APPLIED ECONOMICS

MARICOPA ASSOCIATION OF GOVERNMENTS
REGIONAL GROWING SMARTER IMPLEMENTATION:
FISCAL BALANCE

FINAL REPORT

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October 2001

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1.0 INTRODUCTION

This paper is one of a series on regional technical reports that are funded under a grant by the Federal Highways Administration for MAG's Regional Growing Smarter Implementation Project. There are 13 regional technical reports in four categories:

1. Growth reports – (1) Demographic & Social Change; and (2) Economic Change
2. Distribution – land use, real estate, and socioeconomics
3. Infrastructure reports – (1) Water Supply; (2) Regional Transportation Systems; (3) Regional Water/Wastewater Treatment; (4) Regional Open Space; (5) School Facilities; and (6) Cost of Regional Infrastructure
4. Regional issues reports – (1) Sales Tax Base; (2) Fiscal Balance; (3) Affordable Housing; and (4) Commute Sheds

This report presents the results of a regional issues report on Fiscal Balance. This report is Phase I of a project to estimate order-of-magnitude fiscal balance of regional land use plans and projects. The purpose of this working paper is to provide background information on how different types of development impact communities from a fiscal perspective. The paper also includes an analysis of the revenue structure of local governments in Metro Phoenix relative to the ability to sustain various mixes of development types.

Phase II of Fiscal Balance will include the development of a generalized fiscal model that can be used to evaluate the impacts of different land use combinations for five size categories of cities and Maricopa County. This model will be applied to the regional composite of land use plans being prepared by the municipalities in Maricopa County under Growing Smarter.

This paper reports on Phase I results. The first phase of this task is a literature review on fiscal impacts and local revenue sources. The second phase of the task involves setting up the preliminary model and using it to evaluate the net fiscal impacts by city for several general land use categories.

The balance of this working paper is divided into three chapters:

?? *Chapter 2.0 provides a summary of the literature search on land use impacts and local revenue sources*. The focus of the land use summary will be on the net impacts of residential versus nonresidential uses at the city level. The local revenue information will focus on the types of revenues that are statutorily available to cities in Arizona, highlighting any underutilized sources.

?? *Chapter 3.0 details background data and assumptions that were collected for the preliminary model including city and county population, employment, staffing levels, tax rates, permitting activity, assessed value, and other local data*. In addition, the process for analyzing budget information for each community based on standardized revenue and expenditure categories is reviewed.

?? *Chapter 4.0 presents the methodology used in development the model results from the preliminary model showing the comparative net impacts by city for residential, office, retail and industrial development.* This may be helpful for member agency cities to use for order-of-magnitude fiscal balance impacts while they are still in the land planning stage of the general plan updates.

2.0 LITERATURE REVIEW

2.1 Introduction

This portion of the working paper provides a summary of the articles and papers that describe local land use impacts based on national results. There is substantial variation in these findings, although most authors agree that residential development does not pay for itself. Second, this chapter presents a review of the types of local revenue sources that are available to cities in Arizona and how these revenues can be used to ensure fiscal sustainability.

2.2 Land Use Fiscal Impacts

While it is generally conceded that non-residential development generates positive impact and residential development has a negative fiscal impact, many studies have been conducted to gauge the impact of various housing types. Although market conditions drive the demand for single family and multi-family housing, it is essential for jurisdictions to understand the impacts and plan for well-balanced communities. Fiscal impact analysis creates a link between planning and the economics of the market.[1]

2.2.1 Residential Development

There are many factors that affect residential revenues and expenditures. Property tax collections, local income tax collections, sales tax collections, residential fees and permits, motor vehicle fees, state aid, and a multitude of other sources help determine the local revenue contribution attributed to the residential sector. Education, health services, police and fire protection, public transportation, and public works are among a variety of residential services local government provides. Note that most fees and permits are collected for the funding of a specific program, while tax collections can be used to finance a variety of general government expenditures. This is an important concept in fiscal impact analysis where the type of expenditures and revenues attributed to different types of development are crucial factors.

Education is one of the largest categories of local government spending, and therefore many fiscal analyses include both education and non-education spending. However, since the purpose of this task is to examine the fiscal impacts on local governments, this review will only consider municipalities and not school districts.

The level of services required from local government depends on the type, location, and density of the residential development. Typically, population generated by residential development creates a greater demand for services than employment generated by non-residential development. In most cases, high value property will have a greater impact on revenues attributed to residential uses while low value homes will contribute less to municipal coffers. A fiscal impact analysis developed for the municipality of Anchorage, Alaska by Tischler and Associates created a prototype of the impact of residential uses on the municipality's general fund. Single family rural units, which had the highest market value, also generated the most revenue.[2] In a similar study, the department of Agricultural Economics at Purdue University

[1] Holzheimer, Terry. "How Has Fiscal Impact Analysis Been Integrated Into Local Comprehensive Planning?" National Planning Conference Proceedings, 1998.
[2] Tischler and Associates. "Prototype Land Use Fiscal Impact Analysis: Municipality of Anchorage, Alaska."

compared the fiscal impacts of low, mid-priced, and high priced housing of various densities on the unincorporated Wabash Township, Tippecanoe County, and Tippecanoe School Corporation.[3] In both studies, the lower property values associated with high-density housing did not create as much revenue as the high value of the low-density housing. However, because high-density residential developments have more units in a smaller area, often times the infrastructure costs are lower because a larger population can be served more efficiently. The length of water lines, sewer lines, and streets miles necessary to meet the needs of the resident population are less in multi-family housing than in single family housing. This drives down the expenditures for local governments. The trade-offs between lower service and infrastructure costs versus lower housing values vary depending on location and tax structure.

As previously mentioned, city revenues are typically the function of property tax, income tax, sales tax, state shared revenues, permits, and fees generated by the residents. In the case study of the Indiana jurisdictions, both property tax and local income tax were higher in higher-end residential development while permits and fees collected generated more revenue from the lower-end housing, because of the high-density nature.[4] In Indiana, state controls limit property tax collection for local governments. These limits are adjusted in accordance with past assessed value. Therefore, since none of the developments were big enough to increase the amount collected in the first year, the property tax revenues did not cause great impacts on either government entity. At the county level, the higher end housing resulted in a positive impact while the lower end housing caused a negative impact. The township experienced a much smaller impact than the county because it shared a much smaller amount of both property and income tax revenue. The township impacts were negative for all housing types, but the negative impact was less for the higher end communities because of the greater amounts of income and property tax collected.

In the Alaska prototype only one type of housing reflected a positive impact on the city's general fund. Single family rural was the only type to generate positive net impact. This was the result of lower expenditures on rural homes since they tended to rely on on-site water and septic systems. Also, rural housing in Anchorage had higher property values than the other types.[5] Once again, the results of this prototype were dependent on the tax structure of the municipality, which relies on property tax as the main form of local revenue.

In addition to the varying tax structures of a municipality, methodology plays an important role in results of a fiscal impact analysis. For example, the Indiana study considered three types of impacts: direct, indirect, and construction. As the designation suggests the direct impact encompasses revenues and costs derived exclusively from the new development, while construction includes non-recurring revenues and expenditures derived from the construction of the new housing. In the Indiana study as well as others, indirect impacts refer to the revenues generated by resident purchases and related economic activity. They may include the income tax generated by new jobs created, the sales tax generated by the purchases of the new residents, and increased property value, just to site a few examples. Indirect impacts vary depending on local tax structure. In the Indiana case, since local communities do not share in sales tax generated by the new local activity (because it is exclusively a state revenue), sales tax was not considered as a component of indirect local impact. In general, the exclusion of indirect impacts may result in a fiscal analysis that does not capture the overall impact of a residential development.

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[3] DeBoer, Larry and Lei Zhou. "The Fiscal Impact of Residential Development in Unincorporated Wabash Township. October 1997.
[4] DeBoer, Larry and Lei Zhou, October 1997.
[5] Tischler and Associates.

The fiscal impact studies of Alaska and Indiana were based on a per capita or per service population (population + employment) distribution of revenues and expenditures. Another method commonly used in fiscal analysis compares the costs and revenues across land uses. The cost of community service (COSC) method creates a ratio that compares the revenue generated and spent by land use.[6] Expressed as a ratio, it evaluates the dollars created in local revenues compared to dollars spent by local governments for residential and non-residential uses. A study utilizing this ratio in Gallatin and Broadwater Counties in Montana found residential land uses generated revenue/expenditure ratios of 1: 1.45 and 1: 3.25, respectively.[7] Another study by the Utah Department of Agriculture found that residential development in three Utah counties had ratios ranging from 1: 1.11 to 1: 1.27.[8] These ratios indicate that spending attributed to residential uses outweighed revenues collected from residential land uses.

However, there are many drawbacks to this type of interpretation. First, the COSC does not consider the relationships between land uses, assuming that land uses are independent of each other. In the case of the Montana study, it did not take into account that residents are necessary to operate the industrial activities and they also spend money in the area, which in turn creates retail sales and tax contributions.[9] This isolation of the land uses does not consider the indirect benefits, as were seen in the Indiana analysis.

Another important issue to consider when discussing the net impact of residential development is the timeframe of the analysis. While capital expenditures such as road construction or extension of sewer, water, and electric lines, may occur immediately, tax revenues may not accrue until much in the development stage. At the same time, one-time tax, fee, and permit revenues from construction may generate positive impacts when they are collected, but do not cover long-term maintenance costs. Certain impact analyses that only consider the present impact may not reflect the true long-term cost of development.

A study examining the fiscal impact of developing residential subdivisions in the City of San Antonio did not consider the impact over time or the indirect costs.[10] The study found that the developers paid for the largest share of capital infrastructure expenses, state or federal funds covered the next largest share, and municipal funds paid the remainder. The study also concluded that in four of the five subdivisions, the lots did not represent a net loss to the city. The study only covered the immediate construction impact. It also did not distinguish between housing types and property values, which other studies found to be important indicators of the property, income, and sales tax generated by different housing types.

