Overview

As the self-proclaimed "Live Music Capital of the World," there is no question that music is a defining element of Austin's culture. Music is everywhere in Austin - on almost any given weekday or weekend night, music lovers in Austin can select from literally dozens of live shows that they could attend covering the full spectrum of musical genres. City government recognizes the role of music in Austin in a variety of ways, including providing music by local artists at the airport, funding a cable access channel devoted entirely to local music, and administering a loan program specifically for the music industry. Music and the arts have become a major element in tourism, a fact clearly recognized by the Austin Convention and Visitors Bureau. This is true not only for destination travel (such as participants who come specifically for South by Southwest), but for the hundreds of thousands of leisure travelers the world over who consider music a key aspect of their vacation entertainment plans. Moreover, quality of life considerations are assuming an increasing role in corporate expansion and relocation decisions – since many firms can be located virtually anywhere, quality of life and its impact on the company's ability to attract and maintain the best possible labor force is a vital consideration. As a result, the arts have become a critical element in overall economic development planning, and are increasingly touted by those seeking to recruit and retain firms in Austin.

The measurable economic and fiscal impact of music in Austin is significant, as more than $616 million in economic activity, almost 11,200 jobs, and over $11 million in City tax revenues can be attributed to influence of music on the local economy. Perhaps even more important are impacts that are not as easily measured, especially the connection between technology and the arts. In the technology world, value initially is created through knowledge, either directly or imbedded in products. Among other things, this means that there are few geographic constraints on where many companies are located – since a software company can more or less be anywhere, it follows that the company will tend to be based where its management wants to be. This in turn implies that quality-of-life factors that make a community attractive to a company's labor force assume a heightened importance, since the fundamental asset of any technology firm will always be the people who work there.

This last point about quality of life may be one of the most important. All the usual factors related to economic development continue to be important, but research is beginning to show that an additional consideration that makes a big difference is cultural vitality. In particular, several studies suggest there is a significant relationship between the breadth and scope of cultural offerings (music, the arts, etc) and the growth of a technology-based economy. To some degree, this interconnection makes sense, since technical innovation, entrepreneurship, and the arts all involve a creative impulse, albeit in different forms. In recognizing this relationship, it follows that if we lose one we may damage the others. What appears to set Austin apart from most other communities is this concentration of creativity. As such, it may well be the community's most important strategic asset, and should be kept in mind in the development of public policy.

The Status of the Local Music Scene

To assist Austin in developing strategies to promote its musicians, artists, and live music venues, a series of interviews were conducted with local stakeholders, including musicians themselves, concert promoters, club owners, technology companies, not-for-profit social service providers, staff at the Chamber of Commerce and the Convention and Visitors Bureau, and members of the Austin Music Commission. The primary themes that emerged were:

The "supply" of music in Austin exceeds the local demand.

Austin enjoys an unusually high concentration of musicians and music-related activity. Ironically, this actually can work to the detriment of those in the local industry. Specifically, Austin is and long has been a "buyer's market" for live music. As a result, the "sellers" – musicians in particular – must contend with a much tighter and potentially less remunerative market than their colleagues elsewhere.

The abundance of local musical talent means that clubs will have a wide variety of acts to choose from, and that the shows that are available typically pay poorly. Indeed, it is not at all unusual for a performer to actually lose money by playing a gig, in that their costs (for equipment, rehearsal space, band members, etc.) exceed what they are paid, either from the cover at the door or directly by the

club. This has a number of implications, including many musicians being unable to afford adequate housing, health care, etc.

Cost pressures on venues continue to rise.

Just as local musicians suffer to some degree from their own success (which has helped make Austin a mecca for musicians from all over the world), the growth of the technology community, which at least partially can be attributed to local quality of life, has helped push real estate prices sharply higher in recent years. Rising rents and house prices have put pressure on all lower income groups, including the majority of musicians and songwriters in the City. These pressures have also been felt in the commercial real estate market, further reducing profit margins of club owners who lease their facilities. Other operating costs are also increasing, especially for utilities. Higher costs for venues exacerbates the supply and demand imbalance of musicians described above, with the overall net effect that it is very difficult for Austin-based performers to be able to earn a living playing locally.

Efforts to assist musicians and the music industry are widespread, but diffused.

There are a wide variety of economic development and social service organizations which have at least a program or two devoted to providing some form of assistance to musicians or the music industry, but their impact is limited. Part of the problem is that no one group has as its primary mission supporting the music industry overall; organizations dedicated entirely to musicians' assistance (such as the SIMS Foundation) tend to focus on just one area (in SIMS case, mental health services). One issue to be overcome is funding limitations; since there is no dedicated source of public sector funds to support music, any program or organization must find additional financial support in order to extend its offerings.

The full impact of certain regulations and ordinances is not always considered.

Fire code restrictions, noise ordinances, and parking policies are all examples of local regulations that have an impact on the music industry. None are particularly burdensome in and of themselves, but their enforcement has on occasion had unintended consequences (such as the last-minute shutting down of a major label showcase during SXSW due to an artificially low maximum occupancy standard). This is not to suggest that any particular ordinance or regulation

needs to be changed, but rather that the needs of the music industry should be considered in both policy development and implementation.

Policy Options to Assist the Local Music Scene

Explore ways to reduce costs for live music venues.
As discussed above, costs for clubs and other live music facilities are rising, with the combination of rising property taxes/rents and accelerating utility costs especially burdensome. The possibility of applying the policies under the Smart Growth initiative could be explored as a means of allowing live music venues to qualify for economic development incentives.

W*ork to develop additional opportunities for local musicians.*
By all accounts, it is very difficult to make a living playing music locally in Austin, for the reasons previously discussed. However, it does appear that it is viable to play regionally, as a number of acts have successfully developed a market throughout Texas and the Southwest. Support could be provided to interested local musicians to secure bookings in cities in the region.

Designate an ombudsman to facilitate interaction between music activity and regulatory authorities.
This responds directly to the concern expressed about the unintended consequences of regulation.

Leverage efforts to assist local musicians through focused assistance.
Over the course of the interviews with local stakeholders, it became clear that there are a number of programs and organizations that exist, at least in part, to support music in Austin. However, funding limitations constrain many of these programs. In that light, it is crucial that efforts to support local music be coordinated to the maximum extent possible. For example, a local foundation has invested time and effort into creating a health care clinic for musicians, and has secured access to a facility, staff, and supplies. What is missing is funding for administrative costs. Given that many of elements for creating the clinic are in place, the chances of receiving grant funding for administrative expenses likely are good, especially if an experienced grant writer works to assist in finding funding. However, that resource presently is not clearly accessible to that foundation.

Introduction

Local economic growth in Austin has been extraordinary in recent years. A combination of corporate relocations and expansions, rapid population expansion, extensive investment in technology and Internet-related start-ups, and the meteoric rise of Dell helped make Austin among the five fastest growing metropolitan areas in the United States over the last decade. Since 1990, per capita personal income has grown from $18,092 to $31,794 (during 1999), more than 280,000 jobs have been created, and the average price of a home sold has grown from $87,600 to $191,400, a gain of almost 220 percent. These achievements have not gone unnoticed in the United States and abroad. In the past two years, for example, Austin has placed either first or second in the *Forbes Magazine*-Milken Institute rankings of Best Cities to Do Business.[1]

While these rapid growth rates likely were unsustainable over time, the unexpected national economic slowdown and the dot.com implosion have caused Austin's economy to stagnate. Unemployment in Austin has doubled over the past year and publicly announced high-tech layoffs have surpassed 17,000 jobs. Moreover, dramatic losses in the stock market have erased billions of net worth in the region's publicly-traded companies and individual investors. While the regional economy remains relatively healthy (unemployment, for example, is still below five percent), significant growth is not expected until next year.

Most agree that Austin's economic resurgence will be closely tied to the factors that drove growth in the recent past – a highly trained workforce, proximity to customers, and superior quality of life. This unique mix has enabled Austin to develop an unusually high concentration of economic activity in three areas:

[1] http://www.milken-inst.org.

- *The public sector:* Home to the state capitol and the flagship of the University of Texas System, Austin has long been buffered from the economic volatility that has afflicted other parts of the state because of the scale of these institutions. Government entities from the local to federal levels presently provide employment for more than 110,000 people in the Austin MSA.

- *High technology manufacturing and research:* While Austin's emergence as a national leader in this area has only been recently noted by wider audiences, the groundwork for this development began almost five decades ago, with Tracor's founding during the 1950s. IBM and Texas Instruments brought light manufacturing facilities here in the 1960s, Motorola and AMD came to town in the 1970s, and the City attracted two major research consortia – MCC and SEMATECH – in the 1980s. Presently, four of Austin's six largest private employers are in the high-tech sector, providing jobs for almost 37,000 residents.

- *Live music:* Long billed as the "Live Music Capital of the World," Austin is home to a disproportionately large number of musicians, live music venues, and music support industries, and has been for many decades. Current and prospective local employers and employees are increasingly sensitive to this aspect of the Austin environment in making their hiring and location decisions.

One important underlying factor in Austin's recent and long-term economic success has been the focus on creativity and innovation in each of these areas. The Texas state government is expected to come up with novel solutions to emerging social problems across a broad spectrum. Many graduates of local universities use state and local government as a starting point for their professional careers, in part because of the allegiance to the Austin area they cultivated during their college years.

UT-Austin and other institutions of higher education in the area are charged not just with conveying the state of existing knowledge in different disciplinary areas, but also with cultivating the ability of students to extend the boundaries of that knowledge through independent thought and investigation. High-tech industry, at both the manufacturing and research levels, thrives only through the continued improvement of processes and products. Creativity and innovation are at the core of the music industry.

As the self-proclaimed "Live Music Capital of the World," there is no question that music is a defining element of Austin's culture. Music is everywhere in Austin - on almost any given weekday or weekend night, music lovers in Austin can select from literally dozens of live shows that they could attend covering the full spectrum of musical genres. City government recognizes the role of music in Austin in a variety of ways, including providing music by local artists at the airport, funding a cable access channel devoted entirely to local music, and administering a loan program specifically for the music industry. There are also scores of live music festivals in and around the City each year, attracting locals and out-of-towners to Auditorium Shores, Fiesta Gardens, Zilker Park, and a host of other outdoor sites. At the same time, music is an integral part of the face the city presents to the rest of the world, with touring acts and *Austin City Limits* bringing the Austin sound to viewers all over the globe.

While it is evident that music is vital to Austin, the nature and scope of its role in the local economy is not clear. Traditional economic impact analysis of the arts has been limited to calculations of the role that an organization or a major event plays in injecting net funds into a community. However, this limited analysis does not tell the full story, as the scope of the arts impact on local economies has broadened considerably in recent years. For example, music and the arts have become a major element in tourism, a fact clearly recognized by the Austin Convention and Visitors Bureau. This is true not only for destination travel (such as participants who come specifically for South by Southwest), but for the hundreds of thousands of leisure travelers the

world over who consider music a key aspect of their vacation entertainment plans. Moreover, quality of life considerations are assuming an increasing role in corporate expansion and relocation decisions – since many firms can be located virtually anywhere, quality of life and its impact on the company's ability to attract and maintain the best possible labor force is a vital consideration. As a result, the arts have become a critical element in overall economic development planning, and are increasingly touted by those seeking to recruit and retain firms in Austin.

In order to better understand how to enhance and support the role of music in Austin's economy, Texas Perspectives was asked by the City to measure the economic impact of the music industry, to evaluate factors shaping the status of music in Austin, and to suggest policy options to help enhance and promote local music. The first section of the report details the economic and fiscal impact of music in Austin, including a discussion of the externalities associated with music and its role in as a cultural amenity that helps attract and retain technology businesses and workers. The second section summarizes the results of numerous interviews with local stakeholders and representatives from other well-known music communities. The report concludes with a series of broad policy options aimed at protecting and enhancing Austin's music industry.

The Economic Impact of Music on Austin

There are two main areas where the influence of music on the Austin economy can be measured – 1) the direct production of music by artists and local companies, and 2) the consumption of music by tourists. Recording studios, the production of musical instruments, concert promoters, and artists themselves all represent the production of music. At the same time, music is a significant draw for tourists to the Austin area. South by Southwest (SXSW) is the clearest example of music "tourism," but thousands of visitors to Austin each year have come at least partially because of the local music scene. These two aspects of music lend themselves to economic impact modeling, since each involves a net

injection of money into the community that can credibly be measured. Their impact is detailed below.

Music-Related Business

The Texas Music Industry Directory[2] (TMID) provides a listing of music industry-related firms throughout the state. The Directory organizes these firms into 96 music business categories in ten major groups. They are listed below, together with a summary of the kinds of firms or services provided within each group. Throughout the state, there are almost 7,000 firms and more than 100,000 professionals offering music industry services in one or more of these areas.[3]

- *Education:* public and private instruction and instructional materials, music archives.
- *Industry Services:* accounting, management, creative studios, financial, legal, insurance, merchandising, publishing, publicity, on-line services.
- *Music Videos:* soundstages, video distribution, production, postproduction and duplication.
- *Media:* print, radio and television firms, free-lance journalists, consultants, journals and newsletters.
- *Musical Instruments & Equipment:* manufacturing, sale, rental, repair, wholesale/distribution, sheet music suppliers.
- *Recording Services:* engineers, mastering, recording & rehearsal studios, media manufacturers.

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[2] Texas Music Office, Office of the Governor. "The Texas Music Industry Directory, March 2001." Available on-line at http://www.governor.state.tx.us/music/index.htm. Now in its 11th year of publication, the TMID can be assumed to be relatively comprehensive.

[3] *Ibid.*, p. 3.

- *Record Production, Distribution & Sales:* production, distribution, record labels, retail stores, marketing.
- *Commercial Music:* advertising, arrangement, film/industrial scoring, jingles, soundtracks.
- *Tour Services:* booking, event management, lighting, security, sound systems, ticketing, transportation.
- *Venues:* auditoriums, arenas, clubs, dancehalls, concert halls, performing arts centers, stadiums, amphitheaters, fairgrounds.

The following table presents details the number of different types of music firms operating in larger Texas cities during the year 2000.

Table 1: Music-Related Businesses in Major Texas Cities

	Art/Creative Studios	Recording Studios	Artist Management	Clubs/ Dancehalls	Private Schools/ Instruction
Austin	68	117	85	89	40
Dallas	18	80	45	97	17
Fort Worth	2	16	5	30	5
Arlington	1	14	6	14	3
Houston	32	95	70	108	32
San Antonio	16	42	19	72	5

In most of these categories, Austin has many more firms than its generally more populous neighbors in other parts of the state. Only Dallas and Houston surpass Austin in terms of the actual number of venues ("Clubs/Dancehalls") available to live musicians and their followers. Even this discrepancy may not be as large as it appears, as Clubs and Dancehalls represent only a fraction of the total live music venues. The Austin Convention and Visitors Bureau, for example, estimates that there

are a total of 120 live music venues in the City, and nearly 1,000 resident musicians.[4]

The information from the TMD provides a descriptive understanding of the relative importance of music to Austin. It also helps determine which SIC (Standard Industrial Classification) codes should be used to gather information from the Texas Comptroller's Office on music industry sales activity during 2000. This information was used as inputs into the econometric model of the Austin economy, and are reflected in the column labeled "direct."

In an input-output analysis of new economic activity, it is useful to distinguish three types of expenditure effects: direct, indirect, and induced. Direct effects are production changes associated with the immediate effects or final demand changes. The payment made by an out-of-town visitor to a hotel operator is an example of a direct effect, as would be the taxi fare that visitor paid to be transported into town from the airport.

Indirect effects are production changes in backward-linked industries cause by the changing input needs of directly affected industries – typically, additional purchases to produce additional output. Satisfying the demand for an overnight stay will require the hotel operator to purchase additional cleaning supplies and services, for example, and the taxi driver will have to replace the gasoline consumed during the trip from the airport. These downstream purchases affect the economic status of other local merchants and workers.

Induced effects are the changes in regional household spending patterns caused by changes in household income generated from the direct and indirect effects. Both the hotel operator and taxi driver experience increased income from the visitor's stay, for example, as do the cleaning supplies outlet and the gas station proprietor. Induced effects capture the

[4] http://www.austin360.com/partners/acvb/events/music.html .

way in which this increased income is in turn spent by them in the local economy.

An economy can be measured in a number of ways. “Output” describes total economic activity, and is equivalent to a firm’s gross sales. “Value-added” is the difference between sales and cost-of-goods sold (in other words, what the firm buys from other companies), and is analogous to gross profit.

The interdependence between different sectors of the economy is reflected in the concept of a “multiplier.” An output multiplier, for example, divides the total (direct, indirect and induced) effects of an initial spending injection by the value of that injection – i.e., the direct effect. The higher the multiplier, the greater the interdependence among different sectors of the economy. An output multiplier of 1.4, for example, means that for every $1,000 injected into the economy, another $400 in output is produced in all sectors.

The following tables delineate the results of running the model.

Table 2: Output Impact of Music-Related Businesses in Austin

Sector	Direct	Indirect	Induced	Total
Agriculture/Mining	$0	$265,189	$244,908	$510,095
Construction	$0	$863,621	$672,298	$1,535,919
Manufacturing	$40,113,509	$6,162,243	$1,817,986	$48,093,743
Transportation/Utilities	$0	$5,688,835	$2,813,230	$8,502,065
Wholesale Trade	$0	$5,114,660	$3,142,276	$8,256,935
Retail Trade	$125,003,600	$699,353	$9,447,003	$135,149,955
Finance & Real Estate	$0	$9,879,874	$12,277,667	$22,157,543
Services	$60,777,651	$31,045,861	$13,028,917	$104,852,431
Government	$0	$2,476,289	$2,013,165	$4,489,453
TOTAL	$225,894,760	$62,195,925	$45,457,450	$333,548,139

Table 3: Value-Added Impact of Music-Related Businesses in Austin

Sector	Direct	Indirect	Induced	Total
Agriculture/Mining	$0	$175,108	$164,741	$339,847
Construction	$0	$498,723	$329,820	$828,544
Manufacturing	$12,362,692	$2,770,029	$684,836	$15,817,560
Transportation/Utilities	$0	$3,219,853	$1,619,897	$4,839,749
Wholesale Trade	$0	$3,500,895	$2,150,833	$5,651,728
Retail Trade	$107,334,936	$445,583	$7,400,762	$115,181,289
Finance & Real Estate	$0	$7,130,525	$8,949,960	$16,080,482
Services	$25,893,263	$17,757,014	$8,269,046	$51,919,320
Government	$0	$1,316,114	$951,479	$2,267,592
TOTAL	$145,590,891	$36,813,844	$30,521,374	$212,926,111

Table 4: Employment Impact of Music-Related Businesses in Austin

Sector	Direct	Indirect	Induced	Total
Agriculture/mining	0	6	4	10
Construction	0	13	9	22
Manufacturing	197	42	9	248
Transportation/Utilities	0	32	18	50
Wholesale Trade	0	25	15	40
Retail Trade	2,800	18	225	3,043
Finance & Real Estate	0	69	57	125
Services	991	444	238	1,673
Government	0	17	23	39
TOTAL	3,987	665	598	5,250

The results of the model simulation indicate that $225.9 million in direct sales activity translates into a total of $333.5 million, implying a sales multiplier of 1.48. The value-added and employment patterns are similar, as $145.6 million in direct activity yields total value-added of $212.9 million, while direct employment of 3,987 creates an additional 1,263 positions for a total employment impact of 5,250 jobs.[5] Since the vast

[5] Value-added is the difference between a firm's sales and its cost of goods sold.

majority of direct music business is concentrated in retail trade and services, it is not surprising that these sectors comprise the bulk of the total impact.

