-American, and 1.7% are Hispanic.

Figure 15 - Factors Influencing Decision to Visit Area

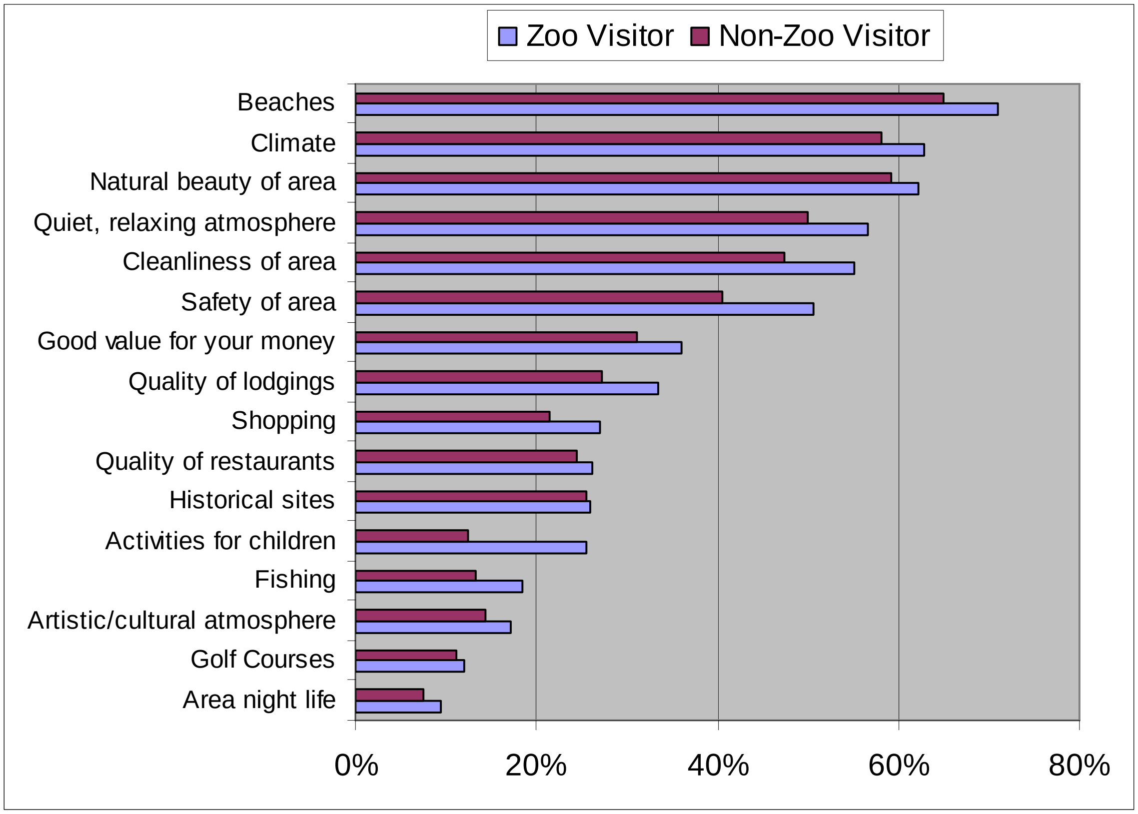


Figure 16 - Household Type

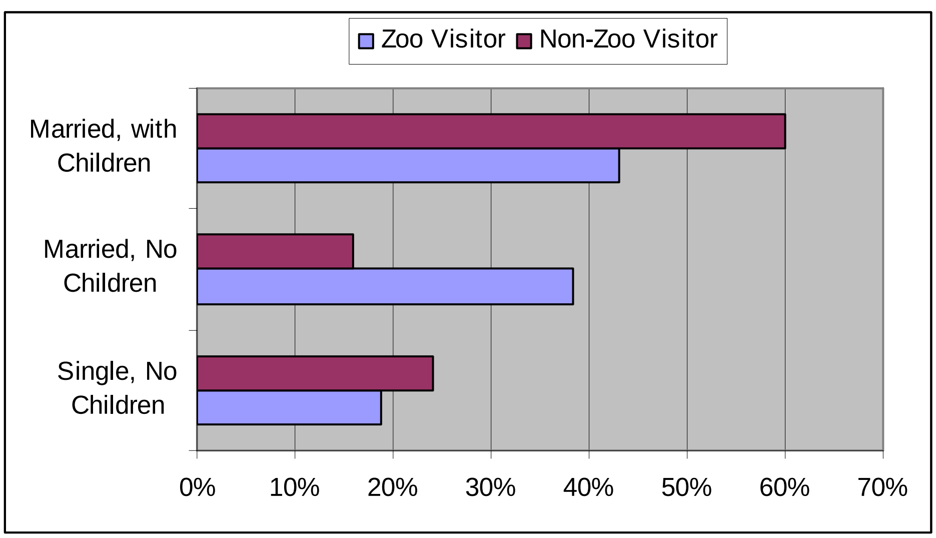
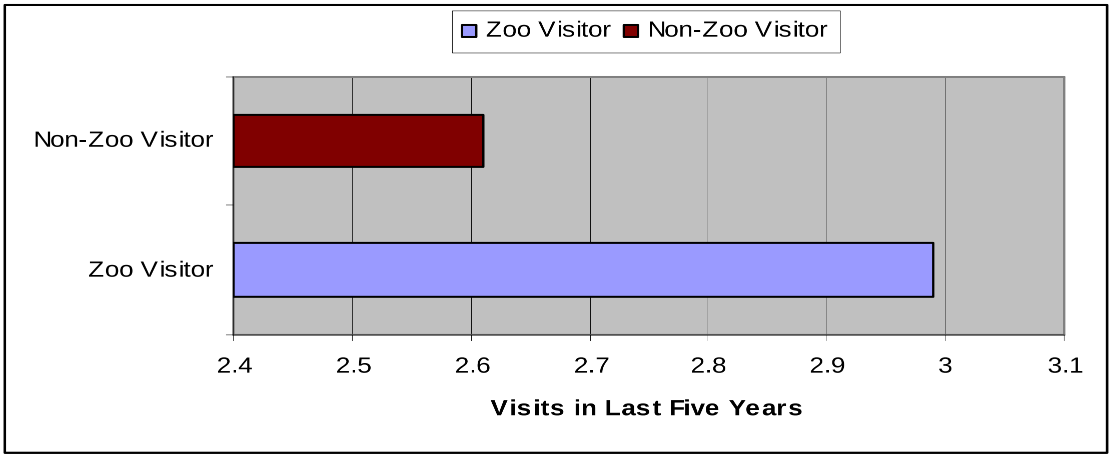


Figure 17 - Number of Visits to the Area in the Last Five Years



ZOO tourists come back for repeat visits to our area more often than non-zoo visitors, averaging 3 visits in the last five years compared to 2.6 visits by non-zoo visitors.

