Border Wars: Tax Revenue, Annexation, and Urban Growth in Phoenix

Carol E. Heim

January 2006
Revised July 2006

Border Wars:
Tax Revenues, Annexation, and Urban Growth in Phoenix

Carol E. Heim
Department of Economics
University of Massachusetts
200 Hicks Way
Amherst, MA 01003
cheim@econs.umass.edu

January 2006
Revised, July 7, 2006


Abstract

Phoenix and neighboring municipalities, like many in the South and West, pursued a growth strategy based on annexation in the decades after World War II. This paper explores the link between annexation and competition for tax revenues. After discussing arguments for annexation, it traces the history of annexation in the Phoenix metropolitan area. A long-running series of "border wars" entailed litigation, pre-emptive annexations, and considerable intergovernmental conflict. The paper argues that tax revenues have been a key motivation for annexation, particularly since the 1970s. It then considers several related policy issues and argues that while opportunities for annexation are becoming more limited, competition for tax revenues (particularly sales tax revenues) continues to be fierce and to create dilemmas for municipalities in the region.

JEL classifications: H71, H77, N92, R51

Keywords: annexation, municipal revenues, sales tax, Phoenix, urban growth, intergovernmental relations
INTRODUCTION

Phoenix has been one of the most rapidly growing cities in the United States since 1950. It was the sixth largest U.S. city in terms of population in July 2003 and a projection based on past growth showed that it was likely to pass Philadelphia to take fifth place during 2006.¹ The Phoenix metropolitan area ranked fourteenth in 2003, whereas the Philadelphia metropolitan area was fourth. One reason Phoenix’s city ranking was higher than its metropolitan area ranking was that the city continued to expand its boundaries dramatically by annexation. More of the metropolitan area population was within the city than in a case like Philadelphia. In 2003, the Phoenix city share of the metropolitan area population was about 39 percent, whereas Philadelphia’s was only about 26 percent.²

Figure 1 shows the increase in Phoenix’s land area from 1881-2005. The city grew from about 17 square miles in 1950 to about 515 by 2005. Other cities and towns in Maricopa County, which includes 24 municipalities, also expanded by annexation (see Table 1 and Figure 2).³ Buckeye grew from under 1 square mile to about 127 by 2000, Peoria from about 1 square mile to about 141. Scottsdale grew rapidly for several decades, although it saw very little annexation in the 1990s. As municipalities approached each other’s boundaries there ensued a long-running series of “border wars” or what some called “range wars.”⁴

Expansion by annexation was common throughout the United States in the nineteenth century. In the twentieth century it slowed in the East and Midwest, but continued in the South and West, especially after World War II.⁵ This paper explores the link between annexation and competition for tax revenues. After discussing arguments for annexation, the paper traces the history of annexation in the Phoenix metropolitan area from the 1950s onward. It argues that tax
revenues have been a key motivation, particularly since the 1970s. The paper then considers several policy issues raised by the annexation history and argues that while opportunities for annexation are becoming more limited, competition for tax revenues (particularly sales tax revenues) continues to be fierce and to create dilemmas for municipalities in the area.

**ARGUMENTS FOR ANNEXATION**

In the Phoenix area the primary argument for annexation, from the perspective of municipal officials, often was to obtain tax revenues and fees. These included sales taxes, property taxes, and other revenues such as population-based shared revenues (e.g., state-shared taxes and federal revenue sharing). The population-based state revenues came from the state sales tax, income tax, vehicle license tax, and highway user revenue fund; part of these revenues are distributed to municipalities each year on the basis of their populations. From the late 1980s, development impact fees also were collected in annexed (and other) areas.

Of course, annexation brought additional costs as well as revenues. The League of Arizona Cities and Towns encouraged municipalities to undertake studies of the effects of annexation before taking action, since the additional revenue to be gained must be considered in light of the necessary expenditures to provide services to the annexed areas. In some cases, such considerations led to decisions against annexation. Mesa held off on a proposed annexation in 1974 due to concern that financing necessary services in the area would lower the city’s income. The city of Phoenix’s staff conducted a series of studies on the budgetary impact of annexations. In several cases they concluded that the short-run cost-revenue relationship was negative, but that the longer-run outcome would be more positive.
Population-based tax revenues motivated municipalities to accomplish annexation before the next census so that residents of the annexed territory would be included in population totals. Gilbert’s Acting Town Manager advised the Town Council and Planning and Zoning Commission that during the calendar year 1979, annexation should be an important issue for the Council, P & Z Commission and the Town staff, since the town’s boundaries for the 1980 census would include areas annexed before January 1, 1980. Buckeye, a town of 5,600, annexed state prison facilities so that the inmates would be counted in the town’s population in the 2000 census. At full capacity the facilities were expected to hold 4,600 inmates, which would bring an additional $1.3 million in state tax revenues each year. The town planned to use the revenues to upgrade its infrastructure and it agreed to provide police and fire protection and waste removal to the prison facilities.

By annexing, cities also sought to avoid being ringed by independent municipalities with their own taxing powers. In Cities Without Suburbs, David Rusk (former mayor of Albuquerque) argued that cities must be elastic in order to grow. An elastic city had vacant city land to develop and the political and legal tools to annex new land. Phoenix city officials and staff clearly shared this view. Phoenix has had an aggressive annexation policy, officials explain, to prevent a landlocked core city that eventually would decay and cause residents to move to the suburbs. Instead, [Mayor] Barrow said, we annexed the suburbs. A 1974 staff report had compared Phoenix to cities which did not annex between 1950 and 1970. It concluded that annexation provided an expanding tax base and protected the city against a proliferation of incorporated cities or annexations by other cities. In 1978, Councilman Howard Adams was explicit about revenue motivations: It’s incumbent upon us to protect our pocketbook . . . and
keep bedroom communities from sapping our financial strength.\textsuperscript{14} Mayor Margaret Hance, echoing the 1974 report, said annexation policy had been the single most important factor in the health and vitality of Phoenix.\textsuperscript{15}

In some cases, the goal of annexation was to capture existing sources of revenue, such as the factory outlet mall inside a 12-square-mile area near New River annexed by Phoenix in 1995.\textsuperscript{16} Often, however, annexation was in anticipation of future development. For example, in 1987 Gilbert annexed 150 acres at the southeast corner of Gilbert and Williams Field Road; plans for the area included a major shopping center, auto sales mall, office complex, and residential housing.\textsuperscript{17} Sales tax revenues were especially desired and auto malls topped the list of sought-after developments.

For at least several decades, according to data from the U.S. Census Bureau, Phoenix’s fiscal structure has been more dependent on sales taxes than U.S. municipalities as a whole. General and selective sales taxes as a share of general revenue are shown in Table 2. The share in Phoenix has been considerably higher than in all municipalities since 1969-70. In Scottsdale, sales taxes were reported in 2005 to make up half of the city’s operating budget, with sales taxes from auto deals accounting for about 17 percent of those sales taxes.\textsuperscript{18} More than one-quarter of the municipalities in the Phoenix metropolitan area had no primary or secondary property tax in early 2005.\textsuperscript{19} Most were small municipalities, but they included Mesa, a city of almost one-half million people in 2004. (Municipalities in Arizona are not responsible for school finance; that responsibility lies with school districts, which levy their own taxes.)

