

An Economic Impact Study of the Aurora Theatre

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Executive Summary

The Aurora Theatre is the premier provider of performing arts entertainment in Gwinnett County. We estimate that the economic effect of the theatre on the local economy is approximately \$3,244,547.47, including the impact of theatre patrons on local restaurants. The increased economic activity adds 11 jobs to the Gwinnett economy in addition to the theatres' staff and artists.

Key Findings:

- \$1,566,445.71 in revenues for 2012-2013 season
 - 31.5% of attendees are from other counties
 - \$161,808.46 in grants and contributions originate outside of Gwinnett
 - These streams of income are unlikely to be duplicated by substitutes for the Aurora Theatre.
- \$1,688,178.05 in expenses for 2012-2013
 - \$805,574.07 (or 49%) of expenses are made to individuals or firms in Gwinnett
 - The geographic location of an additional 8% of expenditures is unknown.
 - Local effects of spending in Gwinnett total \$976,115.56.
 - Job creation estimates between 5 and 6 depending on location of geographically-unknown expenditures
- \$465,592.75 - Lower bound of restaurant expenditures including taxes and tips
 - Total local effect: \$701,986.20 and 5.81 jobs
- Total effect equals initial spending by patrons for theatre services plus funding from additional sources (revenues), local effects resulting from expenditures by the Aurora Theatre in Gwinnett County, and the effects of spending by patrons at local businesses, for a total of \$3,244,547.47

