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THE ECONOMICS OF THE COMMERCIAL MUSIC INDUSTRY IN ATLANTA AND THE STATE OF GEORGIA: INDUSTRIAL ORGANIZATION AND NEW ESTIMATES OF ECONOMIC IMPACTS

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Executive Summary

In October 2002 Georgia State University researchers Kelly D. Edmiston and Marcus X. Thomas derived estimates of the economic impact of the commercial music industry in Georgia. This study reviews their findings, describes some recent developments in the sector, provides some updated estimates of economic impact, and concludes with a discussion of the structure of the industry, the importance of “clusters” in music recording, and some policy implications.

The state of Georgia continues to forge an undeniable impression on the national music psyche. Georgia not only has a rich musical heritage, it also promises one of the brightest musical futures among the national music scenes. Georgia artists and their music continue to dominate the airwaves, music charts and award shows.

Georgia artists, writers, producers and engineers represented a significant number of nominees at the 47th Annual Grammy Awards held February 13, 2005. Nominees with Georgia ties included Usher Raymond, Ray Charles, John Mayer, The Atlanta Symphony Orchestra, Ludacris, Shirley Caesar, Ann Nesby, Dottie Peoples, Alan Jackson and Kevin Bonds with New Birth Missionary Baptist Choir. Georgia artists and their projects had at least 27 nominations in 24 categories.

This study follows the method of the earlier research by Edmiston and Thomas by using the *ReferenceUSA* database on firms, sorted by six-digit SIC code, employment, and sales. The major finding of this update is significant growth in *primary* production in the music industry, which for the most part consists of musicians and ensembles, arrangers and composers, and, especially, recording studios. We estimate that there are 415 firms employing 2,715 individuals and producing \$286.3 million in output. These new estimates imply 42 percent more employment and 35 percent more output in the primary sector than in the earlier research. Clearly primary

music production is a rapidly growing sector. Using an output multiplier of 1.82 (i.e. each \$1 of output in primary music production has a \$1.82 impact on the economy), we find the primary music sector has an impact on the state economy of 4,941 jobs and \$521 million in output

When combined with the *secondary* music sector, which includes manufacturing, wholesale and retail trade, and music schools, and using the appropriate relevant multipliers, we find a *total* impact on the state economy from the music industry to be \$997 million in output and 11,032 jobs, generating \$54.3 million in tax revenues.

That being said, it is important to note that the output multiplier may well be an *underestimate* of the true long run impact. The argument is based, at its core, on the notion that there are increasing returns to scale in music production. New music production not only generates additional spending and output in the economy, but also serves to attract even more music production activity to the state. The returns to scale are based on the industrial organization of music production that greatly favors the clustering of production in a few centers of activity. As music production in Georgia, especially Atlanta, reaches a critical mass it begins to attract professionals from other locations, who will find prospects for success greater where there is already a significant amount of activity. Reasons for clustering include:

- *Thick Market*: Individuals working in a project-based industry will only choose a location for residence if there is a large enough and stable enough market for their services such that steady employment is likely, albeit through a series of different projects working with different teams.
- *Human capital*: Young individuals who want to gain technical knowledge and establish connections with a professional network will be drawn to locations where there is a significant amount of activity. In such a milieu, individuals can acquire valuable human capital by serving as interns, or low-paid assistants on projects, and also by informal interaction with individuals more established in the industry.

- *Collaboration by musicians*: Professional musicians learn from each other: they can collaborate on projects, provide feedback for one another, and also arrange for co-production, where by appearing on each other's recordings artists can each have the opportunity to make themselves known to the other recording artist's fan base. Such collaboration is quite common in contemporary urban music.
- *Collaboration and knowledge spillovers from technical professionals*: Just as with musicians, so also recording engineers are able to learn from each other's experiments, successes and failures. Again, this requires a thick market of working professionals; this most prominent example of the importance of clusters for technical spillovers is probably the software industry – also to a very large degree a “project-based” industry – but there are many similarities in sound recording.
- *Live music*: A vibrant recording scene for music will also tend to lead to a critical mass of support for live music production, which in turn will lead to the further attraction of musical talent.

In sum, the music production industry is one where we expect significant clustering of activity. When this is the case, each professional who chooses to locate in the cluster generates a positive externality, in that he or she is not only benefiting their own career prospects, but also making the location even more attractive to *other* professionals. The standard public policy response to positive externalities in production is to encourage that activity: otherwise market participants will tend to make decisions only focusing on their own costs and benefits and not on the positive spillovers they are generating for the industry.