For municipalities with a property tax, sales tax revenues might nonetheless be a more desired source of revenue than property taxes on residences, since the commercial establishments
generating sales tax revenues require fewer municipal expenditures than residential development. Studies show that for each dollar of tax revenue generated, the median cost of public services for residential development is $1.16, for commercial and industrial development, $.27, and for working lands (such as farms and forests) and open space, $.36.\textsuperscript{20} As noted above, in making decisions about annexation, it was important for municipalities to consider not only the revenue but also the expenditure consequences of those decisions.

A second argument made by municipalities for annexation was that it would allow for orderly, planned growth. Planning staff for the city of Mesa, which was considering annexing 14 square miles in 1978, explained that City zoning laws are tougher than those of Maricopa County, which administers unincorporated land . . .\textsuperscript{21} A former Phoenix City Council member claimed that Some of the worst problems the cities have is in areas where (land was) annexed from the counties. Counties have just a hodgepodge of zoning that's inappropriate. In the counties' defense--some of the stuff is very old--they were not equipped to make those kinds of (planning and zoning) decisions.\textsuperscript{22} Municipalities also did not want to have to upgrade infrastructure when areas eventually came within their boundaries.

Annexation also may contribute to orderly development by simplifying the political structure of a region. Maricopa County has only 24 municipalities, whereas the Chicago region has 265 and the Los Angeles region approximately 180. Fewer jurisdictions may reduce political fragmentation leading to land-use mismanagement.\textsuperscript{23} A 1977 editorial in the Arizona Republic, strongly defending annexation in the 1950s and later, claimed that . . . the entire Valley of the Sun would be a governmental shambles if annexation hadn't been carried out\textsuperscript{24} (although it did not elaborate on the deleterious consequences).
From the perspective of some residents, annexation was desirable because of the municipal services it would bring, and some city officials cited extension of services as one of their motivations. Other residents, however, had moved precisely to avoid living in a city and opposed annexation. Some did not wish to pay city property taxes even though services would improve. Property owners sometimes asked for assurance in advance that a property would be rezoned (e.g., from agricultural to commercial) if they agreed to annexation.

Annexations also were requested by some developers. For example, Continental Homes asked the Phoenix City Council to consider annexation of Pima Ranch, where it hoped to create a major residential development. The Council scheduled a policy session in January 1980 to discuss the pros and cons of the case and the financial implications of annexing a larger area, including Pima Ranch, south of the city. Avanti Mortgage Company of Phoenix, which wanted to develop a 33-acre industrial park, requested annexation of 620 acres in 1987 in order to receive Phoenix services. However, other developers opposed annexation of undeveloped areas, preferring to develop under county jurisdiction and have residents request annexation later if they wished. Pulte Homes, for example, opposed annexation by Queen Creek of a project site in Pinal County in 1998 because the town would require lower-density zoning than the county. If Pulte could get the land rezoned in the county before annexation, the more profitable higher-density zoning would persist even if the town later annexed the land.

Arizona’s 1980 Ground Water Management Act required that new subdivisions in Active Management Areas, where groundwater was being depleted, have a 100-year water supply. This created a reason for developers to seek annexation of their properties by municipalities, since the properties then would qualify as having an assured water supply. In the mid-1980s, water also
may have been a motivation for municipalities to annex. Legislators in 1985 voiced concerns that cities were battling for more land so they can qualify for more Central Arizona Project water. More recently in Peoria, however, availability of water has become a precondition for annexation rather than a motivation. The city is not eager to annex areas that do not bring their own water supply with them, and it requires that development and annexation agreements for large developments include a water budget indicating anticipated demand and supply. In some areas without sufficient groundwater, developers were required to pay for the drilling of new wells at a distance; they eventually would be used to pipe water into the area.

In some U.S. cities, annexation was motivated by a desire to dilute the city’s minority vote. In the Phoenix area, some annexations, especially in later decades, were of territory containing few people; they did not bring a large additional white population into the city. Phoenix also had a smaller nonwhite population than many other annexing cities. However, the issue was raised in Phoenix in 1979, following several annexations that added thousands of voters. Plaintiffs in a suit filed in October claimed that an annexation in May diluted the strength of minority voters. The plaintiffs sought to halt the November 6 primary election on the grounds that the annexation and precinct changes had not been screened by U.S. Department of Justice as required by the Voting Rights Act of 1965. Screening determined whether racial and ethnic voting patterns reflected those of the rest of a city, so that minority voting rights were not weakened. The Justice Department allowed the May annexation to become effective without objection, although it reserved the right to object later.

Racial considerations may have worked against annexation of certain areas. Amy Bridges argued that in the 1950s, annexation of poor African-American communities into Phoenix was
delayed, whereas newer communities further out were annexed and provided with streets and utilities. The black community in the southernmost part of Phoenix was annexed just in time for the 1960 census. She did not explicitly argue that revenue concerns overcame the earlier reluctance to annex these areas, but as noted above, a larger population at census time meant greater revenues for a municipality.

ANNEXATION IN THE VALLEY OF THE SUN

1950s: Tax Exemptions for Industrialists

Significant annexation in the Phoenix area dates from the late 1950s. Municipal reform in 1948-1950 established Charter Government, with a strong city manager and better municipal administration. Potential Phoenix residents had more confidence that, if annexed, they would live in a well-managed city. Previously, many fringe area property owners who thought municipal government was inefficient and unprofessional had refused to sign annexation petitions. Annexation initially proceeded slowly, due in part to lack of city staff and to legal and political challenges by annexation opponents. Major cities sought changes in state laws to make annexation easier, but legislation governing the annexation process actually became more restrictive in the mid-1950s. However, based on his study of Phoenix during 1944-1973, William Collins concluded that in the end the annexation law, while not simple, proved liberal enough to allow the city to acquire nearly all the land that it sought.

The role of revenue motivations in early annexation efforts is not entirely clear. Phoenix City Manager Ray W. Wilson denied in 1951 that the need for more tax revenues was a reason for city expansion and thought that annexed areas receive more in services for several years than
they contribute in taxes. The argument for annexation made by the *Arizona Republic* in 1957 was that Phoenix is a metropolitan area. Industries in this area can choose between a handful of small, autonomous cities, with duplicating services and inefficient operation, or one large municipality of the model type now enjoyed by Phoenix. We'll choose the latter, and we think most people will agree. In 1958, to ensure successful annexation, the city was willing to forego sales tax revenues, as well as to amend its building code and zoning ordinance and to assure property owners that property tax rates would remain stable. Industrialists in southeastern and southwestern areas opposed annexation and argued that they needed tax exemptions to compete effectively while being inside the city. On March 24, 1959, voters approved 14 exemptions to the city sales tax for business and industry and the annexations proceeded.

However, John Williams, the city's finance director, argued that increased property tax revenues from the highly valued industries would offset the lost sales tax revenues. According to John Wenum, who studied annexation by Phoenix and neighboring municipalities, despite their disavowal of tax-base expansion as a goal of annexation, nine [of forty-one public and private] respondents indicated that this might have been a consideration in the annexation of a large industrial tract in 1959. An *Arizona Republic* editorial in 1975 stated that the industries have paid far more in property taxes than they have saved through the sales tax concessions. . . . the voters approved the small price paid for annexation in return for the much larger benefits that would stem from having these firms in the city.