The San Antonio findings were consistent with the results of other studies, which typically noted positive impacts during the short-term because of construction impacts. In contrast, the Indiana study showed long-term positive impacts were less than the first year impacts, and likewise negative first year impacts were intensified in the long-term. Had the San Antonio study been

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[6] Prindle, Allen M. and Thomas W. Blaine. "Cost of Community Services." Ohio State University Extension, 1998.
[7] Haggerty, Mark. "Fiscal Impacts of Alternative Development Patterns: Broadwater and Gallatin Counties." Montana State University, October 1997.
[8] Snyder, Donald and Gary Ferguson. "Cost of Community Service Study: Cache, Sevier, and Utah Counties." Utah State University, December 1994.
[9] Haggerty, Mark, October 1997.
[10] Dotzour, Mark. "Fiscal Impact Study: Does Growth Pay for Itself." National Association of Home Builders website. Accessed April 17, 2001.

extended over a longer time period and incorporated other costs generated by residential housing, the results may not have yielded the same impact. Another factor that may have affected the results of the San Antonio case is the prevalence of permits and fees required for residential construction. Again, most local permits and fees are only used for specific services and are set to cover the cost of those services. For example, a fee may be charged to perform inspections and issue building permits. While the money collected from the fee is still considered revenue, it directly corresponds with the cost of the city services. The break-even nature of permits and fees may have influenced the positive impact results of this particular study.

Finally, location of the residential development, the current capacity of facilities, and other developments taking place in the area are important factors in fiscal impact analysis. A comparison study of development types in Florida found that nodal or corridor development had much lower the capital costs than those of scattered development. [11] This stems from the fact that local spending on capital infrastructure was decreased because the development built on existing infrastructure instead of requiring the more costly extension of services.

2.2.2 Non-Residential Development

Non-residential land uses typically generate important revenues for local governments while requiring limited expenditures for services. Local government revenues from nonresidential development are generated in the form of property and sales taxes, fees, and permits. Most studies agree that non-residential uses place lower burden on municipal services than residential uses. However, it is not always as apparent to what extent each land use will impact the fiscal budgets of municipal and county governments.

In general, hotel and industrial uses seem to generate the most local revenues while requiring the least amount of services. Revenues and expenditures from non-residential land uses are generally a function of property and sales tax collected, and costs attributed to non-residential services. The largest non-residential cost categories are typically police and fire protection, public works, and management.[12] The prototype developed for Anchorage, Alaska found that hotel uses had the greatest positive impact on both the municipality government as well as the school district.[13] This stems from three important findings. The first is that the hotels generate a good amount of revenue because the property values tend to be higher. Secondly, most local jurisdictions directly benefit from lodging taxes levied on room charges. Finally, hotels require the least amount of local services due to low employment density. The Alaska prototype verified similar findings for industrial land uses. Although industrial land had lower property values than other non-residential uses, it also required the least amount of local spending also because of low employment density.

Retail, office, and other service designations also tend to have positive impacts on local budgets. The extent of the impact depends greatly on several factors, including the current land use composition of the area, the methodology used in determining the fiscal impact, the tax structure, the current capacity of facilities, and the presence of other development projects. In the Anchorage Alaska prototype, office land uses generated positive net impact while retail and service industries generated negative impacts.[14] Also in the Anchorage case, retail uses generated

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[11] Anderson, Geoff, "Why Smart Growth: A Primer by the International City/County Management Association." July 1998.
[12] Tischler and Associates.
[13] Tischler and Associates.
[14] Tischler and Associates.

more expenditures than revenues collected. Since Anchorage does not have local sales tax, the property value of the land was the most important factor. In spite of the fact that retail land had higher property values, higher tax revenues were offset by increased service demands, mainly more street traffic and increased public safety services. For service land uses, negative impacts stemmed from low property values and more municipal services required. In contrast the previously mentioned Montana study, which used the COSC ratio, reported that both commercial and office uses generated positive impacts. This disparity is probably the result of different local tax structures as well as the methodology used.

As previously mentioned, the cost of community services (COSC) is an approach that relates the various types of land use to the level of local taxation and spending generally associated with each. An advantage to this method is the ability to allocate certain services to land uses rather than attributing expenditures across all population and employment. This method is especially popular among studies that attempt to emphasize the amount of revenue generated by non-residential activities in contrast with the amount of services consumed by residential uses. Studies based on the COSC overwhelmingly generate ratios over 1 for residential land uses (meaning residential communities consume more taxes than they pay), and ratios much less than 1 for open space and industrial use.

When this approach is applied to analyze the fiscal impacts of municipalities and counties, industrial activity and agriculture/open space typically generate the lowest COSC ratios, while retail and office activity can have higher ratios. In a study of 12 diverse townships in Pennsylvania, this type of ratio was utilized to compare the fiscal impacts of residential, commercial, industrial, and agricultural space.[15] The results overwhelmingly indicated that farmland had the lowest ratio, ranging from 1: 0.02 to 1: 0.13, meaning that for every dollar of local revenue generated by agricultural uses; only 2 to 13 cents in expenditures were required. The results from industrial and commercial uses were similar, ranging from 1: 0.04 to 1:0.37. The variation in the ratios is a result of the diverse character and composition of each township. A comparative study of two growing counties in southwestern Montana yielded similar results using the COSC method.[16] Services and expenditures were allocated across three land uses to determine the fiscal impact of increased residential growth in the once rural farm area. Again, industrial uses yielded the lowest ratios while agricultural and commercial uses remained well under the 1:1 ratio.

The COSC method seems like a simple way of representing the fiscal impact of a land use on a local government, however it can be misleading because the land uses typically do not exist independently. While the COSC has its drawbacks, other methodologies used in fiscal impact analysis (based on per capita population served) tend to yield similar results in studies performed around the United States.

Studies that incorporate a more comprehensive approach to determining fiscal impact of land uses have found that balanced combinations of residential and non-residential development often provide the best fiscal impact on an area. Approaches that consider mixed-use growth scenarios typically yield more solid results because they consider the indirect impact of development on a specific area. For example, fiscal impact analysis for Post Falls, Idaho determined a combination of low density residential with increased non-residential activity would produce the best fiscal

[15] Kelsey, Tim. "Fiscal Impacts of Different Land Uses: the Pennsylvania Experience." Pennsylvania State University College of Agricultural Sciences, 1997.
[16] Mark Haggerty. October 1997.

scenario for the city.[17] In contrast, a similar approach utilized in Germantown, Tennessee suggested that continued growth with emphasis on high value housing would produce the best fiscal results for that jurisdiction.[18]

In most of the cases reviewed, non-residential land uses provide positive fiscal impact for local city governments. However, this is not always the reality for every area. Since no general relationship can be stated about land use, it is important to keep in mind that every jurisdiction and analytical approach, being unique, will generate different results. In spite of this, some broad-based work has been done to create an overall ranking of land uses. The following section discusses a hierarchy of land use created by Burchell and Listokin based on their extensive experiences with fiscal impact analysis.

2.2.3 Burchell-Listokin Hierarchy of Land Uses

Robert Burchell and David Listokin have published a wide body of literature dealing with fiscal impact analysis. In 1993 they created a design generalizing the hierarchy of land uses and typical fiscal impacts on municipalities and school districts.[19] This hierarchy, as shown in Figure 2-1, is based on their experience with fiscal impact analysis although fiscal impacts will vary across jurisdictions.

FIGURE 2-1
TYPICAL HIERARCHY OF LAND USE AND FISCAL IMPACT
BURCHELL & LISTOKIN

Land use	Municipal Impact	School District Impact
Research Office Parks	+	+
Office Parks	+	+
Industrial Development	+	+
High Rise/Garden Apartments (Studio/One bedroom)	+	+
Age-Restricted Housing	+	+
Garden Condominiums (1-2 bedrooms)	+	+
Open Space Lands	+	+
Retail Facilities	-	+
Townhouses (2-3 Bedrooms)	-	+
Expensive single-family homes (3-4 bedrooms)	-	+
Townhouses (3-4 bedrooms)	-	-
Inexpensive Single Family homes (3-4 bedrooms)	-	-
Garden Apartments (3+ bedrooms)	-	-
Mobile Homes	-	-

Source: Burchell and Listokin, 1993.

[17] Tischler, Paul S. "The Realities of Fiscal Impact Analysis." National Association of Homebuilders website. Accessed April 17, 2001.
[18] Tischler, Paul S.
[19] Burchell, Robert W. and David Listokin. "Fiscal Impact Procedures and State of the Art: The Subset Question of the Costs and Revenues of Open Space and Agricultural Lands." Lincoln Institute of Land Policy, 1993.

The authors footnote this table with a disclaimer that the hierarchy is a general listing and may not accurately apply to all communities, especially considering the individuality, capacity, and other developments in the area. This is indeed the case in Maricopa County. Previous impact studies for municipalities in Maricopa County show some deviation from the results shown in the hierarchy, most notably the impact of retail centers. Retail centers bring with them overwhelmingly positive fiscal impacts, a result that contrasts with the hierarchy's mixed ranking. This is due to local sales tax collections that more than make up for the higher costs of street maintenance and public safety services. Likewise, because open space areas do not directly create revenue, their fiscal impact is negative in contrast with the Burchell-Listokin ranking.

2.2.4 General Results and Conclusions

A number of important points derived from this literature review provide a basis for the fiscal impact model for Maricopa County. The majority of the studies presented in this review support the general view that residential development has a negative fiscal impact on local governments while industrial, hotel, agricultural, and retail uses generate positive impacts. However, most authors note that the results of fiscal analysis according to land use cannot be interpreted in isolation since these land uses do not exist in isolation. Despite the fact that residential development "drains city coffers", housing at all levels is necessary to provide employment for the commercial and industrial uses. Higher density housing, which generally causes the greatest negative fiscal impact, can reduce sprawl, capital costs, and other negative quality of life factors.

It is also important to remember the individuality of areas when reviewing fiscal impact analyses. The results of a fiscal analysis in one specific area cannot be interpreted as sweeping truths for all new development in any area. The nature of the area, tax structure, and the current capacity of the available facilities are important factors that are unique to a jurisdiction. This is an element of importance for the fiscal impact model for Maricopa County, where the local tax structure and growth patterns differ widely from other places in the United States.

2.3 Revenue Sources Available to Arizona Communities

Every state has a defined set of revenues that are available to local communities. As noted in the fiscal impact review, the local tax structure can have a significant impact on fiscal impact results. For example, in communities with local income taxes, the value of housing is very important because it tends to affect both property and income tax revenues. In Arizona, where sales taxes are a key local revenue source, retail development creates an overwhelmingly positive impact that helps to offset the negative net impact of residential development that supports local retail.