Music-Associated Tourism

In Austin, an estimated ten percent of all hotel stays are related to either the influence of music or the music industry.[6] This figure is somewhat artificial, in that it assumes that trips to Austin are driven by a single, discrete purpose. For most visitors, this is not true – leisure travelers in particular are likely to list a number of attractions and amenities as contributing to their decision to visit a community. However, it is clear that music and music-related activities are top-of-mind for many travelers to Austin, and are a significant draw. According to the 1999 Destination Report prepared for the Texas Department of Economic Development, culture was cited (by 22% of respondents) as a primary attraction of the Austin area.[7] More specifically, nightlife (12%) and concerts/plays/museums (11%) were mentioned (compared to statewide figures of 8% for each) as planned activities by area visitors. At the same time, local music has an impact on meeting planners. A disproportionate share of Austin's business travel is for conventions and seminars/training, which is not surprising given the number of locally-based associations and technology firms. Entertainment is a consideration in decisions on where to have group meetings, and the Convention and Visitors Bureau has developed an organized effort to arrange for local musicians to play these events.

Of course, there are also tourist events that are directly music-driven, with SXSW being the most obvious example. Conceived in the mid-1980s in part to leverage Austin's music scene to tourists, SXSW has grown rapidly since. In 1993, focus was broadened from just music to embrace film and interactive media, reflecting the technological convergence of these areas.

[6] Input into this estimate was provided by staff at the Austin Convention and Visitors Bureau.
[7] The report is available from the Tourism Research Server at http://research.travel.state.tx.us

The 2001 conference spanned 10 days and featured 400 bands, 165 film features and 200 interactive technology panelists. Austin was host to more than 15,000 conference participants this year, the majority of whom stayed in local hotels during the conference.

Taken together, is appears that ascribing ten percent of hotel stays to the influence of music is reasonable. Put another way, it seems fair to say that if there were no music in Austin, hotel room-nights would initially decline by ten percent. Using this figure, it is then possible to use data from TDED on tourist spending to estimate the direct tourist activity associated with music, which totaled $199.0 million last year. The following tables detail the total economic impacts.

Table 5: Output Impact of Music-Associated Tourism in Austin

Sector	Direct	Indirect	Induced	Total
Agriculture/Mining	$0	$325,145	$225,524	$550,671
Construction	$0	$984,661	$620,762	$1,605,424
Manufacturing	$0	$2,823,475	$1,672,135	$4,495,607
Transportation/Utilities	$25,849,848	$5,896,551	$2,592,125	$34,338,522
Wholesale Trade	$0	$3,295,630	$2,892,925	$6,188,555
Retail Trade	$112,544,664	$853,199	$8,701,734	$122,099,597
Finance & Real Estate	$0	$7,604,300	$11,334,337	$18,938,638
Services	$60,668,730	$17,373,442	$12,010,863	$90,053,039
Government	$0	$2,475,808	$1,851,869	$4,327,678
TOTAL	$199,063,242	$41,632,211	$41,902,274	$282,597,731

Table 6: Value-Added Impact of Music-Associated Tourism in Austin

Sector	Direct	Indirect	Induced	Total
Agriculture/Mining	$0	$215,727	$151,681	$367,411
Construction	$0	$586,966	$304,416	$891,382
Manufacturing	$0	$1,195,686	$629,909	$1,825,606
Transportation/Utilities	$18,379,044	$3,462,612	$1,492,522	$23,334,178
Wholesale Trade	$0	$2,255,802	$1,980,157	$4,235,958
Retail Trade	$81,350,797	$532,175	$6,815,430	$88,698,407
Finance & Real Estate	$0	$5,579,472	$8,262,953	$13,842,425
Services	$40,329,458	$11,585,448	$7,620,125	$59,535,033
Government	$0	$1,177,407	$875,581	$2,052,989
TOTAL	$140,059,299	$26,591,295	$28,132,774	$194,783,389

Table 7: Employment Impact of Music-Associated Tourism in Austin

Sector	Direct	Indirect	Induced	Total
Agriculture/Mining	0	6	4	10
Construction	0	15	8	23
Manufacturing	0	18	8	27
Transportation/Utilities	225	35	16	276

Wholesale Trade	0	16	14	30
Retail Trade	3,217	22	207	3,446
Finance & Real Estate	0	64	52	116
Services	1,468	293	219	1,981
Government	0	11	21	33
TOTAL	4,910	480	551	5,942

Combining the results from the two model simulations indicates the scope of the measurable economic impact of music in Austin. As the tables below indicate, music-related activity accounted for over $616 million in output, almost $408 million in value-added, and supported more than 11,190 jobs.

Table 8: Combined Output Impact

Sector	Direct	Indirect	Induced	Total
Agriculture/Mining	$0	$590,334	$470,432	$1,060,766
Construction	$0	$1,848,282	$1,293,060	$3,141,343
Manufacturing	$40,113,509	$8,985,718	$3,490,121	$52,589,350
Transportation/Utilitie	$25,849,848	$11,585,386	$5,405,355	$42,840,587
Wholesale Trade	$0	$8,410,290	$6,035,201	$14,445,490
Retail Trade	$237,548,264	$1,552,552	$18,148,737	$257,249,552
Finance & Real	$0	$17,484,174	$23,612,004	$41,096,181
Services	$121,446,381	$48,419,303	$25,039,780	$194,905,470
Government	$0	$4,952,097	$3,865,034	$8,817,131
TOTAL	$424,958,002	$103,828,136	$87,359,724	$616,145,870

Table 9: Combined Value-Added Impact

Sector	Direct	Indirect	Induced	Total
Agriculture/Mining	$0	$390,835	$316,422	$707,258
Construction	$0	$1,085,689	$634,236	$1,719,926
Manufacturing	$12,362,692	$3,965,715	$1,314,745	$17,643,166
Transportation/Utilitie	$18,379,044	$6,682,465	$3,112,419	$28,173,927
Wholesale Trade	$0	$5,756,697	$4,130,990	$9,887,686

Retail Trade	$188,685,733	$977,758	$14,216,192	$203,879,696
Finance & Real	$0	$12,709,997	$17,212,913	$29,922,907
Services	$66,222,721	$29,342,462	$15,889,171	$111,454,353
Government	$0	$2,493,521	$1,827,060	$4,320,581
TOTAL	$285,650,190	$63,405,139	$58,654,148	$407,709,500

Table 10: Combined Employment Impact

Sector	Direct	Indirect	Induced	Total
Agriculture/Mining	0	12	8	20
Construction	0	28	17	45
Manufacturing	197	59	17	275
Transportation/Utilities	225	67	34	326
Wholesale Trade	0	41	30	71
Retail Trade	6,016	40	433	6,488
Finance & Real Estate	0	132	109	241
Services	2,459	738	457	3,654
Government	0	28	44	72
TOTAL	8,897	1,145	1,148	11,192

The music industry also supports local governments in the Austin area. In addition to the obvious transaction taxes (including sales and hotel/motel) that occur with tourism and retail trade, the economic activity associated with music also helps to support both firms and individuals who pay property taxes. At the same time, the ripple effects (the indirect and induced impacts outlined in the tables above) will also generate revenue; an increase in household expenditures, for example, flows through to the City and County, as well as Capital Metro and the public schools. The following table summarizes the fiscal impacts.

Table 11: Fiscal Impact of Music (All Local Jurisdictions)

	Music Industry	Tourism-Based	Total
Property Taxes	$9,212,645	$7,568,250	$16,780,895
Sales Taxes	$2,946,474	$2,418,547	$5,365,021
Other Taxes/Fees	$398,299	$4,234,788	$4,633,087
Total	$12,557,418	$14,221,585	$26,779,003

Table 12: Fiscal Impact of Music Industries (City of Austin only)

	Direct	Indirect/Induced	Total
Property Taxes	NA	$1,731,056	$1,731,056
Sales Taxes	$789,407	$483,830	$1,273,237
Hotel/Motel Taxes	NA	$421,566	$421,566
Other Taxes/Fees	$236,988	$101,566	$338,554
Total	$1,026,395	$2,738,018	$3,764,413

Table 13: Fiscal Impact of Music-Related Tourism (City of Austin only)

	Direct	Indirect/Induced	Total
Property Taxes	NA	$1,422,074	$1,422,074
Sales Taxes	$1,012,621	$583,668	$1,596,289
Hotel/Motel Taxes	$3,867,300	$232,038	$4,099,338
Other Taxes/Fees	$220,493	$146,995	$367,488
Total	$5,100,414	$2,384,775	$7,485,189

Table 14: Total Fiscal Impact of Music (City of Austin only)

	Direct	Indirect/Induced	Total
Property Taxes	NA	$3,153,130	$3,153,130
Sales Taxes	$1,802,028	$1,067,498	$2,869,526
Hotel/Motel Taxes	NA	$653,604	$4,520,904
Other Taxes/Fees	$457,481	$248,561	$706,042
Total	$6,126,809	$5,122,793	$11,249,602

The Connection to Technology

Much has been written recently about the evolution of the "new economy" and the changes in fundamental historic economic relationships this has brought about. The old model in which dominant industries made location decisions virtually free of concessions to local governments and concern with the desires of potential workers has gone by the wayside. Economic development professionals historically focused their recruitment efforts, and by default the community's public inducement funds, on developing utility, road and real estate infrastructure. An early 1970s survey by *Industrial Development* confirmed this approach. Corporate America's top site location factors focused on environmental activism, availability of utilities, taxes, transportation access and labor costs. This left non-profit and community development organizations the responsibility of cultural and entertainment development.

The escalating significance of information technologies to the economy and the types of workers they need have radically altered the way in which cities and regions must establish and preserve their competitive edge. Today's leading cities and regions must adapt by taking a much broader and integrated approach to economic development, using traditional fiscal tools, environmental stewardship, and zoning regulations to create attractive working environments for business and employees alike.

One fundamental shift in the historic economic paradigm, noted by many writers, is the steady erosion of the power of business owners to unilaterally decide where to locate their offices and production facilities. Of necessity, business establishments have become increasingly sensitive to the needs and wishes of their employees in worksite location decisions. This is particularly true in high technology sectors that are so dependent on the new breed of "knowledge workers." A recent study by Professor

Richard Florida at Carnegie Mellon University examined these issues in depth.[8] Among the key findings of this research were:

- "Amenities and the environment – particularly natural, recreational, and lifestyle amenities – are absolutely vital in attracting knowledge workers and in supporting leading-edge high technology firms and industries."

- "Knowledge workers prefer places with a diverse range of outdoor recreational activities … and associated lifestyle amenities… [These activities and amenities] should be easy to get to and available on a 'just-in-time' basis."

- "The availability of job and career opportunities is a necessary but insufficient condition to attract the young knowledge workers … [who] favor cities and regions with a 'thick labor market' which offers the wide variety of employment opportunities required to sustain a career in high technology fields."

Under these circumstances, it is hardly surprising that most of the leading high technology regions today, including Austin, are regions that also present high levels of environmental quality and lifestyle amenities. Coalitions of public and private sector groups have also worked hard in these areas to develop strategies that will preserve and extend the range of environmental, natural and lifestyle amenities they offer.

The growth of the technology industry in the 1990s radically altered business location requirements. No longer are physical site characteristics and cheap labor the driving forces of the site location process. A *Conway Data* survey of corporate real estate executives in the early 1990s reveals that proximity to customers, access to skilled labor,

[8] Richard Florida, "Competing in the Age of Talent: Environment, Amenities and the New Economy." Report prepared for the R. K. Mellon Foundation, Heinz Endowments, and sustainable Pittsburgh. January 2001.

and a variety of quality of life factors are now the most important issues. Much of this shift can be attributed to tastes and preferences of young, tech savvy workers. They tend to rank "quality of place" considerations as highly as any other factor, even job market conditions, in making career decisions, and the reasons for this transcend mere residential preference.

The ability to maintain creativity and innovation in the workplace, crucial to success in the modern economy, requires ready access to a vibrant, renewing cultural environment. Even traditional manufacturing firms have long recognized the new dictate, that most new value is created through a process that needs creativity as a crucial raw material. John D. Ong, Chairman Emeritus of the B.F. Goodrich Company, speaking to a group of business students in 1995 as part of the Business Committee for the Arts Lecture Series, observed that:

> "People who create in our companies – whether they be scientists, marketing experts or business strategists – benefit from exposure to the arts. People cannot create when they work and live in a culturally sterile environment… The economic benefits of the arts greatly transcend and outlive any of the normal cycles… That is why business invests in the arts – even when times are tough, and when there is increased pressure to manage money carefully."[9]

In assessing "quality of place," Professor Florida summarizes the concerns of knowledge workers into four main areas: lifestyle, environmental quality, a vibrant music and arts scene, and natural and outdoor amenities. The approach promoted by the Austin Convention and Visitors Bureau is reflected in the acronym "CHARM" – standing for culture, heritage, arts, recreation and music. Whichever classification scheme is adopted, it is apparent that Austin scores highly on each of these dimensions.

[9] Quote appears in "The Role of the Arts in Economic Development: Issue Brief." NGA Center for Best Practices, June 2001, p. 6. Report available at http://www.nga.org.

But it is impossible to assess independently the significance of each of these areas, and to some extent they are quite interdependent. For example, many of the thousands of musicians and songwriters who call Austin home do so not just because of the music scene here, but also because of the diverse and tolerant lifestyle associated with a university town, the acute local sensitivity to preserving environmental treasures such as Barton Springs, and the ready access to recreational amenities the City offers.

Enlightened business and government leaders recognize that investment in the arts, including live music, is something more than simply a sign of personal or corporate virtue. Rather, there are real economic returns associated with this investment. These returns extend beyond the ability to attract and retain high quality employees. Name recognition and the image of a corporate citizen that come with these investments make many consumers more receptive to the products of these firms. More than a third of all businesses that supported the arts in 1997 believed that the general public was more likely to purchase products and services from companies they knew provided such support.[10] They also tend to fortify the regional economy by drawing dollars in from the outside and increasing local disposable income, and the regional economy is often the core of a company's client base.

Given the shortage of highly skilled, entrepreneurial, and flexible technology workers, businesses have increasingly based expansion and relocation decisions on the geographic preferences of their workers. Why should these trends matter to a well-established technology community such as Austin? The unprecedented growth of this industry has contributed to skyrocketing real estate prices and cost of living indicators that are making Austin too expensive for many musicians, artists, and club owners. Music has been the traditional backbone of Austin's unique culture and a major selling point to high tech companies and their workers.

[10] "The CEO Challenge: A Conference Board/Hendricks & Struggles Survey of 656 CEOs." May 1999. Business Committee for the Arts Report. http://www.bca.org.

Indeed, to quote one local technology spokesperson, “Music defines Austin, Texas.” Just as Austin’s quality of life and “Live Music Capital of the World” image captivated and attracted thousands of technology workers, the resulting rise in living and costs could dampen future growth.

Externalities

Economic analysis typically assumes that the pricing system works perfectly, an assumption that is often not true in practice. In the present context, for example, cover charges for live music events are invariably too high for some and too low for others when evaluated strictly on the basis of the expected utility from witnessing/participating in a performance. But clubgoers also derive satisfaction from their companions and the general ambience of the setting. Arguably, these discrepancies tend to “average out” and cover charges and participation rates vary accordingly. In the long run, individual choices, guided by the price system, tend to move toward efficient outcomes, even if entry prices do not fairly represent the value of the services being provided on an individual basis.

But even if the price system worked perfectly, individual microeconomic motivations still fail to achieve efficiency and promote growth under a variety of circumstances. A particularly troublesome class of problems involves what are called “externalities.” These are situations in which the actions of one decision-making unit – a person, firm or government entity – have an impact on the welfare of others that is either unnoticed or immaterial to the primary actor. Because of these external effects that go unheeded by the individual making economic decisions, the level of consumption of or investment in a particular good or service which that individual would choose independently is *socially* inefficient – i.e., more or less consumption or investment by that individual would enhance overall social welfare.

These external effects can be detrimental (a “negative externality” such as neglect of your yard allowing crabgrass to spread to adjoining properties) or beneficial (a “positive externality” such as your construction of a

retaining wall preventing erosion on adjoining properties). Both positive and negative externalities can be observed in the live music industry.

Residents of Austin who have never been to a club or dancehall, or never even participated in any of the scores of festivals featuring live music in the City annually, still derive tangible benefits from the existence of these venues and events. Among other things, they attract tourism and outside spending which enriches local firms, helps fund City services, and correspondingly reduces the local tax burden. Perhaps more importantly, they also embellish the image of Austin as a good place to work and live. This makes it easier for local companies to attract and retain workers – an issue discussed more thoroughly above. Both of these are examples of positive externalities, where Austin residents at large derive indirect benefits from the decisions of other local residents and out-of-town visitors to support the live music industry here.

Ironically, the extensive depth and breadth of the music industry in Austin can also be detrimental from a public perspective. The City serves as an "incubator" of sorts, where large numbers of musicians and songwriters come to put together a band, work the clubs, and get an act together. This makes it a very attractive area in terms of promoting creativity and networking in the industry. But the very large number of musicians and venues here also can impose negative externalities on other citizens of the area.