**1960s: Contested Borders**

By the end of the 1950s, cities were approaching each others' boundaries (see Figure 3) and considerable acrimony ensued. The most heated conflict, which began in 1956, was between
Phoenix and Scottsdale. The two cities ended up in protracted court battles after attempting to annex the same land. The *Arizona Republic* reported in March 1963 that the recurring annexation war between Phoenix and Scottsdale erupted anew yesterday and noted a few days later that in this vast space, two booming Valley cities are competing for the right to expand to make way for future growth. Scottsdale accused Phoenix of trying to hem us in from the north. Scottsdale’s original incorporation in 1951 was motivated by its fear of being swallowed up by Phoenix. Tempe and Glendale also reacted to Phoenix’s expansion by attempting to annex, sometimes unsuccessfually. Relations between Phoenix and Glendale were not as bitter as those among the other cities, for several reasons including the fact that some residents on Glendale’s fringe actually preferred to be annexed into Phoenix.

Some efforts were made to halt the border wars, although they did not always have lasting success. Phoenix and Glendale created a neutral area in 1958 and later extended the arrangement to other areas. Phoenix and Scottsdale agreed on spheres of annexation influence in 1964. In 1968, Chandler and Tempe passed a gentlemen’s agreement setting out which areas could be annexed by each city in the future without prior approval of the other city and establishing an open area between them which was to be jointly planned. The agreement was reaffirmed in 1971 but violated by Chandler in 1974, setting off the annexations by Gilbert and other cities described below.

Similar attempts were made in later years. In 1978, Phoenix and Scottsdale agreed not to annex land across their respective sides of Scottsdale Road, and in 1985 the two cities agreed upon the 56th street alignment as a future boundary. In order to gain Phoenix’s assent to its incorporation, Cave Creek agreed in 1986 not to extend its boundaries south of the Carefree
Highway. But it later reneged on that agreement, claiming it was a blackmail agreement.\textsuperscript{49} In 1987, Chandler entered an agreement with Gilbert to draw a boundary line dividing 16 square miles of unclaimed land between the two communities; the hope was that the agreement would prevent future land grabs\textsuperscript{50} and contribute to more systematic planning.\textsuperscript{50} As growth spread beyond Maricopa County to Pinal County (between Phoenix and Tucson), the municipalities of Casa Grande, Coolidge, Florence, Maricopa, and Eloy worked on official intergovernmental agreements to replace gentlemen\textquotesingle s agreements made in the 1980s but ignored by new city and town managers.\textsuperscript{51}

\textbf{1970s: Pre-emptive Strip Annexation}

In their annexations, municipalities could not jump over land that had been annexed by another city, even if that land was simply a narrow strip of property intended to serve as a barrier to another municipality\textquotesingle s expansion. The area inside the strip remained county land (referred to as a county island\textsuperscript{52}) until the strip-annexing municipality chose to annex it. A 1974 annexation by Chandler spurred Gilbert in 1975 to create the largest county island to date with a strip varying in width up to 200 feet that enclosed a 51 square mile area (see Figure 4).\textsuperscript{52} Gilbert was seeking to prevent similar action by Mesa or Chandler. In 1978 Gilbert was a town of 4,100 that was anticipated to grow to 125,000. Gilbert Mayor Dale Hallock explained that By doing the stripping we\textquotesingle ve taken in everything that could ever be in Gilbert and now we are in a position to very slowly go ahead and develop it.\textsuperscript{53} In a 1976 interview, Town Manager Lynn Stuart also emphasized planning considerations and citizens\textquotesingle desire that Gilbert keep its rural atmosphere.\textsuperscript{54}

County islands created headaches for county officials in law enforcement, road maintenance, and construction, who claimed that municipalities only annexed parts that benefited
them, leaving behind pockets that needed extensive road work or bridges. In the Gilbert case, the county Board of Supervisors was reluctant to continue developing highways inside the island, but ultimately it did. Maricopa County Manager Robert Mauney argued that

> Cities and towns look at annexation as a business venture, and the profit motive is always there. They want the tax base, but they don't want to have to put a lot of money into improvements. That's why many of them wait until roads and other improvements are completed before they consider annexation.

County islands continued to pose problems and the League of Arizona Cities and Towns pressed for legislation making it easier to eliminate them. A bill (not introduced by the League) that was signed into law in 2003 allowed counties to initiate annexations of parcels of 10 acres or less, though the process would be halted if more than half of the property owners, or cities and towns, objected. Some municipalities decided to cut off emergency and fire protection services to residents of nearby county islands who were not paying taxes to the municipalities and had contracted instead for services with a more distant private supplier (Rural/Metro). Not surprisingly, such decisions were controversial, as when Goodyear refused to respond to a near-drowning call just outside the city. Ultimately services were resumed by Goodyear and Avondale, who planned to charge Rural/Metro a steep price for providing them.

The 1975 Gilbert strip annexation was challenged in court. The annexation law required consent of the owners of at least 51 percent of the assessed valuation of the area to be annexed. The suit claimed that Gilbert annexed all of the property of those favoring annexation, but only part of the property of those opposing it. The rest of their property was not included in the calculations to determine whether 51 percent was attained. The *Arizona Republic* reported that Lawyers for the town concede it used that method in its annexation, but say the action was
The annexation was upheld, but the case helped to generate changes in the legislation discussed below. A ruling by the Arizona Court of Appeals in a later case noted that Glick indicated that some cities were engaging in strip annexation, that is, were artificially extending their boundaries to include potentially high value taxable areas, or to defend against the encroachment of equally aggressive neighboring municipalities.

One neighboring East Valley community--Mesa--was reported to have been relatively unconcerned by Gilbert's 1975 annexation. However, Mesa pursued its own aggressive annexation plans and municipalities to the west of Phoenix, including Tolleson, Avondale, Goodyear, and Peoria, all joined in border wars in 1976-77. Like Buckeye in more recent years, the first three were tiny communities (populations under 7,000 in 1970) that added vast amounts of land. In June 1976, Phoenix strip annexed around an area of about 37 square miles in response to the threat that Tolleson would annex an area that Phoenix officials feel is in the path of natural Phoenix expansion. It added another 5 square miles in July so Avondale wouldn't annex the world, according to Councilman Ken O'Dell. In July 1977, Phoenix annexed a 25-foot-wide strip around a 14-square-mile area in Deer Valley. An editorial in the Arizona Republic asserted that Phoenix was again maintaining its right to grow in the face of possible incorporation of a city of Deer Valley or possible strip annexation of the area by Peoria.

Stealth was involved in some cases. In May 1976, Goodyear annexed a parcel of land a few hours ahead of its neighbor city [Avondale], sparking a dispute. A few years later the Arizona Republic reported that the southern boundary of Phoenix was locked into place permanently Thursday when the City Council called a special annexation meeting on short notice to head off a rumored intrusion by Chandler into the Ahwatukee area. Chandler had been.
scheduled to consider an annexation that Thursday night.