Estimated Economic Impact of The ZOO

The ZOO at Gulf Breeze has a direct quantifiable impact that includes wages paid to employees, operating expenditures, capital improvements, and the spending by tourists who extend their stay in the area to visit The ZOO. Due to the "multiplier effect", this spending ripples through the local economy and ends up in the pockets of employees of grocery stores, car dealerships, hospitals, law firms, banks, insurance companies, and construction firms, all of whom in turn re-spend the dollars. Our analysis identifies those spending activities that would not occur in the region were it not for the presence of The ZOO, and clarifies the impact that ZOO activities have on the other industry sectors in the region.

Analysis of the available visitor survey data indicates that the primary characteristics that differentiate the ZOO tourist from the non-zoo tourist are that the ZOO visitor stays longer in Pensacola and sees more attractions, visits more often, and spends more while here.[7] Whereas most visitors to the region indicate that the main factor influencing their decision to visit is the area beaches, The ZOO at Gulf Breeze provides a strong incentive to our area's visitor to *increase their length of stay*. Inducing visitors to stay longer has the same stimulative effect as increasing the number of visitors, because it increases the amount of dollars that are spent in the local economy.

Based on responses to approximately 10,000 visitor surveys collected over the past five years, we estimate that visitors to The ZOO in Gulf Breeze stay in the area .83 days longer than those who do not visit the ZOO. To estimate the amount of area tourism spending that The ZOO generates, this analysis uses survey data that indicates that the daily average expenditure by visitors to The ZOO is $67.55 per person per day, as shown in Table 2 below.

[7] Visitor Information Survey and Industry Tracking System (VISIT) September 22, 1998 through October 4, 2002

Table 2 - Estimated Daily Spending Patterns of Visitors to The ZOO

Category	Spending Per Party Per Day	Spending Per Person Per Day	Spending based on .83 day length of stay	Number of Out of Town ZOO Visitors[8]	Annual Spending
Lodging Per Day	$68.29	$20.26	$16.82	85,367	$1,435,800
Grocery Per Day	$20.21	$6.00	$4.98	85,367	$425,020
Restaurant Per Day	$35.85	$10.64	$8.83	85,367	$753,721
Entertainment Per Day	$28.74	$8.53	$7.08	85,367	$604,175
Shopping Per Day	$41.87	$12.42	$10.31	85,367	$880,251
"All other" Per Day	$32.70	$9.70	$8.05	85,367	$687,576
Total Spending Per Day	$227.66	$67.55	$56.07	85,367	$4,786,542

We calculate that visitors to The ZOO generate about $3.1 million in direct spending each year that stays in the local economy (allowing for “leakages” such as expenses incurred by retailers in bringing their product to market). When the total impact of this direct spending is considered (i.e., when taking the “multiplier effect” into account), approximately $4.83 million in total spending is generated each year in the two-county region. About 79 jobs are directly or indirectly supported by ZOO-related tourist spending in the regional economy along with annual incomes to area workforce totaling approximately $1.9 million.

ZOO-related visitor spending impacts are seen primarily in the hotel and lodging, restaurant, recreation, retail merchandise, construction, and professional business services industries. Other industry sectors that see a large economic impact due to ZOO-related spending include real estate, wholesale trade, banking and personal services.

In addition to visitor spending, the maintenance and operation of The ZOO also stimulates economic activity. In calendar year 2003, The ZOO spent over $1.8 million on animal food and supplies, insurance, advertising, repairs and maintenance, veterinary services, wages, and other operating expenses. We estimate that these expenses generate about $1.08 million in direct spending

[8] Surveys conducted by The ZOO indicate that 60% of ZOO visitors reside outside of the Northwest Florida region. Annual ZOO attendance over the last five years has averaged 142,278 persons.

each year that stays in the local economy (allowing for "leakages" such as expenses for goods and services not available locally). When the total impact of this direct spending is considered (i.e., when taking the "multiplier effect" into account), approximately $1.66 million in total spending is generated each year in the two-county region. About 20 jobs are directly or indirectly supported by the ZOO annual budget spending in the regional economy along with annual incomes to area workforce totaling approximately $634,149. Table 3 shows a summary of the economic impacts generated by both visitor spending, and the annual operating budget of The ZOO.

Table 3 - Summary of the Economic Impact of The ZOO

Estimated Annual Economic Impact of The ZOO	Direct	Indirect	Induced	Total
Total Spending (Output)	$4,149,839	$1,176,246	$1,171,682	$6,497,768
Income Generated	$1,596,823	$508,950	$450,423	$2,556,196
Jobs Supported	71.0	13.5	14.7	99.2
State and Local Taxes Generated Annually				$307,160
Estimated Annual ZOO Visitor Spending Impact	Direct	Indirect	Induced	Total
Total Spending (Output)	$3,072,697	$880,571	$879,805	$4,833,073
Income Generated	$1,208,561	$375,267	$338,218	$1,922,047
Jobs Supported	57.8	10.0	11.0	78.9
Estimated Annual ZOO Budget Impact	Direct	Indirect	Induced	Total
Total Spending (Output)	$1,077,142	$295,676	$291,877	$1,664,695
Income Generated	$388,262	$133,683	$112,204	$634,149
Jobs Supported	13.2	3.4	3.7	20.3

We estimate that the combined impact of the ZOO operating budget and the spending of tourists that are induced to stay longer in the region generates about $4.15 million in direct spending each year that stays in the local economy. As these spending ripples through the local economy, approximately $6.5 million in total spending is generated each year in the two-county region that would not occur if The ZOO did not exist. About 99 local jobs are directly or indirectly supported by the ZOO along with annual incomes to the local workforce totaling approximately $2.5 million. ZOO related spending also generates state and local tax revenues totaling approximately $307,160 annually. Figure 18 and Table 4 below show the industry sectors that are most affected in terms of total spending output stimulated by The ZOO in Gulf Breeze.

