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THE ECONOMIC IMPACT OF WINTER VISITORS ON SUNBELT CITIES: REVENUES
AND COSTS OF MUNICIPAL GOVERNMENTS

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ABSTRACT

Tourism has become an important component of local economies in towns and cities throughout the Desert Southwest. The annual trek southward of winter snowbirds has become the economic lifeblood of many communities. Assessing the costs and benefits of tourism is too complicated and expensive for most places, especially small towns. This exploratory study examines one type of benefit (sales tax revenue) and one type of cost (city employment) for the resort town of Scottsdale, Arizona. Benefits are found to outweigh costs in Scottsdale by a ratio of 2.2 : 1. Implications and research questions are reviewed.

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Tourism studies have emphasized the many effects that a tourist industry can have on local communities such as its impact on income and employment (1), politics (7), ethnic preservation (6), crime (14), arts and crafts (5), social (8), and general socio-cultural aspects (10). The importance of impact-oriented research in order to acquire a more complete knowledge of tourism's real costs and benefits has also been specifically underlined. (12)

The need for research is particularly essential for urban tourism since urban tourism, due to a serious lack of relevant data, is among the

most misunderstood and underestimated types of tourism.(18) Vandermey argues that if urban tourism is to achieve the importance that it is capable of, then more economic analysis is necessary in order to increase the awareness of communities, municipal governments, and even the tourist industry itself, as to the full potential of tourism to benefit urban areas. This statement has widespread relevance among cities and towns in southwestern United States where local tourism often generates critical revenues. The arrival of winter snowbirds is widely celebrated by local businesses in many communities within the Desert Southwest.

PURPOSE OF STUDY

The purpose of this exploratory study is to investigate the economic impacts of seasonal tourists on city government revenue. The City of Scottsdale, Arizona, is examined as a case study because it is a popular tourist destination and similar in many ways to other winter havens across the U.S. Sunbelt. Scottsdale has had a lengthy history of attracting winter visitors. During the peak season, the population of winter visitors in the city on a given day is estimated to be in excess of 28,000. This figure is equivalent to one-fourth of the city's estimated 1984 permanent population of 110,000. Western Savings' Foresight Eighty (19) indicates that geographically, the largest concentrations of winter visitors within Metropolitan Phoenix are found in the adjacent communities of Scottsdale and Mesa/Apache Junction.

The relationship between the seasonal influx of winter visitors into the city and the resulting "squeeze" on local institutions are found among many towns across the U.S. Sunbelt (and elsewhere). The overall impact of winter visitors on city governments will be reviewed in this paper by analyzing the benefits and costs of seasonal visitors.

Economic analysis of tourism is important because in Arizona, as in all southwestern states, tourist expenditures are an important component of their respective economies. It is estimated that in 1984 a total of 16.1 million visitors came to Arizona and spent almost 4 billion dollars.(11) Included in this total are the winter visitors ("snowbirds")--composed largely of retired people fleeing the frost belt states and Canada during the hostile winter months.(13) These figures support commonly held conceptions that the economic importance of winter visitors to state and to local communities is very significant. However, to-date, few detailed cost-benefit analyses have been made to determine the value of economic benefits derived from out-of-state visitors vis-a-vis the costs that they impose upon local tourist communities.(9)

METHODOLOGY

In this paper the overall economic impact of seasonal tourists on city government is viewed as a ratio of benefit and cost. The benefit of winter visitors is defined as the difference between the total amount of direct sales tax collected during the winter tourist season, and the total amount of direct sales tax collected during the nontourist season.

That is, the surplus amount of tax revenue generated during the tourist season is considered to be the economic benefit received by the City of Scottsdale from tourist spending. The cost component of tourism is defined as the expanded city expenditures for the provision of additional services demanded by winter visitors. This approach to determining costs is similar to that version of the Service Standard Fiscal Impact Method which assumes the real cost of growth to equal the total number of additional employees required as the result of growth.(2) While sharply restricting the definitions of tourism costs and benefits to those incurred by municipal governments, this methodology permits the ready comparison of large numbers of tourist centers.