1980s: Changes in Annexation Legislation

The 1980s brought two important changes in annexation legislation. Strip annexation was outlawed in 1980. A city or town shall not annex territory if as a result of such annexation unincorporated territory is completely surrounded by the annexing city or town. Territory annexed had to adjoin the annexing municipality for at least three hundred feet and had to be at least two hundred feet in width, exclusive of highways, and no more than twice as long as it was wide. In 1986, other changes made annexation more difficult. A waiting period of thirty days before signatures could be collected on an annexation petition was imposed. During that time a public hearing had to be held after notices had been published, posted, and mailed to relevant parties. The petition had to be signed by the owners of one-half or more in value of the real and personal property and more than one-half of the persons owning real and personal property that would be subject to taxation by the city or town in the event of annexation. Previously, annexations could be done with the signatures of a very few large owners whose property was worth more than one-half of the assessed value in the area to be annexed. In one extreme case in 1977, the 14-square-mile Deer Valley annexation, Phoenix annexed the entire area with the signature of a single property owner.

Some cities rushed to annex before the 1980 legislation took effect. Scottsdale’s City Council met at 7 a.m. on June 30, 1980 to approve an annexation by which a 10-foot-wide strip enclosed 86 square miles, an area nearly equal to the city’s size. The action was challenged by several lawsuits alleging violations of the state’s open-meeting law. In July, Chandler prepared plans to surround 36 square miles with a similar strip. Despite the outlawing of strip
annexation, annexation wars continued in the early 1980s. Conflicts among Phoenix, Scottsdale, Cave Creek, and Peoria were an important impetus for the 1986 legislation.\textsuperscript{72} As an initial step in 1985, a one-year moratorium on city annexation involving state land was approved. Legislators wanted a year to study possible legislative changes; they feared annexations of outlying areas would encourage leap-frog development, discourage in-fill, and drain a city's water resources.\textsuperscript{73} In addition to making the changes described above, the 1986 legislation allowed deannexation of territory to cure some of the problems created by past strip annexation. However, because the deannexation law only applied to a select group of Arizona cities and towns, it was declared unconstitutional in 1990 by the Arizona Supreme Court.\textsuperscript{74}

After the passage of the 1986 legislation and in response to Phoenix City Council discussions on the merits of annexation, a multi-departmental task force produced an annexation policy study analyzing the issues. City Council member Linda Nadolski had been vocal in opposing further annexation, which she argued had negative fiscal consequences for existing city neighborhoods. Others had suggested that the city should promote growth within its existing boundaries and thought that annexation encouraged urban sprawl. The annexation policy study reaffirmed the conclusion of the 1974 staff report that annexation had positive long-term benefits. It did, however, recommend careful determination of which areas should be annexed and of the optimum timing for annexation. Evaluation criteria were proposed to be used by staff in reviewing each proposed annexation area. Phoenix planning officials remained committed to a policy of expansion, although the Planning Department did reject a few annexations that did not seem appropriate at the time they were proposed. Both revenue and planning considerations remained important for city officials.\textsuperscript{75}
1990s: West Valley Growth

Although the tightening of the legislation made it more difficult, annexation continued in the 1980s and 1990s (see Table 1 and Figure 5). Much of the annexation of the 1990s occurred in the West Valley, with Buckeye and Peoria registering especially large increases in land area. For some time Peoria and Phoenix had been jockeying for position in the northwestern area near Lake Pleasant. A compromise plan recommended by the State Land Commissioner in 1987 identified areas for future annexation by each city and left about 40 percent of the contested area outside both. Annexations within these areas proceeded in later years.76

Buckeye’s expansion was the most dramatic. It followed in the footsteps of Surprise, another small West Valley municipality that had annexed a large amount of territory in the 1980s to position itself for future development. In 1999, Buckeye annexed the site that would become the Verrado development created by DMB Associates. With an annual town budget of $2.6 million, Buckeye hoped to see Verrado bring annual property-tax revenue of $10 million. An even larger annexation of 35,000 acres in 2002 had been requested by the developers of Douglas Ranch, a master-planned community that eventually could include 83,000 homes over the next half-century. John DiTullio, the developer’s representative, and Buckeye Mayor Dusty Hull argued that the annexation would bring control of water resources essential for the town’s future growth. With Douglas Ranch added to other large-scale developments already approved by the Buckeye Town Council, over 240,000 new housing units were projected for a town whose population at the time was approximately 7,000. As a result of its ambitious annexations, Buckeye became second in area only to Phoenix among Valley municipalities.77

An overall shift in the focus of growth from the East Valley to the West Valley occurred
in the 1990s and after, partly due to development of highways west of Phoenix and to availability of land. In 1991, about 26 percent of Valley housing starts occurred in the west; by 1999 its share was 40 percent, more than the northeast or southeast. Population continued to soar in many East Valley municipalities as well, but the West Valley attained a new presence in the region. Its municipalities competed hard for facilities; Glendale was successful in two major cases. It landed the new Coyotes hockey arena after negotiations for a Scottsdale site at Los Arcos failed, and it won out over Tempe and Mesa after a nearly two-year battle to attract the Cardinals football stadium, scheduled to open for the 2006 season. Glendale offered an attractive site to be purchased by the Cardinals and the creation of a Community Facilities District, which would issue bonds for $48 million of on- and off-site improvements and retire the bonds through a combination of parking fees, surcharges, and sales taxes at the site.78

Glendale also reversed its annexation policy in 2005 as projected improvements in the Loop 303 freeway led city officials to anticipate increases in land values and development along the freeway route. This area lay within the territory strip-annexed by Glendale in the 1970s. The city had not been eager to annex the unincorporated territory and had considered annexations only if property owners approached the city and were east of 115th Avenue. However, with the prospect of sales, construction, and property taxes from new properties included within the city, Glendale began actively courting property owners for annexations.79

**2000–: State Trust Lands**

Further opportunities for annexation are becoming more limited. Much of the remaining undeveloped land around Phoenix is owned by the state or federal government or by Native American tribal communities. State trust lands are available for annexation and pose some
interesting issues. At the time of Arizona's State Enabling Act in 1910, which allowed the Territory of Arizona to prepare for statehood, sections of each township were assigned to be held in trust for funding public schools. This was a common practice but unlike many states, Arizona retained ownership of much of its trust land rather than selling it quickly. The trust has a fiduciary responsibility to manage its assets in the interests of its beneficiaries and the Arizona Enabling Act and Arizona Constitution specify that the trust lands cannot be sold or leased except to the highest and best bidder at a public auction. These requirements put constraints on what the Arizona State Land Department can do with the land and create difficulties for environmental groups and municipalities that want to see open space preserved rather than developed. At auctions during 2004, state trust lands sold at prices well above their appraised values, sometimes double or more the initial value. More recently, appraisals have been raised to higher levels.