A basic economic principle is that when the supply of any good or service is abundant, its price tends to be depressed. This means, for example, that most local musicians, unless they achieve some degree of stardom (a form of "monopoly power"), will not make a particularly good living from live music alone. One of the consequences of this, all too familiar in Austin, is that a significant proportion of local musicians cannot afford adequate medical insurance and reasonable housing. Unanticipated health problems can impose costs on all local residents through un-reimbursed services provided by the City's public health system.

These examples of positive and negative externalities, respectively, represent legitimate arguments for providing additional private and/or public support to the live music industry. This support may be in the form of direct injections of cash, but this is not necessarily the case. In the case of positive externalities, additional money or support would generate indirect benefits enjoyed by all residents; spending or support to reduce negative externalities would help residents avoid increased demand for a variety of public services and the taxes required to pay for them.

The Status of the Local Music Scene

The analysis above clearly demonstrates that music is vital to Austin, both in measurable terms and through its influence on other aspects of the economy, especially technology. To assist Austin in developing strategies to promote its musicians, artists, and live music venues, a series of interviews were conducted with economic development and CVB representatives from other successful “entertainment” and technology communities. The cities chosen were Orlando, Florida; Nashville, Tennessee; New Orleans, Louisiana; and Seattle, Washington. In addition to the interactions with other cities, numerous in-person interviews were held with local stakeholders, including musicians themselves, concert promoters, club owners, technology companies, not-for-profit social service providers, staff at the Chamber of Commerce and the Convention and Visitors Bureau, and members of the Austin Music Commission.

Interviews with Other Music Communities

The interviews were designed to better understand how other cities that view music and entertainment as a key element of their economic base work to enhance and promote this industry. Specifically, information was sought on how each community’s unique music genre fits into overall community marketing efforts, the relationship of the local music to overall

economic development and growth, and the role of the local music scene in future marketing and economic development strategies.

The results reveal four central themes:

1. *Music is a major tourist attraction.*

A common approach economists use to define industries is based on whether or not they export their goods or services. Exporting industries are often times favored because of the "new dollars" that are infused into the local economy. The city of Austin, for example, has benefited greatly from exporting computers, microelectronics, and software to Europe, Asia, and Latin America.

The music and entertainment sector is no different than other traditional industries. Some communities such as New York and Los Angeles have amassed prodigious assets by exporting music, television shows, and films. Other communities such as New Orleans and Nashville have generated millions of dollars off tourists seeking jazz and country music.

The community representatives surveyed felt strongly that their region's unique musical style was and should be used as a mechanism to attract tourists and potential economic development projects. Except for Nashville, the majority of communities surveyed export very little music. In fact, the Nashville Area Chamber of Commerce used to have a dedicated economic development professional focus solely on recruiting production companies, record labels, and recording studios. However, the consolidation of the record industry forced most satellite offices and representatives to move back to New York and Los Angeles. Therefore, the local music scenes are directly supported by residents and out of town visitors. Without this infusion of tourist dollars, many felt that the local community would be unable to support existing artists and music venues.

Beyond providing entertainment opportunities for area residents, out of town guests seeking local music heavily subsidize area hotels, restaurants, and shops. Nashville, for example, marketed itself for many years as "Country Music USA". Each year Nashville hosts Fan Fair, a four-day country music festival, that this year attracted over 124,000 attendees. Meanwhile, Branson, Missouri is so committed to bringing in visitors that the chamber of commerce initiated a "Gas Busters" promotion to offset the costs of higher gasoline prices this summer. Tourists are eligible to receive $40 in instant rebates at area attractions.

Most important, these communities understand that music is their most recognizable marketing asset. Economic development recruitment efforts do not shy away from using their "entertainment" image. This can be a major advantage when trying to recruit a client that is barraged by marketing packets and phone calls from communities across the country.

2. *Promotions focus on music festivals and events.*

The trend in tourism development is to create broad based entertainment venues for family members of all ages. It is no longer viable to attract just one segment of the population and sustain the entertainment industry. Orlando, Florida is the clear leader in branding its community as the center for family entertainment. This success has influenced the way the traditional "music cities" such as New Orleans and Nashville now market themselves.

There has been a clear shift in the way New Orleans and Nashville approach their music industries. No longer is country music the sole focal point of Nashville's marketing campaign. The city's new marketing slogan is "Music City USA" – an attempt to broaden the city's appeal outside of country music aficionados. Professional sports are also playing a greater role in Nashville's marketing campaign. Nashville representatives predict that the success of the Tennessee Titans (NFL) and Nashville Predators (NHL) will continue to alter Nashville's image and marketing campaigns.

New Orleans is also trying to improve its appeal for vacationing families. The recent opening of the National D-Day Museum and Jazzland Theme Park are just two examples. In addition, the city of New Orleans is deeply concerned that the New Orleans Saints may leave town, thereby losing their only professional sports team.

When the communities surveyed now promote their music industry, it is typically associated with specific events or festivals. Because the communities are looking to attract tourists year-round, music is no longer the main driver of tourism promotion. Similar to Austin's SXSW Festival, other communities are focusing on just one or two events. For example, New Orleans heavily promotes Jazz Fest and Nashville emphasizes Fan Fair. Seattle's Bumbershoot Festival was created in the 1960s to offset the impact of layoffs at Boeing. The Bumbershoot Festival has grown tremendously over the years and is considered the largest festival of its kind on the West Coast.

This is not to say that music is no longer important to these communities. Rather, there is a sense that music alone cannot sustain their cultural and arts communities as they have in the past. Moreover, the clear desire of these communities to attract tourists has forced economic development and community leaders to rethink their marketing campaigns. Similar to traditional economic development, competition for tourism dollars is becoming more competitive. Established tourist destinations can no longer assume that visitors will continue to be drawn to an area for just one type of music or entertainment attraction.

3. *Redevelopment of the urban core has mixed blessings for local music.*

Musicians, bars, and live music venues do not typically qualify for economic development incentives. While there is no question that the live music scene is important to overall quality of life, tourism, and the attraction of highly skilled workers, it has been difficult to quantify the

impact on the local economy. With large crowds and loud noise, live music venues and bars have been pushed to traditionally less desirable locations – usually the depressed urban core or warehouse districts. However, these “less desirable” locations are the preferred environment of young, highly skilled workers.

All of the communities interviewed described major public and private initiatives to revitalize urban core and historic entertainment areas, with the majority focusing on creating mix-used developments that include loft housing, a variety of retail and service businesses, restaurants, and bars. Often these efforts receive public inducements as catalysts to accelerate development. However, many of these projects are fairly upscale, making them too expensive for middle-income residents, family owned restaurants, and local music venues. The end result is the displacement of established clubs and restaurants in favor of upscale new activity.

This displacement appears to have fewer negative effects on the arts and music in other communities where entertainment venues have traditionally been less concentrated than in Austin. While new developments force some clubs and venues to move, the majority of community representatives indicated that there are still numerous location options for clubs. In addition, the cost of living in these communities has not grown at nearly the same rate as Austin's. Therefore, even if Austin's bars and clubs were not so heavily concentrated, they would still be at a competitive disadvantage compared to the bars and live music venues in these other communities.

4. *Greater emphasis is being placed on television and film production*

One of the hottest trends in economic development is the recruitment of television and film productions. Rising labor costs in Los Angeles and New York City are forcing production companies to seek out lower cost alternatives. For most communities, television and film production recruitment is the responsibility of the state economic development

agency – such as the Texas Film Commission. In other communities, the convention and visitors bureau responds to requests for information from movie studios.

As communities place more emphasis on entertainment as a target industry, economic development agencies are struggling to create appropriate recruitment strategies. Communities oftentimes take their local arts and entertainment activities for granted. It is assumed that every community will have local clubs and artists regardless of public sector inducements.

Entertainment regions such as New Orleans, Orlando, Seattle, and Nashville understand the economic impact of this industry and are becoming very aggressive in the recruitment of television and film production. The lead economic development agencies in a number of communities interviewed have staff dedicated to recruiting this industry. The strategy most commonly used is to link their niche music/cultural identity with individual television and film productions. The idea is not to compete for all productions or become the next Hollywood, but rather to attract country music movies to Nashville or jazz films to New Orleans.

Interviews with Local Stakeholders

One of the challenges in assessing the local music industry is that it is so fragmented. Live music shows are the clearest example of what is commonly thought of as the local music scene, but, as discussed previously, music touches a vast range of people, organizations, and industries in ways that are not immediately obvious. As a result, the range of local interviews was fairly broad, and were conducted with an eye toward representing the diversity of music-related activity in Austin. The following were the fundamental issues that came through from these numerous conversations.

1. *The "supply" of music in Austin exceeds the local demand*.

As outlined above, Austin enjoys an unusually high concentration of musicians and music-related activity. Ironically, this actually can work to the detriment of those in the local industry. Specifically, Austin is and long has been a "buyer's market" for live music. As a result, the "sellers" – musicians in particular – must contend with a much tighter and potentially less remunerative market than their colleagues elsewhere.

In the combined Dallas-Fort Worth-Arlington Metroplex, for example, there is one club or dancehall for every 14,600 persons; in Austin, there are only about 7,400 persons per club or dancehall – just over half the average DFWA venue customer base. The economic implications of this are severe. Venues compete for limited numbers of clients on the basis of the price and quality of their musical offerings and related goods and services. Lower cover, beverage and food charges translate into lower revenues from which musicians are paid, and their wages correspondingly suffer.

The abundance of local musical talent means that clubs will have a wide variety of acts to choose from, and that the shows that are available typically pay poorly. Indeed, it is not at all unusual for a performer to actually lose money by playing a gig, in that their costs (for equipment, rehearsal space, band members, etc.) exceed what they are paid, either from the cover at the door or directly by the club. This has a number of implications, including many musicians being unable to afford adequate housing, health care, etc.

2. *Cost pressures on venues continue to rise*.

Just as local musicians suffer to some degree from their own success (which has helped make Austin a mecca for musicians from all over the world), the growth of the technology community, which at least partially can be attributed to local quality of life, has helped push real estate prices sharply higher in recent years. Rising rents and house prices have put pressure on all lower income groups, including the majority of musicians

and songwriters in the City. These pressures have also been felt in the commercial real estate market, further reducing profit margins of club owners who lease their facilities. Rising property taxes also go hand-in-hand with rising property values, and have eroded disposable income and profit margins even more. Over the past decade, the total assessed property valuation in Travis County has increased from $16.9 billion to $46.9 billion, or 178 percent. In the last year alone, total valuation grew $5.6 billion – almost 14 percent. Other operating costs are also increasing, especially for utilities. Higher costs for venues exacerbates the supply and demand imbalance of musicians described above, with the overall net effect that it is very difficult for Austin-based performers to be able to earn a living playing locally.

3. *Efforts to assist musicians and the music industry are widespread, but diffused.*

There are a wide variety of economic development and social service organizations which have at least a program or two devoted to providing some form of assistance to musicians or the music industry, but their impact is limited. Part of the problem is that no one group has as its primary mission supporting the music industry overall; organizations dedicated entirely to musicians' assistance (such as the SIMS Foundation) tend to focus on just one area (in SIMS case, mental health services). One issue to be overcome is funding limitations; since there is no dedicated source of public sector funds to support music, any program or organization must find additional financial support in order to extend its offerings.

4. *The full impact of certain regulations and ordinances is not always considered.*

Fire code restrictions, noise ordinances, and parking policies are all examples of local regulations that have an impact on the music industry. None are particularly burdensome in and of themselves, but their enforcement has on occasion had unintended consequences (such as the

last-minute shutting down of a major label showcase during SXSW due to an artificially low maximum occupancy standard). This is not to suggest that any particular ordinance or regulation needs to be changed, but rather that the needs of the music industry should be considered in both policy development and implementation.

Policy Options

The music industry in Austin is threatened by the effects of the overall economic success it has helped to create, as cost pressures on clubs and venues and the general rise in the cost of living greatly exacerbate the impact of a supply of musicians that exceeds local demand. The broad policy response seems fairly straightforward; find ways to help reduce costs while increasing demand. Specific potential areas of policy response to the situation analysis follow.

1. *Explore ways to reduce costs for live music venues*.
As discussed above, costs for clubs and other live music facilities are rising, with the combination of rising property taxes/rents and accelerating utility costs especially burdensome. The possibility of applying the policies under the Smart Growth initiative could be explored as a means of allowing live music venues to qualify for economic development incentives.

2. W*ork to develop additional opportunities for local musicians.*
By all accounts, it is very difficult to make a living playing music locally in Austin, for the reasons previously discussed. However, it does appear that it is viable to play regionally, as a number of acts have successfully developed a market throughout Texas and the Southwest. Support could be provided to interested local musicians to secure bookings in cities in the region.

3. *Designate an ombudsman to facilitate interaction between music activity and regulatory authorities*.

This responds directly to the concern expressed about the unintended consequences of regulation.

4. *Leverage efforts to assist local musicians through focused assistance*. Over the course of the interviews with local stakeholders, it became clear that there are a number of programs and organizations that exist, at least in part, to support music in Austin. However, funding limitations constrain many of these programs. In that light, it is crucial that efforts to support local music be coordinated to the maximum extent possible. For example, a local foundation has invested time and effort into creating a health care clinic for musicians, and has secured access to a facility, staff, and supplies. What is missing is funding for administrative costs. Given that many of elements for creating the clinic are in place, the chances of receiving grant funding for administrative expenses likely are good, especially if an experienced grant writer works to assist in finding funding. However, that resource presently is not clearly accessible to that foundation.

Conclusions

The measurable economic and fiscal impact of music in Austin is significant, as more than $616 million in economic activity and almost 11,200 jobs can be attributed to influence of music in the local economy. Perhaps even more important are impacts that are not as easily measured, especially the connection between technology and the arts. In the technology world, value initially is created through knowledge, either directly or imbedded in products. Among other things, this means that there are few geographic constraints on where many companies are located – since a software company can more or less be anywhere, it follows that the company will tend to be based where its management wants to be. This in turn implies that quality-of-life factors that make a community attractive to a company's labor force assume a heightened

importance, since the fundamental asset of any technology firm will always be the people who work there.

This last point about quality of life may be one of the most important. All the usual factors apply (housing, schools, transportation, recreation, etc.), but research is beginning to show that an additional consideration that makes a big difference is cultural vitality. In particular, several studies have shown that there is a significant relationship between the breadth and scope of cultural offerings (music, the arts, etc) and the growth of a technology-based economy. To some degree, this interconnection makes sense, since technical innovation, entrepreneurship, and the arts all involve a creative impulse, albeit in different forms. In recognizing this relationship, it follows that if we lose one we may damage the others. What appears to set Austin apart from most other communities is this concentration of creativity. As such, it may well be the community's most important strategic asset, and should be kept in mind in the development of public policy.

Broad Issues/Concepts Raised by Those Interviewed During Study

Funding sources

Public sector:

- General Revenue – how much can be claimed from music – could that amount be dedicated to music projects.
- Bed tax – how much can be claimed from music – could that be dedicated to music projects
- Sales tax on utility bill, drink taxes, tax on tickets sold, concession taxes
- Tax abatements/incentives

Private Sector:

- Partnerships – potential corporate sponsorships or partnerships of projects like the Austin Music Network
- Grants – potential especially to non-profits
- Loans – programs like the Music Industry Loan Program

Economic Development/Ways to help musicians get more jobs

- Help clubs with incentives that are tied to hiring Austin musicians
- Help musicians get more jobs outside Austin – nonprofit help and any other help
- Help programs that publicize and make easier to find musicians to hire
- Increase free concerts that hire Austin musicians
- Reduce club owners costs
- Pay musicians to be musicians
- Hire a musician campaign
- Recruit music related businesses
- Create music alliance group
- Help booking music acts with events
- Advertising issues – reach out to local musicians
- Outdoor festivals, radio station festivals
- Another event like SXSW

Health issues

- Increase help for existing entities like SIMS
- Increase help for health needs that are not being met by current services
- Learn from others like New Orleans's musicians' clinic

Housing issues

- Learn from others like New Orleans's musicians's housing program
- Find out what is already being done in Austin that could help the music community, and then make those in the music community aware of those programs

Old Airport and Music issues

- Could big concerts be held at the old airport during the time that the master plan is still in development?
- Could the old airport be the site for numerous music related businesses, including a facility that would host large scale events, such as those now being held at the new Verizon facility near San Antonio
- Could there be housing at the old airport that would be good for musicians and those working in music related businesses?

Non-profit issues

- Form a non-profit to sustain music industry in Austin
- Learn from no-profits such as the New Orleans Jazz and Heritage Foundation
- How could Austin best fund such a non-profit
- Web presence for Austin musicians
- Marketing to locals
- Centralized place for help – ombudsman role
- Provide an information clearing house
- Provide technical assistance, such as grant writing
- Increase venue development
- Downtown festival series
- Venue accessibility

How are the Total Economic Impacts Determined?

The first step in evaluating the fiscal and economic impact of a program, project, event, or industry expansion is to estimate its regional economic impact. This section focuses on how to estimate regional total economic impacts. The manner in which total economic impacts are created in an economy is often compared to the way ripples are made in a pond. The total economic impact has three segments, which are delineated in Figure 1.

- *Direct impacts* (the initial drops causing the ripple effects) are the changes in spending due to a new or existing economic activity.
- *Indirect impacts* are economic changes required to produce the supplies and services required by the direct effects.
- *Induced impacts* are the changes in consumer spending generated by changes in regional labor income that results from the direct and indirect effects.

Figure 1: Components of the Multiplier for the Construction of a Hotel

DIRECT IMPACT	INDIRECT IMPACT	INDUCED IMPACT
Excavation/Construction Labor **Concrete** **Wood** **Bricks** **Equipment** **Finance and Insurance**	**Production Labor** **Steel Fabrication** **Concrete Mixing** **Factory and Office Expenses** **Equipment Components**	**Expenditures by wage earners on-site and in the supplying industries for food, clothing, durable goods, entertainment**

Types of Direct Economic Effects

It is important to understand that the direct effects can be classified into two types of expenditure streams—those generated by projects (typically composed of construction and/or equipment purchases) or special events and those resulting from programs or new commercial establishments (on-going operations and maintenance). The two types of direct effects are delineated by the duration of their economic impacts and the manner in which the annual level of spending that generates the economic impacts is estimated. Often a proposed project has both types of direct effects (e.g., a new hotel has a construction phase as well as an operations phase). In such cases, the economic activity that makes up the two types of direct impacts must be separated.