THE ECONOMICS OF THE COMMERCIAL MUSIC INDUSTRY IN ATLANTA AND THE STATE OF GEORGIA: INDUSTRIAL ORGANIZATION AND NEW ESTIMATES OF ECONOMIC IMPACTS

1. A Review of Previous Research on the Music Industry in Georgia

In October 2002 Georgia State University researchers Kelly D. Edmiston and Marcus X. Thomas (E&T) derived estimates of the economic impact of the commercial music industry in Georgia, which were prepared for the Film, Video, and Music Office of the Georgia Department of Industry, Trade and Tourism.¹ This study will briefly review the findings of E&T, describe some recent developments in the sector, provide some updated estimates of economic impact, and conclude with a discussion of the structure of the industry, the importance of “clusters” in music recording, and some policy implications.

The state of Georgia has a well-known history of producing celebrated musicians, and Metro Atlanta has more recently become recognized an industry hub for music production. E&T set out to estimate the economic impact of the entire music sector in Georgia, from music production (which the study referred to as *primary* activity) to manufacturing, instrument repair, education, and wholesale and retail trade in music, which were together classed as *secondary* activity.

Estimates were constructed using estimates from the *ReferenceUSA* database. This is a listing of all firms in the state classified by six-digit SIC, where information is provided for each firm on location, employment and sales. As E&T recognize, because the database only provides a *range* to describe employment and sales (e.g. employment between 1 and 4, or 5 and 9, etc.; sales either under \$500,000, or between \$500,000 and \$1 million, etc.) the results must be treated as estimates only. In all sections of this paper we have followed the method of the earlier paper, to better provide comparisons. The same industry classifications were used in terms of SIC

¹ “The Commercial Music Industry in Atlanta and the State of Georgia: An Economic Impact Study” is available as FRC Report No. 85, Andrew Young School of Policy Studies, Georgia State University (August 2003) and in the *MEIEA Journal*, 4(1), (2004): 61-82.

categories, and we follow E&T by using the mean number of ranges given by *ReferenceUSA*: so, for example, if a classification has 4 firms that are described as having between 5 and 9 employees, we assume the four firms have in total between them 28 employees.

E&T estimated that the *primary* music industry in Georgia, involving commercial music production, had 427 establishments, which together employed 1,918, and generated sales of \$212.1 million. Using an input-output model of the state economy E&T determined that the output multiplier for commercial music production was 1.82: in other words that every \$1 of output by the music production industry has a \$1.82 impact on the Georgia economy. (Note that in the final section of this paper, which discusses the structure of the music production industry, we will suggest reasons why an input-output model might *underestimate* the true impact of new spending in music production). Applying the multiplier, they estimate that the total impact of primary music production for Georgia is \$386 million, with a total employment impact of 3,492 jobs. Finally, a social accounting matrix was used to estimate the tax revenue generated by primary music production, and E&T arrive at a figure of \$16.375 million (this suggests an implicit tax rate on economic activity generated by the primary music industry of 4.2 percent).

Turning to the *secondary* music industry, the calculations are somewhat more complex, since with the inclusion of wholesale and retail trade we need to ensure that we avoid the effects of double-counting – if we add together the total sales prices involved in the three transactions of (1) a manufacturer selling an instrument to a wholesaler, (2) the wholesaler selling the same instrument to a retailer, and (3) the retailer selling the instrument to a final consumer, we will have overestimated the total value of economic activity. E&T estimate that for wholesale and retail trade, each \$1 in sales represents \$0.126 in output. For all other sectors sales and output are treated as equivalent. Using this formula, they find total *output* in the secondary music industry of \$368.9 million, with total employment at 3,670. The input-output model generates a multiplier for the secondary sector of 1.64, and so the total impact of the

secondary sector is \$604 million, generating in the state economy 5,451 jobs and tax revenue of \$41.3 million (suggesting an implicit tax rate of 6.8 percent).

The primary and secondary sectors combined, given the multiplier effects, are estimated to have generated for the state, at the time of the E&T study, \$989.7 million in output, 8,943 jobs, and \$57.7 million in tax revenue.

2. Recent Developments

The state of Georgia continues to forge an undeniable impression on the national music psyche. Georgia not only has a rich musical heritage, it also promises one of the brightest musical futures among the national music scenes. Georgia artists and their music continue to dominate the airwaves, music charts and award shows.

Georgia artists, writers, producers and engineers represented a significant number of nominees at the 47th Annual Grammy Awards held February 13, 2005. Nominees with Georgia ties included Usher Raymond, Ray Charles, John Mayer, The Atlanta Symphony Orchestra, Ludacris, Shirley Caesar, Ann Nesby, Dottie Peoples, Alan Jackson and Kevin Bonds with New Birth Missionary Baptist Choir.² Georgia artists and their projects had at least 27 nominations in 24 categories.