Border wars can occur over state trust land as well as privately owned land, with more than one municipality hoping to annex the same piece of land. The State Land Department declined to take sides in the dispute between Phoenix and Peoria over land near Lake Pleasant. Instead, it required that the two cities work out their boundary dispute before the State Selection Board approved their annexation requests in December 2002. Phoenix had sought to annex west to 79th Avenue; Peoria had included the area east to 67th Avenue in its General Plan and objected to Phoenix's annexation request. The boundary ultimately ended up following the 75th Avenue alignment north of New River Road. Additional annexations of state trust lands are likely, including lands in Pinal County. Future disposition of state trust lands may be affected by legislative reform efforts that had been underway for several years by 2005.
POLICY ISSUES

In addition to helping explain how Phoenix grew to its current size and urban form, the history of annexation raises some interesting policy issues. First, did the bitter history of annexation wars make it more difficult for municipalities to cooperate on matters of regional concern, such as transportation or environmental issues? While some planners and others think it may have played a role, it was difficult to find examples of specific policy decisions that were blocked or made poorly that could be attributed to this cause. There may have been some examples in the area of transportation, such as streets from Phoenix that were not aligned to make it easy for Phoenix shoppers to get to Scottsdale, or delays in their construction. On the other hand, municipalities did succeed in coming to agreement on a major transit plan associated with a November 2004 referendum to extend a half-cent sales tax due to expire after its initial 20 years. Ongoing difficulties in reaching cooperation among municipalities may be due not primarily to historical memories of annexation wars, but to current situations that appear to participants to be zero-sum games.

A second policy issue emerges when annexation and the associated land-based growth path are no longer an option. What happens when a city runs out of land? What changes in policy become necessary when a city no longer can count on tax revenues from extensive growth? Scottsdale faces precisely this dilemma, partly due to its commitment in the 1990s to preservation of desert open space. By 2003, Scottsdale had only about 4,000 acres of developable land left of its 117,000 acres and new-home prices were soaring. The Morrison Institute for Public Policy issued a report arguing that Scottsdale needed to focus on intensive development and redevelopment and to become involved in three regional efforts: genome research, initiatives
associated with Arizona State University, and a (related) push to top-tier science and technology status. The city decided to put $130 million into redevelopment of the Los Arcos Mall into the ASU Scottsdale Center for New Technology and Innovation. High-rise developments were accepted downtown as part of the more intensive strategy.\(^\text{83}\)

Chandler is looking ahead; anticipating that vacant land would be nearly gone by 2010, it commissioned in 2003 an initial study of build-out, and in 2004 a more extensive one. The city’s goal is to avoid serious strain on the municipal budget as revenues from new home construction stop. Retail and employment growth are expected to lag behind residential growth, but services still must be provided to residents. Similarly, a Gilbert mayoral candidate warned in January 2005 that Gilbert’s growth may reach build-out in less than eight years, some five or six years ahead of schedule.\(^\text{84}\)

Tempe was landlocked early on (see Table 1). It successfully redeveloped (or gentrified) its downtown during the 1980s.\(^\text{85}\) However, one tool that appears to have been important--the exercise of eminent domain--may be less available to Scottsdale or other municipalities. Eminent domain has never been popular in Arizona, a strong property-rights state. Recent controversial cases inflamed opposition. When Mesa tried to exercise eminent domain for redevelopment in the case of Bailey Brake Service, many viewed the action as a taking for private developers rather than serving a genuine public purpose. The courts ultimately blocked the action and the state legislature made the exercise of eminent domain more difficult by requiring a two-thirds Council vote and more public reviews and process.\(^\text{86}\)

Phoenix probably will not face this dilemma for several decades, especially with its recent annexations in the north, but there is concern about strengthening the city’s downtown and about
the impact of ongoing expansion at the periphery upon the city’s core. Phoenix established a Downtown Development Office in July 2004 and a major redevelopment plan including a downtown campus for Arizona State University, bioscience centers, light rail, and high-density housing, was adopted by the City Council in December. At the same time, Phoenix appeared to be seeking to keep its options open for extensive growth. When Cave Creek sought in 2004 to annex 11 square miles, pushing its western border to 24th Street, Phoenix objected to the State Land Department. Cave Creek Mayor Victor Francia was reported to believe that Phoenix’s action was a payback for Cave Creek’s betrayal of its 1986 promise not to extend south of Carefree Highway. Whether or not that was the case, the 11-square-mile annexation by Cave Creek would make it more difficult for Phoenix to annex Anthem and New River in the future. It was unclear whether Phoenix eventually would seek to annex these areas as part of further northern expansion, although Rick Naimark, executive assistant to the Phoenix city manager, denied that there were any plans to do so.  

Finally, even as the annexation wars wound down, competition for tax revenues remained intense. When David Richert became Phoenix Planning Director in 1992, City Manager Frank Fairbanks gave him a directive to stop the bleeding of sales tax at the city’s borders.  Within municipalities, the push for sales tax revenues may have led to inferior planning and zoning decisions. Debra Stark, Peoria’s Community Development Director in 2004, cited cases where properties were zoned for commercial use but were unable to attract commercial development, sat vacant, and eventually had to be down-zoned. Or, too many retail facilities may be built, they struggle to survive, and cities end up with empty buildings if they fail.

In the Phoenix area as elsewhere, municipalities compete by offering subsidies to
developers to locate shopping or auto malls within their boundaries. It certainly would seem to be in municipalities' interest, especially at a time of tight budgets, to avoid paying large subsidies for developments that would locate somewhere in the region in any case. The dilemma, of course, is that they risk losing the development to another municipality willing to pay, and many municipal officials feel that if the subsidies succeed, they are worth the price. Citizens do not always agree; Scottsdale ultimately decided through a voter referendum not to provide a $36.7 million subsidy, approved by the City Council, to Wal-Mart to locate at the site of the former Los Arcos Mall in south Scottsdale.

Joint revenue sharing agreements, in which municipalities agree to share the sales tax revenues generated by a mall regardless of where it locates, can eliminate this dilemma. Phoenix and Scottsdale tried unsuccessfully in the 1990s to create a joint revenue-sharing agreement for development along North Scottsdale Road, which divides the two cities and which at its intersection with the Loop 101 freeway is one of the last remaining areas for development. Part of the problem is that whichever municipality feels it is winning the competition has less incentive to make an agreement; over the years the balance shifted between Scottsdale and Phoenix. Scottsdale snared Nordstrom for the Scottsdale Fashion Square Mall with a subsidy of $27.5 million in the early 1990s. But more recently Phoenix landed major commercial developments along the west side of Scottsdale Road, including a $100 million luxury auto mall that opened in 2002 and popular new shopping areas such as Desert Ridge Marketplace and Kierland Commons.

There have been two successful cases of revenue-sharing agreements between Tempe and Chandler. The first (1996) was for the Arizona Mills Mall, which ultimately landed in Tempe.
What is striking about this case is the role of the developers, who ultimately pushed the cities to come to agreement. This agreement was terminated in 2003 on the grounds that there has been substantial commercial development within Chandler and the perpetual sharing agreement is no longer necessary. Tempe and Chandler also worked out an agreement in 1998 over a Chapman Chevrolet dealership that ended up in Chandler. They agreed not to provide tax rebates; the host city was to receive the first $4 million in tax revenues and 75 percent thereafter.