Impacts of Projects and Special Events

Typically only the total spending or person-years of effort for the full duration of projects and special events is well known. Therefore, in order to provide a sense of the phase-in process of any project, annual spending estimates over the life of the project are made as proportions of the total. Examples are the construction of a new hotel or spending generated by having an existing local facility serve as the venue for

a soccer tournament. In both cases, the economic activities involved are likely to be measured in total dollars spent or in terms of the total number of jobs that will be "created." Further, the term of the economic activity associated with projects and events typically is a period shorter than five years. (Equipment purchases also fall into this category of "one-time economic impacts" through the spending for equipment. Generally, equipment purchases are not made in the region, so the economic impacts generated directly from such spending tend to be small.)

Recurring Impacts

Unlike spending on special events or construction and equipment purchases, the annual operation and maintenance expenditures of new and/or expanded facilities generate an on-going stream of economic impacts. Such economic impacts are typically referred to as *recurring impacts*. The regional economic impacts of operations and maintenance expenditures are based on spending or employment levels for a typical year. Generally, however, the establishment or program for which the impacts are measured, tends to endure for a much longer period. Hence, the recurring economic impacts are often measured as a stream of annual income with no well-defined end date. Examples of recurring expenditures are the operation and maintenance of a hotel or set of roads. Events, such as festivals, can also be classified into this category, provided they occur every year.

Defining and Estimating the Direct Economic Effects

Great care and effort should be used to define and estimate the direct effects. This is true because the total economic impacts resulting from an economic model are only as good as the data that are used to produce them. Hence, defining and estimating the direct effects is the most important part of economic and fiscal impact analyses.

Direct effects of a program, project, event, or industry expansion can be defined for either a single industry or multiple industries. The decision regarding which of the two options is appropriate should be based on the how closely the direct effect matches one of the 500 or so industries available in the input-output model. If one of the 500-plus industries (such as Electronic Component Manufacturing) alone is sufficient to identify the source of the direct effects, then a single-industry direct effect can be used. For example, if an industry is identical to that of the entire direct effect or if it is an aggregate of the industry that is disturbed plus one or more other industries, then the choice of a single-industry direct effect is the correct one. Otherwise, the direct effect should be defined by two or more industries. Examples of both are provided as follows:

Single-industry direct effect.

It is probably best to start learning how to estimate economic impacts by first measuring the effects of change in a single industry. As mentioned above, this type of analysis should only be performed when the industry directly affected by the event, project, or program is defined well by the economic model that is used. This is because, for each industry, the economic model is based upon something akin to a recipe of production for each industry specified in it. Thus, if the "recipe" for the model's industry does not portray the direct effects well, then the multiplier effects will be inaccurately estimated. It cannot be emphasized enough that the direct effects must be estimated accurately. One way to assure that the direct effects are as

precise as possible is to use as much project-specific data as possible or to perform a survey of the suppliers.

If the direct effects appear to be defined well by the model (e.g., if the direct effects are hotel operations and the model has an industry labeled Hotel and Motels) then simply using the annual projected industry revenues (or employment) that define the direct effect may be sufficient. If the duration of the project is less than a year (such as the Republican national convention) and the direct effects is specified in terms of jobs, then the number of jobs should be multiplied by the fraction of the year the direct effect endures. Regardless, it is best if the industry's wages and salaries are calibrated to that known for the direct effect. This assures that the bulk of the direct effects, which tend to be in the form of labor income (on average nearly 70 percent of industry revenues are used for payroll) are specified precisely.

Even if the direct effects are portrayed extremely well by the model's industry, the economic impacts can be estimated improperly by the model in a regional setting. This is because, in some cases, not all of the estimated direct effects are produced in the impact region. The situations where this is the case are those where the direct effects are due to a change in local demand for a good or service. An example of such a direct effect would be the set of goods and services required in order to build a new hotel in San Antonio. In this case, the architects, engineers, and construction contractors involved need not be from San Antonio. They could come from Austin or places beyond. The same could be said for the equipment and other manufactured goods that they use in the construction process. Furthermore, if the contractor is not from San Antonio then the labor income is probably mostly spent by employees outside of the San Antonio metropolitan area. In such cases, the direct effects must be discounted (shared down/bifurcated) so that they reflect only the purchases that are likely to be made *in the region*. This process is called "regionalizing the direct effects."

Regionalizing the direct effects can be done in either of two ways. The first requires a survey of the direct effects. The survey would ask the organization causing the direct effects to provide the proportion of each of their industry expenditures that will be fulfilled by local producers. The second way is to use a set of proportions that, for each industry, represents the average propensity at which local goods and services are used to fulfill local demands. This set of proportions is technically called the vector of regional purchase coefficients (RPCs). Although less accurate than those obtained via survey work, they are readily available from some regional input-output model vendors. Further, they are better than doing nothing at all about the regionalization issue. Indeed, since many economic impact-modeling situations afford neither the time nor the money for the requisite survey work and since often times even when such work possible the actual proportions are unknown, the vector of RPCs must be used (see Appendix B for more information).

Direct effects defined by two or more industries.

Multiple-industry direct effects must be estimated when no single industry in the economic model is sufficient to define the direct effects. Such direct effects are called "groups" in the *IMPLAN Pro User's Guide* and "economic translators" by users of PC I-O produced by the Regional Science Research Corporation. An alternative and probably more popular term is "impact vectors." The term "economic translator" derives from their purpose, which is—no matter what they are called—to translate a

single figure representing an economic disturbance into its industry components for modeling. (The term impact vector is derived from the fact that they form the vector of industry effects from which the economic impacts are estimated.) Regardless, like the industries of the models typically used to estimate economic impacts, they can be viewed as industry-level recipes of direct effects.

Not surprisingly, multiple-industry direct effects are peculiar to each application. Further, in practice, multiple-industry direct effects are the norm rather than the exception. Economic consultants pride themselves on the expertise that they have developed with regard to specific types of multiple-industry direct effects. Some have developed a niche in developing port impact vectors that divide cargo into different commodities, handling types, and surface transportation transshipments. Others have worked exclusively on the various types of tourism. And still others have expertise in airport activity, convention center construction and operations, or highway construction. In large measure, experience in a particular industry can substitute for survey work that might otherwise be required. But in most cases there are regional peculiarities that require at least some basic spending information in order to calibrate information in the economic model.

A prime example of an activity that must be defined as a multiple-industry direct effect is tourism. Tourism is not a pre-defined industry in economic models. In fact, there are many types of tourism, so that even if there were a pre-defined industry that could sometimes be used as an impact vector, it probably would not be appropriate for most applications. Tourists have direct contact with several industries, the most important of which are shown in Table 1. But even the set of industries displayed in Table 1 is not sufficient for modeling tourism. This is because input-output models only measure the margins of retail trade industry. That means that the goods retailers sell are not measured in the retail industry of the input-output model. The goods sold by retailers must be assigned separately by the analyst to the industries that made them. Otherwise the economic effect of both wholesaling and manufacturing functions will not measured. Hence, only a portion of the retail sales dollars (about 20 percent) are assigned to the retail trade industries. The rest of the dollars should be allocated to wholesale trade and appropriate manufacturing, mining, and agricultural industries, the selection of which depends on the types of retail purchases made.

Table 1. Primary Tourism Sectors with Example Spending Levels

#	IMPLAN Sector Name	Daily
463	**Hotels & Lodging Places**	**$85.00**
437	**Air Transportation**	**$67.00**
454	Eating and Drinking	**$50.00**
449	**General Merchandise Stores**	**$15.50**
451	**Automobile Service Stations**	**$10.30**
477	**Automobile Rental and Leasing**	**$7.75**
486	**Commercial Sports (except racing)**	**$6.00**
488	**Amusement & Recreation Services**	**$5.70**
455	**Miscellaneous Retail**	**$3.40**
483	**Motion Pictures**	**$3.00**
478	**Automobile Parking and Services**	**$1.20**

The precise pattern of tourism spending that should be used for an application, however, depends upon the tourism base (e.g., heritage, nature, and conventions), the tourism destination, and the distribution of tourists by type of overnight lodging (e.g., day-tripper, hotel/motel, campground, stayed with friends and family). The formation of the tourism impact vector needed for a particular application, then, depends on many things. Hence, in order to produce an accurate tourism impact vector, a survey should be conducted. For rough calculations, however, an impact vector reflecting the entries in Appendix A may often be sufficient. Needless to say, the results of several surveys plus some expert knowledge were required to produce the tourism impact vector represented by the 127 industries displayed in the Appendix A. This should make it clear that there is no substitute for good survey work and familiarity with input-output accounting when the construction of a complex direct effect is required.

Regardless of the type of direct effect the following procedures apply:

(1) Determine whether the direct effects can be identified by a single industry in the economic model.

(2) To calibrate the model, obtain local data on the average earnings per worker for each major industry that comprises the direct effects.

(3) If retail and wholesale trade are involved be sure to find out details on the types of goods and services that are provided. If possible identify the operating margins of the retail and wholesale establishments involved. If this is difficult or impossible, assume that the establishments operate with a margin of about 20 percent of sales revenues. Distribute the remaining 80 percent to manufacturers and local wholesalers. This distribution should be made on the basis of the types of goods that the wholesalers/retailers sell.

(4) Use all of the primary data sources that you can.
   a) Use all available local survey data on the direct effects (e.g., often some data on visitor spending are available)
   b) Use architecture and engineering cost estimates for construction projects to get an idea of the types of materials, equipment, and labor that are required. The materials and equipment can be translated into industry purchases.
   c) Obtain the new organization's estimates of its operation and maintenance costs in as detailed a fashion as possible.
   d) Bifurcate by industry the direct effects into the value of goods and services that will be supplied by local organizations and that supplied by organizations outside of the impact area. That is, determine how much of each expenditure item in the direct effects will be spent in the impact area.
   e) Get information on all of the major taxes that will be affected by the direct effects (e.g., sales tax, property tax, income tax, hotel occupancy tax, cement production tax, other gross receipts taxes, and corporation franchise tax).
   f) Get information on the prospective increase in public services (by level of government and by department) that will be needed, if any.

Estimating Indirect and Induced (Multiplier) Economic Effects

The process for estimating a given project's indirect and induced economic impacts is more roundabout. By definition, a project's first round of *indirect impacts* includes the purchases of any supplies and/or services that are required to produce the direct effects. Subsequent purchases of supplies and services generate other rounds of indirect impacts. The *induced impacts* are the purchases that arise, in turn, from the increase in aggregate labor income of households. Both the indirect and induced economic impacts demonstrate how the demand for direct requirements reverberates through an economy.

One means of estimating these indirect and induced impacts would be to conduct a survey of the organization producing the direct effect. In the case of a construction project, like a new hotel, the questionnaire would ask for the names and addresses of the contractor's suppliers, what and how much they supply, the names and addresses of their employees, and their annual payroll. It would also ask for the organization to identify which of the suppliers were in the impact region. Another questionnaire might cover the household spending of the employees of the surveyed firms. It could request a characterization of the employee's household budget by detailed line items, including name and address of the firm or organization from which each line item is purchased. The business questionnaire could also be sent to the regional business addresses identified in these other questionnaires, and the household questionnaires, in turn, could be sent to the homes of the employees of the businesses contacted in the first round of surveying. This snowball-type sampling could continue until time or money was exhausted. The spending of each organization or household surveyed would then be weighted by its contribution to either the project or to household consumption. The weighted sum of these survey responses would yield the total regional economic impact.

This survey-based approach to estimating indirect and induced impacts, however, consumes a great deal of money and time. Economic models that cost far less are typically used instead. The model that has proven to estimate the indirect and induced economic effects of events most accurately is the input-output model. Its advantage stems from its level of industry detail and its depiction of interindustry relations.

Estimates of the total economic impacts of a project, program, or event are derived from regional input-output models by applying them to the regionalized direct effects, discussed earlier. The total economic impacts produced by input-output models typically come in many forms. First, they present the economic activity in terms of output or revenues (except for the retail and wholesale trade industries), employment, and income. Also, they often present it in terms of the regional equivalent of gross domestic product (GDP), which represents the wealth accumulated in the region due to the project, program, or event. Second, they decompose each of these total economic effect measures into their direct and indirect portions.

The best way to compare the relative return of projects, programs, or events competing for dollars from the same funds is to calculate the economic impacts per million dollars of investment. To derive such a measure for a government entity, this means the total economic impacts of the project, program, or event should be divided by the amount of public spending/incentives given that is required to make it come

about. The two components of public spending required typically are in the form of tax incentives and the marginal cost to the government of the additional public services and goods that must be provided.

How are the Net Fiscal Impacts Estimated?

Once the economic impacts on the jurisdictions have been measured, an evaluation of the impact on tax revenues can be ascertained. Changes in tax revenues are derived as a function of changes in economic activity; for example, an increase in sales tax revenue is calculated by applying the appropriate tax rates to estimates of increased retail sales.[1] By the same token, estimates of increased property taxes are based on changes in employment, as ratios of property tax revenue per existing job are embedded in the models. Estimates of tax revenue impacts are typically needed for all jurisdictions that are affected economically by the project.

[1] In this particular example, it is important to estmate the proportion of new retail sales that will be subject to sales taxes before applying the appropriate sales tax rates to generate the revenue estimate.

Inputs Into the Model

Industry

SIC	Implan Sector	Value
2731 Publishing and Printing	176	35,749,118
2741 Miscellaneous Publishing	178	4,682,929
3652 Phonograph Records and Prerecorded Audio Tapes	371	1,557,728
3931 Musical Instruments	418	492,387
5736 Musical Instrument Stores	453	67,552,598
5735 Record and Prerecorded Tape Stores	453	53,863,015
7812 Motion Picture and Video Tape Production	483	17,388,498
7929 Bands, Orchestras, Actors, and Other Entertainers	484	11,911,809
7922 Theatrical Producers (Except Motion Picture)	484	1,320,631
8299 Schools and Educational Services, NEC	497	31,351,853
8231 Libraries	497	24,195
Total		225,894,760

Tourism

SIC	Implan Sector	Value
Ground Transportation	440	26,338,795
Retail Sales	449	55,134,106
Food Sales	450	11,125,461
Eating & Drinking	454	44,207,822
Hotels & Lodging	463	40,755,420
Recreation	488	21,501,638
Total		199,063,242

Output Impact

AustinRedo.iap

IMPACT NAME: Travis MULTIPLIER: Type SAM

Industry	Direct*	Indirect*	Induced*	Total*	Deflator
1 Dairy Farm Products	0	24	83	107	1.00
2 Poultry and Eggs	0	107	162	269	1.00
3 Ranch Fed Cattle	0	1.064	3.214	4.278	1.00
4 Range Fed Cattle	0	929	2.847	3.776	1.00
5 Cattle Feedlots	0	232	698	930	1.00
6 Sheep- Lambs and Goats	0	60	178	238	1.00
7 Hogs- Pigs and Swine	0	92	276	368	1.00
8 Other Meat Animal Products	0	10	29	38	1.00
9 Miscellaneous Livestock	0	2.013	5.636	7.649	1.00
10 Cotton	0	0	23	23	1.00
11 Food Grains	0	3	27	30	1.00
12 Feed Grains	0	142	600	742	1.00
13 Hay and Pasture	0	52	222	274	1.00
14 Grass Seeds	0	0	0	0	1.00
15 Tobacco	0	0	0	0	1.00
16 Fruits	0	2	83	85	1.00
17 Tree Nuts	0	10	1.282	1.291	1.00
18 Vegetables	0	317	406	723	1.00
19 Sugar Crops	0	0	0	0	1.00
20 Miscellaneous Crops	0	0	0	0	1.00
21 Oil Bearing Crops	0	0	0	0	1.00
22 Forest Products	0	20	14	34	1.00
23 Greenhouse and Nursery Products	0	10.239	20.528	30.767	1.00
24 Forestry Products	0	0	42	42	1.00
25 Commercial Fishing	0	0	0	0	1.00
26 Agricultural- Forestry- Fishery Serv	0	5	477	481	1.00
27 Landscape and Horticultural Servic	0	339.240	155.156	494.396	1.00
28 Iron Ores	0	0	0	0	1.00
29 Copper Ores	0	0	0	0	1.00
30 Lead and Zinc Ores	0	0	0	0	1.00
31 Gold Ores	0	0	0	0	1.00
32 Silver Ores	0	0	0	0	1.00
33 Ferroalloy Ores- Except Vanadium	0	0	0	0	1.00
34 Metal Mining Services	0	0	0	0	1.00
35 Uranium-radium-vanadium Ores	0	0	0	0	1.00
36 Metal Ores- Not Elswhere Classifie	0	0	0	0	1.00
37 Coal Mining	0	531	403	935	1.00
38 Natural Gas & Crude Petroleum	0	216.877	256.350	473.226	1.00
39 Natural Gas Liquids	0	18.243	21.563	39.805	1.00
40 Dimension Stone	0	0	0	0	1.00
41 Sand and Gravel	0	126	135	261	1.00
42 Clay- Ceramic- Refractory Mineral	0	0	0	0	1.00
43 Potash- Soda- and Borate Minerals	0	0	0	0	1.00
44 Phosphate Rock	0	0	0	0	1.00
45 Chemical- Fertilizer Mineral Minin	0	0	0	0	1.00
46 Nonmetallic Minerals (Except Fuel	0	0	0	0	1.00
47 Misc. Nonmetallic Minerals- N.E.C	0	0	0	0	1.00
48 New Residential Structures	0	0	0	0	1.00
49 New Industrial and Commercial Bui	0	0	0	0	1.00

*1998 Dollars - if results are deflated and aggregated, then deflators displayed are set to 1.0 (results have been deflated)