Related to this concept of benefit is the fact that the number of people staying in sunbelt cities fluctuates during the year. During the winter season, the largest number of both permanent citizens and visitors are in residence. During the summer off-season there are many fewer visitors while many local residents leave southwestern cities for cooler climates. Still, some visitors are in evidence even during the hot off-season--particularly those traveling for business purposes. Accordingly, this study assumes that during summer the number of business travelers coming to Scottsdale is approximately equal to the number of Scottsdale residents leaving the city for cooler vacations elsewhere. And presumably, a similar process operates during the summer off-season in other tourist towns throughout the Desert Southwest.

Two sets of secondary data are employed in this analysis. Both were provided by the municipal government of Scottsdale. The first set is the 1984 data on sales tax collections by major business types. The sales tax data are provided according to the following business categories: Automotive, Construction, Food Stores, Hotels and Motels, Department Stores, Restaurant, Retail Stores, Rental, Utilities, and Other (taxable activities such as newspapers and advertisements). The second data set are figures on the city's expenditures for individual categories of municipal services provided during the fiscal year 1984/1985. It is acceptable to use these 1984/1985 public employee figures to show the number of public employees in calendar 1984 as the number of personnel employed in that fiscal year is almost identical to that of the 1983-1984 time period.

ECONOMIC BENEFIT OF WINTER VISITORS TO THE CITY

A study by Soesilo and Mings (17) on the nature of tourism seasonality provides information on the timing of the winter tourist season in Scottsdale and its variable effect on types of businesses. This study established the months of November through April as the tourist season. The seven business classes found to be most sensitive to seasonality were: Food Stores, Restaurants, Department Stores, Retail Stores, Hotels, Rentals, and Others.

The separate economic contribution of winter visitors to city revenues can be determined by subtracting total summer revenues from winter revenues, for each of the seven business classes impacted by winter visitors, except for the hotel category.(Table 1) This study

assumes that hotels are utilized exclusively by tourists, winter and summer. Therefore all sales taxes collected by the hotel sector, regardless of season, are considered to originate from visitors. It is recognized that other services, such as Restaurants, Stores, or Rental, are utilized by local residents--as well as by tourists. Furthermore, Automotive, Construction, and Utilities are assumed to be completely dominated by local residents and, therefore, excluded from Table 1. The differences between sales taxes collected in the winter tourist season and the summer nontourist season are summarized in Table 1.

Table 1 shows the direct sales tax contribution of winter visitors to city revenues to have been \$2,562,939 in 1984. Since the total annual sales tax in 1984 was \$20,117,426, this amount constitutes a 12.74% of the total sales tax collection received by the City of Scottsdale.

ECONOMIC COST OF WINTER VISITORS

While winter visitors have been found to contribute to sales tax revenue, they also utilize roads, hospitals, waste removal, and other public services. Since their demands are concentrated heavily during a few months, the impacts of winter visitors can be significant to the provision of community services. The cost of winter visitors in this study is defined as the cost of additional full-time public employees that are required in Scottsdale in order to serve these winter visitors. The basic assumption underlining this definition is that public cost is proportional to the number of full-time public employees. Hence, a population increase within a community requires additional public employees, thereby, increasing the total public cost. Accordingly, the number of employees in excess of normal standards for a city the size of Scottsdale may be attributed to a seasonal influx of tourists. The cost of hiring these "extra" employees may be considered the cost of tourism.

The U.S. Census of Governments classifies municipal service functions as: Financial Administration, General Control, Police, Fire Protection, Highways, Sewerage, Sanitation, Water Supply, Parks and Recreation, and Libraries. Generally, these functions have thirty-eight sub-functions. The City of Scottsdale performs those service functions in seven departments with ninety-four subdivisions. These seven departments are: General Government, Police, Management Service, Field Operation, Community Services, Community Development, and Non-departmental.