Much more typical, however, were large incentives, such as the $60 million offered by Gilbert and estimated $40 million by neighboring Chandler to lure auto malls. An agreement was announced in 2004 but it involved both malls being built without sharing revenue. Some Arizona legislators have not been pleased with municipal competition for tax revenues and introduced legislation during 2004 to restrict it. Municipalities and the League of Arizona Cities and Towns opposed the legislation, arguing that the ability to offer inducements was an important power for municipalities to retain. The League was against any diminution of local control or increase in outside legislative interference.

In hopes of forestalling further legislative initiatives, the mayors of six municipalities (Avondale, Chandler, Peoria, Phoenix, Scottsdale, and Tempe) announced in January 2005 that they were working together on agreements to stop sales-tax incentive wars. But state Senator Ken Cheuvront, D-Phoenix, and others introduced bills aiming to end outlandish deals; their goal was to force the cities to stop giving public subsidies to big-box retail stores and auto malls. Legislation was signed by the governor in April 2005 that placed conditions on municipalities entering into retail development tax incentive agreements, including a requirement that a municipality make findings concerning an agreement’s necessity and financial benefits.
Chandler, Phoenix, and Tempe did ultimately agree to a truce creating a "no-incentive zone," but only in a small area along a portion of the cities' mutual borders.98

**CONCLUSION**

The history of urban growth in the Phoenix metropolitan area has been one of expansion onto inexpensive land from which tax revenues could be reaped as new areas were annexed into municipalities. These fiscal considerations were an important motivation for annexation, particularly from the 1970s onward, although other factors such as a desire for planning control and sheer boosterism should not be overlooked. The resulting border wars entailed court battles, pre-emptive land grabs, and mistrust between municipalities. They ultimately helped to provoke state legislation in the 1980s that outlawed strip annexation and made annexation more difficult. Annexation continued, however, both by municipalities such as Phoenix which already had grown large but continued to see physical expansion as crucial to ongoing prosperity and by tiny communities in the West Valley such as Buckeye which sought to replicate the experience of Phoenix in earlier decades.

By the turn of the century, limits to annexation and to extensive growth were being approached by several communities, but competition for tax revenues continued unabated. As some municipalities considered more intensive development strategies, inducements to developers to locate within their boundaries often were an important part of the package. The distributional consequences of those inducements led to opposition both from citizen's groups and from state legislators concerned about the transfer of funds from municipalities to private firms. Where extensive growth continued, in more distant areas such as Pinal County, some
municipalities hoped to craft intergovernmental agreements that might help prevent repetition of the earlier history of border wars in Maricopa County.
NOTES

This paper is part of a larger project comparing urban growth and property development in Chicago from about 1850-1900 and Phoenix from about 1950-2000. I would like to thank the Political Economy Research Institute at the University of Massachusetts, Amherst, for research support. I am grateful to Philip Carter, Thomas Maloney, Lynne Sagalyn, Eric Sandweiss, and Anita Summers for helpful comments on earlier drafts of this paper. I also benefited from discussions of this research at sessions at the annual meetings of the Organization of American Historians and the Social Science History Association, at the Penn Economic History Forum at the University of Pennsylvania, and at presentations sponsored by the Center for Public Administration and Policy and the Economics Department at the University of Arizona and by the Center for Public Policy and Administration at the University of Massachusetts, Amherst. In addition to those cited in the notes below, I would like to thank the following individuals for useful discussions and information that contributed to my research for this paper: Douglas Ballard (Chandler Planning and Development Department), Dalen Buchanan (Maricopa County Planning and Development Department), Robert Cafarella (Scottsdale Preservation Department), Catherine Connolly (League of Arizona Cities and Towns), Corey Cox (Arizona Department of Commerce), Patrick Flynn (Flynn Financial Consulting), Patricia Gober (Department of Geography, Arizona State University), Ruth Gieszl (Gilbert, Arizona), Matthew Holm (Maricopa County Planning and Development Department), Teresa Huish (Scottsdale Planning and Development Services Department), Kathleen Ingle (Arizona Republic), Gregory Keller (Arizona State Land Department), Joseph Nucci (Tempe Development Services Department), Dan Stanton (Arizona State University Libraries), and Philip VanderMeer (Department of History, Arizona State University). Newspaper articles cited below came from several sources, including original hard copies of newspapers, microfilm copies, collections of clippings in local archives, the online edition of the Arizona Republic, and CD News: The Arizona Republic, Arizona Business Gazette on CD-ROM at Arizona State University’s Hayden Library, Tempe, Arizona. Some of these sources (e.g., the online edition) do not provide page numbers for articles.


3. The Phoenix metropolitan area included only Maricopa County until after the 1990 census, when Pinal County was added. The population of Maricopa County was 3,501,001 at July 1, 2004; at that date the population of Pinal County was 214,359. See U.S. Census Bureau, Annual Estimates of the Population for Counties of Arizona: April 1, 2000 to July 1, 2004, at http://www.census.gov/popest/counties/CO-EST2004-01.html. For most of the period under consideration in this paper, it is reasonable to focus primarily upon Maricopa County in studying the Phoenix metropolitan area. As growth spreads into Pinal County, that becomes less true.


8. For example, a retrospective cost/benefit analysis of a 1972 annexation by Phoenix showed that it cost the city more than it received in revenue in the first two fiscal years, though the report predicted that the relationship between costs and revenues was likely to become more positive in the future. See City of Phoenix, Budget and Research Department Research Report No. 75-27, Cost/Benefit Analysis of the 1972 Deer Valley Annexation, October 9, 1974. Similarly, the City of Phoenix, Management and Budget Department Management Report No. MB 79-66, Cost-Revenue Impact of Annexing a Northwest Area, November 15, 1978, concluded that the annexation being analyzed would be financially beneficial after two to three years. In 1982, Phoenix city departments concluded that annexation in areas to the west and southwest would result in immediate costs exceeding revenues. By the third year, general revenue fund benefits would be positive, although by less than the amount of water and wastewater surcharges that would be lost when the areas were annexed. The study recommended that the city annex only contiguous parcels where development appeared imminent, a positive cost-revenue projection was made, and infrastructure was funded by the developer. See Marvin A. Andrews et al., Annexation Implications: Western and Southwestern Phoenix, Arizona, prepared by the Phoenix Planning Department in cooperation with other city departments, March 1982, pp. 3-4, 48. Other reports also emphasized various aspects of the timing of annexation, including setting dates for annexation such that property tax revenue would arrive in time for the next fiscal year. See City of Phoenix, Management and Budget Department Management Report No. MB 81-268, Budgetary Impact of Annexing the Southeast Area, June 22, 1981. The Annexation Policy Study produced by the City of Phoenix Planning Department (December 1988) discussed variables affecting the short term revenue/cost ratio (including population density, proximity to

27
existing services, nonresidential land use, infrastructure needs and finance, and timing), the
approach used by the city to determine benefits and costs, and difficulties in calculating
revenue/cost ratios (see pp. 4-5, 10-13). It concluded (p. 28) that in return for the longer term
economic benefits enabling it to be a strong core city, Phoenix has temporarily subsidized the
operating costs of service delivery to areas with low density, scattered residential development
and few commercial areas.  

9. Minutes of Work Study Session of the Town of Gilbert Common Council and Planning &
Zoning Commission, January 16, 1979, Town Clerk's Office, Gilbert, Arizona. See also Gilbert
Maricopa County neighborhoods before the mid-decade census of 1995. If it had succeeded, it
would have gained about $340,000 in state-shared revenue.