2.3.1 Sales Taxes

All communities in Maricopa County levy a local sales tax ranging from one to three percent. Sales taxes, according to state statues, can be levied on businesses in the following categories: transportation, utilities, telecommunications, pipelines, private car lines, publishers, job printing, contracting, builder sales, amusements, restaurants, personal property rental, retail, membership camping, transient lodging and mining extractions. Technically, the sales tax in Arizona falls under the general revenue category of consolidated transaction privilege taxes. This includes utility taxes and transient lodging taxes, which are classified by most cities as separate revenue line items. The various categories of businesses above can be taxed at different rates. Within the retail category, higher priced items may also be taxed at a differential rate. Typically taxes on hospitality industries, which may include both restaurants and lodging, as well as taxes on utilities, are at a different rate than other types of retail sales. In addition to taxes on electric, gas

and telecommunication utilities providing service in a particular city, cities may also tax municipal water sales.

In Maricopa County, cities that tax utilities at a different rate than the standard sales tax include Phoenix, Chandler, Peoria, Avondale, Paradise Valley and Cave Creek. Although the utility provider pays the taxes, residents and businesses that use utilities effectively generate the tax revenues. Thus, utility taxes, especially at a higher than standard rate, allow residential development as well as industrial operations (who are typically larger utility users) to generate revenues beyond just property taxes.

Transaction privilege tax revenues are normally an unrestricted revenue source, but they may be restricted for particular uses. Typically, the all or most privilege or sales tax revenues are allocated to the general fund. However, some cities have voter-approved increments to their normal sales tax that are set aside for specific uses such as transit improvements, tourism promotion or other local projects. According to state statutes, cities can form special multi-purpose facility districts and levy extra sales taxes within the district. The district may cover the entire city. Additionally, counties with populations over 1.2 million may levy a special sales or transaction privilege tax of not more than 10 percent of the tax rate applying to each type of business activity. This is only levied for regional transportation; in Maricopa County, voters approved a ½ cent sales tax for freeway construction until 2005.

Transient lodging taxes, which in Maricopa County range from 2 to 4 percent in addition to the normal sales tax rate, can be a significant revenue source for cities with hotel development. All but three of the cities in Maricopa County levy transient lodging taxes. According to state statutes, cities over 100,000 people must use all lodging taxes in excess of the normal sales tax rate for tourism promotion.

Among the various types of transaction privilege taxes, one underutilized revenue generator related to non-retail land uses is property rentals, including both real and personal property. All municipalities in Maricopa County levy this tax; statewide, there are just a couple of municipalities that do not. Cities are allowed to impose a tax on leases of commercial and industrial space as well as equipment. For office space where lease rates are typically fairly high relative to other types of nonresidential uses, lease taxes can generate significant revenues. For industrial space, both building leases and leases on high value manufacturing equipment may generate a sizeable stream of revenues for a city.

2.3.2 Property Taxes

The second major type of unrestricted revenues for local cities and counties are property taxes. Property taxes are one of the few revenue sources that are generated by all types of land uses. The amount of local property tax revenues is a function of the property value as well as the tax rate. Taxes apply to both real and personal property.

Typically cities have both a primary and secondary property tax rate. The primary tax is used for general fund purposes, while the secondary tax is used for bonded indebtedness. In Arizona, residential property is taxed at 10 percent of its assessed value while commercial and industrial property is taxed at 25 percent of its assessed value. There are 9 classes of property in total with specific assessment ratios, although the residential or commercial/industrial rates apply to the majority of property in most cities.

The state sets limits on property tax rates and the annual increase in local tax rates. The local property tax levy cannot increase more than 2 percent per year (plus new construction), excluding special assessments, taxes for bonded indebtedness and voter approved increases, thus limiting increases in the primary tax rate. Bonded indebtedness cannot exceed 6 percent of the value of taxable property in the city, thereby limiting secondary property tax rates. However, this debt limit may be extended to 20 percent of taxable property value for water, sewer, lighting, or land acquisition for parks or open space, with the approval of the majority of taxpayers in the district.

Property taxes can be used as a restricted revenue source in the case of special assessment districts. Cities can form special assessment districts or enhanced municipal service districts. Typically, a city will issue bonds to cover the cost of specific improvements. These bonds are then repaid using property taxes from the special assessment. Special assessment districts may be formed to provide a specific area with a higher level or greater degree of services including public safety, fire protection, refuse collection, street or sidewalk cleaning, landscape maintenance in public areas, planning, promotion, transportation, or public parking.

Within Maricopa County, 11 cities and towns do not impose local primary property taxes including: Mesa, Gilbert, Fountain Hills, Paradise Valley, El Mirage, Queen Creek, Guadalupe, Litchfield Park, Cave Creek, Carefree and Youngtown. While property taxes may be viewed as a potential source of additional revenues for these communities, there is typically overwhelming political opposition to implementing local property taxes in a non-tax city. For these communities, industrial development does not tend to have a positive fiscal impact. However, if the city or town imposes a lease tax, this may partially offset the shortage of revenues for some types of industrial operations. Residential development also does not generate tax revenues in cities without a local property tax. However, resident population is the basis for state shared revenue distributions, which make up a large portion of general fund revenues in most cities.

2.3.3 Other Revenues

The majority of other revenues used by cities for operations and maintenance include service charges, licenses and permits, fines, interest and intergovernmental or state shared revenues. Service charges, licenses and permits are a useful way to offset the cost of specific services. Although these types of revenues should result in a break-even impact for cities relative to the expenditures they are intended to cover, they do reduce the amount of tax revenues required to cover certain services.

Intergovernmental or state shared revenues are a significant item for most cities. This category includes state shared income and sales taxes as well as vehicle license tax[20], grants, highway user revenues (HURF), and lottery funds (LTAF). All of these revenues except for grants are distributed to cities based on population. State shared income and sales tax and distributions are only adjusted following a decennial or mid-decade census, while lottery fund distributions are adjusted annually. Additionally, state shared income tax, sales tax and HUFG fund distributions are adjusted to reflect annexations.

State shared income and sales tax as well as auto lieu taxes are all general fund revenues. However, highway user funds and lottery funds are restricted and must be captured in separate accounts. Based on state statutes, any revenues derived from fees, excises or license taxes relating to registration, operation or use of vehicles on public highways or streets must be used for construction, maintenance and repair of streets, highways and bridges or for right-of-way

[20] Counties in Arizona are allowed to do vehicle license taxes differently, and in fact, all do.

acquisition. Typically, cities have transportation or streets funds that are used for HURF and LTAF distributions and related expenditures; large cities (over 300,000 population) must use these funds for transit.

Development impact fees are another type of local revenues that can be used by cities and towns, although these fees are limited to capital costs. Impact fees are designed to cover the cost of extending infrastructure and increasing capacity to serve new development. According to state statutes, impact fees must result in beneficial use to the areas being charged. They must bear a reasonable relationship to the burden imposed on the municipality to provide additional public services, and they must be assessed in a non-discriminatory manner. To ensure that these fees are used for their intended purpose, they must also be placed in a separate fund. Cities typically use development fees for water and sewer infrastructure including expanded treatment capacity and water resource acquisition; public safety facilities; street and traffic signal improvements; parks, cultural and library facilities; and general government facilities. The majority of cities in Maricopa County now impose impact fees, although most have implemented these fees in the past ten years.

2.3.4 Prohibited Local Revenues

There are several types of local taxes that state statutes specifically prohibit local governments from imposing. These include taxes that are currently imposed by the state and distributed to cities such as vehicle license tax, gas tax and income tax. Insurance taxes, which are imposed by the state, are also prohibited for cities and counties.

Taxes on telecommunications providers cannot be levied with the exception of sales taxes, permit fees and in-kind payments for use of public right of way. However, franchise fees on telecommunication utilities are permitted.

2.3.5 Conclusions on Local Revenue Sources

Local governments have a fairly limited range of revenue types that can be generated locally. These include transaction privilege and property taxes, as well as various fees for services including user fees, permits and licenses.

For municipalities that currently impose property taxes, there is little underutilized potential for additional revenues, outside of increases in assessed value from market conditions and new development that will yield additional property taxes. Most of the untapped potential for increases in locally controlled revenues is in the various types of privilege taxes including sales taxes on utilities, transient lodging and property leases. Transient lodging tax, which can be imposed on both lodging and restaurants, can provide increased local revenues for cities with this type of development. However, for cities over 100,000, lodging taxes may only generate a limited amount of unrestricted revenues since taxes above the standard retail sales tax rate must be used for tourism promotion.

Since retail sales taxes generate significant unrestricted local revenues, cities may be tempted to pursue retail development at the expense of office any industrial development. While retail land uses in typically generate the most positive fiscal impacts, given the tax structure in Arizona, the exclusion of other types of development does not promote balanced communities from an economic perspective.

Only a few cities impose a higher tax on utilities above their standard sales tax rate. This source can provide sales tax revenues from non-retail uses. These may be the best alternatives for cities and towns in terms of increasing the volume locally controlled revenues from a variety of development types.

3.0 ANALYSIS OF LOCAL TAX RATES AND BACKGROUND DATA

3.1 Introduction

The purpose of the literature review described in Chapter 2 and the background data and assumptions described here is to provide a basis for a generalized fiscal impact model for cities in Maricopa County. This chapter includes information about local tax rates, an analysis of local versus non-local city revenues, and a discussion of other socioeconomic data that will be used in the impact model.

3.2 Local Taxes

As noted in the previous chapter, there are two primary types of local tax revenues: property tax and transaction privilege tax. Cities generally break privilege tax into three types: sales tax, utility tax and transient occupancy tax (TOT). Figure 3-1 shows tax rates for all incorporated cities in Maricopa County. The cities are listed in descending order by population size.