Figure 18 - Distribution by Industry Sector of the Economic Impact of The ZOO

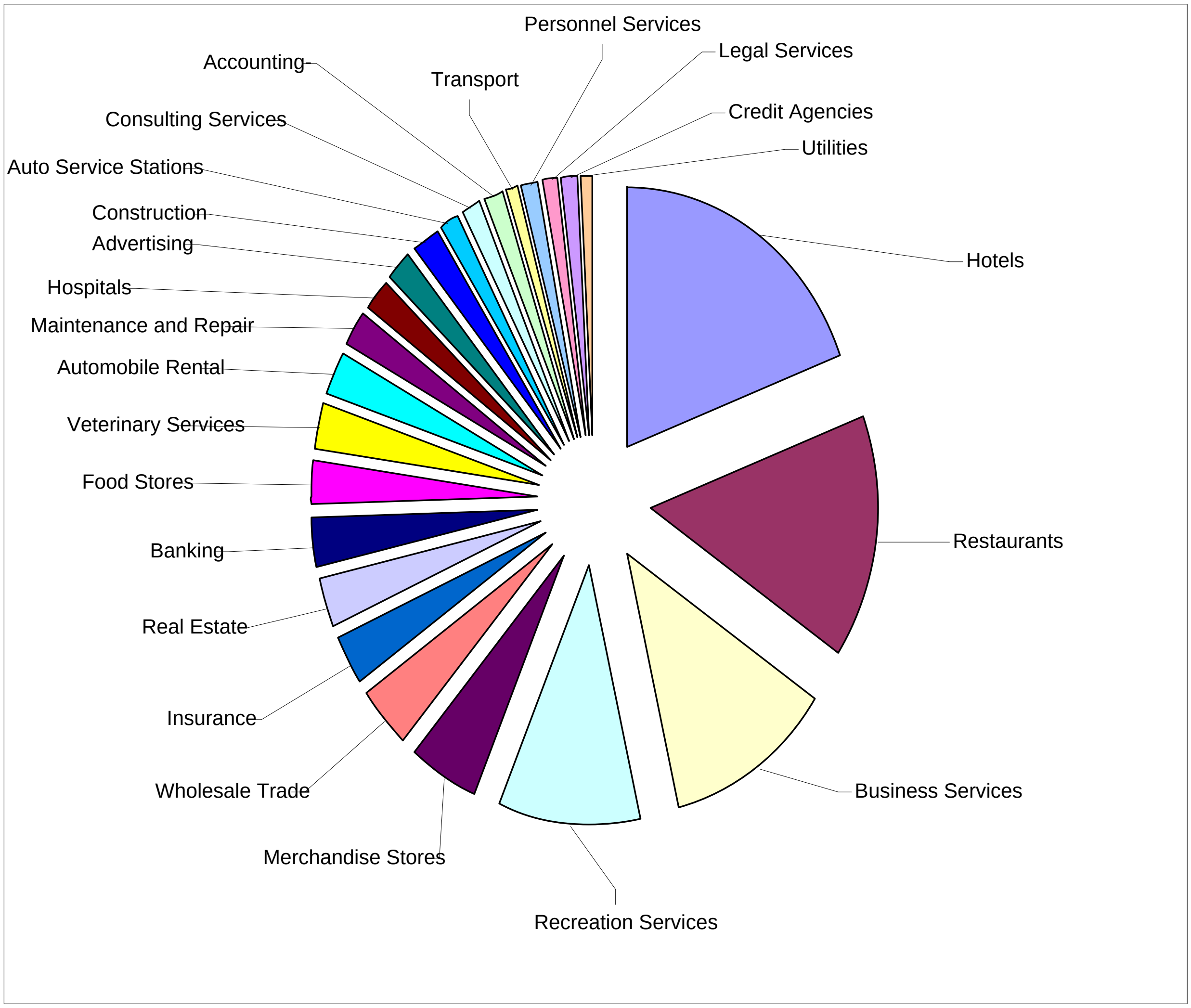


Table 4 - Distribution by Industry Sector of the Economic Impact of the ZOO

Industry Sector	Total Spending Generated	Incomes Supported	Jobs Supported
Hotels	$1,032,332	$406,468	18.4
Restaurants	$790,676	$301,763	21.2
Business Services	$636,215	$176,713	6.5
Recreation Services	$517,113	$235,712	7.3
Merchandise Stores	$276,441	$130,999	7.5
Wholesale Trade	$194,954	$81,904	1.5
Insurance	$170,901	$38,888	3.0
Real Estate	$157,831	$21,390	0.8
Banking	$157,089	$30,327	0.6
Food Stores	$153,978	$91,557	3.7
Veterinarians and Doctors	$148,802	$88,836	1.4
Automobile Rental	$138,733	$42,302	1.6
Maintenance and Repair	$116,219	$74,009	1.8
Hospitals	$108,314	$64,170	1.6
Advertising	$105,619	$25,699	0.4
Construction	$104,894	$35,824	0.9
Auto Service Stations	$73,278	$32,700	0.8
Consulting Services	$71,745	$32,816	0.9
Accounting	$61,738	$45,952	1.0
Transport Services	$56,676	$18,786	0.5
Personnel Services	$56,355	$52,912	1.9
Legal Services	$55,830	$41,659	0.5
Credit Agencies	$52,705	$35,348	0.8
Utilities	$49,351	$10,311	0.2
Other Medical and Health Services	$41,741	$19,426	0.8
Miscellaneous Retail	$38,079	$18,245	1.1
Automobile Repair and Services	$32,269	$11,220	0.4
Building Materials & Gardening	$27,975	$15,493	0.5
Security and Commodity Brokers	$27,431	$13,253	0.1
Services To Buildings	$24,251	$10,009	0.5
Equipment Rental and Leasing	$23,938	$8,130	0.2
Engineering- Architectural Services	$22,143	$10,108	0.2
Advertising	$21,619	$10,631	0.2
Other Nonprofit Organizations	$19,760	$12,678	0.6
Apparel & Accessory Stores	$18,696	$7,438	0.4
Commercial Printing	$18,260	$5,783	0.2
Furniture & Home Furnishings Stores	$18,154	$9,015	0.4
Air Transportation	$17,557	$7,170	0.2
Arrangement Of Passenger Transportation	$16,351	$8,426	0.3
State/Local Govt NonEducation	$15,241	$0	0.0
Sanitary Services	$14,943	$4,007	0.1
Newspapers	$14,607	$5,960	0.2
Other	$796,965	$262,157	8.1
Total	$6,497,768	$2,556,196	99.2

Cultural and Social Impacts

While the quantitative analysis of The ZOO operational budget and visitor spending provides strong evidence of the importance of The ZOO to the regional economy, there are many other less tangible impacts related to enhancing the region's attractiveness as a place to live and work. The existence of The ZOO provides not only quantifiable economic impacts on the region but it also provides educational and cultural services that are beneficial to the area but difficult to measure in dollar terms. These benefits include the contribution that The ZOO makes in the generation of an educated, knowledgeable, and more well-rounded populace. Benefit flows also include the availability of professional wildlife consulting on a pro bono basis by Zoo staff. Zoo volunteers and staff also participate in meaningful ways with numerous community outreach programs. Its spacious and beautiful grounds provide an attractive venue for international and regional arts and cultural activities. Indeed, a plethora of professional, social, and cultural events would not occur in the area without the support and direction of The Zoo. Each of these contributions has a significant but difficult to measure economic impact on the regional economy, which was not included in this analysis. Therefore, it should be noted that this report provides a conservative estimate based only on observable and measurable activities undertaken by or on behalf of The ZOO. The following section identifies some of the "qualitative" economic impacts that in some ways are even more important to the long-term economic vitality of the region's economy.