Atlanta maintains its 11th place rank among national radio markets and is still ranked fourth behind New York, Chicago and Washington D.C. in the number of African-Americans in its listening population.³ African-Americans account for 28.4 percent of the city's total listening population.

The roster of burgeoning talent continues to develop in Georgia. In the last four to five years artists such as John Mayer, Butch Walker (solo), Lil' Jon, Ciara, Van Hunt, Anthony Hamilton, Bone Crusher, T.I., Angie Aparo, Donnie and Cody Chestnut have exploded onto the

² Accessed at www.grammy.com.

³ Accessed at www.arbitron.com.

national music scene. These innovative artists represent genres including rock, hip-hop, rap, soul and pop. Many of these entrepreneurial musicians released their records independently and developed a fan base before being discovered by the major labels that now release their music.

In early 2005, Jermaine Dupri signed a deal with EMI distributed Virgin Records which includes Mr. Dupri's services as a solo artist and his So So Def imprint. Although the amount is not confirmed, the agreement is suspected to be in the neighborhood of \$20 million.⁴ This new venture firmly cements So So Def as the only major label currently operating in Georgia. Dupri will be involved in recruiting, marketing and promotion in addition to making records.⁵

Although not distributed directly by a major label, The Artist Factory is a new label with a classic concept. Founded by Hiram Hicks, former VP of Island/Def Jam, the company specializes in artist and product development. The Artist Factory works with major labels' new talent by providing vocal, dance and media training while also developing songs and production for their projects.

Ventures such as So So Def and The Artist Factory are poised to keep creative synergy in Atlanta and revitalize a national interest in locating label home and satellite offices to the region.

The number of recording facilities in Georgia continues to grow at a steady rate. Stankonia, the studio owned by Grammy-winning duo Outkast is partially responsible for the continued growth. Stankonia is the region's official training site for Digidesign, the company responsible for the Pro Tools recording platform.⁶ During intense training seminars, recording and mixing engineers hone their skills and learn new techniques that are employed on many of today's top recordings.

Atlanta's PatchWerk Recordings made *Mix* magazine's "Class of 2002" with its new Studio 9000, which includes a console that is eighteen feet wide, with sightlines to the various recording spaces designed for recording different sorts of sounds, instruments and genres. The

⁴ Accessed at www.vh1.com/news/articles/1496177/20050124/dupri_jermaine.jhtml?headlines=true

⁵ Nick Marino, "Virgin Records snares Dupri", Atlanta Journal-Constitution, January 25, 2005, p. C1.

⁶ Accessed at www.digidesign.com

studio was designed by Russ Berger, who explains that PatchWerk needed “an open, airy sound for certain instruments, like percussion, but because they also do a lot of rap and hip hop, they need certain instruments, when they’re pushed way forward in the mix, to be very dry so they have absolute control. So, we have a booth that offers that, and there is an alcove area in the studio that allows them to get that really dead, dry sound, but both of those spaces can be used to speak into the main space.”⁷ PatchWerk has even attracted the attention of academic scholarship, which sees it as a key development in the evolution of the recording industry.⁸

Although recent mergers and consolidation have reduced the number of national music distributors in the U.S., Atlanta still provides a regional home to what is now the “Big Four”. In late 2004, Sony and BMG successfully merged so the national distribution labels are now Universal, Sony/BMG, WEA and EMI.

In 2005, Atlanta will again play host to Music Midtown and the Atlantis Music Conference. These events draw a combined audience of over 300,000 people annually to listen to over 400 signed and unsigned performing artists. In addition to these two mainstays of Atlanta music events, the Billboard R&B Hip-Hop Conference is also scheduled to be held in Atlanta August 3-5, 2005. Formerly held in Miami, FL, the conference promises to bring significant music and entertainment traffic to Atlanta.

3. New Estimates of Economic Impact

To update the figures for the economic impact of the music sector in Georgia, we replicated the method of E&T. We again turn to the *ReferenceUSA* database, and use the same method to convert figures from that database into estimates of employment and sales.

We do not re-estimate the input-output model “from scratch” nor do we re-estimate the social accounting matrix, but instead use the values employed by E&T for output and

⁷ “The Class of 2002”, *Mix*, June 2002, p. 7.