FIGURE 3-1
LOCAL TAX RATES

Jurisdiction/Size	Sales Tax	Primary Property Tax	Utility Tax	Lodging Tax*
Extra Large				
Phoenix	1.80%	0.83%	2.70%	3.00%
Large				
Mesa	1.50%	0.00%	1.50%	2.50%
Glendale	1.30%	0.38%	1.30%	3.00%
Scottsdale	1.40%	0.53%	1.40%	3.00%
Chandler	1.50%	0.38%	2.75%	2.90%
Tempe	1.80%	0.55%	1.80%	2.00%
Medium Large				
Gilbert	1.50%	0.00%	1.50%	3.00%
Peoria	1.50%	0.32%	3.00%	3.50%
Medium				
Avondale	1.50%	0.60%	2.00%	2.00%
Surprise	2.00%	0.41%	2.00%	1.00%
Goodyear	2.00%	1.34%	2.00%	2.00%
Fountain Hills	1.60%	0.00%	1.60%	3.00%
Paradise Valley	1.40%	0.00%	1.40%	3.00%
Small				
El Mirage	3.00%	0.00%	3.00%	2.00%
Buckeye	2.00%	0.94%	2.00%	0.00%
Guadalupe	2.00%	0.00%	2.00%	4.00%
Wickenburg	1.00%	0.71%	1.00%	0.00%
Tolleson	2.00%	1.02%	2.00%	2.00%
Litchfield Park	2.00%	0.00%	2.00%	1.00%
Cave Creek	2.50%	0.00%	3.00%	4.00%
Queen Creek	1.00%	0.00%	1.00%	1.00%
Youngtown	2.00%	0.00%	2.00%	2.00%
Carefree	2.00%	0.00%	2.00%	3.00%
Gila Bend	3.00%	1.64%	3.00%	2.00%
Maricopa County	0.00%	1.17%	0.00%	0.57%

Source: Arizona Department of Revenue; city budgets.
*Lodging tax rate is in addition to sales tax. All tax rates include general fund portions only.

Sales tax rates in Maricopa County range from 1 to 3 percent. The county imposes an additional 0.7 percent tax, although none of these revenues are captured in the County's general fund. In general, smaller cities and cities without property taxes tend to have higher sales tax rates. However, there are exceptions. Gila Bend, a small town, has one of the highest local sales tax rates and the highest primary property tax rate. Queen Creek, also a small town, has no local property tax, and a sales tax rate of only one percent. Mesa, a large city, also has no local property tax and a relatively low sales tax rate. However, Mesa is also one of the few cities in Arizona with a municipal electric and gas utility (serving the city's downtown area) that generates substantial local revenues.

Property tax rates shown in the table include only the primary tax or the portion that goes into the general fund for unrestricted use. Local rates range from 0 percent to 1.64 percent. County property taxes are in addition to local taxes in incorporated areas. Gila Bend, Goodyear, Tolleson and Buckeye have the highest rates ranging from 0.94 percent to 1.64 percent. All of these cities also have relatively low assessed value per capita meaning that higher mill rates are required to generate sufficient tax revenues.

Only five cities impose a utility tax that is over and above the standard sales tax rate including Phoenix, Chandler, Peoria, Avondale and Cave Creek. Utility taxes are imposed on gross sales by electric and gas utilities. The tax is paid by the utility provider, but passed through to the consumer.

Most cities impose lodging taxes, with the exception of Buckeye and Wickenburg. Lodging tax rates may also apply to restaurant sales. In other cases there is a separate rate for restaurants that is in between the standard sales tax rate and the lodging tax rate. Lodging taxes, which apply to gross sales by hotels and motels are in addition to the normal sales tax rate. Rates range from 1 to 4 percent. The county imposes an additional 0.57 percent tax although revenues are captured in special funds. Cities that do not impose lodging taxes typically have few or no hotels or motels.

3.3 Local and Non-Local Revenues

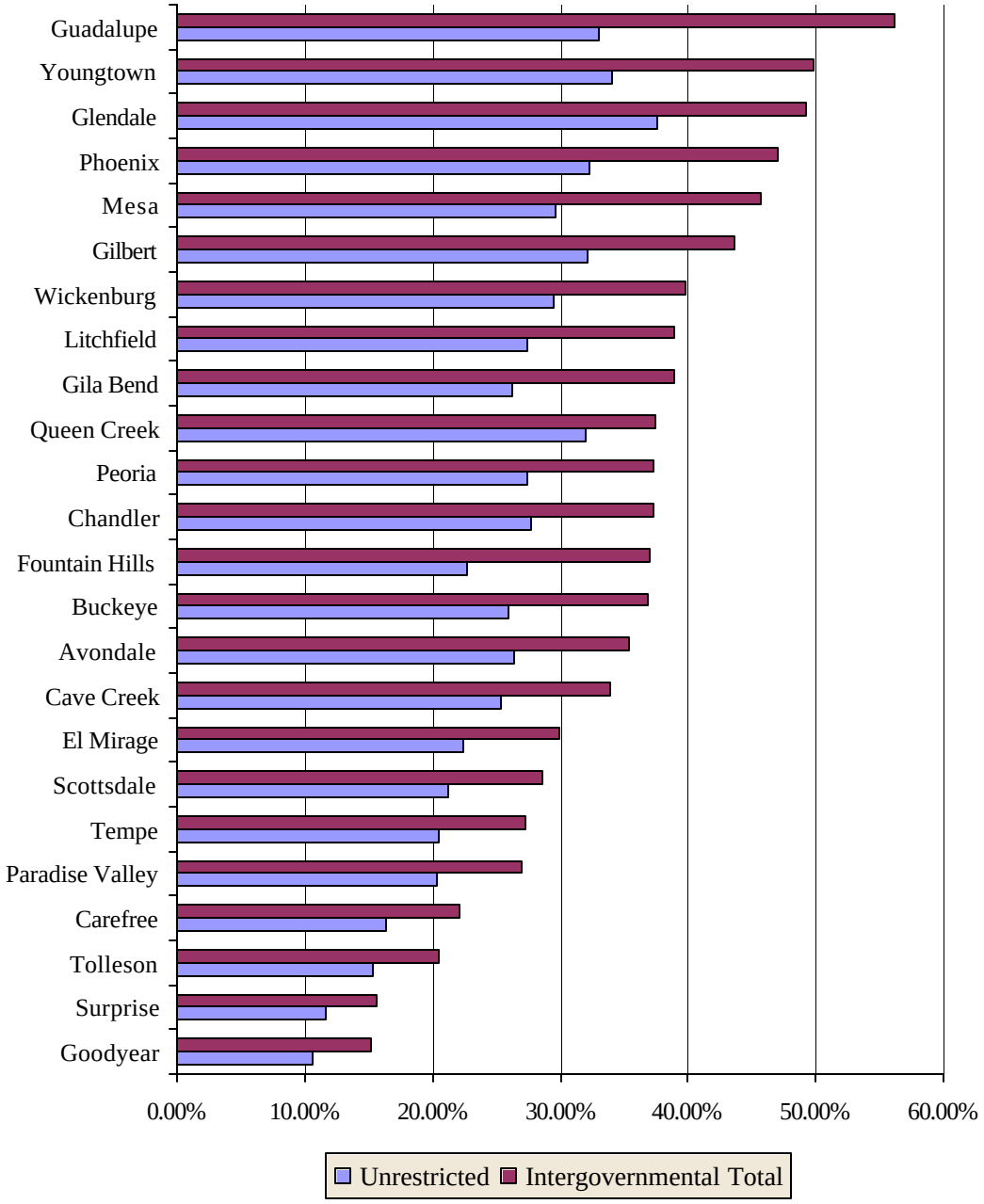
Cities utilize a variety of types of revenues, some of which are under local control and some of which are distributed by other government entities such as the state. The taxes described above are generally locally controlled in terms of cities being able to set rates for various business categories. Service charges, fines, licenses and permits are other examples of locally controlled revenues.

Non-local or intergovernmental revenue sources include state shared income and sales tax, auto lieu tax, federal, state and local grants, highway user revenues and lottery funds. Figure 3-2 shows intergovernmental revenues as a share of total general fund and transportation fund revenues.[21]

Typically state shared income and sales tax and motor vehicle in-lieu combined make up 11 to 38 percent of local operating budgets for cities in Maricopa County. This translates into an average of $176 per capita per year. These three sources are unrestricted general fund revenues. Unfortunately for many cities, state shared income and sales taxes are distributed based on Census population. The amount of revenues distributed varies each year depending on the total amount of state taxes collected. However, for cities that are adding large amounts of residential development there is a one to five year lag before state shared revenues will catch up to current resident population.

[21] Transportation or streets funds are used to capture highway user revenues and pay for local street maintenance expenditures.

FIGURE 3-2
SHARE OF INTERGOVERNMENTAL REVENUES



Total intergovernmental revenues, including grants and funds that are specifically for transportation make up between 15 and 56 percent of local budgets. There does not seem to be a particular pattern in terms of city size. For Guadalupe and Youngtown, intergovernmental revenues make up 50 to 56 percent of operating resources. Neither of these towns have a local property tax. However, the next group of cities for whom intergovernmental revenues make up 44 to 49 percent of operating resources are all large cities including Phoenix, Mesa, Glendale and

Gilbert. Tempe, in contrast, is only dependent on intergovernmental revenues for 27 percent of its general and transportation funds.

Generally, the problem with intergovernmental revenues is that while they have been a reliable source of revenues for cities in the past, they can be impacted by changes in state legislation at any time. The Arizona League of Cities has been active in lobbying against any reductions in state shared revenues. The other issue is timing as noted above. These revenues cover a large portion of the cost of supporting residential development. For fast growing cities, particularly small cities, the lag in adjusting distribution formulas for state shared income and sales tax can strain local budgets.

3.4 Other Socioeconomic Data

In order to develop a generalized fiscal impact model for Maricopa County, a variety of data was collected in addition to the tax and revenue information. Revenues and expenditures by line item were collected for each city and are described in Chapter 4. In addition information gathered on population, employment, FTE City Staff, police officers, park acres, street miles, value of building permits issued, gross sales and assessed value is shown.

Cities can generally be grouped by size range based on population. There are common fiscal and economic characteristics for cities of similar sizes. Small cities struggle to achieve economies of scale in their staffing and service levels, whereas large cities may be able provide additional services that are not available in smaller cities, thereby increasing expenditures and staffing levels on a relative basis.

Cities in Maricopa County can be categorized into 5 groups based on population size. Maricopa County itself is in a separate category since it is not really comparable to cities in terms of budget structure. In the impact model, cities will be able to change categories over time as their population grows.

?? **Extra Large** – This category includes only the City of Phoenix based on current population. Since Phoenix is over 3 times larger than the next largest city, it has unique socioeconomic and fiscal characteristics that require a separate category.