History of The ZOO – Gulf Breeze

In October 1983, the first twenty acres of land were purchased to develop a zoo that was conceptualized during a safari to Africa in 1982 by Pat Quinn, now Director/President, Dr. James Potter and Prentice Robinson, both Board

Members. In May 1984, The ZOO was opened to the public, and on September 24, 1988, The ZOO was granted accreditation with the American Zoo and Aquarium Association (AZA). In 1988, an additional thirty acres were developed as the Safari Line Limited Railway, offering a view of 150 animals on a narrated ride.

In 1989, The Florida Association of Zoos and Aquariums was born out of a meeting in Pat Quinn's office of representatives of zoological institutions doing business within the State of Florida. The Director of The ZOO was appointed to the Fish & Game Captive Wildlife Committee.

In 1990, new landscaping was added, the petting zoo was modified, and several exhibits were developed. The animal kitchen was donated that same year. Also during 1990, the swamp and the farm in The ZOO were added. The Jaguar exhibit was constructed, new graphics were added and the ZOO's week-long ZOOCAMP for children had its first successful year.   In 1991 and 1992 the Cougar, Tamarin, and Giraffe exhibits were constructed. Also during that time, the Japanese Garden was completed. A new gift shop and administrative building was built in 1993, and a restaurant and banquet/conference facility was opened in January of 1996.

In 1995, the Tiger habitat was completed and the American Black Bears were put on display. A River Otter exhibit and an Asian Rhino habitat were also constructed that year. These were followed by a neo-tropical exhibit for Tamarins and Marmosets, Gorilla and Chimpanzee Islands, a boardwalk to the preserve, and an Orangutan exhibit/breeding facility in 1997-1998. In 1999 a Discovery Center was built for special events and exhibits such as "Backyard Monsters: The World of Insects" featuring robotic bugs and insect displays; "Zoolights" the annual Christmas event; "Reptiles: The Beautiful and the Deadly" featuring a variety of live reptiles; "Dinamation" featuring giant robotic dinosaurs, and many others.

Several new exhibits were created along the border of the wildlife preserve in 2000 for South American Tapirs, American Alligators, and the highly endangered African Wild Dogs. In 2001 The ZOO introduced a pair of Caracals, a large waterfall and landscaping for the giraffe yard. In 2002 The ZOO entered into an agreement with the City of Gulf Breeze and the Water Management District to irrigate portions of the park with “gray water.” This agreement is mutually beneficial, resulting in a substantial savings in utilities for the park as well as water conservation for the city. Jerry and Dona Barron dedicated the Nicholas Addison Baron Memorial at The ZOO in honor of their son, Nicholas. They donated a children’s playground area with a 30 foot magnolia tree, landscaping and park benches. At the center is a bronze sculpture of a baby elephant by famed Australian artist Tom Tischler.

2003 brought a trained dromedary camel named Hank to provide camel rides. Visitors can now also learn about the history and importance of farm animals in the recently expanded petting zoo. Also in 2003, the train depot building was renovated and a beautiful garden area featuring a large white gazebo and extensive landscaping was created for weddings at The ZOO.

The Gulf Coast Zoological Society or “ZOO Friends” was formed in 2001 to function as a conservation, education and research partner with The ZOO. The Society is a 501(c)(3) non-profit organization and is also a member of AZA. Its mission includes the development and presentation of educational programs regarding the conservation of endangered species, research on wildlife survival, captive breeding and husbandry, biodiversity, and the environment, as well as conducting numerous outreach programs in the community. Development of this non-profit management will mean significant new opportunities for community involvement and growth for The ZOO.

The ZOO’s Local Education Programs

Focused education is part of The ZOO’s mission, and it provides local citizens a golden opportunity to understand animals and the need to conserve their populations and ecosystems. The ZOO is at once a living laboratory, science center, botanical garden and wildlife preserve. Conservation and Educational programs offered include:

- **Zoocamp**. Zoocamp is offered throughout the summer and during traditional school breaks. Basic principles of zoology and animal classification are taught, and the program fosters an awareness and appreciation for the natural world through activities and hands-on experiences. Campers learn fundamental concepts of wildlife management and the roles modern zoos play in animal conservation through cooperative breeding programs. They also learn about the need for preserving and maintaining wildlife habitats, the factors that contribute to many species becoming endangered and what we can do to help save them. The activities help create an awareness of biodiversity, and emphasize teamwork and imagination as problem-solving techniques on behalf of the environment.
- **Jr. Zookeeper**. This program for teenagers provides hands-on experiences in zookeeping and animal husbandry. Topics covered include taxonomic comparisons, animal behavior research projects, the Species Survival Program and the ever-changing role of animal managers in today's zoos.
- **Zootots**. Toddlers can explore the connections between animals and their young as well as the interrelationships between animals and their environments. Special activities include making enrichment for The ZOO's animals. Through books and informal lectures, children develop an awareness of the natural world.
- **Zooschool**. In collaboration with local elementary schools, The ZOO provides onsite science classes to first grade classes and to a class of gifted elementary school science students. Utilizing The ZOO as an outdoor laboratory, the focus is on offering scientific instruction in a real world environment.
- **Teacher's Packet**. The ZOO provides a comprehensive yet specific collection of data and activities that local teachers can use to facilitate their teaching programs.
- **Newsletters**. The ZOO newsletter has information regarding the participation of zoos in animal conservation, endangered animals housed at The ZOO that provides basic information about the animal, its status in the wild, and what zoos are doing to insure their survival.
- **Zoosnooze**. The ZOO offers an overnight stay at The ZOO to school, scout, and church groups that includes a nighttime train ride, tours of the night houses of several of the primates and cats housed at The ZOO, and a reptile encounter at the Education Center. These programs are designed to introduce animals not normally on display or areas not normally accessible to the public. The presentations underscore the role of The ZOO in the conservation of wildlife and its participation in Species Survival Programs.