⁸ Paul Théberge, “The Network Studio: Historical and Technological Paths to a New Ideal in Music Making” *Social Studies of Science*, 34(5), (October 2004): 759-781, at 770.

employment multipliers, converting sales figures from wholesale and retail trade establishments into estimates of output, and the implicit tax revenues generated per dollar of economic impact.

For the primary music industry, which for the most part consists of musicians and ensembles, arrangers and composers, and, especially, recording studios, we estimate that there are 415 firms employing 2,715 individuals and producing \$286.3 million in output. Interestingly, there are fewer firms than at the time of E&T, who found 427 firms. Yet, our new estimates are of 42 percent more employment and 35 percent more output in the primary sector than E&T. Clearly primary music production is a rapidly growing sector, although this fact would not be recognized by someone only looking at the number of firms.

There is no reason to expect that the size of the employment and output multiplier for the sector would have changed, and applying E&T's estimate of a multiplier of 1.82 for the primary music production sector, our estimate is that there is a total impact on the state economy of 4,941 jobs and \$521 million in output (compared to the previous estimates by E&T of 3,492 jobs and \$386 million in output). Finally, assuming an implicit tax rate of 4.2 percent (as in the previous study), the primary sector generates \$21.9 million in tax revenues.

Turning to the secondary industries, we arrive at the following estimates:

<i>Sector</i>	<i>Establishments</i>	<i>Employees</i>	<i>Sales</i>
Publishing and Manufacturing	39	487	\$119.75 million
Wholesale Trade	62	323	\$330.5 million
Retail Trade	408	1,927	\$317.25 million
Rental & Repair; Instruction	274	977	\$89 million
Total Secondary	783	3,714	\$856.5 million

The estimate of total employment in the secondary music sector of 3,714 is just slightly above E&T's estimate of 3,670.

To calculate the total value of output in the secondary sector, we follow E&T in their assumption that each dollar of sales in the wholesale and retail sectors represents \$0.126 of output. Thus, the \$330.5 million in wholesale sales is estimated at \$41.64 million in output, and the \$317.25 million in retail sales is estimated at \$39.97 million in output. The total output of the sector is then estimated by us to be \$290.36 million. This is less than the E&T estimate of \$368.9 million for direct output by the secondary sector. The key difference between E&T and our new estimates appears to be in the wholesale category, where under SIC code 5099-09 (Records, Tapes, and CD's wholesale) E&T were able to include Warner Elektra Atlantic, and so under that single six-digit code account for 400 employees and \$650 million in sales, whereas WEA is no longer listed in this category, and so we now find for code 5099-09 only 22 employees and \$14 million in sales. Converting the sales figures into estimates of contribution to output, we find that the decline in output in the 5099-09 classification is about \$80 million, which more than accounts for the decline in the secondary music sector level of output from the E&T data to the current study; in other words, the secondary sector excluding wholesale distribution grew in aggregate over the past few years.

Applying E&T's estimate of the multiplier for the secondary sector of 1.64, we find a total economic impact on the state of \$476.19 million, and 6,091 jobs. Applying the E&T estimate of the implicit tax rate for the secondary music sector of 6.8 percent, our estimate is that the secondary sector generated \$32.38 million in net tax revenue.

Finally, combining the primary and secondary sectors, we have the following summary of *total economic impact*, where the figures from the E&T study from October 2002 are in parentheses:

	Output	Employment	Tax Revenues
Primary Music Production	\$521 million (\$386 million)	4,941 (3,492)	\$21.9 million (\$16.4 million)
Secondary Music Industries	\$476 million (\$604 million)	6,091 (5,451)	\$32.4 million (\$41.3 million)
Total	\$997 million (\$990 million)	11,032 (8,943)	\$54.3 million (\$57.7 million)

We estimate the total economic impact of the music industry in Georgia to be \$997 million in output and 11,032 jobs.

4. The Industrial Organization of Music Recording: Clustering and Returns to Scale

The estimates of the previous section were based on output multipliers derived by E&T with an input-output model: in this section of the paper we wish to argue that the output multiplier may well be an *underestimate* of the true long run impact.

The argument is based, at its core, on the notion that there are increasing returns to scale in music production. New music production not only generates additional spending and output in the economy, but also serves to attract even more music production activity to the state. The returns to scale are based on the industrial organization of music production that greatly favors the clustering of production in a few centers of activity. As music production in Georgia, especially Atlanta, reaches a critical mass it begins to attract professionals from other locations, who will find prospects for success greater where there is already a significant amount of activity.

To understand why this might be the case, it is important to understand how most music production is organized. For the most part, music recording is *project based*. Recording studios are not firms with large, full-time staff who work with different musicians to produce music.