?? **Large** – This category includes cities from 150,000 to 400,000 in population such as Mesa, Glendale, Tempe, Scottsdale and Chandler.

?? **Medium Large** – This category includes cities from 100,000 to 150,000. Both Gilbert and Peoria fall into this category and have grown dramatically over the past ten years.

?? **Medium** – This category includes cities from 10,000 to 100,000. There is a large gap between cities currently in the medium category and cities in the medium large category. The smaller of the two cities in medium large has a population of 108,000, compared to the largest city in the medium category, Avondale, with a population of only 36,000. Cities in the medium category include Avondale, Surprise, Goodyear, Fountain Hills and Paradise Valley, which are all between 13,000 and 36,000 in population size.

?? **Small** – This category captures communities with population under 10,000, including 11 cities and towns: El Mirage, Buckeye, Guadalupe, Wickenburg, Tolleson, Litchfield Park, Cave Creek, Queen Creek, Youngtown, Carefree and Gila Bend. Many of these smaller cities and towns are in the western part of the county, and all, with the exception of Guadalupe, are on the urban periphery.

Figure 3-3 shows population and employment levels for MAG member agencies along with city staffing levels and number of police officers. With a few exceptions, staffing levels per capita are fairly uniform across all sizes of cities. As noted above, larger cities such as Phoenix may provide municipal services that are not available in smaller areas and require additional staffing. Smaller cities, in contrast, must have a minimum number of personnel just to provide a basic level of services. Among larger cities, Phoenix and Tempe have slightly higher staffing levels. Among smaller cities, Tolleson and Wickenburg seem to have above average staff relative to their population size. Some cities like Fountain Hills, Paradise Valley and Carefree do not provide a full range of services and therefore do not need the same level of staffing.

FIGURE 3-3
SOCIOECONOMIC CHARACTERISTICS AND STAFFING LEVELS

Jurisdiction	Population	Employment	FTE City Staff	FTE Per Capita	Sworn Police Officers	Population Per Officer
Extra Large						
Phoenix	1,321,045	734,773	13,915	0.011	2,750	480.38
Large						
Mesa	396,375	164,772	3,627	0.009	729	543.72
Glendale	218,812	76,289	1,526	0.007	293	746.80
Scottsdale	202,705	136,665	2,047	0.010	279	726.54
Chandler	176,581	74,291	1,273	0.007	256	689.77
Tempe	158,625	153,984	1,840	0.012	315	503.57
Medium Large						
Gilbert	109,697	21,230	663	0.006	129	850.36
Peoria	108,364	19,283	821	0.008	101	1,072.91
Medium						
Avondale	35,883	8,563	338	0.009	58	618.67
Surprise	30,848	4,700	274	0.009	55	560.87
Goodyear	18,911	16,296	184	0.010	37	511.11
Fountain Hills	20,235	4,191	96	0.005	contract	na
Paradise Valley	13,664	6,070	70	0.005	35	390.40
Small						
El Mirage	9,910	1,844	128	0.013	27	367.04
Buckeye	6,537	7,221	85	0.013	20	326.85
Guadalupe	5,228	904	45	0.009	contract	na
Wickenburg	5,175	3,891	93	0.018	11	470.45
Tolleson	4,690	7,141	119	0.025	18	260.56
Litchfield Park	3,810	2,163	41	0.011	contract	na
Cave Creek	3,728	1,605	27	0.007	contract	na
Queen Creek	4,316	2,015	28	0.006	contract	na
Youngtown	3,010	1,336	20	0.007	9	334.44
Carefree	2,927	1,730	13	0.004	contract	na
Gila Bend	1,980	1,023	23	0.012	contract	na
Maricopa County	3,072,149	1,482,983	15,118	0.005	679	4,524.52

Source: MAG Projections by MPA, 1997; Individual city budgets, 2000.

Staffing levels for police follow a somewhat similar pattern. The counts shown in Figure 3-3 are only for sworn officers and do not include other support staff or volunteers. A number of the small cities contract with the County sheriff for police services including Fountain Hills, Guadalupe, Litchfield Park, Cave Creek, Queen Creek, Carefree and Gila Bend. Typically, these contracts are substantially less costly on a per capita basis than in-house police departments and are more feasible for small cities.

One way to compare the level of police staffing across communities is to compare the population per officer. Among larger cities there are typically about 600 people per officer. Phoenix is actually the lowest among large cities, perhaps due to economies of scale. All of the larger cities have achieved certain economies due to their population size; however, police departments in larger cities also tend to have more special units and task forces.

Among medium large and medium sized cities the number of residents per officer is typically about 670. Peoria is an exception with a ratio of over 1,000 perhaps due to rapid population growth in the last several years and a lag in staffing increases. Among small cities that have municipal police departments, there are only about 360 residents per officer, reflecting a higher level of service that is typical among smaller communities.

The next set of information collected for cities includes economic data that will be used in the impact model such as construction permit values, assessed value and gross sales, shown in Figure 3-4. Gross sales and construction permit data were not available for all cities.

Construction permit values vary significantly over time depending on economic cycles. Relative levels among cities also vary depending on the ratio of residential to nonresidential construction, since one large nonresidential project can substantially increase the value of permits issued. Generally, in 1999-00 the cities of Phoenix, Mesa, Scottsdale and Chandler had the largest construction values with close to $1 billion each, and over $2 billion in Phoenix. Among the smaller cities, Surprise and Goodyear both issued between $175 and $350 million in permits, which is substantially more than other cities based on city size. Both of these cities are experiencing record levels of residential development.

Gross sales are another economic indicator that can vary over time with economic cycles. In order to compare the level of sales across cities, per capita sales are shown. Per capita sales are a good way to show the level of revenues that are available to each city from sales tax. However, not all sales are generated by local residents. There is significant crossover between cities in terms of shopping patterns. In addition, some cities like Scottsdale, where sales per capita are twice as high as any other city, benefit significantly from sales to tourists. Carefree, Paradise Valley, Tempe and Mesa also have above average sales per capita, perhaps due in part to tourism. Construction contributes to gross sales, so cities with higher levels of new construction will have temporarily inflated sales figures. In Tolleson, sales per capita are higher than would be expected given the retail base, although over 30 percent of current sales tax collections in the year shown came from construction.

FIGURE 3-4
ECONOMIC CHARACTERISTICS

Jurisdiction	Population	Employment	Construction Permits	Gross Sales	Gross Sales per Capita	Primary Net Asssed Value	Assessed Value per Svc Pop.
Extra Large							
Phoenix	1,321,045	734,773	$2,127,648,000	$23,836,698,189	$18,044	$7,164,422,685	$3,485
Large							
Mesa	396,375	164,772	$1,030,933,000	$13,633,980,290	$34,397	$1,824,821,029	$3,252
Glendale	218,812	76,289	$271,274,000	$3,292,911,831	$15,049	$842,781,324	$2,856
Scottsdale	202,705	136,665	$1,142,904,000	$14,179,334,773	$69,951	$2,606,970,007	$7,682
Chandler	176,581	74,291	$961,023,723	$2,641,218,123	$14,958	$1,025,149,748	$4,086
Tempe	158,625	153,984	$274,916,000	$4,800,000,000	$30,260	$1,275,933,396	$4,082
Medium Large							
Gilbert	109,697	21,230	$550,000,000	$1,576,000,000	$14,367	$557,123,570	$4,255
Peoria	108,364	19,283	$385,885,921	$2,098,838,768	$19,368	$492,232,405	$3,856
Medium							
Avondale	35,883	8,563	$96,674,000	$337,436,200	$9,404	$97,806,557	$2,201
Surprise	30,848	4,700	$347,711,000	$524,013,445	$16,987	$162,482,205	$4,571
Goodyear	18,911	16,296	$178,199,000	$441,499,050	$23,346	$125,957,664	$3,578
Fountain Hills	20,235	4,191	$137,278,000	$336,274,467	$16,618	$189,646,161	$7,764
Paradise Valley	13,664	6,070	$120,745,000	$435,149,303	$31,846	$336,435,390	$17,049
Small							
El Mirage	9,910	1,844	na	na	na	$18,924,248	$1,610
Buckeye	6,537	7,221	$2,322,000	$72,016,280	$11,017	$30,248,528	$2,199
Guadalupe	5,228	904	na	$35,980,484	$6,882	$8,693,010	$1,418
Wickenburg	5,175	3,891	$4,525,000	$10,732,510	$2,074	$28,840,898	$3,181
Tolleson	4,690	7,141	$54,714,621	$170,397,142	$36,332	$72,397,344	$6,119
Litchfield Park	3,810	2,163	$7,171,587	$73,347,970	$19,251	$33,373,934	$5,587
Cave Creek	3,728	1,605	$28,243,000	na	na	$48,712,591	$9,134
Queen Creek	4,316	2,015	$46,857,000	$56,465,268	$13,083	$19,800,583	$3,128
Youngtown	3,010	1,336	$170,000	na	na	$15,062,468	$3,466
Carefree	2,927	1,730	$26,918,000	$95,265,992	$32,547	$70,902,062	$15,225
Gila Bend	1,980	1,023	na	na	na	$5,388,875	$1,794
Maricopa Cty	3,072,149	1,482,983	$1,019,675,000	na	na	$19,603,718,629	$4,304

Source: MAG Projections by MPA, 1997; Individual city budgets, 2000; Phone interview, April 2001.
Note: Service population = population + employment.

The final economic measure shown in Figure 3-4 is assessed value. This is an important factor since cities with higher levels of assessed value have a larger tax base and can potentially generate more property tax revenues. Assessed value across cities is compared based on service population or population plus employment. This is appropriate since both residential and nonresidential properties contributed to the value base. Paradise Valley and Carefree, and to a lesser extent Scottsdale, Fountain Hills and Cave Creek, stand out due to the extremely high average value of residential properties in these cities. All of the other cities range from about $1,400 to $6,100 in assessed value per service population. Gila Bend, El Mirage and Guadalupe all have values below $2,000, which is primarily a reflection of below average housing values and limited new home construction. However El Mirage and Guadalupe do not collect primary local property taxes so assessed values are less important. Gila Bend has a very high primary tax rate to make up for lower values.

All of the data presented in the chapter will be used along with revenues and expenditures to build the fiscal impact model. Socioeconomic data is important in creating revenue and expenditure rates that can be applied to future development information to calculate impacts.