The ZOO's Community Outreach Programs

The social benefits provided by The ZOO are also considerable. The ZOO serves as an important community builder through outreach programs that enrich our hospitals, churches, schools, and other community endeavors. The ZOO and ZOO staff actively share in activities and support the Symphony, Opera, Little Theatre, Interstate Fair and many other community activities in Northwest Florida. The ZOO contributes over $30,000 annually to our community's charities, civic clubs, hospitals, schools and other deserving groups by providing ZOO Friends Memberships, ZOO admissions and ZOO programs for their constituents and fund-raising activities. For example, over the last several years, The ZOO and its partner, WEAR Channel 3, have contributed over $125,000 for Communities Caring Christmas through its ZOOLIGHTS holiday event. Some of the other outreach programs offered by The ZOO include:

- **Animal Assisted Therapy**. Partnering with a local mental health facility, trained zoo staff members conduct sessions that unite zoo animals with developmentally delayed and behaviorally challenged youth. This goal-directed intervention is accomplished with hands-on animal encounters and introductions to animal husbandry. Discussions of the plight of endangered species and our responsibilities of informed decision-making are emphasized. The goal of the therapy is to utilize a wide variety of zoo animals as therapeutic facilitators for the clients, while at the same time providing enrichment to the animals.
- **Zoomobile**. Zoomobile presentations are specifically designed to teach basic concepts of conservation. One of the Zoomobile presentations focuses on the destruction of the rainforests and its effect on the animals that live there. Another presentation deals specifically with endangered animals. Zoomobile's staff discusses how these animals became endangered and what can be done to save them.
- **Blended School**. Partnering with local school districts The ZOO offers onsite science classes to home-schooled students. This year the theme is the interrelationships between animals and their environment. Hands-on experiments utilizing The ZOO as an outdoor classroom emphasize the role of biodiversity and conservation in a world of threatened habitats.
- **Docent-Volunteer Program**. The ZOO has an active and ongoing volunteer program where docents represent The ZOO at community events and at special events held at The ZOO such as fundraisers and school field trips. They also accompany the Zoomobile to schools, churches and community events. They conduct tours for school groups, educate zoo visitors with

artifacts, and provide answers to questions about zoo animals and wildlife conservation at the information booth.

- **Animal Care**. The animal care department at The ZOO provides care for 700 animals around the clock. Their daily responsibilities encompass everything from feeding and medicating to assisting in animal births, hand-raising baby animals, providing innovative and interesting enrichment, repairing exhibits, training ZOOtech students, and educating visitors. They are often called upon by local citizens to answer questions about animal care or to rescue wildlife that become injured or stray into populated areas.

The ZOO's Partnership with The University Of West Florida and Pensacola Junior College.

The ZOO's association with the University of West Florida and Pensacola Junior College provides numerous benefits to the community and also to the educational institutions. Some of the benefits that result from The ZOO's partnership with our advanced educational institutions include: the ability to apply for grant funds, the creation of internship and job opportunities, the increased ability to attract distinguished speakers and conferences, numerous and varied opportunities for applied research, the promotion of increased university-community interaction, improved student educational opportunities and experiences, the ability to attract new students and faculty, and increased opportunities for volunteerism and community service. Each of these important benefits serves to enhance the reputation of The ZOO, the University of West Florida, and Pensacola Junior College. Programs currently offered include:

- **Zoo Animal Technology Program**. A two-year Associate of Science degree in Zoo Animal Technology is offered by Pensacola Junior College in association with The ZOO. At its inception this program was endorsed by Robert Wagner, former president of AZA. The program offers practical instructional course work at PJC and a series of seminars presented at The ZOO. The seminars are organized by the Curator of Education and call on zoo staff to give talks on all aspects of zoo management, conservation programs, zoo safety, and exhibit design. In addition, all the clinical hands-on training of students is conducted at The ZOO, including animal care, husbandry, breeding and health. Students learn all practical aspects of working at a zoo and are instilled with the importance of today's zoo in promoting and facilitating animal conservation and species survival.

- **Interdisciplinary Sciences, Zoo Science Specialty.** A Bachelor of Science degree in Interdisciplinary Sciences, Zoo Science Specialty is offered by the University of West Florida in association with Pensacola Junior College and The ZOO.
- **Internships**. Students from area high schools and colleges participate in independent study or internships at The ZOO where they complete projects that provide training, education, and professional development in a working environment.

The ZOO's Role in Enhancing the Region's Economic Development Efforts.

In an era in which businesses are actively seeking a highly skilled workforce to fill jobs in the "new economy" industries, the ability to attract and retain skilled workers is becoming a major issue. The ZOO contributes to an increasingly important factor in business location decisions: cultural amenities and quality of life. The true significance of cultural activities in economic development may lie not so much in the quantifiable financial effects on the economy of a community as it does in the improvement and attractiveness of the city and it's downtown...Culture and the arts can contribute to changing a community's image, drawing tourists to the city, creating markets for new business, and encouraging new private investment.[9] James Segedy in a 1997 review of the literature on the importance of quality of life in business location decisions and local economic development found: "The classic variables of land, labor and capital as well as utility rates, taxes and the elusive business climate and entrepreneurial environment are now essentially available universally. As the focus of economic activity shifts more toward the service sector we are beginning to see other transformations…. The new variable has become psychic income.

[9] The Economics of Amenity: A Policy Guide to Urban Economic Development, Partners for Livable Places, 1985.

This translates into a higher value placed on more intangible variables such as quality of life and amenities."[10]

Richard Florida, a professor of economic development at Carnegie Mellon University and the author of *The Rise of the Creative Class*, claims that cultural amenities, such as those offered by The ZOO, are an important factor in attracting the highly educated and well-paid segment of the workforce on whose efforts corporate profits and economic growth increasingly depends.[11]

The ZOO's International Conservation Programs

In addition to its regional and local school conservation education programs and its conservation messages and learning opportunities throughout the park, The ZOO is actively involved in a number of specific international conservation efforts such as:

- **Bees 'n' Trees**. Save the Elephants Foundation and The ZOO are involved in the conservation project "Bees 'n' Trees" in Samburu Reserve, Kenya. The project aims to protect acacia trees from elephant tusks deraking trees by wrapping the trees with wire and hanging bee hives on the trees. The bees will act as guardians of the trees, and honey produced can be harvested and distributed to the nearby community to consume or sell.
- **Species Survival Plan**. The ZOO displays over 16 species that are part of the American Zoo and Aquarium's (AZA) Species Survival Plan program to provide for breeding and conservation of many endangered species.
- **Rhino Rolly Program**. The ZOO makes annual contributions to the Rhino Rolly Program for the conservation of elephants and rhinos in the Abedare Forests of Kenya.
- **Village Scout Program**. The ZOO contributes to the Village Scout Program, a World Wildlife Fund project which helps prevent poaching in Zimbabwe by engaging regional villagers as resource and wildlife management partners.
- **Conservation Endowment Fund**. The ZOO is an annual contributing partner to the AZA's Conservation Endowment Fund, which provides resources to support conservation efforts worldwide.

[10] James Segedy, "How important is 'Quality of Life' in Location Decisions and Local Economic Development?," *Dilemmas of Urban Economic Development: Issues in Theory and Practice*, R. Bingham and R. Mier, eds., Sage Publications, Thousand Oaks, CA, 1997, pp. 56-73.
[11] Richard Florida, *The Rise of the Creative Class*, The Washington Monthly, May 2002.