Table 2 compares the number of municipal employees in Scottsdale with standards found in other parts of the United States. The figures show the mean number of full-time public employees for four macro regions of the United States, with 110,000 population and 138,000 population as bases.(1) This information is obtained from the U.S. Census of Governments. The table indicates that cities in the western region of U.S. with 110,000 population, such as Scottsdale, are characterized by a standard of 911 full-time public employees. The figure is less than those of the northeast and the southern regions but somewhat higher than that of the north-central. A similar pattern holds true for the 138,000 population, in which case Scottsdale would be expected to employ 1,139

full-time personnel.

The number of full-time public employees in Scottsdale (828) suggests that the number of city employees is well below the standard or mean figure expected. However, further examination of the break down of employees by service function and the number of part-time personnel is necessary for a more accurate and complete explanation.

Specific factors to be considered are:

1. In response to a community demand for additional police force, the city added 35 full-time personnel for police protection in its 1985/1986 budget. With this addition, the size of the total police force exceeds the standard by 24 employees.

2. It is necessary to convert part-time employee figures into full-time equivalents. By using a conversion coefficient of 0.5, 54 additional full-time employees for recreation/culture must be included in the city employee total. The conversion coefficient is derived from an interview with Personnel Director, City of Scottsdale.

3. In regard to fire protection, the City of Scottsdale has contracted Rural Metro Fire Department (a private company) to perform this function and therefore, an upward adjustment figure of 166 private fire fighters should be added. This number is identical to the standard figure for a city of 110,000 population in the western region of the U.S.

4. The departments of Financial Administration and General Control contain an abnormally high number of public employees. The combined number of employees in these two departments exceeds the norm for 110,000 population by 140. However, this extremely large number of employees probably is not related appreciably to winter visitors. Rather, it is a result of the city's rapid growth in recent years. During the period from 1975 to 1984 both revenues and expenditures increased dramatically. The average annual revenue increase was 26.4 percent. The growth of construction during the last decade has increased significantly, particularly within the housing sector.(2) Accordingly, numerous additional city employees were required in order to cope with such exceptional demands.

The total number of equivalent public employees derived by incorporating the above adjustments into the original total is 932 (calculated as follows: 828 + 24 Police + 54 Recreation + 166 Fire - 140 Finance Administration). The standard figure for full-time public employees in cities of 110,000 in the Western Region is 911. Hence, the total of 932 personnel implies that 21 additional full-time public employees were needed to satisfy the demands of winter visitors in Scottsdale (932 - 911 = 21).

In 1984, the total annual city operations expenditure for personnel was \$52,794,000. The total number of full-time and part-time employees was, 819 and 254, respectively. When the number of part-time employees is converted into full-time equivalents, the total number of full-time public employees becomes 946. Since the total number of equivalent full-time public employees was 946 and the annual operations expenditure

was \$52,794,000, the expenditure for one full-time employee in 1984 was approximately \$55,800 ($52,794,000 \div 946 = 55,800$). Thus, in monetary terms, the addition of 21 full-time public employees cost the city \$1,171,800.

The method of determining Municipal costs utilized in the preceding paragraphs is not without limitation. As Burchell and Listokin (2) argue, although it has been in use for decades this method of calculation based on Regional Employee Standards, is highly generalized. However, data needed for this type of analysis are readily available for U.S. cities.

REVENUE COST RATIO

The above calculations show that in 1984 winter visitors contributed \$2,562,939 in direct sales tax to the city, while demanding 21 additional full-time public employees which cost the city \$1,171,800. The revenue/cost ratio therefore is $\$2,562,939 / \$1,171,800 = 2.2 : 1$ and indicates a positive impact of winter visitors on the city.

Although the ratio of 2.2 : 1 reflects a strong positive impact from winter visitors, the revenue side is underestimated due to the fact that winter visitors also contribute directly to other sources of city revenue such as intergovernmental taxes (shared state sales taxes) which constitute 26.5% of the city's total revenue. If this less-direct contribution of tourist taxes were considered as well, the revenue/cost ratio would become even higher than 2.2 : 1.

CONCLUSIONS

The purpose of this paper is to examine the economic impacts of seasonal tourists upon the City of Scottsdale, Arizona. The revenue/cost ratio derived from the analysis shows that the impact of winter visitors on the city is positive. Specifically, tourists contribute more than twice as much in sales taxes to Scottsdale than is paid back in the form of additional city employees. The results of the analysis strengthen the claims that local tourism is financially beneficial and should be encouraged by local governments. This conclusion holds implications for other communities.