4.0 FISCAL IMPACT MODEL METHODOLOGY

4.1 Introduction

This chapter describes the methodology used to develop the generalized fiscal impact model for Maricopa County that will show net impacts for four time periods: 2000, 2010, 2040 and build out. The final model will not be completed until Phase II. However, results from the draft model are included to show the net impact of one developed acre of residential, office, industrial and retail development in each city.

4.2 Budget Data

Annual budgets were collected for each community in Maricopa County for the 2000-01 fiscal year. These budgets included actual or estimated revenues and expenditures for 1999-00 that were used in developing the model. Since the model must be generalized for all 24 cities, a uniform set of revenue and expenditure categories was developed in order to standardize the data. The general categories of revenues are fairly standard across cities. However, there is some variation among departmental expenditures in terms of how functions are organized. To the extent possible, like functions were classified uniformly across communities.

Figure 4-1 lists the categories of revenues and expenditures that will be reflected in the model. Although the model is only intended to provide order of magnitude estimates of net impacts, it is useful to be able to develop rates based on different factors for each of the revenue and expenditure categories shown below.

FIGURE 4-1
STANDARDIZED REVENUE AND EXPENDITURE CATEGORIES

Revenues	**Expenditures**
Local Taxes	Mayor & Council
Property Tax	City Manager
Sales Tax	Marketing/Community Relations
Transient Occupancy	Human Resources
Utility Franchises	City Clerk
Other	City Attorney
Charges for Services	Municipal Court
Fines and Forfeitures	Finance, Administration, Info Tech
Interest	Police
Intergovernmental Revenues, Grants	Fire
Licenses and Permits	Community and Economic Development
Miscellaneous	Public Works
	Engineering & Architectural Services
	Parks, Recreation, Library, Social Services
	Nondepartmental
	Streets
	Transit
	Contingency

4.3 Methodology

For each city, the socioeconomic data shown in Chapter 3, along with some additional data on park acres and street miles was used to develop rates for each line item. The model complexity was somewhat limited based on the type of information available. However, every effort was made to choose the appropriate data as "drivers" for each line item in order to reflect factors that would increase or decrease revenue and expenditure levels. Figure 4-2 shows how each revenue and expenditure line item will be modeled.

FIGURE 4-2
REVENUE AND EXPENDITURE RATES

Community Revenue Rates		Extra Large	Large	Medium Large	Medium	Small	County
Property Tax	assessed value, city rates	varies	varies	varies	varies	varies	0.0117
Sales Tax	gross sales, city rates	varies	varies	varies	varies	varies	0.0000
Utility Franchise	service pop (emp*2)	23.2460	7.9138	7.2557	6.6929	6.2054	0.0000
TOT	transient population	na	na	na	na	na	0.0000
Other	population	0.8281	1.9919	1.4064	0.0000	0.0000	2.4523
Charges for Services	10% construction value	0.0021	0.0007	0.0016	0.0008	0.0053	0.0018
	90% svc pop (pop*2)	11.6650	7.8177	24.8836	11.8926	12.7731	2.1587
Fines & Forfeitures	service pop (pop*2)	5.4518	8.1764	3.9580	7.6484	7.2831	1.3071
Interest	total revenues	0.0057	0.0326	0.0226	0.0220	0.0300	0.0099
Intergovernmental*	population	315.2519	282.3408	201.5908	215.8356	275.8452	145.7067
Licenses & Permits	40% construction value	0.0013	0.0048	0.0035	0.0066	0.0111	0.0000
	60% employment	5.5135	59.3749	110.3361	131.3274	69.2922	0.0182
Misc Income	service population	2.1875	5.5479	2.8112	2.2017	5.4714	2.9769
Rents	not impacted	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Community Expenditure Rates		Extra Large	Large	Medium Large	Medium	Small	County
Mayor & Council	population	3.5646	3.2757	2.8887	4.2302	13.9232	0.5211
City Manager*	service pop (pop*2)	1.6871	3.1136	4.9669	5.9169	15.6880	0.1565
Marketing/Community Relations	population	3.7107	3.6005	0.0000	0.0000	0.0000	0.0000
Human Resources	Per FTE	1108.0289	990.0221	940.3923	972.5743	0.0000	318.1763
City Clerk	service pop (pop*2)	2.9071	1.1296	1.7802	4.3387	0.0000	1.3216
City Attorney	population	3.6206	8.1912	7.8324	11.1213	14.9924	12.7062
Municipal Court	population	34.8906	13.6405	6.1352	14.2545	17.9167	42.0346
Finance, Admin., Info Tech	Per FTE	2925.8056	2448.0950	3431.8791	3645.1333	2762.7856	2084.6959
Police	per officer	96883.6364	114725.6871	101081.7283	87189.4673	63841.6338	53558.2975
Fire	service pop (pop*2)	41.8095	26.9183	25.5206	35.3060	29.4522	0.0000
Community and Economic Dev.	70% service population	9.2084	18.4019	19.4828	27.2290	25.7377	0.0000
	30% construction value	0.0038	0.0061	0.0023	0.0040	0.0063	0.0000
Public Works	service pop (pop*2)	6.1939	8.8347	5.1939	18.6432	10.8172	2.7357
Engineering & Architectural Svcs	construction value	0.0013	0.0000	0.0000	0.0000	0.0000	0.0000
Parks, Recreation, Library	60% population	57.0176	67.4842	35.3591	20.0385	24.1847	0.2609
and Social Services	40% park acres	20102.1617	16130.7119	10971.4145	8727.4522	7162.8992	4.6071
Nondepartmental	total expenditures	0.0000	0.0303	0.0551	0.1814	0.1518	0.0000
Streets	street miles	8717.8993	12689.9266	11471.0320	11907.9175	10401.8531	47426.6032
Transit	service pop (pop*2)	24.6057	5.3658	3.4358	0.0000	0.0000	0.0000
Contingency	total revenues	0.0522	0.0140	0.0135	0.0149	0.0331	0.0000
Superintendent of Schools	population	0.0000	0.0000	0.0000	0.0000	0.0000	0.4665
Health and Human Services	population	0.0000	0.0000	0.0000	0.0000	0.0000	88.3906
General Government	service pop (pop*2)	0.0000	0.0000	0.0000	0.0000	0.0000	29.6006
*FTE per Service Pop (pop*2)*		0.0041	0.0035	0.0031	0.0032	0.0042	0.0020
Service Pop per Officer		1227.9502	1635.2166	2101.0224	1252.2650	969.3847	637.5979
Non-Retail Sales Tax per Emp		64.8500	66.3667	74.57	109.2633	134.8144	0.0000

Sources: 1999/00 actual budget data for each jurisdiction; Applied Economics, 2001.
Note: For small cities, city manager, human resources and city clerk expenditures are combined.

Ultimately, the model will use land absorption by land use category as the basic input. This data will then be converted to population, employment, street miles and assessed value that will in turn drive revenues and expenditures.

Once, rates have been developed for each line item and each city, the next step was to group cities by size as described in Chapter 3. Then, based on averages for each size category, final revenue and expenditure rates were calculated. Some averages included all cities in a size category, while other averages excluded cities that were significantly above or below average relative to other similar sized areas. Figure 4-2 details the average rates by line item. As cities grow over time, rates for the appropriate size category can be applied. In the case of sales and property tax, actual gross sales and assessed value will be used along with individual city tax rates in order to calculate tax revenues.

For expenditures, there is some variation by size category. Only extra large and large cities have marketing and community relations departments; only extra large, large and medium large cities have transit expenditures; and only Phoenix has a separate department for engineering and architectural services. Engineering is typically included in public works for all other cities. Small cities combine general government services including city manager, city clerk and human resources into a single line item that is reflected under city manager. There are other individual differences between cities, but since this is a generalized model, it is not possible to reflect each city's expenditure structure separately.

4.4 Land Use Pro-Formas

A draft version of the model was used to develop net impacts by city for four different general land uses to illustrate the differences in impacts by land use and by city size. The land use categories included residential, office, retail and industrial. Within the residential category there are seven different density levels (4 single family and 3 multi-family). Development pro-formas were created for one acre of land of each type. These pro-formas, shown in Figure 4-3, include assumptions on density, construction costs per square foot, and retail sales per square foot. This information is then used to calculate residential housing units and population, nonresidential square feet and employment, construction costs, retail sales, assessed value, additional park acres and street miles required.

Some variables such as population per housing unit and park acres per capita vary by city in order to make the results more representative of city-specific conditions. Non-retail sales per employee are based on actual tax collections by industry. The data by city was averaged to create a rate for each size category. These rates range from $65 to $135 per employee and are shown at the bottom of Figure 4-2.

4.5 Net Impacts by Land Use by City

Using the preliminary impact model, each of the pro-formas was evaluated for each of the 24 communities plus the county. The community results are shown in Figure 4-4. Total revenues and expenditures are indicated along with a ratio of revenues divided by expenditures. Ratios greater than one indicate a positive net impact. Since this is an order of magnitude model, ratios close to one should be considered a break even.

Although construction costs are shown in the pro-formas, these are only used as a basis for calculating assessed value. No construction sales tax, permit fees or related expenses are included in the net impacts since these are non-recurring items that distort that longer term impact results.

4.5.1 Industrial Development

Industrial development is close to a break even in terms of its fiscal impact for most cities. For Goodyear, Buckeye, Tolleson and Gila Bend that have relatively high local property tax rates, the ratio of revenues to expenditures for industrial development ranges from 1.34 to 1.48 indicating a strong positive impact. For the County, industrial development generates a negative impact based on the mix of general fund revenues versus services compared to cities.

Real property assessed value for industrial is less than for office development, but employment density is also lower. Typically with industrial development, the majority of assessed value is from personal property. Based on averages from the Census of Manufacturing, the industrial pro-forma includes $12,000 of personal property per employee, which helps to boost property tax revenues. On the expenditure side industrial and office development generally require a less police service than other types of development. This is significant since public safety is usually one of the largest expenditure items for cities.

4.5.2 Office Development

Office development creates a positive impact for all the cities and the county, with the ratio of revenues to expenditures ranging from 1.17 to 2.20. The greatest positive impacts are in cities with higher property tax rates such as Goodyear, Tolleson and Gila Bend. Peoria, which has a moderate property tax rate but one of the highest utility tax rate shows the most positive net impact.