- **Anti-poaching Program**. The ZOO contributes directly to the anti-poaching program in Africa's Tsavo National Park.
- **WILDCON**. The ZOO participates in the sponsorship of WILDCON, which provides bush clothing, radios and pilot supplies and other gear for aircraft surveillance and anti-poaching activities in Zimbabwe.
- **Jaguar Conservation**. The ZOO is currently organizing a partnership with the Belize ZOO and the Belize government to assist with jaguar conservation and conservation education programs in Central America.

The ZOO's Safari Programs

Pat Quinn, the president, director, and co-founder of The ZOO, and his wife Donna, have led more than 50 safaris into the wilds of east and south Africa as well as South America. The Quinns have taken people into the wilderness for nearly 30 years, to explore areas such as Zambia, South Africa, Namibia, Botswana, Kenya, Tanzania, Peru, and Ecuador. These safaris include close encounters with animals such as lions, baboons, giraffes, elephants, hippos, and thousands of graceful birds. In South America and the Galapagos Islands, travelers may see sea lions, seals, marine iguanas, and tortoises.

Each safari is limited to 14 persons ensuring a personalized experience. Security is provided by professional guides who escort all game viewing activities. Transportation is by all-terrain vehicles but the excursion may also include white-water rafting, riding on an elephant, flying in a private plane, canoeing, or cruising aboard a luxury yacht. Through tropical rain forests, pristine coastal regions, and vast open plains, safari-goers can expect to see migrating wildebeests, vast flocks of flamingos, and rookeries of penguins. In addition to the animal encounters, travelers discover the history of African tribes, meet with Masai warriors, explore the Great Rift Valley or see the world's largest waterfall, Victoria Falls.

Estimated Attendance of The ZOO Following the Proposed ZOO Master Plan

The purpose of this section is to provide estimates of the attendance levels that could be achieved following the proposed $3-5 million Master Plan capital investment program at The ZOO in Gulf Breeze. The ZOO Master Plan includes the following elements:

Master Plan Themes

Zoogeographic and Biome Themes

- Africa Adventure
- Asian Realm
- The Rainforest – Maya World, Meso-American Tropical Forest
- Ausie Walk-About – The Australian Outback
- Wild Florida – Native Wildlife of the Sunshine State
- The Desert Biome
- Pampas & Grasslands

Taxonomic and Behavioral Themes

- World of Birds
- Nocturnal House – Creatures of the Night
- Bats
- Cat Country (and Cat Ambassador Program)
- Reptile Safari
  - Dragon World
  - The Serpentarium
  - The Frog House and Jewels of the Rainforest
  - Turtle Conservation Center
  - Alligator Swamp
  - Crocodile Cove
- Insect Zoo and Butterfly Pavilion

Demonstration, Activity Themes and Interpretive Kiosks

- The Florida Homestead – Farm in the Zoo (And the History of Domestication)
- Petting Zoo
- Parrot Bay
- Lori Landing

- Camel Safari

Miscellaneous Development

- Vehicle Entry/Exit
- Parking Lot
- Pedestrian Entry Plaza
- Various Interpretive Kiosks – Introduction and demo venues at exhibit theme entry areas.
- Etc……………..

Research and analysis used to develop these estimates relied upon the following:

- Previous market studies and research pertaining to zoo attendance;
- Population and cultural characteristics present at zoos nationwide;
- Affect of capital investment, population, incomes, education, annual budget, acreage development and other variables on attendance at zoos nationwide;
- Site plans and proposals for the ZOO and botanical garden at Gulf Breeze, including anticipated capital investment and annual budget.

This analysis uses a liner regression procedure to predict the attendance number that might be expected to result from the improvements that are planned for The ZOO in Gulf Breeze. This approach is, in a sense, a formalization of the procedure that one might intuitively follow in attempting to predict the outcome of one variable by using known related variables. The first step is to gather information on known independent variables that we feel will help to explain the unknown dependent variable, zoo attendance. These explanatory variables were then used to estimate or predict zoo attendance. In reviewing the literature, we find that it is believed that zoo attendance is a function of several variables, including: population, resident income and employment levels[12], capital investment[13], tourism levels[14], competitive local attractions, quality of

[12] Economic Impact of the St. Louis Zoo, http://www.stlzoo.org/home/economicimpact/
[13] The Economic Contribution of the Lowry Park Zoo to the Hillsborough County Economy Center For Economic Development Research, University of South Florida, May 2003
[14] The Economic Impact of the Cincinnati Zoological Society, 1992 To 1996, Marie Haney The Economics Research Group, Center for Economic Education, University of Cincinnati

management[15], and the perceived quality and value of the zoo.[16] Data on the metro population, household incomes, competitive attractions, zoo budgets, zoo site acreage, and tourism indicators for each of the zoos in the United States that are members of the American Zoo and Aquarium Association were reviewed to determine their correlation with zoo attendance. We found that the variables that had the strongest correlation to zoo attendance were annual zoo budget and capital investment, followed by metro population, and then arts and recreation indices (used as indicators of tourism). The Pearson Correlation for each of these independent variables is shown in Table 5. A value of 1 would indicate that zoo attendance is precisely predictable from the other variable. A positive correlation indicates that as the value of the variable increases, the value of zoo attendance also tends to increase. The closer the correlation value is to 1, the stronger is that tendency; and the closer the correlation value is to 0, the weaker is that tendency. Statistical significance is computed to determine the likelihood that a particular correlation could occur by chance. The significance represents the degree of rarity of a certain result. A significance less than .01 means that there is less than a 1% probability that this relationship occurred by chance.

Table 5 - Correlation of Variables with Zoo Attendance

Independent Variable	Pearson Correlation with Zoo Attendance Nationwide	Statistical Significance Level	Number of Zoos Tested
Annual Zoo Budget	0.885	0.000*	189
Capital Investment in Zoo	0.660	0.000*	152
Metro Population	0.452	0.000*	189
Tourism Index	0.377	0.000*	176
Median Household Income	0.296	0.000*	176
High Technology Employment	0.295	0.000*	176
Population Education Levels	0.206	0.008	176
Population Growth 1990 to 2000	0.044	0.578	176
Developed Acres	0.036	0.631	184
Climate Index	0.031	0.689	176

*Statistically significant at the .001 level of significance.

[15] The Economic Impact of Local Nonprofits on the Pueblo Economy, Kevin Duncan, Malik and Seeme Hasan School of Business, University of Southern Colorado, March, 2003
[16] Coopers & Lybrand, Market and Financial Analysis for the Proposed Tulsa Aquarium and Aquatic Resources Educational & Science Center, July 16, 1996.