Industry	Direct*	Indirect*	Induced*	Total*	Deflator
50 New Utility Structures	0	0	0	0	1.00
51 New Highways and Streets	0	0	0	0	1.00
52 New Farm Structures	0	0	0	0	1.00
53 New Mineral Extraction Facilities	0	0	0	0	1.00
54 New Government Facilities	0	0	0	0	1.00
55 Maintenance and Repair- Residenti	0	370.334	852.996	1.223.330	1.00
56 Maintenance and Repair Other Fac	0	1.442.944	398.689	1.841.633	1.00
57 Maintenance and Repair Oil and Ga	0	35.004	41.375	76.380	1.00
58 Meat Packing Plants	0	12.379	39.519	51.898	1.00
59 Sausages and Other Prepared Meats	0	27.086	32.197	59.282	1.00
60 Poultry Processing	0	0	0	0	1.00
61 Creamery Butter	0	0	0	0	1.00
62 Cheese- Natural and Processed	0	0	0	0	1.00
63 Condensed and Evaporated Milk	0	0	0	0	1.00
64 Ice Cream and Frozen Desserts	0	0	0	0	1.00
65 Fluid Milk	0	63.832	124.812	188.644	1.00
66 Canned Specialties	0	448	1.008	1.456	1.00
67 Canned Fruits and Vegetables	0	939	1.168	2.107	1.00
68 Dehydrated Food Products	0	0	0	0	1.00
69 Pickles- Sauces- and Salad Dressing	0	1.053	1.161	2.215	1.00
70 Frozen Fruits- Juices and Vegetable	0	0	0	0	1.00
71 Frozen Specialties	0	0	0	0	1.00
72 Flour and Other Grain Mill Product	0	0	0	0	1.00
73 Cereal Preparations	0	0	0	0	1.00
74 Rice Milling	0	0	0	0	1.00
75 Blended and Prepared Flour	0	0	0	0	1.00
76 Wet Corn Milling	0	0	0	0	1.00
77 Dog- Cat- and Other Pet Food	0	0	0	0	1.00
78 Prepared Feeds- N.E.C	0	0	0	0	1.00
79 Bread- Cake- and Related Products	0	120.279	49.460	169.739	1.00
80 Cookies and Crackers	0	641	980	1.621	1.00
81 Sugar	0	0	0	0	1.00
82 Confectionery Products	0	701	788	1.489	1.00
83 Chocolate and Cocoa Products	0	0	0	0	1.00
84 Chewing Gum	0	0	0	0	1.00
85 Salted and Roasted Nuts & Seeds	0	320	587	907	1.00
86 Cottonseed Oil Mills	0	0	0	0	1.00
87 Soybean Oil Mills	0	0	0	0	1.00
88 Vegetable Oil Mills- N.E.C	0	0	0	0	1.00
89 Animal and Marine Fats and Oils	0	0	0	0	1.00
90 Shortening and Cooking Oils	0	0	0	0	1.00
91 Malt Beverages	0	4.134	1.842	5.976	1.00
92 Malt	0	0	0	0	1.00
93 Wines- Brandy- and Brandy Spirits	0	196	550	746	1.00
94 Distilled Liquor- Except Brandy	0	0	0	0	1.00
95 Bottled and Canned Soft Drinks &	0	11.832	11.460	23.292	1.00
96 Flavoring Extracts and Syrups- N.E	0	3.646	5.005	8.651	1.00
97 Canned and Cured Sea Foods	0	0	0	0	1.00
98 Prepared Fresh Or Frozen Fish Or S	0	0	0	0	1.00

*1998 Dollars - if results are deflated and aggregated, then deflators displayed are set to 1.0 (results have been deflated)

Industry	Direct*	Indirect*	Induced*	Total*	Deflator
99 Roasted Coffee	0	31.998	12.529	44.526	1.00
100 Potato Chips & Similar Snacks	0	114.634	131.465	246.098	1.00
101 Manufactured Ice	0	0	7.460	7.460	1.00
102 Macaroni and Spaghetti	0	0	0	0	1.00
103 Food Preparations- N.E.C	0	8.992	92.895	101.886	1.00
104 Cigarettes	0	0	0	0	1.00
105 Cigars	0	0	1.618	1.618	1.00
106 Chewing and Smoking Tobacco	0	0	0	0	1.00
107 Tobacco Stemming and Redrying	0	0	0	0	1.00
108 Broadwoven Fabric Mills and Finis	0	292	443	735	1.00
109 Narrow Fabric Mills	0	0	0	0	1.00
110 Womens Hosiery- Except Socks	0	0	0	0	1.00
111 Hosiery- N.E.C	0	0	0	0	1.00
112 Knit Outerwear Mills	0	0	0	0	1.00
113 Knit Underwear Mills	0	0	0	0	1.00
114 Knit Fabric Mills	0	0	0	0	1.00
115 Knitting Mills- N.E.C	0	0	0	0	1.00
116 Yarn Mills and Finishing Of Textile	0	0	0	0	1.00
117 Carpets and Rugs	0	0	0	0	1.00
118 Thread Mills	0	0	0	0	1.00
119 Coated Fabrics- Not Rubberized	0	0	0	0	1.00
120 Tire Cord and Fabric	0	0	0	0	1.00
121 Nonwoven Fabrics	0	0	0	0	1.00
122 Cordage and Twine	0	0	0	0	1.00
123 Textile Goods- N.E.C	0	22	31	53	1.00
124 Apparel Made From Purchased Ma	0	724	20.288	21.012	1.00
125 Curtains and Draperies	0	592	2.356	2.949	1.00
126 Housefurnishings- N.E.C	0	0	0	0	1.00
127 Textile Bags	0	71	130	201	1.00
128 Canvas Products	0	2.554	984	3.538	1.00
129 Pleating and Stitching	0	11	848	859	1.00
130 Automotive and Apparel Trimmin	0	656	45.575	46.231	1.00
131 Schiffi Machine Embroideries	0	0	0	0	1.00
132 Fabricated Textile Products- N.E.C	0	2.884	29.420	32.304	1.00
133 Logging Camps and Logging Contr	0	0	0	0	1.00
134 Sawmills and Planing Mills- Genera	0	0	0	0	1.00
135 Hardwood Dimension and Flooring	0	0	0	0	1.00
136 Special Product Sawmills- N.E.C	0	0	0	0	1.00
137 Millwork	0	4.378	4.239	8.616	1.00
138 Wood Kitchen Cabinets	0	6.346	9.783	16.129	1.00
139 Veneer and Plywood	0	0	0	0	1.00
140 Structural Wood Members- N.E.C	0	2.206	2.747	4.953	1.00
141 Wood Containers	0	6.013	2.166	8.179	1.00
142 Wood Pallets and Skids	0	47.517	4.606	52.123	1.00
143 Mobile Homes	0	43	10	53	1.00
144 Prefabricated Wood Buildings	0	102	82	183	1.00
145 Wood Preserving	0	0	0	0	1.00
146 Reconstituted Wood Products	0	0	0	0	1.00
147 Wood Products- N.E.C	0	7.147	8.446	15.593	1.00

*1998 Dollars - if results are deflated and aggregated, then deflators displayed are set to 1.0 (results have been deflated)

Industry	Direct*	Indirect*	Induced*	Total*	Deflator
148 Wood Household Furniture	0	706	44.437	45.143	1.00
149 Upholstered Household Furniture	0	2	1.304	1.306	1.00
150 Metal Household Furniture	0	59	4.976	5.035	1.00
151 Mattresses and Bedsprings	0	254	90.468	90.722	1.00
152 Wood Tv and Radio Cabinets	0	0	0	0	1.00
153 Household Furniture- N.E.C	0	0	0	0	1.00
154 Wood Office Furniture	0	6	1.644	1.650	1.00
155 Metal Office Furniture	0	0	0	0	1.00
156 Public Building Furniture	0	1.290	2.749	4.039	1.00
157 Wood Partitions and Fixtures	0	60	162	222	1.00
158 Metal Partitions and Fixtures	0	172	294	467	1.00
159 Blinds- Shades- and Drapery Hardw	0	41	51.555	51.596	1.00
160 Furniture and Fixtures- N.E.C	0	12	285	297	1.00
161 Pulp Mills	0	0	0	0	1.00
162 Paper Mills- Except Building Pape	0	182	107	289	1.00
163 Paperboard Mills	0	34	20	55	1.00
164 Paperboard Containers and Boxes	0	47.470	10.163	57.633	1.00
165 Paper Coated & Laminated Packag	0	511	153	664	1.00
166 Paper Coated & Laminated N.E.C.	0	0	0	0	1.00
167 Bags- Plastic	0	0	0	0	1.00
168 Bags- Paper	0	0	0	0	1.00
169 Die-cut Paper and Board	0	121	32	152	1.00
170 Sanitary Paper Products	0	0	0	0	1.00
171 Envelopes	0	0	0	0	1.00
172 Stationery Products	0	0	0	0	1.00
173 Converted Paper Products- N.E.C	0	187	167	354	1.00
174 Newspapers	0	1.069.786	140.481	1.210.266	1.00
175 Periodicals	0	767.562	101.023	868.585	1.00
176 Book Publishing	35.045.392	581.032	116.321	35.742.744	1.00
177 Book Printing	0	994.561	4.662	999.223	1.00
178 Miscellaneous Publishing	4.565.983	300.552	35.481	4.902.016	1.00
179 Commercial Printing	0	1.997.594	179.940	2.177.534	1.00
180 Manifold Business Forms	0	22.784	3.409	26.193	1.00
181 Greeting Card Publishing	0	0	0	0	1.00
182 Blankbooks and Looseleaf Binder	0	0	0	0	1.00
183 Bookbinding & Related	0	364.568	2.210	366.777	1.00
184 Typesetting	0	23.181	1.760	24.941	1.00
185 Plate Making	0	15.065	1.433	16.498	1.00
186 Alkalies & Chlorine	0	0	0	0	1.00
187 Industrial Gases	0	3.188	4.241	7.429	1.00
188 Inorganic Pigments	0	0	0	0	1.00
189 Inorganic Chemicals Nec.	0	0	0	0	1.00
190 Cyclic Crudes- Interm. & Indus. Or	0	39.645	52.736	92.381	1.00
191 Plastics Materials and Resins	0	0	0	0	1.00
192 Synthetic Rubber	0	0	0	0	1.00
193 Cellulosic Man-made Fibers	0	0	0	0	1.00
194 Organic Fibers- Noncellulosic	0	0	0	0	1.00
195 Drugs	0	12.458	901.773	914.230	1.00
196 Soap and Other Detergents	0	1.535	9.503	11.039	1.00

Industry	Direct*	Indirect*	Induced*	Total*	Deflator
197 Polishes and Sanitation Goods	0	2.292	8.130	10.423	1.00
198 Surface Active Agents	0	0	0	0	1.00
199 Toilet Preparations	0	303	75.811	76.114	1.00
200 Paints and Allied Products	0	83	23	106	1.00
201 Gum and Wood Chemicals	0	0	0	0	1.00
202 Nitrogenous and Phosphatic Fertili	0	0	0	0	1.00
203 Fertilizers- Mixing Only	0	0	0	0	1.00
204 Agricultural Chemicals- N.E.C	0	0	0	0	1.00
205 Adhesives and Sealants	0	0	0	0	1.00
206 Explosives	0	0	0	0	1.00
207 Printing Ink	0	0	0	0	1.00
208 Carbon Black	0	0	0	0	1.00
209 Chemical Preparations- N.E.C	0	1.441	847	2.288	1.00
210 Petroleum Refining	0	3.954	8.762	12.716	1.00
211 Paving Mixtures and Blocks	0	4.615	3.986	8.601	1.00
212 Asphalt Felts and Coatings	0	1.447	985	2.432	1.00
213 Lubricating Oils and Greases	0	0	0	0	1.00
214 Petroleum and Coal Products- N.E.	0	0	0	0	1.00
215 Tires and Inner Tubes	0	0	0	0	1.00
216 Rubber and Plastics Footwear	0	0	0	0	1.00
217 Rubber and Plastics Hose and Belti	0	0	0	0	1.00
218 Gaskets- Packing and Sealing Devic	0	9	8	17	1.00
219 Fabricated Rubber Products- N.E.C.	0	61	67	128	1.00
220 Miscellaneous Plastics Products	0	5.223	2.681	7.904	1.00
221 Leather Tanning and Finishing	0	1.476	630	2.107	1.00
222 Footwear Cut Stock	0	0	0	0	1.00
223 House Slippers	0	0	0	0	1.00
224 Shoes- Except Rubber	0	3	1.864	1.867	1.00
225 Leather Gloves and Mittens	0	0	0	0	1.00
226 Luggage	0	0	0	0	1.00
227 Womens Handbags and Purses	0	0	0	0	1.00
228 Personal Leather Goods	0	0	0	0	1.00
229 Leather Goods- N.E.C	0	0	0	0	1.00
230 Glass and Glass Products- Exc Con	0	20.908	2.942	23.850	1.00
231 Glass Containers	0	0	0	0	1.00
232 Cement- Hydraulic	0	0	0	0	1.00
233 Brick and Structural Clay Tile	0	0	0	0	1.00
234 Ceramic Wall and Floor Tile	0	0	0	0	1.00
235 Clay Refractories	0	0	0	0	1.00
236 Structural Clay Products- N.E.C	0	0	0	0	1.00
237 Vitreous Plumbing Fixtures	0	0	0	0	1.00
238 Vitreous China Food Utensils	0	0	0	0	1.00
239 Fine Earthenware Food Utensils	0	0	0	0	1.00
240 Porcelain Electrical Supplies	0	0	0	0	1.00
241 Pottery Products- N.E.C	0	217	172	389	1.00
242 Concrete Block and Brick	0	1	1	2	1.00
243 Concrete Products- N.E.C	0	15	11	26	1.00
244 Ready-mixed Concrete	0	129	123	251	1.00
245 Lime	0	124	153	277	1.00

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Industry	Direct*	Indirect*	Induced*	Total*	Deflator
246 Gypsum Products	0	0	0	0	1.00
247 Cut Stone and Stone Products	0	0	0	0	1.00
248 Abrasive Products	0	0	0	0	1.00
249 Asbestos Products	0	0	0	0	1.00
250 Minerals- Ground Or Treated	0	84	97	181	1.00
251 Mineral Wool	0	0	0	0	1.00
252 Nonclay Refractories	0	0	0	0	1.00
253 Nonmetallic Mineral Products- N.E	0	50	74	124	1.00
254 Blast Furnaces and Steel Mills	0	0	0	0	1.00
255 Electrometallurgical Products	0	0	0	0	1.00
256 Steel Wire and Related Products	0	0	0	0	1.00
257 Cold Finishing Of Steel Shapes	0	0	0	0	1.00
258 Steel Pipe and Tubes	0	0	0	0	1.00
259 Iron and Steel Foundries	0	38	16	54	1.00
260 Primary Copper	0	0	0	0	1.00
261 Primary Aluminum	0	0	0	0	1.00
262 Primary Nonferrous Metals- N.E.C	0	0	0	0	1.00
263 Secondary Nonferrous Metals	0	0	0	0	1.00
264 Copper Rolling and Drawing	0	0	0	0	1.00
265 Aluminum Rolling and Drawing	0	0	0	0	1.00
266 Nonferrous Rolling and Drawing- N	0	14	11	25	1.00
267 Nonferrous Wire Drawing and Insu	0	1.692	661	2.353	1.00
268 Aluminum Foundries	0	0	0	0	1.00
269 Brass- Bronze- and Copper Foundri	0	0	0	0	1.00
270 Nonferrous Castings- N.E.C.	0	0	0	0	1.00
271 Metal Heat Treating	0	0	0	0	1.00
272 Primary Metal Products- N.E.C	0	0	0	0	1.00
273 Metal Cans	0	0	0	0	1.00
274 Metal Barrels- Drums and Pails	0	0	0	0	1.00
275 Cutlery	0	0	0	0	1.00
276 Hand and Edge Tools- N.E.C.	0	0	0	0	1.00
277 Hand Saws and Saw Blades	0	0	0	0	1.00
278 Hardware- N.E.C.	0	0	0	0	1.00
279 Metal Sanitary Ware	0	0	0	0	1.00
280 Plumbing Fixture Fittings and Trim	0	0	0	0	1.00
281 Heating Equipment- Except Electr	0	0	0	0	1.00
282 Fabricated Structural Metal	0	90	62	152	1.00
283 Metal Doors- Sash- and Trim	0	109	80	189	1.00
284 Fabricated Plate Work (Boiler Shop	0	198	115	313	1.00
285 Sheet Metal Work	0	251	284	535	1.00
286 Architectural Metal Work	0	96	65	161	1.00
287 Prefabricated Metal Buildings	0	0	0	0	1.00
288 Miscellaneous Metal Work	0	0	0	0	1.00
289 Screw Machine Products and Bolts	0	487	340	828	1.00
290 Iron and Steel Forgings	0	0	0	0	1.00
291 Nonferrous Forgings	0	0	0	0	1.00
292 Automotive Stampings	0	0	0	0	1.00
293 Crowns and Closures	0	0	0	0	1.00
294 Metal Stampings- N.E.C.	0	6.153	12.180	18.333	1.00

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Industry	Direct*	Indirect*	Induced*	Total*	Deflator
295 Plating and Polishing	0	811	293	1.105	1.00
296 Metal Coating and Allied Services	0	1.226	457	1.684	1.00
297 Small Arms Ammunition	0	0	0	0	1.00
298 Ammunition- Except For Small Ar	0	0	0	0	1.00
299 Small Arms	0	0	0	0	1.00
300 Other Ordnance and Accessories	0	0	0	0	1.00
301 Industrial and Fluid Valves	0	0	0	0	1.00
302 Steel Springs- Except Wire	0	0	0	0	1.00
303 Pipe- Valves- and Pipe Fittings	0	967	673	1.639	1.00
304 Miscellaneous Fabricated Wire Pro	0	4.266	2.036	6.303	1.00
305 Metal Foil and Leaf	0	0	0	0	1.00
306 Fabricated Metal Products- N.E.C.	0	2.008	805	2.813	1.00
307 Steam Engines and Turbines	0	95	72	167	1.00
308 Internal Combustion Engines- N.E.	0	0	0	0	1.00
309 Farm Machinery and Equipment	0	188	207	395	1.00
310 Lawn and Garden Equipment	0	0	0	0	1.00
311 Construction Machinery and Equir	0	0	0	0	1.00
312 Mining Machinery- Except Oil Fiel	0	0	0	0	1.00
313 Oil Field Machinery	0	698	238	936	1.00
314 Elevators and Moving Stairways	0	0	0	0	1.00
315 Conveyors and Conveying Equipm	0	0	0	0	1.00
316 Hoists- Cranes- and Monorails	0	0	0	0	1.00
317 Industrial Trucks and Tractors	0	0	0	0	1.00
318 Machine Tools- Metal Cutting Tyı	0	0	0	0	1.00
319 Machine Tools- Metal Forming Ty	0	0	0	0	1.00
320 Industrial Patterns	0	0	0	0	1.00
321 Special Dies and Tools and Accesso	0	6.846	1.321	8.167	1.00
322 Power Driven Hand Tools	0	0	0	0	1.00
323 Rolling Mill Machinery	0	0	0	0	1.00
324 Welding Apparatus	0	0	0	0	1.00
325 Metalworking Machinery- N.E.C.	0	0	0	0	1.00
326 Textile Machinery	0	0	0	0	1.00
327 Woodworking Machinery	0	0	0	0	1.00
328 Paper Industries Machinery	0	0	0	0	1.00
329 Printing Trades Machinery	0	0	0	0	1.00
330 Food Products Machinery	0	3.826	449	4.275	1.00
331 Special Industry Machinery N.E.C.	0	30.047	11.282	41.330	1.00
332 Pumps and Compressors	0	0	0	0	1.00
333 Ball and Roller Bearings	0	0	0	0	1.00
334 Blowers and Fans	0	17	9	26	1.00
335 Packaging Machinery	0	0	0	0	1.00
336 Power Transmission Equipment	0	5	2	7	1.00
337 Industrial Furnaces and Ovens	0	0	0	0	1.00
338 General Industrial Machinery- N.E.	0	22	4	26	1.00
339 Electronic Computers	0	1.273.903	320.184	1.594.087	1.00
340 Computer Storage Devices	0	0	0	0	1.00
341 Computer Terminals	0	2.665	633	3.299	1.00
342 Computer Peripheral Equipment-	0	158.791	37.746	196.537	1.00
343 Calculating and Accounting Machi	0	0	0	0	1.00