Office development, which is assumed to be mid-rise office for this example, has the highest assessed value due both the quality and density of development. This is the main reason for the significant positive impacts. Real property values are about 2.5 times the level for industrial or retail development. Office development also generates more employees per acre than retail or industrial, so the overall level of expenditures is generally higher.

FIGURE 4-4
NET IMPACTS PER ACRE OF DEVELOPMENT BY CITY AND LAND USE TYPE

		Industrial		Office		Retail	
Phoenix	Revenues	$3,342	0.97	$11,801	1.17	$47,850	7.53
	Expenditures	$3,461		$10,094		$6,358	
Mesa	Revenues	$2,695	0.78	$10,442	1.23	$41,064	9.03
	Expenditures	$3,450		$8,482		$4,548	
Glendale	Revenues	$3,236	0.94	$11,999	1.41	$36,280	8.10
	Expenditures	$3,458		$8,504		$4,479	
Scottsdale	Revenues	$3,448	1.00	$12,609	1.48	$38,988	8.64
	Expenditures	$3,461		$8,513		$4,512	
Chandler	Revenues	$3,236	0.94	$11,999	1.41	$41,418	9.09
	Expenditures	$3,458		$8,504		$4,554	
Tempe	Revenues	$3,478	1.00	$12,695	1.49	$46,715	10.09
	Expenditures	$3,461		$8,514		$4,630	
Gilbert	Revenues	$3,781	1.18	$14,651	1.86	$41,712	10.17
	Expenditures	$3,202		$7,883		$4,101	
Peoria	Revenues	$4,239	1.32	$15,969	2.02	$42,012	10.23
	Expenditures	$3,208		$7,902		$4,106	
Avondale	Revenues	$5,354	1.20	$19,903	1.66	$42,926	7.53
	Expenditures	$4,457		$11,996		$5,698	
Surprise	Revenues	$5,082	1.14	$19,121	1.60	$55,463	9.37
	Expenditures	$4,452		$11,982		$5,918	
Goodyear	Revenues	$6,398	1.43	$22,906	1.90	$56,325	9.49
	Expenditures	$4,475		$12,049		$5,934	
Fountain Hills	Revenues	$4,509	0.97	$17,472	1.36	$44,915	8.63
	Expenditures	$4,670		$12,838		$5,207	
Paradise Valley	Revenues	$4,509	1.02	$17,472	1.46	$39,829	7.06
	Expenditures	$4,442		$11,954		$5,644	
El Mirage	Revenues	$3,989	1.02	$15,457	1.44	$80,622	10.92
	Expenditures	$3,916		$10,698		$7,384	
Buckeye	Revenues	$5,322	1.34	$19,293	1.78	$55,868	8.68
	Expenditures	$3,967		$10,844		$6,440	
Guadalupe	Revenues	$3,989	0.96	$15,457	1.32	$54,995	9.23
	Expenditures	$4,167		$11,668		$5,959	
Wickenburg	Revenues	$5,000	1.26	$18,365	1.70	$30,030	5.51
	Expenditures	$3,955		$10,808		$5,454	
Tolleson	Revenues	$5,434	1.37	$19,616	1.81	$55,942	8.68
	Expenditures	$3,971		$10,856		$6,443	
Litchfield Park	Revenues	$3,989	0.96	$15,457	1.32	$54,995	9.23
	Expenditures	$4,167		$11,668		$5,959	
Cave Creek	Revenues	$3,989	0.96	$15,457	1.32	$54,995	9.23
	Expenditures	$4,167		$11,668		$5,959	
Queen Creek	Revenues	$3,989	0.96	$15,457	1.32	$54,995	9.23
	Expenditures	$4,167		$11,668		$5,959	
Youngtown	Revenues	$3,989	1.02	$15,457	1.44	$54,995	8.58
	Expenditures	$3,916		$10,698		$6,407	
Carefree	Revenues	$3,989	0.96	$15,457	1.32	$54,995	9.23
	Expenditures	$4,167		$11,668		$5,959	
Gila Bend	Revenues	$6,320	1.48	$21,165	1.77	$82,150	11.75
	Expenditures	$4,256		$11,924		$6,994	
Maricopa Cty	Revenues	$5,201	0.77	$18,531	2.20	$2,374	0.33
	Expenditures	$6,749		$8,427		$7,210	

Source: Applied Economics, 2001.

FIGURE 4-4 (continued)
NET IMPACTS PER ACRE OF DEVELOPMENT BY CITY AND LAND USE TYPE

		Estate SF		Large Lot SF		Medium SF		Small SF	
Phoenix	Revenues	$1,240	0.82	$1,726	0.78	$3,437	0.81	$5,705	0.82
	Expenditures	$1,520		$2,201		$4,257		$6,998	
Mesa	Revenues	$909	0.68	$1,364	0.72	$2,728	0.76	$4,546	0.78
	Expenditures	$1,343		$1,907		$3,598		$5,853	
Glendale	Revenues	$1,060	0.65	$1,527	0.65	$3,048	0.68	$5,069	0.69
	Expenditures	$1,633		$2,341		$4,466		$7,300	
Scottsdale	Revenues	$911	0.77	$1,279	0.77	$2,549	0.82	$4,233	0.84
	Expenditures	$1,182		$1,664		$3,113		$5,044	
Chandler	Revenues	$1,084	0.76	$1,563	0.77	$3,119	0.81	$5,188	0.83
	Expenditures	$1,422		$2,024		$3,833		$6,244	
Tempe	Revenues	$992	0.70	$1,397	0.69	$2,784	0.73	$4,624	0.75
	Expenditures	$1,414		$2,012		$3,809		$6,204	
Gilbert	Revenues	$869	0.65	$1,304	0.68	$2,608	0.72	$4,347	0.73
	Expenditures	$1,347		$1,921		$3,643		$5,938	
Peoria	Revenues	$838	0.81	$1,204	0.83	$2,401	0.89	$3,993	0.91
	Expenditures	$1,036		$1,453		$2,706		$4,378	
Avondale	Revenues	$1,073	0.63	$1,510	0.62	$3,011	0.65	$5,000	0.66
	Expenditures	$1,698		$2,430		$4,627		$7,557	
Surprise	Revenues	$841	0.59	$1,195	0.59	$2,383	0.63	$3,959	0.64
	Expenditures	$1,418		$2,009		$3,786		$6,155	
Goodyear	Revenues	$1,125	0.76	$1,467	0.70	$2,911	0.73	$4,813	0.74
	Expenditures	$1,484		$2,106		$3,980		$6,478	
Fountain Hills	Revenues	$666	0.54	$999	0.57	$1,998	0.61	$3,330	0.63
	Expenditures	$1,238		$1,742		$3,251		$5,264	
Paradise Valley	Revenues	$728	0.53	$1,092	0.56	$2,184	0.59	$3,640	0.61
	Expenditures	$1,379		$1,952		$3,671		$5,964	
El Mirage	Revenues	$1,309	0.71	$1,964	0.74	$3,928	0.77	$6,547	0.78
	Expenditures	$1,842		$2,664		$5,129		$8,417	
Buckeye	Revenues	$1,269	0.82	$1,748	0.79	$3,479	0.82	$5,771	0.84
	Expenditures	$1,544		$2,210		$4,223		$6,905	
Guadalupe	Revenues	$1,495	0.81	$2,242	0.84	$4,485	0.87	$7,475	0.89
	Expenditures	$1,844		$2,666		$5,135		$8,427	
Wickenburg	Revenues	$911	0.75	$1,249	0.73	$2,486	0.77	$4,123	0.78
	Expenditures	$1,212		$1,715		$3,232		$5,255	
Tolleson	Revenues	$1,409	0.85	$1,945	0.82	$3,872	0.85	$6,424	0.86
	Expenditures	$1,658		$2,382		$4,565		$7,475	
Litchfield Park	Revenues	$871	0.69	$1,306	0.73	$2,612	0.77	$4,353	0.79
	Expenditures	$1,258		$1,789		$3,380		$5,501	
Cave Creek	Revenues	$830	0.70	$1,245	0.74	$2,490	0.78	$4,151	0.80
	Expenditures	$1,191		$1,688		$3,179		$5,166	
Queen Creek	Revenues	$1,178	0.73	$1,767	0.76	$3,533	0.80	$5,889	0.81
	Expenditures	$1,613		$2,321		$4,444		$7,275	
Youngtown	Revenues	$547	0.60	$820	0.65	$1,640	0.70	$2,733	0.73
	Expenditures	$909		$1,264		$2,332		$3,755	
Carefree	Revenues	$699	0.74	$1,048	0.80	$2,096	0.86	$3,493	0.89
	Expenditures	$942		$1,315		$2,431		$3,920	
Gila Bend	Revenues	$1,476	1.05	$1,942	0.97	$3,855	1.01	$6,377	1.02
	Expenditures	$1,411		$2,007		$3,815		$6,225	
Maricopa Cty	Revenues	$799	0.60	$1,009	0.63	$1,998	0.82	$3,296	0.93
	Expenditures	$1,335		$1,611		$2,440		$3,545	

Source: Applied Economics, 2001.