The independent variables that were found to be significantly correlated to zoo attendance were used to create a regression equation that calculates predicted zoo attendance based on the values of several of the independent variables. Using a stepwise regression procedure, the computer statistics program developed an equation in which a combination of independent variables was able to explain 80% of the variation in zoo attendance. The equation used to predict ZOO attendance was:

Attendance (predicted) = constant + b(annual budget) + b(population) + b(tourism index) + error

This equation was used to estimate the attendance that could be expected at The ZOO and Botanical Gardens in Gulf Breeze in 2009. Two attendance figures are reported, the first based on new capital investment of $3,000,000, and the second based on new capital investment of $5,000,000. Annual budgets were assumed to increase by 3-5% per $1 million of capital investment, and population and demographic values used in the equation reflect values forecast for 2009. The calculated attendance predictions for The ZOO in 2009 using the above assumptions is 261,654 to 274,363 persons annually, with a 95% confidence interval of + or - 27%.

Clearly, there are many factors, events, and circumstances that influence the number of people that attend a given zoo, and many of these variables are difficult to quantify and are therefore not represented in the regression equation. Zoo attendances vary widely even within the same region. Management skill, promotion, and perception of value have important but difficult to quantify contributions to zoo attendance. Some assumptions made in the predicted values inevitably will not materialize, and unanticipated events and circumstances may occur. For these reasons, the confidence interval for the predicted zoo attendance is provided to give an indication of the margin of error in the equation.

Attendance at The ZOO in Gulf Breeze has averaged 142,278 persons annually over the past five years. The proposed ZOO Master Plan would substantially increase the overall investment in The ZOO, and should significantly increase its perceived value. Combined with the forecast increases in population and other demographic variables anticipated to occur over the next five years, ZOO attendance is predicted to almost double. Should this occur, the economic impact that The ZOO has on the local economy will increase proportionally.

Table 6 - Estimated Annual Economic Impact of The ZOO in 2009 Following Capital Investment

Estimated Annual Economic Impact of The ZOO	Current	In 2009 After $3,000,000 Investment	In 2009 After $5,000,000 Investment
Total Spending (Output)	$6,497,768	$10,702,538.80	$11,399,033.49
Income Generated	$2,556,196	$4,225,866.84	$4,498,392.87
Jobs Supported	99.2	167.2	177.5
State and Local Taxes Generated Annually	$307,160	$564,878	$592,314

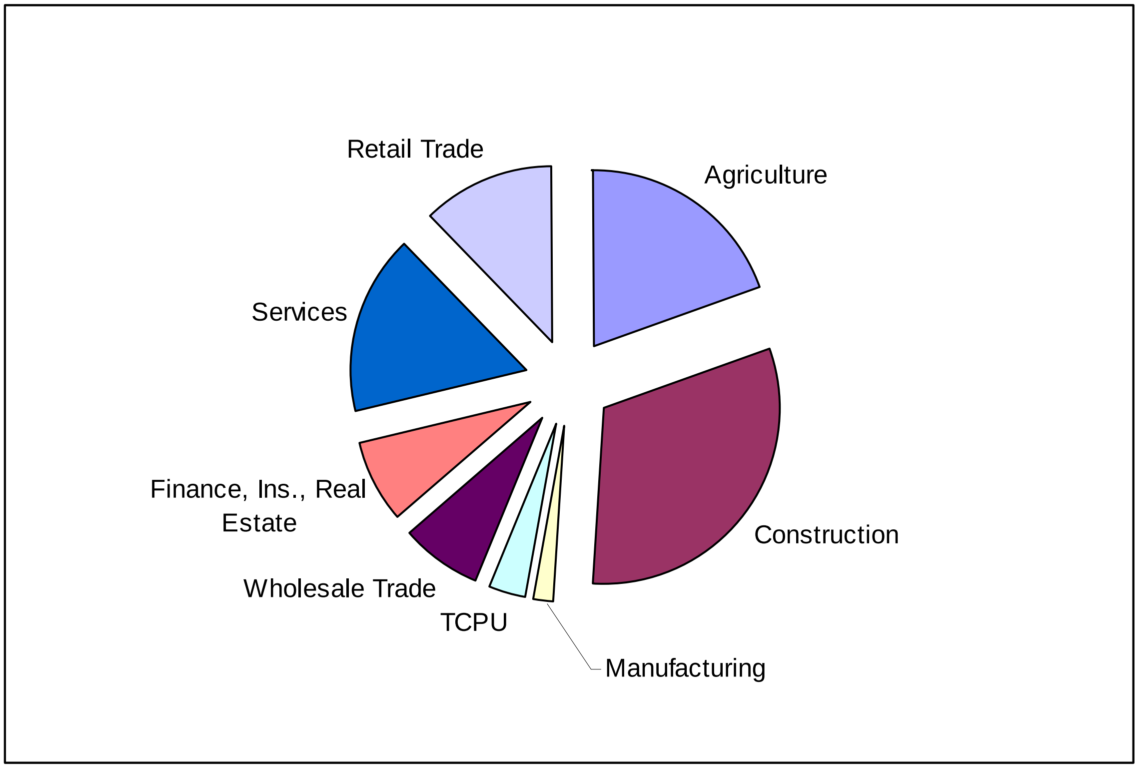
Estimated Economic Impact of the Proposed ZOO Master Plan

The proposed $3-5 million ZOO Master Plan will also have an immediate impact the local economy during the period of implementation. As this new spending ripples through the local economy, it will result in local retail and business-to-business sales. Local jobs will be either directly or indirectly created by this development project, and household incomes across a variety of industry sectors will be generated in the local economy. Table 7 below shows the estimated impact for the two investment scenarios.   Figure 19 below shows the distribution by industry sector of the economic impact of the proposed capital investment project. Again, these impacts will occur only during the period of implementation, whereas the impacts described in Table 6 above will occur each year.