10. Arizona Republic, January 29, 1999, 1 [Southwest Valley Community section], May 19, 1999,
1 [Southwest Valley Community section], May 21, 1999, 3 [Sun Cities/Suprise Community
section]; Committee on Public Institutions and Universities, Arizona House of Representatives,


12. Arizona Republic, November 13, 1974, B2. See also Phoenix Gazette, October 31, 1974,
A16; Bradford Luckingham, Phoenix: The History of a Southwestern Metropolis (Tucson:
University of Arizona Press, 1989), 161-62; Grady Gammage, Jr., Phoenix in Perspective:
Reflections on Developing the Desert, 2nd ed. (Tempe: Herberger Center for Design Excellence,
College of Architecture and Environmental Design, Arizona State University, 2003), 36-39, 49;
Parks Board, 2005), 8, 94.

13. Norman Y. Cravens, Executive Assistant to the City Manager, to John B. Wentz, City
Manager, ¶Effects of Annexation on the City of Phoenix,¶ October 17, 1974 [transmitted by
Wentz to the Mayor and City Council of Phoenix, October 28, 1974], City of Phoenix, Budget
and Research Department, Phoenix, Arizona.


Metropolitan America (Washington, D.C.: Brookings Institution Press, 2002), 41-45, 192-95,
disagreed with Rusk's assertions that annexation brought metropolitan-wide benefits. She
concluded that central cities were the main beneficiaries. For a sample of 250 metropolitan areas
during 1960-1990, annexation did not lead to significant increases in growth of population or per
capita income in the suburbs or the metropolitan area as a whole. Much of what may appear to be
effects of annexation actually were regional effects; annexations were concentrated in regions of
high growth (the South and West). According to Pack (p. 42), central city residents benefited from the improved tax base: The one clear change is that the newly enlarged city will generally have a sounder fiscal base after incorporating suburban areas, which will account for the higher city bond rating Rusk cites, and this will be a real benefit to the residents of the original city, at least in the short run. This assumes that at least some of the additional revenues resulting from the sounder fiscal base actually are spent within the original city boundaries. It is very difficult to identify a distinct geographical location for many urban expenditures, which makes it hard to pursue the question of annexation=s distributional consequences within a city or metropolitan area.


19. Property tax information provided by League of Arizona Cities and Towns, e-mail from Brent Stoddard to author, February 15, 2005. The municipalities in Maricopa County without primary or secondary property taxes were Carefree, Guadalupe, Litchfield Park, Mesa, Paradise Valley, Queen Creek, and Youngtown; those in Pinal County were Apache Junction and Maricopa. Some of these municipalities had not yet incorporated in earlier decades. It is not clear whether there is a linear relationship between the extent of a city=s dependence on sales tax revenues and its propensity to annex or to offer incentives to firms generating tax revenues to locate within its borders. An interesting study of three U.S. cities showed that different fiscal structures were associated with different development policies. Oklahoma City, heavily reliant on sales taxes, promoted retail development. Columbia, South Carolina, drawing more of its income from property taxes, sought residential and commercial land development to preserve property values citywide, promote revitalization, and reduce blight. Columbus, Ohio, more dependent on income taxes, stressed job creation. See Michael A. Pagano, City Fiscal Structures and Land Development, Discussion Paper prepared for The Brookings Institution Center on Urban and Metropolitan Policy and CEOs for Cities, April 2003.


22. Arizona Business Gazette, July 20, 1987, 8. It is, of course, possible that planning was offered as a rationale for annexation when another motivation (such as tax revenues) was equally or more important. However, there did not seem to be great reluctance on the part of municipal officials to put forward tax revenues as a reason for annexation. It also does not necessarily follow that growth in fact will be well-planned as a result of annexation. Municipalities do not
always have the tools or political conditions to allow the quality of planning they might desire.

23. Morrison Institute for Public Policy, Hits and Misses: Fast Growth in Metropolitan Phoenix (Tempe: Morrison Institute for Public Policy, School of Public Affairs, College of Public Programs, Arizona State University, 2000), 26.


32. The percentage of the Phoenix population whose race was nonwhite was 6.2 in 1950, 5.8 in 1960, 6.7 in 1970, 15.7 in 1980, 18.3 in 1990, and 25.7 or 28.9 in 2000, depending on whether those of two or more races are included in the number for white or nonwhite. See U.S. Bureau of the Census, County and City Data Book, 1952, 1962, 1972, 1983, 1994, 2000 (Washington, D.C.: U.S. Government Printing Office, 1953, 1962, 1973, 1983, 1994, 2000), table 4, 442; table 6, 476; table 6, 630; table C, 650; table C, 650; table C-2, 662. Census 2000 data on race are not directly comparable with those from earlier censuses. People identifying their origin as Spanish, Hispanic, or Latino may be of any race. The percentage of the Phoenix population that was
Spanish origin in 1980 was 14.8, Hispanic origin in 1990 was 20.0, and Hispanic or Latino in 2000 was 34.1. See County and City Data Book, 1983, 1994, 2000 (table C, 650; table C, 651; table C-1, 644).


37. Arizona Republic, September 20, 1951, 1. A similar claim concerning the relationship between revenues and the cost of services had been made by the chairman of the mayor’s finance advisory committee in 1947, and city officials reiterated the point in 1965 (Collins, Emerging Metropolis, 48-49; Wenum, Annexation, 41).


39. Arizona Republic, March 25, 1959, A1; Collins, Emerging Metropolis, 98-99. Tax concessions also were associated with annexation of a west side industrial area in 1949 (Konig, Toward Metropolis Status, 95-96). Connerly described how iron and steel firms, particularly U.S. Steel, strongly resisted annexation into Birmingham, preferring to remain in unincorporated areas or jurisdictions in which such firms paid lower taxes or had greater control (Connerly, One Great City, 49).

40. Arizona Republic, April 19, 1958, 1; Konig, Toward Metropolis Status, 107-8.

41. Wenum, Annexation, 49.

42. Arizona Republic, December 6, 1975, A6.

43. Collins, Emerging Metropolis, 96; Wenum, Annexation, 85-89.


58. Arizona Republic, October 16, October 21, November 6, 2003. Buckeye was skeptical that reimbursement from Rural/Metro would be forthcoming.


68. Ibid., * 9-471 (H).


77. Arizona Republic, November 28, 2004, October 26, 2003, April 18, 2004, May 27, 2003; Regular Council Meeting Minutes, October 15, 2002, Town Clerk's Office, Buckeye, Arizona. Buckeye had made an earlier attempt in 1989 to annex land for large-scale development (a 48,000-acre master-planned development known as Sun Valley), but although the annexation was approved the project did not go forward at that time and many of its investors ended up in bankruptcy.


81. Catherine Balzano, Planner III, Real Estate Division, Arizona State Land Department, interviews by the author, Phoenix, Arizona, March 19, 2004, April 5, 2004; City of Phoenix Annexation Request A-00-01 (Revised).

82. Donald E. Hadder, Sr., Principal Planner, City of Scottsdale, interview by the author, Scottsdale, Arizona, June 10, 2003.