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Industry	Direct*	Indirect*	Induced*	Total*	Deflator
344 Typewriters and Office Machines N	0	0	0	0	1.00
345 Automatic Merchandising Machine	0	0	0	0	1.00
346 Commercial Laundry Equipment	0	0	0	0	1.00
347 Refrigeration and Heating Equipme	0	1.886	1.973	3.859	1.00
348 Measuring and Dispensing Pumps	0	0	0	0	1.00
349 Service Industry Machines- N.E.C.	0	1.625	526	2.151	1.00
350 Carburetors- Pistons- Rings- Valves	0	0	0	0	1.00
351 Fluid Power Cylinders & Actuators	0	0	0	0	1.00
352 Fluid Power Pumps & Motors	0	0	0	0	1.00
353 Scales and Balances	0	0	0	0	1.00
354 Industrial Machines N.E.C.	0	982	546	1.528	1.00
355 Transformers	0	233	60	293	1.00
356 Switchgear and Switchboard Appara	0	177	157	335	1.00
357 Motors and Generators	0	3.493	3.448	6.941	1.00
358 Carbon and Graphite Products	0	0	0	0	1.00
359 Relays & Industrial Controls	0	8.853	2.602	11.455	1.00
360 Electrical Industrial Apparatus- N.E	0	0	0	0	1.00
361 Household Cooking Equipment	0	0	0	0	1.00
362 Household Refrigerators and Freeze	0	0	0	0	1.00
363 Household Laundry Equipment	0	0	0	0	1.00
364 Electric Housewares and Fans	0	0	0	0	1.00
365 Household Vacuum Cleaners	0	0	0	0	1.00
366 Household Appliances- N.E.C.	0	0	0	0	1.00
367 Electric Lamps	0	0	0	0	1.00
368 Wiring Devices	0	114	68	182	1.00
369 Lighting Fixtures and Equipment	0	6.051	3.116	9.167	1.00
370 Radio and TV Receiving Sets	0	2.334	52.211	54.545	1.00
371 Phonograph Records and Tape	0	0	0	0	1.00
372 Telephone and Telegraph Apparatu	0	54.441	67.062	121.503	1.00
373 Radio and Tv Communication Equ	0	3.206	19.413	22.619	1.00
374 Communications Equipment N.E.C	0	465	2.817	3.283	1.00
375 Electron Tubes	0	0	0	0	1.00
376 Printed Circuit Boards	0	56.364	15.259	71.623	1.00
377 Semiconductors and Related Device	0	375.441	116.403	491.844	1.00
378 Electronic Components- N.E.C.	0	36.066	9.764	45.829	1.00
379 Storage Batteries	0	0	0	0	1.00
380 Primary Batteries- Dry and Wet	0	0	0	0	1.00
381 Engine Electrical Equipment	0	0	0	0	1.00
382 Magnetic & Optical Recording Me	0	0	0	0	1.00
383 Electrical Equipment- N.E.C.	0	145	4.715	4.860	1.00
384 Motor Vehicles	0	362	29.380	29.742	1.00
385 Truck and Bus Bodies	0	0	0	0	1.00
386 Motor Vehicle Parts and Accessori	0	18.489	8.629	27.118	1.00
387 Truck Trailers	0	0	0	0	1.00
388 Motor Homes	0	0	0	0	1.00
389 Aircraft	0	1	8	9	1.00
390 Aircraft and Missile Engines and P	0	0	0	0	1.00
391 Aircraft and Missile Equipment-	0	104	87	191	1.00
392 Ship Building and Repairing	0	0	0	0	1.00

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Industry	Direct*	Indirect*	Induced*	Total*	Deflator
393 Boat Building and Repairing	0	62	253	314	1.00
394 Railroad Equipment	0	0	0	0	1.00
395 Motorcycles- Bicycles- and Parts	0	0	0	0	1.00
396 Complete Guided Missiles	0	0	0	0	1.00
397 Travel Trailers and Camper	0	2	38	39	1.00
398 Tanks and Tank Components	0	0	0	0	1.00
399 Transportation Equipment- N.E.C	0	41	183	224	1.00
400 Search & Navigation Equipment	0	506	2.132	2.638	1.00
401 Laboratory Apparatus & Furniture	0	0	0	0	1.00
402 Automatic Temperature Controls	0	24	16	40	1.00
403 Mechanical Measuring Devices	0	32.783	11.177	43.960	1.00
404 Instruments To Measure Electricit	0	1.092	1.367	2.459	1.00
405 Analytical Instruments	0	1.091	8.807	9.899	1.00
406 Optical Instruments & Lenses	0	12	95	107	1.00
407 Surgical and Medical Instrument	0	217	3.086	3.302	1.00
408 Surgical Appliances and Supplies	0	8.140	134.805	142.945	1.00
409 Dental Equipment and Supplies	0	0	0	0	1.00
410 X-Ray Apparatus	0	0	0	0	1.00
411 Electromedical Apparatus	0	540	5.067	5.608	1.00
412 Ophthalmic Goods	0	64	13.993	14.057	1.00
413 Photographic Equipment and Supp	0	3.176	4.741	7.916	1.00
414 Watches- Clocks- and Parts	0	0	0	0	1.00
415 Jewelry- Precious Metal	0	1.698	29.689	31.387	1.00
416 Silverware and Plated Ware	0	0	0	0	1.00
417 Jewelers Materials and Lapidary W	0	0	0	0	1.00
418 Musical Instruments	502.134	305	251	502.690	1.00
419 Dolls	0	0	0	0	1.00
420 Games- Toys- and Childrens Vehicl	0	1.466	7.424	8.891	1.00
421 Sporting and Athletic Goods- N.E.C	0	1.130	9.455	10.585	1.00
422 Pens and Mechanical Pencils	0	0	0	0	1.00
423 Lead Pencils and Art Goods	0	0	0	0	1.00
424 Marking Devices	0	410	58	469	1.00
425 Carbon Paper and Inked Ribbons	0	0	0	0	1.00
426 Costume Jewelry	0	0	0	0	1.00
427 Fasteners- Buttons- Needles- Pins	0	0	0	0	1.00
428 Brooms and Brushes	0	0	0	0	1.00
429 Signs and Advertising Displays	0	93.686	8.581	102.267	1.00
430 Burial Caskets and Vaults	0	0	0	0	1.00
431 Hard Surface Floor Coverings	0	0	0	0	1.00
432 Manufacturing Industries- N.E.C.	0	1.219	920	2.140	1.00
433 Railroads and Related Services	0	37.673	30.912	68.585	1.00
434 Local- Interurban Passenger Transi	0	156.434	331.462	487.896	1.00
435 Motor Freight Transport and Ware	0	1.640.109	908.350	2.548.458	1.00
436 Water Transportation	0	18.341	30.565	48.905	1.00
437 Air Transportation	0	433.014	474.128	907.142	1.00
438 Pipe Lines- Except Natural Gas	0	25.546	16.148	41.695	1.00
439 Arrangement Of Passenger Transp	0	488.626	109.250	597.876	1.00
440 Transportation Services	25.849.848	433.636	82.618	26.366.102	1.00
441 Communications- Except Radio an	0	4.198.479	2.274.707	6.473.186	1.00

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Industry	Direct*	Indirect*	Induced*	Total*	Deflator
442 Radio and TV Broadcasting	0	3.034.446	302.038	3.336.484	1.00
443 Electric Services	0	41.046	30.930	71.977	1.00
444 Gas Production and Distribution	0	367.853	527.106	894.959	1.00
445 Water Supply and Sewerage Systen	0	67.196	108.471	175.667	1.00
446 Sanitary Services and Steam Supply	0	642.985	178.671	821.656	1.00
447 Wholesale Trade	0	8.410.290	6.035.201	14.445.490	1.00
448 Building Materials & Gardening	0	62.267	983.598	1.045.865	1.00
449 General Merchandise Stores	56.623.972	25.552	1.285.828	57.935.352	1.00
450 Food Stores	11.426.100	29.433	2.414.764	13.870.297	1.00
451 Automotive Dealers & Service Sta	0	81.261	3.118.476	3.199.737	1.00
452 Apparel & Accessory Stores	0	13.694	929.986	943.679	1.00
453 Furniture & Home Furnishings Stor	125.003.600	22.920	1.120.971	126.147.488	1.00
454 Eating & Drinking	44.494.592	1.203.108	4.640.666	50.338.368	1.00
455 Miscellaneous Retail	0	114.316	3.654.445	3.768.761	1.00
456 Banking	0	1.581.594	1.947.944	3.529.537	1.00
457 Credit Agencies	0	1.902.607	1.225.801	3.128.408	1.00
458 Security and Commodity Brokers	0	1.117.581	414.307	1.531.888	1.00
459 Insurance Carriers	0	385.711	3.463.746	3.849.457	1.00
460 Insurance Agents and Brokers	0	73.430	659.417	732.847	1.00
461 Owner-occupied Dwellings	0	0	10.580.478	10.580.478	1.00
462 Real Estate	0	12.423.252	5.320.313	17.743.564	1.00
463 Hotels and Lodging Places	39.151.372	1.051.288	986.835	41.189.496	1.00
464 Laundry- Cleaning and Shoe Repair	0	451.560	400.767	852.327	1.00
465 Portrait and Photographic Studios	0	5.199	112.568	117.767	1.00
466 Beauty and Barber Shops	0	0	481.854	481.854	1.00
467 Funeral Service and Crematories	0	0	78.418	78.418	1.00
468 Miscellaneous Personal Services	0	21.396	463.266	484.661	1.00
469 Advertising	0	2.598.738	235.895	2.834.633	1.00
470 Other Business Services	0	6.131.163	912.474	7.043.636	1.00
471 Photofinishing- Commercial Photo	0	1.243.524	285.751	1.529.274	1.00
472 Services To Buildings	0	1.174.824	275.973	1.450.797	1.00
473 Equipment Rental and Leasing	0	282.937	79.927	362.864	1.00
474 Personnel Supply Services	0	3.096.808	475.027	3.571.835	1.00
475 Computer and Data Processing Ser	0	5.746.845	936.267	6.683.112	1.00
476 Detective and Protective Services	0	881.892	149.147	1.031.039	1.00
477 Automobile Rental and Leasing	0	341.597	166.692	508.289	1.00
478 Automobile Parking and Car Wash	0	115.607	138.327	253.934	1.00
479 Automobile Repair and Services	0	611.318	1.124.639	1.735.957	1.00
480 Electrical Repair Service	0	96.966	57.141	154.107	1.00
481 Watch- Clock- Jewelry and Furnitu	0	2.059	33.656	35.715	1.00
482 Miscellaneous Repair Shops	0	245.412	90.775	336.187	1.00
483 Motion Pictures	16.869.334	9.684.038	547.713	27.101.084	1.00
484 Theatrical Producers- Bands Etc.	12.819.137	4.958.685	303.207	18.081.030	1.00
485 Bowling Alleys and Pool Halls	0	87	19.820	19.907	1.00
486 Commercial Sports Except Racing	0	112.037	9.181	121.219	1.00
487 Racing and Track Operation	0	773	130.376	131.150	1.00
488 Amusement and Recreation Service	21.517.358	34	696.988	22.214.380	1.00
489 Membership Sports and Recreation	0	25.295	299.034	324.329	1.00
490 Doctors and Dentists	0	0	5.101.949	5.101.949	1.00

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Industry	Direct*	Indirect*	Induced*	Total*	Deflator
491 Nursing and Protective Care	0	0	337.179	337.179	1.00
492 Hospitals	0	2.635	2.196.102	2.198.736	1.00
493 Other Medical and Health Services	0	284	1.121.746	1.122.030	1.00
494 Legal Services	0	1.975.880	1.946.580	3.922.460	1.00
495 Elementary and Secondary Schools	0	0	105.900	105.900	1.00
496 Colleges- Universities- Schools	0	2.091	94.845	96.936	1.00
497 Other Educational Services	31.089.180	3.818	381.074	31.474.072	1.00
498 Job Trainings & Related Services	0	84.375	159.919	244.294	1.00
499 Child Day Care Services	0	0	564.495	564.495	1.00
500 Social Services- N.E.C.	0	0	738.957	738.957	1.00
501 Residential Care	0	0	399.283	399.283	1.00
502 Other Nonprofit Organizations	0	16.106	239.114	255.221	1.00
503 Business Associations	0	451.730	224.500	676.230	1.00
504 Labor and Civic Organizations	0	4.416	407.413	411.830	1.00
505 Religious Organizations	0	0	263.618	263.618	1.00
506 Engineering- Architectural Services	0	355.120	165.786	520.907	1.00
507 Accounting- Auditing and Bookkee	0	2.734.018	431.793	3.165.811	1.00
508 Management and Consulting Servic	0	2.909.178	457.205	3.366.383	1.00
509 Research- Development & Testing	0	999.573	210.600	1.210.172	1.00
510 Local Government Passenger Tran	0	28.489	61.513	90.002	1.00
511 State and Local Electric Utilities	0	2.715.780	2.056.656	4.772.436	1.00
512 Other State and Local Govt Enterp	0	745.845	1.042.450	1.788.295	1.00
513 U.S. Postal Service	0	1.439.799	350.331	1.790.130	1.00
514 Federal Electric Utilities	0	0	0	0	1.00
515 Other Federal Government Enterpr	0	22.185	36.064	58.248	1.00
516 Noncomparable Imports	0	0	0	0	1.00
517 Scrap	0	0	0	0	1.00
518 Used and Secondhand Goods	0	0	0	0	1.00
519 Federal Government - Military	0	0	0	0	1.00
520 Federal Government - Non-Militar	0	0	0	0	1.00
521 Commodity Credit Corporation	0	0	0	0	1.00
522 State & Local Government - Educa	0	0	0	0	1.00
523 State & Local Government - Non-E	0	0	0	0	1.00
524 Rest Of The World Industry	0	0	0	0	1.00
525 Domestic Services	0	0	318.020	318.020	1.00
526 Dummy	0	0	0	0	1.00
527 Dummy	0	0	0	0	1.00
528 Inventory Valuation Adjustment	0	0	0	0	1.00
25001 Foreign Trade	0	0	0	0	1.00
28001 Domestic Trade	0	0	0	0	1.00
Total	424.958.002	103,828,142	87,359,721	616,145,863	

*1998 Dollars - if results are deflated and aggregated, then deflators displayed are set to 1.0 (results have been deflated)

Employment Impact

August 20, 2001

IMPACT NAME: SIC MULTIPLIER: Type SAM
AustinRedo.iap

Industry	Direct*	Indirect*	Induced*	Total*
1 Dairy Farm Products	0.0	0.0	0.0	0.0
2 Poultry and Eggs	0.0	0.0	0.0	0.0
3 Ranch Fed Cattle	0.0	0.0	0.1	0.1
4 Range Fed Cattle	0.0	0.0	0.1	0.1
5 Cattle Feedlots	0.0	0.0	0.0	0.0
6 Sheep- Lambs and Goats	0.0	0.0	0.0	0.0
7 Hogs- Pigs and Swine	0.0	0.0	0.0	0.0
8 Other Meat Animal Products	0.0	0.0	0.0	0.0
9 Miscellaneous Livestock	0.0	0.0	0.3	0.3
10 Cotton	0.0	0.0	0.0	0.0
11 Food Grains	0.0	0.0	0.0	0.0
12 Feed Grains	0.0	0.0	0.0	0.0
13 Hay and Pasture	0.0	0.0	0.0	0.0
14 Grass Seeds	0.0	0.0	0.0	0.0
15 Tobacco	0.0	0.0	0.0	0.0
16 Fruits	0.0	0.0	0.0	0.0
17 Tree Nuts	0.0	0.0	0.0	0.0
18 Vegetables	0.0	0.0	0.0	0.0
19 Sugar Crops	0.0	0.0	0.0	0.0
20 Miscellaneous Crops	0.0	0.0	0.0	0.0
21 Oil Bearing Crops	0.0	0.0	0.0	0.0
22 Forest Products	0.0	0.0	0.0	0.0
23 Greenhouse and Nursery Products	0.0	0.1	0.4	0.5
24 Forestry Products	0.0	0.0	0.0	0.0
25 Commercial Fishing	0.0	0.0	0.0	0.0
26 Agricultural- Forestry- Fishery Serv	0.0	0.0	0.0	0.0
27 Landscape and Horticultural Servic	0.0	5.1	2.5	7.6
28 Iron Ores	0.0	0.0	0.0	0.0
29 Copper Ores	0.0	0.0	0.0	0.0
30 Lead and Zinc Ores	0.0	0.0	0.0	0.0
31 Gold Ores	0.0	0.0	0.0	0.0
32 Silver Ores	0.0	0.0	0.0	0.0
33 Ferroalloy Ores- Except Vanadium	0.0	0.0	0.0	0.0
34 Metal Mining Services	0.0	0.0	0.0	0.0
35 Uranium-radium-vanadium Ores	0.0	0.0	0.0	0.0
36 Metal Ores- Not Elswhere Classifie	0.0	0.0	0.0	0.0
37 Coal Mining	0.0	0.0	0.0	0.0
38 Natural Gas & Crude Petroleum	0.0	0.5	0.8	1.3
39 Natural Gas Liquids	0.0	0.0	0.0	0.1
40 Dimension Stone	0.0	0.0	0.0	0.0
41 Sand and Gravel	0.0	0.0	0.0	0.0
42 Clay- Ceramic- Refractory Mineral	0.0	0.0	0.0	0.0
43 Potash- Soda- and Borate Minerals	0.0	0.0	0.0	0.0
44 Phosphate Rock	0.0	0.0	0.0	0.0
45 Chemical- Fertilizer Mineral Minin	0.0	0.0	0.0	0.0
46 Nonmetallic Minerals (Except Fuel	0.0	0.0	0.0	0.0
47 Misc. Nonmetallic Minerals- N.E.C	0.0	0.0	0.0	0.0
48 New Residential Structures	0.0	0.0	0.0	0.0
49 New Industrial and Commercial Bui	0.0	0.0	0.0	0.0
50 New Utility Structures	0.0	0.0	0.0	0.0
51 New Highways and Streets	0.0	0.0	0.0	0.0
52 New Farm Structures	0.0	0.0	0.0	0.0
53 New Mineral Extraction Facilities	0.0	0.0	0.0	0.0
54 New Government Facilities	0.0	0.0	0.0	0.0
55 Maintenance and Repair- Residenti	0.0	2.7	5.6	8.4
56 Maintenance and Repair Other Fac	0.0	10.1	3.3	13.4