Table 7 - Estimated Impact of the Proposed ZOO Master Plan

Estimated Economic Impact of $3,000,000 Investment in Botanical Gardens	Direct	Indirect	Induced	Total
Total Spending (Output)	$2,436,187	$748,321	$689,074	$3,873,581
Income Generated	$883,929	$337,687	$264,896	$1,486,513
Jobs Supported	41.3	8.4	8.6	58.3
Estimated Economic Impact of $5,000,000 Investment in Botanical Gardens	**Direct**	**Indirect**	**Induced**	**Total**
Total Spending (Output)	$4,102,378	$1,260,883	$1,153,940	$6,517,201
Income Generated	$1,478,310	$565,712	$443,601	$2,487,623
Jobs Supported	72.5	14.0	14.5	100.9

Figure 19 - Distribution by Industry Sector of the Proposed ZOO Master Plan



Appendix

Glossary Of Terms

Table 8 - Glossary of Terms

Term	Definition
Analysis Of Economic Impact	An economic impact analysis identifies the economic contribution of a single event (e.g. injection of tourist dollars for a particular tourist attraction within a specified region) to the remaining industry sectors within the same region.
Direct Effects	The effects of stimuli on economic activity are broken down into three components: direct, indirect, and induced. Direct effects are the changes in the industries to which a final demand change (the stimulus being measured in the study) was made. Industries producing goods and services for consumption purchase goods and services from other producers for final use (final demand).
Employment	Employment includes total wage and salary employees as well as self employed jobs in a region. It includes both full-time and part-time workers and is measured in annual average jobs. Data used to determine employment are ES202, Regional Economic Information System (REIS), and County Business Patterns.
Final Demand	Final demands consist of purchases of goods and services for final consumption as opposed to an intermediate purchase where the good will be further remanufactured.
Indirect Business Taxes	Indirect business taxes consist of excise taxes, property taxes, fees, licenses, and sales taxes paid by businesses. These taxes occur during the normal operation of businesses but do not include taxes on profit or income. Indirect business tax numbers are derived from U.S. Bureau of Economic Analysis Gross State Product data.
Indirect Effects	The effects of stimuli on economic activity are broken down into three components: direct, indirect, and induced. Indirect effects are the changes in inter-industry purchases as they respond to the new demands of the directly affected industries. These indirect purchases continue until leakage from the region stop the cycle.
Induced Effects	The effects of stimuli on economic activity are broken down into three components: direct, indirect, and induced. Induced effects typically reflect changes in spending from households as income increases or decreases due to the changes in production.
Infrastructure	A community's existing transportation, communication and utility network.
Input-Output Model	A regional economic analysis begins by identifying the relationships among different sectors in a region and then applying the appropriate multipliers in order to determine the amount of impact a change in input to one industry sector will cause in the output of that sector and subsequent sectors. This multiplying affect demonstrates how one dollar is spent and re-spent within the same region. More specifically, regional multipliers can be used to approximate the changes in output, income and employment in all industry sectors resulting from a change in spending in one sector.
Institutions	A type of final demand sector. Includes personal consumption expenditures or purchases made by households; federal, state, and local government purchases; investment purchases; and trade.

Term	Definition
Labor Income	The terms Labor Income and wages are used interchangeably in this study. Labor Income includes changes in employee compensation and proprietor income resulting from the change in final demand measured by the study. Employee compensation is wage and salary payments as well as benefits including health and life insurance, retirement payments, and any other non-cash compensation. It includes all income to workers paid by employers. Proprietary income consists of payments received by self-employed individuals as income. This is income recorded on Federal Tax Form 1040C. Proprietary income includes income received by private business owners, doctors, lawyers, and so forth. Any income a person receives for payment of self-employed work is counted. Income estimates are derived using ES202, County Business Patterns and Regional Economic Information System (REIS) data.
Margins	Represents the difference between producer and purchaser prices. Producer prices are the prices of the goods at the site of production for commodity industries. Purchaser prices are prices paid by the end user of the good or service at a retail store.
Metropolitan Statistical Area (MSA)	**What is a Metropolitan Statistical Area?** The general concept of a metropolitan area (MA) is one of a large population nucleus, together with adjacent communities that have a high degree of economic and social integration with that nucleus. Each MA must contain either a place with a minimum population of 50,000 or a Census Bureau-defined urbanized area and a total MA population of at least 100,000. A MA comprises one or more counties. A MA may also include one or more outlying counties that have close economic and social relationships with the central county. An outlying county must have a specified level of commuting to the central counties and also must meet certain standards regarding metropolitan character, such as population density, urban population, and population growth. Primary Metropolitan Statistical Area (PMSA) If an area that qualifies as an MA has more than one million persons, primary metropolitan statistical areas (PMSA) may be defined within it. PMSAs consist of a large urbanized county or cluster of counties that demonstrate very strong internal economic and social links, in addition to close ties to other portions of the larger area. When PMSAs are established, the larger area of which they are component parts is designated a consolidated metropolitan statistical area (CMSA). Metropolitan Statistical Area (MSA) Metropolitan statistical areas (MSAs) are relatively freestanding MAs and are not closely associated with other MAs. These areas typically are surrounded by nonmetropolitan counties.
Multipliers	Industries respond to meet final demands directly or indirectly by supplying goods and services to industries responding directly. Each industry that produces goods and services generates demands for other goods and services. These demands ripple through the economy, multiplying the original economic impact.

Term	Definition
Output Impact	Total Industry Output is the value of production by industry for an annual calendar year production. Output is measured either by the total value of purchases by intermediate and final consumers, or by intermediate outlays plus value added. Output can also be thought of as value of sales plus or minus inventory. Most output data is from the Bureau of Economic Analysis output series and the Annual Survey of Manufacturers. Construction output is derived from the current Annual Survey of Construction Put-In-Place. State estimates are from the Census and Survey of Construction Activity.
Regional Purchase Coefficients (Rpc)	Ratios representing the portion of regional demands purchased from local producers. RPC's are used to estimate the trade flows of the model before multipliers are generated. The portion of the specific impact that is imported will not have an indirect or induced effect.
State And Local Government Taxes	State and local government income and expenditures by specific category come from the Annual Survey of State and Local Government Expenditures and include the following: Property Tax Total Sales Tax Alcoholic Beverage Tax Amusement License Corporate License Hunting Motor Vehicle Tax Motor Vehicle Operators PU License Occupational Business License Other License Individual Income Tax Corporate Income Tax Death and Gift Tax Document Stock Tax Severance Tax Taxes NEC Interest Earnings Fines Forfeits Rents Royalties State Education Transfers Local Education Transfers State Local Social Security Federal Grants in Aid State and Local Borrowing Corporate Interest Personal Interest Federal Education Transfers Total Education Operations State and Local Sales State and Local Non-education Purchases Federal Transfers Data
Target Industry	An industry (or industries) that, based on the long-range vision for your community and your community's existing strengths, the economic development organization is working to grow in your area.

Term	Definition
Tax Impacts Report	This report describes taxes related to the chosen impact analysis. Income information is combined with tax information to estimate taxes generated by a change in final demand. These estimates are based on the average for all industries within the model; the average taxes associated with each household income class; the average taxes and transfers associated with each of the government institutions defined by the model. See "State and Local Government Taxes"
Total Economic Output	The effects of stimuli on economic activity are broken down into three components: direct, indirect, and induced. The total effect is the sum of direct, indirect, and induced effects, and is a measure of total inter-industry sales and purchases.
Value Added	Payments made by industry to workers, interest, profits and indirect business taxes.