FIGURE 4-4 (continued)
NET IMPACTS PER ACRE OF DEVELOPMENT BY CITY AND LAND USE TYPE

		Med. Density MF		High Density MF		Very High Density MF	
Phoenix	Revenues	$6,071	0.77	$9,594	0.77	$14,392	0.77
	Expenditures	$7,836		$12,446		$18,597	
Mesa	Revenues	$5,114	0.78	$8,183	0.79	$12,274	0.80
	Expenditures	$6,558		$10,363		$15,436	
Glendale	Revenues	$5,539	0.68	$8,807	0.68	$13,210	0.68
	Expenditures	$8,183		$12,963		$19,336	
Scottsdale	Revenues	$4,536	0.80	$7,179	0.81	$10,768	0.81
	Expenditures	$5,644		$8,900		$13,243	
Chandler	Revenues	$5,673	0.81	$9,021	0.82	$13,532	0.82
	Expenditures	$6,996		$11,063		$16,486	
Tempe	Revenues	$4,967	0.71	$7,866	0.72	$11,798	0.72
	Expenditures	$6,949		$10,987		$16,373	
Gilbert	Revenues	$4,890	0.73	$7,825	0.74	$11,737	0.75
	Expenditures	$6,656		$10,529		$15,694	
Peoria	Revenues	$4,354	0.89	$6,919	0.90	$10,379	0.90
	Expenditures	$4,898		$7,716		$11,474	
Avondale	Revenues	$5,371	0.63	$8,506	0.63	$12,759	0.64
	Expenditures	$8,468		$13,409		$19,997	
Surprise	Revenues	$4,282	0.62	$6,791	0.62	$10,186	0.63
	Expenditures	$6,892		$10,887		$16,215	
Goodyear	Revenues	$4,847	0.67	$7,558	0.66	$11,337	0.66
	Expenditures	$7,249		$11,455		$17,067	
Fountain Hills	Revenues	$3,746	0.64	$5,994	0.65	$8,991	0.65
	Expenditures	$5,893		$9,289		$13,818	
Paradise Valley	Revenues	$4,095	0.61	$6,552	0.62	$9,828	0.63
	Expenditures	$6,681		$10,550		$15,709	
El Mirage	Revenues	$7,365	0.78	$11,784	0.79	$17,676	0.79
	Expenditures	$9,444		$14,993		$22,390	
Buckeye	Revenues	$6,091	0.79	$9,607	0.78	$14,410	0.79
	Expenditures	$7,728		$12,241		$18,263	
Guadalupe	Revenues	$8,409	0.89	$13,454	0.90	$20,182	0.90
	Expenditures	$9,456		$15,010		$22,417	
Wickenburg	Revenues	$4,334	0.74	$6,830	0.74	$10,245	0.74
	Expenditures	$5,875		$9,277		$13,817	
Tolleson	Revenues	$6,792	0.81	$10,716	0.81	$16,078	0.81
	Expenditures	$8,368		$13,265		$19,799	
Litchfield Park	Revenues	$4,897	0.79	$7,836	0.80	$11,754	0.81
	Expenditures	$6,164		$9,743		$14,516	
Cave Creek	Revenues	$4,670	0.81	$7,471	0.82	$11,207	0.82
	Expenditures	$5,787		$9,141		$13,613	
Queen Creek	Revenues	$6,625	0.81	$10,600	0.82	$15,899	0.82
	Expenditures	$8,159		$12,936		$19,306	
Youngtown	Revenues	$3,075	0.73	$4,920	0.75	$7,380	0.75
	Expenditures	$4,199		$6,601		$9,802	
Carefree	Revenues	$3,929	0.90	$6,287	0.91	$9,430	0.92
	Expenditures	$4,386		$6,899		$10,249	
Gila Bend	Revenues	$6,473	0.93	$10,114	0.92	$15,170	0.93
	Expenditures	$6,952		$10,995		$16,393	
Maricopa Cty	Revenues	$3,219	0.83	$4,981	0.87	$7,471	0.91
	Expenditures	$3,891		$5,756		$8,242	

Source: Applied Economics, 2001.

4.5.3 Retail Development

Retail development creates the largest positive impact, significantly greater than any other type of development. This is because retail sales contribute so directly to a city's bottom line. The ratios of revenues to expenditures for retail range from 5.51 to 11.75. Cities with higher sales tax rates tend to have the most positive impacts from retail development. Taxable retail sales in this scenario are estimated at $286 per square foot, a typical rate for neighborhood and community centers in the West according to the Urban Land Institute. These retail sales far outweigh the non-retail sales per employee that are included in the office and industrial scenarios. The lower assessed value associated with retail development is also overshadowed by higher sales tax revenues. The County, which shows a negative impact from retail, is quite different because there is no general fund sales tax.

Retail development typically places a greater burden on local streets and requires more police services, although these expenditures are far out-weighed by higher revenues. Density of employment is also fairly low resulting in lower expenditure levels for other services.

For the purpose of this analysis, each land use type is analyzed independently. However, the retail pro-forma is a good example of how different land uses support each other. Although all retail sales in this model are attributed to stores, local residents support these stores. In a well-balanced city, the highly positive impact created by retail development helps to offset some of the costs associated with supporting residential development.

4.5.4 Residential Development

Residential development is the only type of development that creates a consistently negative impact. The seven pro-formas shown here range in density from estate single-family at 1 unit per acre, to very high density multi-family at 18 units per acre. The impacts from residential development are largely a function of the tax structure of cities in Arizona. The majority of revenues from residential development come from property tax and state shared revenues. Additional revenues from service charges offset some expenditures for items such as recreation. However, since most residents use city services more heavily than people working in the city, the expenditures from residential development typically outweigh revenues.

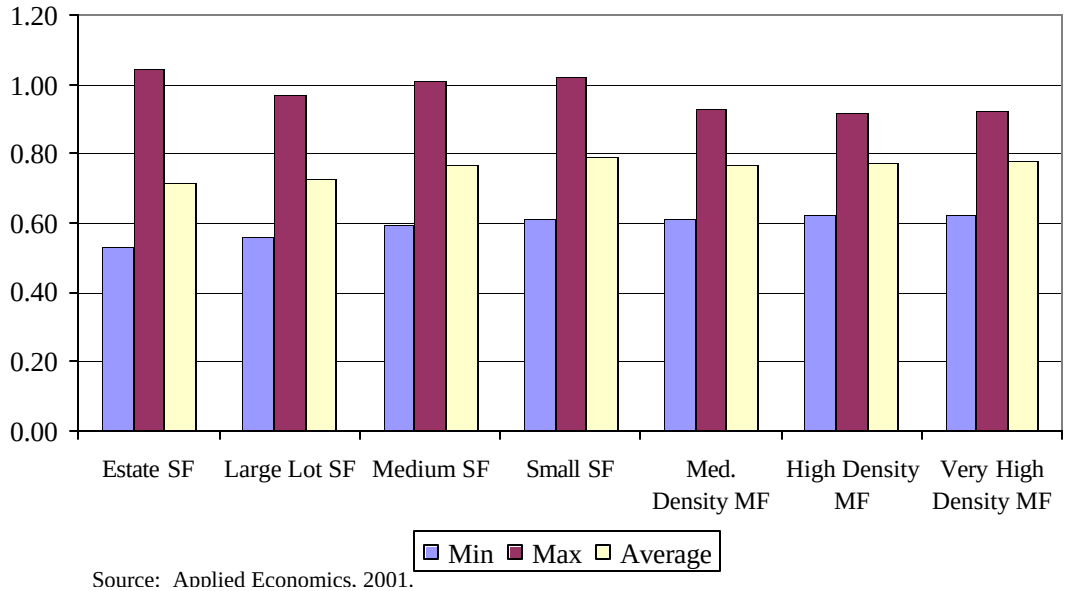
It is possible, however, for high value residential development to create a break even or slightly positive impact. This scenario would be most likely in cities with high local property taxes and limited municipal services. This combination does not exist in any of the cities in Maricopa County, although it could apply to particular high-end developments that provide some municipal services through a homeowners association, and that are in cities with high property taxes.

In Maricopa County, cities with the highest residential property values such as Paradise Valley, Fountain Hills and Carefree do not provide a full range of services. For example, individual residents privately contract fire services. In Fountain Hills and Carefree, the County Sheriff provides police service at a very economical rate. Paradise Valley and Carefree also have no parks, recreation or library services. However, none of these three cities levy a local property tax, so they do not benefit from high assessed values. The only exception may be in Gila Bend, which does provide a fairly full range of services, but has very high local property taxes.

Among the residential pro-formas shown here, small lot single family and very high density multi-family yield the highest average proportion of revenues relative to expenditures. Estate and large lot single family appear to have the most negative impacts, perhaps because they are the

least efficient to serve as far as fire service and streets. However, there is significant variation among cities. A summary of the relative revenue to expenditure ratios for each residential density type is shown in the graph below (Figure 4-5).

FIGURE 4-5
RESIDENTIAL REVENUE/EXPENDITURE RATIOS BY DENSITY
MARICOPA COUNTY COMMUNITIES



Source: Applied Economics, 2001.

For single family overall, Gila Bend had the highest revenue to expenditure ratios across all four density categories and was the only city that showed a positive impact. Paradise Valley consistently had the lowest ratios across all four single family categories ranging from 0.53 to 0.61 cents in revenues for every dollar of expenditures required to support this type of development. In terms of impacts by city size range, it appears that Phoenix had the least negative impacts, followed closely by the small cities. The medium cities had the most negative impacts on average. All size ranges of cities faired better with medium and small lot residential than with estate or large lot development.

For Maricopa County, the same inverse relationship between net impact and density held true to an even greater degree. The average revenue to expenditure ratio for estate and large lot was 0.62, compared to 0.93 for small lot single family, which is close to break even.

The three multi-family development pro-formas represents increasingly greater densities, but with lower per unit values and lower population per unit than single family. For most cities, there was relatively little variation in revenue to expenditure ratios across the three density levels. The least negative multi-family impacts were in Carefree and Gila Bend, both small cities. The most negative impacts were in Paradise Valley, Surprise and Avondale, which all fall into the medium size category. In terms of overall averages by size range, small and medium large cities had the least negative net impacts for multi-family development. For Maricopa County, the results were somewhat negative for medium and high density, but close to break even for very high density multi-family.

4.6 Conclusions

The fiscal model can yield valuable information about how different types of development are likely to impact city budgets. These preliminary results show how the tax structure in Arizona as well as differences among individual cities are manifested in land use and planning decisions.

In addition, the detailed results by line item that will be included in the Phase II version of the model will show specifically what line items are most affected by different land uses and different development factors such as real and personal property values and density, as well as the comparative demands for city services and infrastructure such as parks, streets and police.

The bottom line is that cities must have a balanced mix of land uses for both economic and fiscal reasons. Residential development in isolation is not generally feasible. However, residential development is necessary to support demand for retail, and to create a labor pool for office and industrial uses. At the same time, retail development as the primary type of non-residential development in a community would create a strong fiscal impact, but would not result in a healthy economic base. The complexity within a contiguous urban area like Maricopa County stems from the fact that development patterns do not necessarily conform to city boundaries. When residents can easily work or shop in a neighboring community, it is possible for some cities to develop with an unbalanced mix of land uses that threaten fiscal sustainability. The fiscal impact model will be a useful tool in illustrating how growth patterns in individual cities will impact local budgets in the long term.