While these findings are most applicable to Scottsdale, Arizona, their relevance is not limited to Scottsdale. There is an ongoing debate over the positive and negative impacts of winter visitors on Sunbelt cities. Countless cities and towns in the Desert Southwest, virtually all of them at least to some degree, are impacted by winter visitors. Some places are tourist destination areas like Scottsdale. Other examples include large urban centers such as Tucson, El Paso, and San Antonio, and a host of smaller communities like Las Cruces, New Mexico; Blythe, California; Yuma, Arizona; Eagle Pass, Texas, and countless others throughout the United States. Indeed, no community completely escapes the effects of tourism. And while this study demonstrates that

city coffers are enriched by tourists, they all need more and better information on the many ways they are being affected.

This study demonstrates convincingly that one city, Scottsdale, Arizona, benefits from tourism; at least when city sales tax revenues from tourists are compared with tourist-induced employment costs to the city. But, what of the full range of costs and benefits from tourism? Do communities benefit when a full accounting is taken? What about the many other communities in the Southwest with only a small handful of tourist establishments? What about the varied types of tourism found in the Southwest from ghost towns to winter resorts to mere watering holes? Are they benefiting the same as Scottsdale? This is unlikely. We need to analyze what particular economic and social impacts are occurring within these assorted tourist communities?

Unanswered questions abound! Clearly, more research is required before these questions and others like them can be answered adequately. Hopefully, this brief exploratory article will serve to stimulate such research endeavors. Showing that city revenues benefit from local tourism is merely the beginning.

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Table 1

Season vs. Non-Season Sales Tax Collection, Scottsdale, 1984

Categories Affected by Seasonality	Amount Collected		Net Tourism(a) Contribution
	Tourist-Season (Nov.-April)	Non-Season (May-Oct.)	
Food Stores	\$ 869,572	\$ 770,178	\$ 99,394
Restaurants	761,912	604,465	157,447
Department Stores	1,065,900	754,763	311,137
Retail Stores	1,751,315	1,215,330	535,985
Hotels	1,333,996	662,827	1,333,996 (b)
Rentals	767,158	677,357	89,801
Others	629,985	594,806	35,179
Total Benefit			\$2,562,939

(a) excess of tourist-season over non-season

(b) see text for explanation

Table 2

Mean Number of Municipal Employees - Comparing Scottsdale, Arizona, with Cities of Varying Size and Location (1984)

Service Function	Full-time Public Employee Per								Scottsdale's Employees	
	110,000 residents				138,000 residents				Full-T	Part-T
	NE	NC	So	We	NE	NC	So	We		
Finance Adm.	64	37	48	53	80	47	61	66	71	10
Gen. Control	72	59	54	62	90	75	68	77	184	25
Police	332	215	255	229	417	269	320	287	218	2
Fire	295	172	194	166	370	215	243	208	-(a)	-(a)
Public Works	316	237	416	240	396	298	522	300	208	2
Rec. Culture	149	106	135	161	186	134	168	210	146	217
Total	1228	826	1102	911	1538	1038	1382	1139	828	256

Source: Burchell and Listokin (1980), City of Scottsdale (1985).

NE = North East Region
 NC = North Central Region
 So = Southern Region
 We = Western Region

(a) There were 40 part-time auxiliary fire fighters. These positions filled by permanent full-time employees and were not included in part-time position total.

NOTES:

1. It is estimated that the total number of permanent residents of Scottsdale in 1984 was 110,000. At the peak season the number of winter visitors reaches 28,000 which results in 138,000 permanent and non-permanent residents of Scottsdale (15). Table 2 illustrates that 110,000 and 138,000 population examples will create different demands for the provision of public employees, according to geographic region.

2. The average annual increase for residential construction was 73 percent in terms of dollar value, and 66 percent in the number of dwelling units. For commercial construction the rate was 19 percent in dollar value, and 8 percent in the number of permits.