Instead, recording studios provide space and equipment and some staff to service teams of professionals – musicians and non-musicians – who will come together to work together on a particular project and then, at the completion of the project, go their separate ways to look for new projects. This is much like modern Hollywood and the production of films (although not like the Hollywood “studio era” where the studios maintained large, permanent staff). In general, “Project-based enterprises (companies formed to pursue a specific project outcome) and project-based careers (careers habitually moving from one project to another) are most typically found where complex, non-routine tasks require the temporary employment and collaboration of diversely skilled specialists.”⁹

For the industry to thrive, musicians need to know that there will be a fluid market of individuals with technology and production expertise available to be hired on projects. The market must be sizeable, since in general the production workers must all be available to work on the project either at the same time or in a somewhat predetermined sequence. In turn, individuals with production skills will only want to locate where they know there is a large enough amount of recording activity taking place such that they will not need to fret regarding whether there will be more work available on the completion of a particular project. Music recording, because it is based to a large degree on professionals working on a project-by-project basis with different teams, will locate and thrive only where there is a large enough cluster to support stable incomes. In this sense, as Atlanta grows as a cluster for the industry, success breeds success, as industry players are drawn to the attractions of what economists refer to as a “thick” market.

Because of this structure, public policy is directed not at trying to attract traditional firms to the state, but about ensuring there is an infrastructure and a critical mass of activity to attract mobile professionals to a fluid, project-based network clustered in Metro Atlanta. The following summarizes some of the reasons why we would expect increasing returns to scale in music

⁹ Robert J. DeFillippi and Michael B. Arthur, “Paradox in Project-Based Enterprise” *California Management Review*, 40(2), (Winter 1998): 125-139. Also see Richard E. Caves, *Creative Industries*, (Harvard University Press, 2000).

production, and why establishing a cluster of production activity yields positive spillover effects beyond simple input-output spending multipliers:

- *Thick Market*: Individuals working in a project-based industry will only choose a location for residence if there is a large enough and stable enough market for their services such that steady employment is likely, albeit through a series of different projects working with different teams.
- *Human capital*: Young individuals who want to gain technical knowledge and establish connections with a professional network will be drawn to locations where there is a significant amount of activity. In such a milieu, individuals can acquire valuable human capital by serving as interns, or low-paid assistants on projects, and also by informal interaction with individuals more established in the industry.¹⁰
- *Collaboration by musicians*: Professional musicians learn from each other: they can collaborate on projects, provide feedback for one another, and also arrange for co-production, where by appearing on each other's recordings artists can each have the opportunity to make themselves known to the other recording artist's fan base.¹¹ Such collaboration is quite common in contemporary urban music.
- *Collaboration and knowledge spillovers from technical professionals*: Just as with musicians, so also recording engineers are able to learn from each other's experiments, successes and failures. Again, this requires a thick market of working professionals; this most prominent example of the importance of clusters for technical spillovers is probably the software industry – also to a very large

¹⁰ Weiping Wu, "Dynamic Cities and Creative Clusters" World Bank Policy Research Working Paper 3509 (February 2005).

¹¹ R. Venkatesh, Vijay Mahajan and Eitan Muller, "Dynamic co-marketing alliances: When and why do they succeed or fail?" *International Journal of Research in Marketing*, 17, (2000): 3-31.

degree a “project-based” industry – but there are many similarities in sound recording.

- *Live music*: A vibrant recording scene for music will also tend to lead to a critical mass of support for live music production, which in turn will lead to the further attraction of musical talent.

In sum, the music production industry is one where we expect significant clustering of activity. When this is the case, each professional who chooses to locate in the cluster generates a positive externality, in that he or she is not only benefiting their own career prospects, but also making the location even more attractive to *other* professionals. The standard public policy response to positive externalities in production is to encourage that activity: otherwise market participants will tend to make decisions only focusing on their own costs and benefits and not on the positive spillovers they are generating for the industry.

5. Conclusion

This paper has provided an update of the estimates of the economic impact of the music industry in the state of Georgia. We have found significant growth in the field of primary music production, with 42 percent more employment and 35 percent more output in the primary sector than was found in the earlier study by Edmiston and Thomas. In the secondary music sector, there was small growth in employment, and possibly some decline in output, although this might be an artifact of the database information.

The new estimates for the music industry, combining the primary and secondary sectors, and using the same output multipliers as the earlier study are that the music industry generates for the state 11,032 jobs and \$997 million in output. However, we note that especially in primary production, it is likely the case that output multipliers *understate* the dynamic economic impacts of expansion in the industry.