84. Arizona Republic, October 10, 2003, January 20, 2005. A drop in new construction has significant revenue consequences because construction materials are an important source of sales tax revenues.

85. Luckingham, Phoenix, 260-61. There is some concern that the success of the Mill Avenue redevelopment may be waning, as high rents and a proliferation of chain stores alter the character of the area.


89. Debra Stark, Community Development Director, City of Peoria, interview by the author, Peoria, Arizona, March 8, 2004; *Arizona Republic*, April 18, 2004.

90. Retail establishments differ in this respect from manufacturing plants, which are more footloose.


98. Arizona State Senate, Forty-seventh Legislature, First Regular Session, *Final Amended Fact Sheet for S.B. 1274,* at http://www.azleg.state.az.us; *Arizona Republic*, May 6, 2005. One fruitful line of approach to studying joint revenue sharing agreements among municipalities might be to compare them with cartel agreements among firms. I am grateful to Thomas Maloney, the discussant of this paper at the 2005 annual meeting of the Social Science History Association, for this suggestion.
Population figures are from the Census and the area is from the City Clerk.

FIGURE 2
Annexation by Maricopa County Cities and Towns, 1950-2000

SOURCE: Maps taken from “City Growth Time Line,” Maricopa County Planning and Development Department, Phoenix, Arizona.
FIGURE 3
Annexation by Maricopa County Cities and Towns, 1950-1960

SOURCE: Maps taken from “City Growth Time Line,” Maricopa County Planning and Development Department, Phoenix, Arizona.
The strip of land annexed by the Gilbert City Council is represented by the dark line. The strip encompasses 51 square miles.

FIGURE 5
Annexation by Maricopa County Cities and Towns, 1980-2000

SOURCE: Maps taken from “City Growth Time Line,” Maricopa County Planning and Development Department, Phoenix, Arizona.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Avondale</td>
<td>0.54</td>
<td>1.10</td>
<td>2.26</td>
<td>5.08</td>
<td>22.01</td>
<td>40.62</td>
</tr>
<tr>
<td>Buckeye</td>
<td>0.83</td>
<td>0.83</td>
<td>1.07</td>
<td>2.13</td>
<td>14.51</td>
<td>126.82</td>
</tr>
<tr>
<td>Carefree</td>
<td></td>
<td></td>
<td></td>
<td>8.80</td>
<td>8.81</td>
<td></td>
</tr>
<tr>
<td>Cave Creek</td>
<td></td>
<td></td>
<td></td>
<td>22.60</td>
<td>27.89</td>
<td></td>
</tr>
<tr>
<td>Chandler</td>
<td>0.68</td>
<td>2.89</td>
<td>4.11</td>
<td>23.63</td>
<td>47.84</td>
<td>52.94</td>
</tr>
<tr>
<td>El Mirage</td>
<td>0.22</td>
<td>2.13</td>
<td>7.60</td>
<td>9.92</td>
<td>9.92</td>
<td></td>
</tr>
<tr>
<td>Fountain Hills</td>
<td></td>
<td></td>
<td></td>
<td>16.67</td>
<td>18.23</td>
<td></td>
</tr>
<tr>
<td>Gila Bend</td>
<td></td>
<td>2.87</td>
<td>2.87</td>
<td>8.66</td>
<td>22.43</td>
<td></td>
</tr>
<tr>
<td>Gilbert</td>
<td>0.97</td>
<td>0.97</td>
<td>0.97</td>
<td>6.72</td>
<td>27.28</td>
<td>35.29</td>
</tr>
<tr>
<td>Glendale</td>
<td>1.27</td>
<td>3.66</td>
<td>15.23</td>
<td>39.45</td>
<td>50.30</td>
<td>54.34</td>
</tr>
<tr>
<td>Goodyear</td>
<td>0.31</td>
<td>0.45</td>
<td>1.02</td>
<td>5.91</td>
<td>113.85</td>
<td>115.37</td>
</tr>
<tr>
<td>Guadalupe</td>
<td></td>
<td>0.75</td>
<td>0.75</td>
<td>0.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Litchfield Park</td>
<td></td>
<td>2.30</td>
<td>2.97</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mesa</td>
<td>5.82</td>
<td>13.77</td>
<td>19.70</td>
<td>65.38</td>
<td>113.20</td>
<td>124.38</td>
</tr>
<tr>
<td>Paradise Valley</td>
<td></td>
<td>13.40</td>
<td>13.60</td>
<td>15.23</td>
<td>15.40</td>
<td></td>
</tr>
<tr>
<td>Peoria</td>
<td>1.08</td>
<td>3.72</td>
<td>21.85</td>
<td>60.72</td>
<td>140.68</td>
<td></td>
</tr>
<tr>
<td>Phoenix</td>
<td>16.09</td>
<td>110.95</td>
<td>245.50</td>
<td>321.03</td>
<td>420.36</td>
<td>475.15</td>
</tr>
<tr>
<td>Queen Creek</td>
<td></td>
<td>10.14</td>
<td>22.22</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scottsdale</td>
<td>3.38</td>
<td>61.34</td>
<td>107.08</td>
<td>182.36</td>
<td>183.19</td>
<td></td>
</tr>
<tr>
<td>Surprise</td>
<td>1.06</td>
<td>1.47</td>
<td>60.30</td>
<td>67.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tempe</td>
<td>2.19</td>
<td>13.09</td>
<td>24.61</td>
<td>37.98</td>
<td>39.64</td>
<td>39.88</td>
</tr>
<tr>
<td>Tolleson</td>
<td>0.47</td>
<td>0.51</td>
<td>0.58</td>
<td>1.68</td>
<td>4.24</td>
<td>4.91</td>
</tr>
<tr>
<td>Wickenburg</td>
<td>1.02</td>
<td>1.33</td>
<td>3.43</td>
<td>6.10</td>
<td>10.93</td>
<td>11.39</td>
</tr>
<tr>
<td>Youngtown</td>
<td>0.96</td>
<td>1.00</td>
<td>1.25</td>
<td>1.30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SOURCE: Data provided by Maricopa County Planning and Development Department.
### TABLE 2
Sales Taxes as a Share of General Revenue (Percent)

<table>
<thead>
<tr>
<th></th>
<th>Phoenix</th>
<th>All Municipalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1969-70</td>
<td>30.82</td>
<td>9.10</td>
</tr>
<tr>
<td>1979-80</td>
<td>21.01</td>
<td>10.79</td>
</tr>
<tr>
<td>1989-90</td>
<td>19.28</td>
<td>12.12</td>
</tr>
<tr>
<td>1999-2000</td>
<td>22.96</td>
<td>6.43*</td>
</tr>
</tbody>
</table>

*Data for 1999-2000 are for all local government (counties, municipalities, townships, special districts, and school districts with sufficient autonomy to qualify as independent governments) rather than all municipalities.

NOTE: Sales taxes in this table include general and selective sales taxes that are part of general revenue from own sources. General revenue from own sources (which also includes other taxes, current charges for commodities and services other than liquor store sales, and miscellaneous revenue) is one of two categories that make up general revenue; the other is intergovernmental revenue.