*Number of Jobs

Industry	Direct*	Indirect*	Induced*	Total*
57 Maintenance and Repair Oil and Ga	0.0	0.1	0.1	0.2
58 Meat Packing Plants	0.0	0.0	0.1	0.1
59 Sausages and Other Prepared Meats	0.0	0.0	0.1	0.1
60 Poultry Processing	0.0	0.0	0.0	0.0
61 Creamery Butter	0.0	0.0	0.0	0.0
62 Cheese- Natural and Processed	0.0	0.0	0.0	0.0
63 Condensed and Evaporated Milk	0.0	0.0	0.0	0.0
64 Ice Cream and Frozen Desserts	0.0	0.0	0.0	0.0
65 Fluid Milk	0.0	0.0	0.2	0.2
66 Canned Specialties	0.0	0.0	0.0	0.0
67 Canned Fruits and Vegetables	0.0	0.0	0.0	0.0
68 Dehydrated Food Products	0.0	0.0	0.0	0.0
69 Pickles- Sauces- and Salad Dressing	0.0	0.0	0.0	0.0
70 Frozen Fruits- Juices and Vegetable	0.0	0.0	0.0	0.0
71 Frozen Specialties	0.0	0.0	0.0	0.0
72 Flour and Other Grain Mill Product	0.0	0.0	0.0	0.0
73 Cereal Preparations	0.0	0.0	0.0	0.0
74 Rice Milling	0.0	0.0	0.0	0.0
75 Blended and Prepared Flour	0.0	0.0	0.0	0.0
76 Wet Corn Milling	0.0	0.0	0.0	0.0
77 Dog- Cat- and Other Pet Food	0.0	0.0	0.0	0.0
78 Prepared Feeds- N.E.C	0.0	0.0	0.0	0.0
79 Bread- Cake- and Related Products	0.0	0.0	0.2	0.2
80 Cookies and Crackers	0.0	0.0	0.0	0.0
81 Sugar	0.0	0.0	0.0	0.0
82 Confectionery Products	0.0	0.0	0.0	0.0
83 Chocolate and Cocoa Products	0.0	0.0	0.0	0.0
84 Chewing Gum	0.0	0.0	0.0	0.0
85 Salted and Roasted Nuts & Seeds	0.0	0.0	0.0	0.0
86 Cottonseed Oil Mills	0.0	0.0	0.0	0.0
87 Soybean Oil Mills	0.0	0.0	0.0	0.0
88 Vegetable Oil Mills- N.E.C	0.0	0.0	0.0	0.0
89 Animal and Marine Fats and Oils	0.0	0.0	0.0	0.0
90 Shortening and Cooking Oils	0.0	0.0	0.0	0.0
91 Malt Beverages	0.0	0.0	0.0	0.0
92 Malt	0.0	0.0	0.0	0.0
93 Wines- Brandy- and Brandy Spirits	0.0	0.0	0.0	0.0
94 Distilled Liquor- Except Brandy	0.0	0.0	0.0	0.0
95 Bottled and Canned Soft Drinks &	0.0	0.0	0.0	0.0
96 Flavoring Extracts and Syrups- N.E	0.0	0.0	0.0	0.0
97 Canned and Cured Sea Foods	0.0	0.0	0.0	0.0
98 Prepared Fresh Or Frozen Fish Or S	0.0	0.0	0.0	0.0
99 Roasted Coffee	0.0	0.0	0.0	0.0
100 Potato Chips & Similar Snacks	0.0	0.0	0.3	0.3
101 Manufactured Ice	0.0	0.0	0.1	0.1
102 Macaroni and Spaghetti	0.0	0.0	0.0	0.0
103 Food Preparations- N.E.C	0.0	0.0	0.3	0.3
104 Cigarettes	0.0	0.0	0.0	0.0
105 Cigars	0.0	0.0	0.0	0.0
106 Chewing and Smoking Tobacco	0.0	0.0	0.0	0.0
107 Tobacco Stemming and Redrying	0.0	0.0	0.0	0.0
108 Broadwoven Fabric Mills and Finis	0.0	0.0	0.0	0.0
109 Narrow Fabric Mills	0.0	0.0	0.0	0.0
110 Womens Hosiery- Except Socks	0.0	0.0	0.0	0.0
111 Hosiery- N.E.C	0.0	0.0	0.0	0.0
112 Knit Outerwear Mills	0.0	0.0	0.0	0.0

Industry	Direct*	Indirect*	Induced*	Total*
113 Knit Underwear Mills	0.0	0.0	0.0	0.0
114 Knit Fabric Mills	0.0	0.0	0.0	0.0
115 Knitting Mills- N.E.C.	0.0	0.0	0.0	0.0
116 Yarn Mills and Finishing Of Textile	0.0	0.0	0.0	0.0
117 Carpets and Rugs	0.0	0.0	0.0	0.0
118 Thread Mills	0.0	0.0	0.0	0.0
119 Coated Fabrics- Not Rubberized	0.0	0.0	0.0	0.0
120 Tire Cord and Fabric	0.0	0.0	0.0	0.0
121 Nonwoven Fabrics	0.0	0.0	0.0	0.0
122 Cordage and Twine	0.0	0.0	0.0	0.0
123 Textile Goods- N.E.C.	0.0	0.0	0.0	0.0
124 Apparel Made From Purchased Ma	0.0	0.0	0.1	0.1
125 Curtains and Draperies	0.0	0.0	0.0	0.0
126 Housefurnishings- N.E.C.	0.0	0.0	0.0	0.0
127 Textile Bags	0.0	0.0	0.0	0.0
128 Canvas Products	0.0	0.0	0.0	0.0
129 Pleating and Stitching	0.0	0.0	0.0	0.0
130 Automotive and Apparel Trimmin	0.0	0.0	0.2	0.2
131 Schiffi Machine Embroideries	0.0	0.0	0.0	0.0
132 Fabricated Textile Products- N.E.C	0.0	0.0	0.1	0.1
133 Logging Camps and Logging Contr	0.0	0.0	0.0	0.0
134 Sawmills and Planing Mills- Genera	0.0	0.0	0.0	0.0
135 Hardwood Dimension and Flooring	0.0	0.0	0.0	0.0
136 Special Product Sawmills- N.E.C	0.0	0.0	0.0	0.0
137 Millwork	0.0	0.0	0.0	0.1
138 Wood Kitchen Cabinets	0.0	0.0	0.1	0.1
139 Veneer and Plywood	0.0	0.0	0.0	0.0
140 Structural Wood Members- N.E.C	0.0	0.0	0.0	0.0
141 Wood Containers	0.0	0.0	0.0	0.0
142 Wood Pallets and Skids	0.0	0.1	0.0	0.1
143 Mobile Homes	0.0	0.0	0.0	0.0
144 Prefabricated Wood Buildings	0.0	0.0	0.0	0.0
145 Wood Preserving	0.0	0.0	0.0	0.0
146 Reconstituted Wood Products	0.0	0.0	0.0	0.0
147 Wood Products- N.E.C.	0.0	0.1	0.1	0.1
148 Wood Household Furniture	0.0	0.0	0.3	0.3
149 Upholstered Household Furniture	0.0	0.0	0.0	0.0
150 Metal Household Furniture	0.0	0.0	0.0	0.0
151 Mattresses and Bedsprings	0.0	0.0	0.4	0.4
152 Wood Tv and Radio Cabinets	0.0	0.0	0.0	0.0
153 Household Furniture- N.E.C.	0.0	0.0	0.0	0.0
154 Wood Office Furniture	0.0	0.0	0.0	0.0
155 Metal Office Furniture	0.0	0.0	0.0	0.0
156 Public Building Furniture	0.0	0.0	0.0	0.0
157 Wood Partitions and Fixtures	0.0	0.0	0.0	0.0
158 Metal Partitions and Fixtures	0.0	0.0	0.0	0.0
159 Blinds- Shades- and Drapery Hardw	0.0	0.0	0.3	0.3
160 Furniture and Fixtures- N.E.C	0.0	0.0	0.0	0.0
161 Pulp Mills	0.0	0.0	0.0	0.0
162 Paper Mills- Except Building Pape	0.0	0.0	0.0	0.0
163 Paperboard Mills	0.0	0.0	0.0	0.0
164 Paperboard Containers and Boxes	0.0	0.1	0.0	0.1
165 Paper Coated & Laminated Packag	0.0	0.0	0.0	0.0
166 Paper Coated & Laminated N.E.C.	0.0	0.0	0.0	0.0
167 Bags- Plastic	0.0	0.0	0.0	0.0

Industry	Direct*	Indirect*	Induced*	Total*
168 Bags- Paper	0.0	0.0	0.0	0.0
169 Die-cut Paper and Board	0.0	0.0	0.0	0.0
170 Sanitary Paper Products	0.0	0.0	0.0	0.0
171 Envelopes	0.0	0.0	0.0	0.0
172 Stationery Products	0.0	0.0	0.0	0.0
173 Converted Paper Products- N.E.C	0.0	0.0	0.0	0.0
174 Newspapers	0.0	7.6	0.8	8.4
175 Periodicals	0.0	3.4	0.3	3.7
176 Book Publishing	159.0	2.6	0.3	161.9
177 Book Printing	0.0	6.6	0.0	6.6
178 Miscellaneous Publishing	32.2	1.4	0.1	33.8
179 Commercial Printing	0.0	11.7	0.8	12.5
180 Manifold Business Forms	0.0	0.1	0.0	0.1
181 Greeting Card Publishing	0.0	0.0	0.0	0.0
182 Blankbooks and Looseleaf Binder	0.0	0.0	0.0	0.0
183 Bookbinding & Related	0.0	2.4	0.0	2.4
184 Typesetting	0.0	0.2	0.0	0.2
185 Plate Making	0.0	0.1	0.0	0.2
186 Alkalies & Chlorine	0.0	0.0	0.0	0.0
187 Industrial Gases	0.0	0.0	0.0	0.0
188 Inorganic Pigments	0.0	0.0	0.0	0.0
189 Inorganic Chemicals Nec.	0.0	0.0	0.0	0.0
190 Cyclic Crudes- Interm. & Indus. Or	0.0	0.0	0.0	0.1
191 Plastics Materials and Resins	0.0	0.0	0.0	0.0
192 Synthetic Rubber	0.0	0.0	0.0	0.0
193 Cellulosic Man-made Fibers	0.0	0.0	0.0	0.0
194 Organic Fibers- Noncellulosic	0.0	0.0	0.0	0.0
195 Drugs	0.0	0.0	1.9	1.9
196 Soap and Other Detergents	0.0	0.0	0.0	0.0
197 Polishes and Sanitation Goods	0.0	0.0	0.0	0.0
198 Surface Active Agents	0.0	0.0	0.0	0.0
199 Toilet Preparations	0.0	0.0	0.1	0.1
200 Paints and Allied Products	0.0	0.0	0.0	0.0
201 Gum and Wood Chemicals	0.0	0.0	0.0	0.0
202 Nitrogenous and Phosphatic Fertili	0.0	0.0	0.0	0.0
203 Fertilizers- Mixing Only	0.0	0.0	0.0	0.0
204 Agricultural Chemicals- N.E.C	0.0	0.0	0.0	0.0
205 Adhesives and Sealants	0.0	0.0	0.0	0.0
206 Explosives	0.0	0.0	0.0	0.0
207 Printing Ink	0.0	0.0	0.0	0.0
208 Carbon Black	0.0	0.0	0.0	0.0
209 Chemical Preparations- N.E.C	0.0	0.0	0.0	0.0
210 Petroleum Refining	0.0	0.0	0.0	0.0
211 Paving Mixtures and Blocks	0.0	0.0	0.0	0.0
212 Asphalt Felts and Coatings	0.0	0.0	0.0	0.0
213 Lubricating Oils and Greases	0.0	0.0	0.0	0.0
214 Petroleum and Coal Products- N.E.	0.0	0.0	0.0	0.0
215 Tires and Inner Tubes	0.0	0.0	0.0	0.0
216 Rubber and Plastics Footwear	0.0	0.0	0.0	0.0
217 Rubber and Plastics Hose and Belti	0.0	0.0	0.0	0.0
218 Gaskets- Packing and Sealing Devic	0.0	0.0	0.0	0.0
219 Fabricated Rubber Products- N.E.C.	0.0	0.0	0.0	0.0
220 Miscellaneous Plastics Products	0.0	0.0	0.0	0.0
221 Leather Tanning and Finishing	0.0	0.0	0.0	0.0
222 Footwear Cut Stock	0.0	0.0	0.0	0.0
223 House Slippers	0.0	0.0	0.0	0.0

Industry	Direct*	Indirect*	Induced*	Total*
224 Shoes- Except Rubber	0.0	0.0	0.0	0.0
225 Leather Gloves and Mittens	0.0	0.0	0.0	0.0
226 Luggage	0.0	0.0	0.0	0.0
227 Womens Handbags and Purses	0.0	0.0	0.0	0.0
228 Personal Leather Goods	0.0	0.0	0.0	0.0
229 Leather Goods- N.E.C	0.0	0.0	0.0	0.0
230 Glass and Glass Products- Exc Con	0.0	0.2	0.0	0.2
231 Glass Containers	0.0	0.0	0.0	0.0
232 Cement- Hydraulic	0.0	0.0	0.0	0.0
233 Brick and Structural Clay Tile	0.0	0.0	0.0	0.0
234 Ceramic Wall and Floor Tile	0.0	0.0	0.0	0.0
235 Clay Refractories	0.0	0.0	0.0	0.0
236 Structural Clay Products- N.E.C	0.0	0.0	0.0	0.0
237 Vitreous Plumbing Fixtures	0.0	0.0	0.0	0.0
238 Vitreous China Food Utensils	0.0	0.0	0.0	0.0
239 Fine Earthenware Food Utensils	0.0	0.0	0.0	0.0
240 Porcelain Electrical Supplies	0.0	0.0	0.0	0.0
241 Pottery Products- N.E.C	0.0	0.0	0.0	0.0
242 Concrete Block and Brick	0.0	0.0	0.0	0.0
243 Concrete Products- N.E.C	0.0	0.0	0.0	0.0
244 Ready-mixed Concrete	0.0	0.0	0.0	0.0
245 Lime	0.0	0.0	0.0	0.0
246 Gypsum Products	0.0	0.0	0.0	0.0
247 Cut Stone and Stone Products	0.0	0.0	0.0	0.0
248 Abrasive Products	0.0	0.0	0.0	0.0
249 Asbestos Products	0.0	0.0	0.0	0.0
250 Minerals- Ground Or Treated	0.0	0.0	0.0	0.0
251 Mineral Wool	0.0	0.0	0.0	0.0
252 Nonclay Refractories	0.0	0.0	0.0	0.0
253 Nonmetallic Mineral Products- N.E	0.0	0.0	0.0	0.0
254 Blast Furnaces and Steel Mills	0.0	0.0	0.0	0.0
255 Electrometallurgical Products	0.0	0.0	0.0	0.0
256 Steel Wire and Related Products	0.0	0.0	0.0	0.0
257 Cold Finishing Of Steel Shapes	0.0	0.0	0.0	0.0
258 Steel Pipe and Tubes	0.0	0.0	0.0	0.0
259 Iron and Steel Foundries	0.0	0.0	0.0	0.0
260 Primary Copper	0.0	0.0	0.0	0.0
261 Primary Aluminum	0.0	0.0	0.0	0.0
262 Primary Nonferrous Metals- N.E.C	0.0	0.0	0.0	0.0
263 Secondary Nonferrous Metals	0.0	0.0	0.0	0.0
264 Copper Rolling and Drawing	0.0	0.0	0.0	0.0
265 Aluminum Rolling and Drawing	0.0	0.0	0.0	0.0
266 Nonferrous Rolling and Drawing- N	0.0	0.0	0.0	0.0
267 Nonferrous Wire Drawing and Insu	0.0	0.0	0.0	0.0
268 Aluminum Foundries	0.0	0.0	0.0	0.0
269 Brass- Bronze- and Copper Foundri	0.0	0.0	0.0	0.0
270 Nonferrous Castings- N.E.C.	0.0	0.0	0.0	0.0
271 Metal Heat Treating	0.0	0.0	0.0	0.0
272 Primary Metal Products- N.E.C	0.0	0.0	0.0	0.0
273 Metal Cans	0.0	0.0	0.0	0.0
274 Metal Barrels- Drums and Pails	0.0	0.0	0.0	0.0
275 Cutlery	0.0	0.0	0.0	0.0
276 Hand and Edge Tools- N.E.C.	0.0	0.0	0.0	0.0
277 Hand Saws and Saw Blades	0.0	0.0	0.0	0.0
278 Hardware- N.E.C.	0.0	0.0	0.0	0.0
279 Metal Sanitary Ware	0.0	0.0	0.0	0.0

Industry	Direct*	Indirect*	Induced*	Total*
280 Plumbing Fixture Fittings and Trim	0.0	0.0	0.0	0.0
281 Heating Equipment- Except Electr	0.0	0.0	0.0	0.0
282 Fabricated Structural Metal	0.0	0.0	0.0	0.0
283 Metal Doors- Sash- and Trim	0.0	0.0	0.0	0.0
284 Fabricated Plate Work (Boiler Shou	0.0	0.0	0.0	0.0
285 Sheet Metal Work	0.0	0.0	0.0	0.0
286 Architectural Metal Work	0.0	0.0	0.0	0.0
287 Prefabricated Metal Buildings	0.0	0.0	0.0	0.0
288 Miscellaneous Metal Work	0.0	0.0	0.0	0.0
289 Screw Machine Products and Bolts	0.0	0.0	0.0	0.0
290 Iron and Steel Forgings	0.0	0.0	0.0	0.0
291 Nonferrous Forgings	0.0	0.0	0.0	0.0
292 Automotive Stampings	0.0	0.0	0.0	0.0
293 Crowns and Closures	0.0	0.0	0.0	0.0
294 Metal Stampings- N.E.C.	0.0	0.0	0.1	0.1
295 Plating and Polishing	0.0	0.0	0.0	0.0
296 Metal Coating and Allied Services	0.0	0.0	0.0	0.0
297 Small Arms Ammunition	0.0	0.0	0.0	0.0
298 Ammunition- Except For Small Ar	0.0	0.0	0.0	0.0
299 Small Arms	0.0	0.0	0.0	0.0
300 Other Ordnance and Accessories	0.0	0.0	0.0	0.0
301 Industrial and Fluid Valves	0.0	0.0	0.0	0.0
302 Steel Springs- Except Wire	0.0	0.0	0.0	0.0
303 Pipe- Valves- and Pipe Fittings	0.0	0.0	0.0	0.0
304 Miscellaneous Fabricated Wire Pro	0.0	0.0	0.0	0.0
305 Metal Foil and Leaf	0.0	0.0	0.0	0.0
306 Fabricated Metal Products- N.E.C.	0.0	0.0	0.0	0.0
307 Steam Engines and Turbines	0.0	0.0	0.0	0.0
308 Internal Combustion Engines- N.E.	0.0	0.0	0.0	0.0
309 Farm Machinery and Equipment	0.0	0.0	0.0	0.0
310 Lawn and Garden Equipment	0.0	0.0	0.0	0.0
311 Construction Machinery and Equir	0.0	0.0	0.0	0.0
312 Mining Machinery- Except Oil Fiel	0.0	0.0	0.0	0.0
313 Oil Field Machinery	0.0	0.0	0.0	0.0
314 Elevators and Moving Stairways	0.0	0.0	0.0	0.0
315 Conveyors and Conveying Equipm	0.0	0.0	0.0	0.0
316 Hoists- Cranes- and Monorails	0.0	0.0	0.0	0.0
317 Industrial Trucks and Tractors	0.0	0.0	0.0	0.0
318 Machine Tools- Metal Cutting Tyr	0.0	0.0	0.0	0.0
319 Machine Tools- Metal Forming Ty	0.0	0.0	0.0	0.0
320 Industrial Patterns	0.0	0.0	0.0	0.0
321 Special Dies and Tools and Accesso	0.0	0.1	0.0	0.1
322 Power Driven Hand Tools	0.0	0.0	0.0	0.0
323 Rolling Mill Machinery	0.0	0.0	0.0	0.0
324 Welding Apparatus	0.0	0.0	0.0	0.0
325 Metalworking Machinery- N.E.C.	0.0	0.0	0.0	0.0
326 Textile Machinery	0.0	0.0	0.0	0.0
327 Woodworking Machinery	0.0	0.0	0.0	0.0
328 Paper Industries Machinery	0.0	0.0	0.0	0.0
329 Printing Trades Machinery	0.0	0.0	0.0	0.0
330 Food Products Machinery	0.0	0.0	0.0	0.0
331 Special Industry Machinery N.E.C.	0.0	0.0	0.0	0.1
332 Pumps and Compressors	0.0	0.0	0.0	0.0
333 Ball and Roller Bearings	0.0	0.0	0.0	0.0
334 Blowers and Fans	0.0	0.0	0.0	0.0

Industry	Direct*	Indirect*	Induced*	Total*
335 Packaging Machinery	0.0	0.0	0.0	0.0
336 Power Transmission Equipment	0.0	0.0	0.0	0.0
337 Industrial Furnaces and Ovens	0.0	0.0	0.0	0.0
338 General Industrial Machinery- N.E	0.0	0.0	0.0	0.0
339 Electronic Computers	0.0	2.0	0.5	2.4
340 Computer Storage Devices	0.0	0.0	0.0	0.0
341 Computer Terminals	0.0	0.0	0.0	0.0
342 Computer Peripheral Equipment-	0.0	0.3	0.1	0.4
343 Calculating and Accounting Machi	0.0	0.0	0.0	0.0
344 Typewriters and Office Machines N	0.0	0.0	0.0	0.0
345 Automatic Merchandising Machine	0.0	0.0	0.0	0.0
346 Commercial Laundry Equipment	0.0	0.0	0.0	0.0
347 Refrigeration and Heating Equipme	0.0	0.0	0.0	0.0
348 Measuring and Dispensing Pumps	0.0	0.0	0.0	0.0
349 Service Industry Machines- N.E.C.	0.0	0.0	0.0	0.0
350 Carburetors- Pistons- Rings- Valve	0.0	0.0	0.0	0.0
351 Fluid Power Cylinders & Actuators	0.0	0.0	0.0	0.0
352 Fluid Power Pumps & Motors	0.0	0.0	0.0	0.0
353 Scales and Balances	0.0	0.0	0.0	0.0
354 Industrial Machines N.E.C.	0.0	0.0	0.0	0.0
355 Transformers	0.0	0.0	0.0	0.0
356 Switchgear and Switchboard Appara	0.0	0.0	0.0	0.0
357 Motors and Generators	0.0	0.0	0.0	0.0
358 Carbon and Graphite Products	0.0	0.0	0.0	0.0
359 Relays & Industrial Controls	0.0	0.0	0.0	0.0
360 Electrical Industrial Apparatus- N.I	0.0	0.0	0.0	0.0
361 Household Cooking Equipment	0.0	0.0	0.0	0.0
362 Household Refrigerators and Freeze	0.0	0.0	0.0	0.0
363 Household Laundry Equipment	0.0	0.0	0.0	0.0
364 Electric Housewares and Fans	0.0	0.0	0.0	0.0
365 Household Vacuum Cleaners	0.0	0.0	0.0	0.0
366 Household Appliances- N.E.C.	0.0	0.0	0.0	0.0
367 Electric Lamps	0.0	0.0	0.0	0.0
368 Wiring Devices	0.0	0.0	0.0	0.0
369 Lighting Fixtures and Equipment	0.0	0.0	0.0	0.0
370 Radio and TV Receiving Sets	0.0	0.0	0.2	0.2
371 Phonograph Records and Tape	0.0	0.0	0.0	0.0
372 Telephone and Telegraph Apparati	0.0	0.1	0.1	0.2
373 Radio and Tv Communication Equ	0.0	0.0	0.0	0.0
374 Communications Equipment N.E.C	0.0	0.0	0.0	0.0
375 Electron Tubes	0.0	0.0	0.0	0.0
376 Printed Circuit Boards	0.0	0.6	0.1	0.7
377 Semiconductors and Related Device	0.0	0.9	0.3	1.2
378 Electronic Components- N.E.C.	0.0	0.1	0.0	0.2
379 Storage Batteries	0.0	0.0	0.0	0.0
380 Primary Batteries- Dry and Wet	0.0	0.0	0.0	0.0
381 Engine Electrical Equipment	0.0	0.0	0.0	0.0
382 Magnetic & Optical Recording Me	0.0	0.0	0.0	0.0
383 Electrical Equipment- N.E.C.	0.0	0.0	0.0	0.0
384 Motor Vehicles	0.0	0.0	0.0	0.0
385 Truck and Bus Bodies	0.0	0.0	0.0	0.0
386 Motor Vehicle Parts and Accessori	0.0	0.1	0.0	0.1
387 Truck Trailers	0.0	0.0	0.0	0.0
388 Motor Homes	0.0	0.0	0.0	0.0
389 Aircraft	0.0	0.0	0.0	0.0
390 Aircraft and Missile Engines and P	0.0	0.0	0.0	0.0

Industry	Direct*	Indirect*	Induced*	Total*
391 Aircraft and Missile Equipment-	0.0	0.0	0.0	0.0
392 Ship Building and Repairing	0.0	0.0	0.0	0.0
393 Boat Building and Repairing	0.0	0.0	0.0	0.0
394 Railroad Equipment	0.0	0.0	0.0	0.0
395 Motorcycles- Bicycles- and Parts	0.0	0.0	0.0	0.0
396 Complete Guided Missiles	0.0	0.0	0.0	0.0
397 Travel Trailers and Camper	0.0	0.0	0.0	0.0
398 Tanks and Tank Components	0.0	0.0	0.0	0.0
399 Transportation Equipment- N.E.C	0.0	0.0	0.0	0.0
400 Search & Navigation Equipment	0.0	0.0	0.0	0.0
401 Laboratory Apparatus & Furniture	0.0	0.0	0.0	0.0
402 Automatic Temperature Controls	0.0	0.0	0.0	0.0
403 Mechanical Measuring Devices	0.0	0.1	0.0	0.2
404 Instruments To Measure Electricit	0.0	0.0	0.0	0.0
405 Analytical Instruments	0.0	0.0	0.0	0.0
406 Optical Instruments & Lenses	0.0	0.0	0.0	0.0
407 Surgical and Medical Instrument	0.0	0.0	0.0	0.0
408 Surgical Appliances and Supplies	0.0	0.0	0.4	0.4
409 Dental Equipment and Supplies	0.0	0.0	0.0	0.0
410 X-Ray Apparatus	0.0	0.0	0.0	0.0
411 Electromedical Apparatus	0.0	0.0	0.0	0.0
412 Ophthalmic Goods	0.0	0.0	0.1	0.1
413 Photographic Equipment and Suppl	0.0	0.0	0.0	0.0
414 Watches- Clocks- and Parts	0.0	0.0	0.0	0.0
415 Jewelry- Precious Metal	0.0	0.0	0.1	0.2
416 Silverware and Plated Ware	0.0	0.0	0.0	0.0
417 Jewelers Materials and Lapidary W	0.0	0.0	0.0	0.0
418 Musical Instruments	5.5	0.0	0.0	5.5
419 Dolls	0.0	0.0	0.0	0.0
420 Games- Toys- and Childrens Vehicl	0.0	0.0	0.0	0.0
421 Sporting and Athletic Goods- N.E.C	0.0	0.0	0.0	0.0
422 Pens and Mechanical Pencils	0.0	0.0	0.0	0.0
423 Lead Pencils and Art Goods	0.0	0.0	0.0	0.0
424 Marking Devices	0.0	0.0	0.0	0.0
425 Carbon Paper and Inked Ribbons	0.0	0.0	0.0	0.0
426 Costume Jewelery	0.0	0.0	0.0	0.0
427 Fasteners- Buttons- Needles- Pins	0.0	0.0	0.0	0.0
428 Brooms and Brushes	0.0	0.0	0.0	0.0
429 Signs and Advertising Displays	0.0	0.6	0.0	0.7
430 Burial Caskets and Vaults	0.0	0.0	0.0	0.0
431 Hard Surface Floor Coverings	0.0	0.0	0.0	0.0
432 Manufacturing Industries- N.E.C.	0.0	0.0	0.0	0.0
433 Railroads and Related Services	0.0	0.1	0.1	0.2
434 Local- Interurban Passenger Transi	0.0	1.7	3.3	4.9
435 Motor Freight Transport and Ware	0.0	7.8	4.8	12.6
436 Water Transportation	0.0	0.0	0.1	0.1
437 Air Transportation	0.0	2.9	3.1	6.0
438 Pipe Lines- Except Natural Gas	0.0	0.0	0.0	0.0
439 Arrangement Of Passenger Transp	0.0	0.3	0.4	0.7
440 Transportation Services	0.0	0.5	0.4	0.9
441 Communications- Except Radio an	0.0	6.5	3.5	10.0
442 Radio and TV Broadcasting	0.0	11.2	0.9	12.1
443 Electric Services	0.0	0.0	0.0	0.0
444 Gas Production and Distribution	0.0	0.2	0.4	0.5
445 Water Supply and Sewerage Systen	0.0	0.1	0.2	0.3
446 Sanitary Services and Steam Supply	0.0	0.9	0.4	1.3

Industry	Direct*	Indirect*	Induced*	Total*
447 Wholesale Trade	0.0	25.1	15.4	40.4
448 Building Materials & Gardening	0.0	0.6	10.3	10.9
449 General Merchandise Stores	0.0	0.4	20.0	20.4
450 Food Stores	0.0	0.4	35.9	36.3
451 Automotive Dealers & Service Sta	0.0	0.6	22.9	23.5
452 Apparel & Accessory Stores	0.0	0.2	13.8	14.0
453 Furniture & Home Furnishings Stor	2,799.6	0.3	13.1	2,812.9
454 Eating & Drinking	0.0	14.1	64.8	78.8
455 Miscellaneous Retail	0.0	1.3	44.3	45.7
456 Banking	0.0	5.0	6.9	12.0
457 Credit Agencies	0.0	15.8	14.6	30.4
458 Security and Commodity Brokers	0.0	8.1	2.0	10.1
459 Insurance Carriers	0.0	1.4	12.1	13.5
460 Insurance Agents and Brokers	0.0	0.8	6.7	7.5
461 Owner-occupied Dwellings	0.0	0.0	0.0	0.0
462 Real Estate	0.0	37.5	14.2	51.7
463 Hotels and Lodging Places	0.0	10.3	8.8	19.1
464 Laundry- Cleaning and Shoe Repair	0.0	6.5	8.7	15.3
465 Portrait and Photographic Studios	0.0	0.1	1.4	1.5
466 Beauty and Barber Shops	0.0	0.0	9.5	9.5
467 Funeral Service and Crematories	0.0	0.0	1.1	1.1
468 Miscellaneous Personal Services	0.0	0.2	4.0	4.2
469 Advertising	0.0	15.6	1.2	16.8
470 Other Business Services	0.0	38.5	5.2	43.7
471 Photofinishing- Commercial Photo	0.0	9.2	1.6	10.8
472 Services To Buildings	0.0	17.9	4.7	22.6
473 Equipment Rental and Leasing	0.0	2.1	0.5	2.6
474 Personnel Supply Services	0.0	72.3	11.6	83.9
475 Computer and Data Processing Ser	0.0	23.3	4.1	27.4
476 Detective and Protective Services	0.0	12.5	2.6	15.0
477 Automobile Rental and Leasing	0.0	2.5	1.1	3.5
478 Automobile Parking and Car Wash	0.0	2.7	2.5	5.2
479 Automobile Repair and Services	0.0	3.3	6.8	10.1
480 Electrical Repair Service	0.0	0.6	0.4	0.9
481 Watch- Clock- Jewelry and Furnitu	0.0	0.0	0.3	0.3
482 Miscellaneous Repair Shops	0.0	1.7	0.7	2.4
483 Motion Pictures	192.2	105.4	3.2	300.9
484 Theatrical Producers- Bands Etc	149.9	46.1	1.8	197.9
485 Bowling Alleys and Pool Halls	0.0	0.0	0.5	0.5
486 Commercial Sports Except Racing	0.0	0.8	0.1	0.9
487 Racing and Track Operation	0.0	0.0	1.3	1.3
488 Amusement and Recreation Service	0.0	0.0	13.4	13.4
489 Membership Sports and Recreation	0.0	0.5	4.9	5.4
490 Doctors and Dentists	0.0	0.0	27.2	27.2
491 Nursing and Protective Care	0.0	0.0	4.8	4.8
492 Hospitals	0.0	0.0	17.5	17.6
493 Other Medical and Health Services	0.0	0.0	11.7	11.7
494 Legal Services	0.0	8.6	10.1	18.7
495 Elementary and Secondary Schools	0.0	0.0	2.1	2.1
496 Colleges- Universities- Schools	0.0	0.1	2.2	2.3
497 Other Educational Services	648.4	0.0	4.1	652.6
498 Job Trainings & Related Services	0.0	0.4	2.0	2.3
499 Child Day Care Services	0.0	0.0	8.0	8.0
500 Social Services- N.E.C.	0.0	0.0	7.6	7.6
501 Residential Care	0.0	0.0	6.0	6.0

Employment Impact

IMPACT NAME: SIC MULTIPLIER: Type SAM
AustinRedo.iap

August 20, 2001

Industry	Direct*	Indirect*	Induced*	Total*
502 Other Nonprofit Organizations	0.0	0.3	4.8	5.1
503 Business Associations	0.0	4.6	2.5	7.1
504 Labor and Civic Organizations	0.0	0.2	14.4	14.6
505 Religious Organizations	0.0	0.0	1.2	1.2
506 Engineering- Architectural Services	0.0	2.1	0.9	3.1
507 Accounting- Auditing and Bookkee	0.0	29.2	3.7	32.9
508 Management and Consulting Servic	0.0	18.8	3.3	22.1
509 Research- Development & Testing	0.0	7.9	1.8	9.7
510 Local Government Passenger Tran	0.0	0.3	0.6	0.9
511 State and Local Electric Utilities	0.0	2.0	2.0	4.0
512 Other State and Local Govt Enterp	0.0	2.3	3.0	5.3
513 U.S. Postal Service	0.0	11.9	2.3	14.2
514 Federal Electric Utilities	0.0	0.0	0.0	0.0
515 Other Federal Government Enterpi	0.0	0.0	0.1	0.1
516 Noncomparable Imports	0.0	0.0	0.0	0.0
517 Scrap	0.0	0.0	0.0	0.0
518 Used and Secondhand Goods	0.0	0.0	0.0	0.0
519 Federal Government - Military	0.0	0.0	0.0	0.0
520 Federal Government - Non-Militar	0.0	0.0	0.0	0.0
521 Commodity Credit Corporation	0.0	0.0	0.0	0.0
522 State & Local Government - Educa	0.0	0.0	0.0	0.0
523 State & Local Government - Non-l	0.0	0.0	0.0	0.0
524 Rest Of The World Industry	0.0	0.0	0.0	0.0
525 Domestic Services	0.0	0.0	14.9	14.9
526 Dummy	0.0	0.0	0.0	0.0
527 Dummy	0.0	0.0	0.0	0.0
528 Inventory Valuation Adjustment	0.0	0.0	0.0	0.0
5.001 Foreign Trade	0.0	0.0	0.0	0.0
8.001 Domestic Trade	0.0	0.0	0.0	0.0
	3.986.8	665.2	598.3	5.250.3

*Number of Jobs
Version2.0.1017