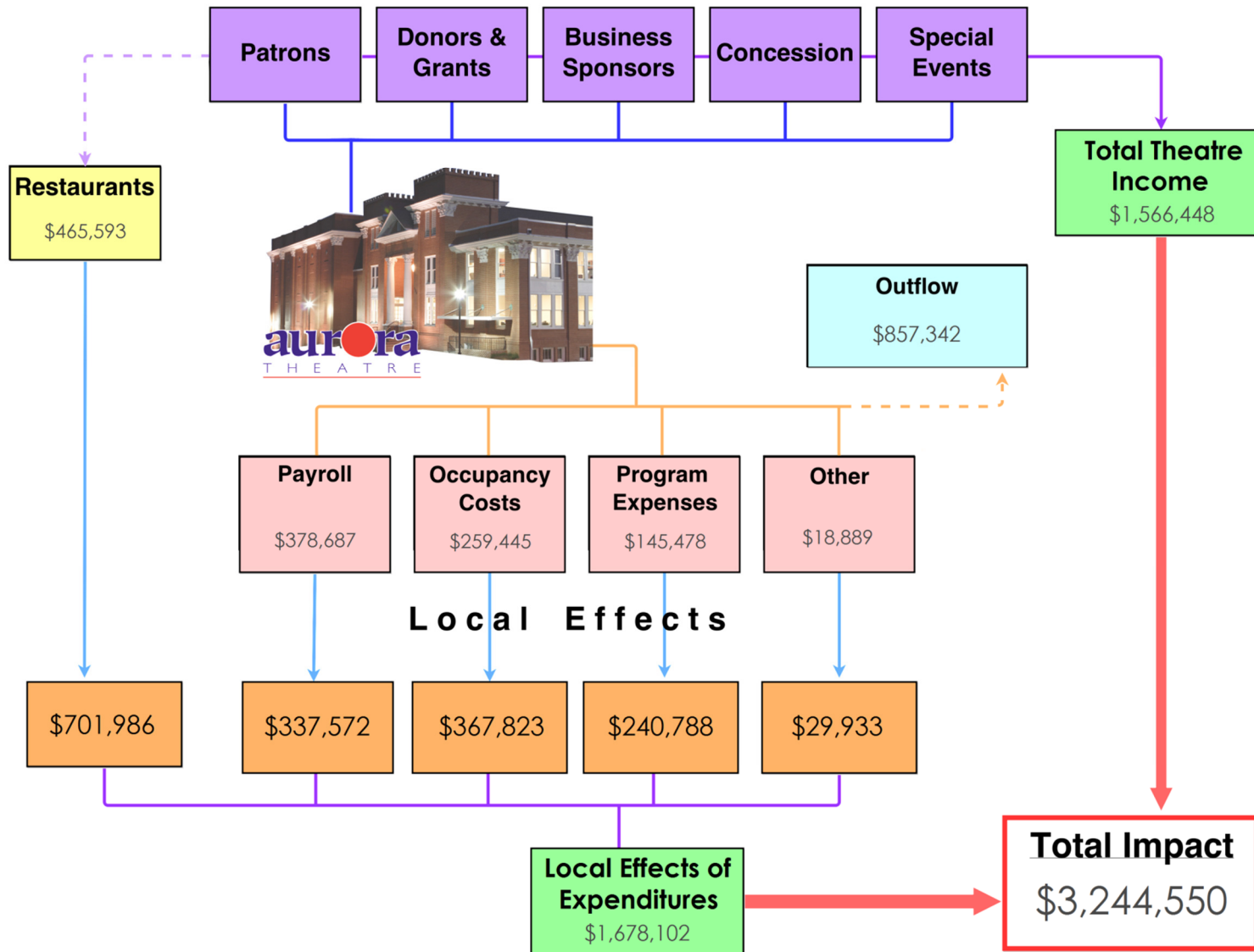


Figure 1: Flow Chart Depicting the Aurora Theatre's Economic Impact

Introduction to the Aurora Theatre

Situated in downtown Lawrenceville, the Aurora Theatre prides itself in being Gwinnett County's premier professional performing arts provider. With hundreds of performances a year, the Aurora Theatre caters to a diverse audience with a wide range of interests. In addition to six regular season shows, the Aurora Theatre also produces cutting edge plays as part of the GGC Harvel Lab Series, recognizes the diversity of Gwinnett County with the Teatro del Sol, and provides seasonal entertainment such as *Aurora's Christmas Canteen* and *A Christmas Carol*. It hosts Comedy Nights, Swing Nights, and leads Ghost Tours through downtown Lawrenceville. Educational programming rounds out the Aurora Theatres services with programs such as the Children's Playhouse, Learning Library, Theatre Academy, and the new Apprentice Company.

The Aurora Theatre is an integral part of Gwinnett County's arts and cultural community. Shows and programs contribute unequivocally to the quality of life in the county, and the theatre as a whole stands as a pillar of economic development in downtown Lawrenceville and the county of Gwinnett.

The economic Impact analysis which follows disaggregates the theatre's economic contributions to Gwinnett County before reassembling the pieces and demonstrating that the theatre's existence adds more than \$3.2 million of consumable goods into the local economy. In addition to individuals employed directly by the theatre, spending by the theatre and its patrons funds an additional 11 jobs in the county.

In the following sections, we discuss our general methodology and then present empirical support for the assertions above.

An Overview of Methodology

A Profit and Loss Statement for the Aurora Theatre's 2012-2013 fiscal year provided the bulk of data necessary for this economic analysis. Following a bill-of-good approach, we assigned industry-specific multipliers for Gwinnett County from the BEA RIMS II dataset to each line item expense paid to an individual or firm with a Gwinnett County zip code. We then make conservative estimates of patron's spending in the local restaurants, and calculate the economic impact of these expenditures. Finally, we recognize that without the Aurora Theatre, alternative spending would recreate some of the total effect calculated. However, we also acknowledge the amount of revenue that flows in to Gwinnett County that is unlikely to continue without the existence of the Aurora Theatre. Finally, we sum together the value of services provided by Aurora (equal to the theatre's income) and the multiplied effects of each local expenditure for the total effect of the Aurora Theatre.

Aurora Theatre Expenditures

During the 2012-2013 Fiscal Year, the Aurora Theatre reported expenditures in the amount of \$1,688,178.05. Of the more than \$1.6 million, 49 percent (or \$805,574.07) was paid to businesses or individuals located in Gwinnett County. Financed expenditures flowing directly out of Gwinnett County totaled 44 percent (\$726,607.10). It is unknown whether the remaining eight percent (\$130,735.39) of expenditures remained within Gwinnett County or not. These figures are based on the zip codes provided on line items of the Profit-Loss Statement.

In addition to analyzing within versus outside county expenditures, we classified the Aurora Theatre's expenses into four categories: Payroll, Occupancy Costs, Program Expenses, and Others. The following table provides a selection of the expense items classified into each category.

Table 1: Examples of Expenses in Each Category

Payroll	{	Officer's Salaries	{	Scenic Materials
		Sales and Marketing Salary		Costume Materials
	{	Hourly Wages		Props Materials
		Benefits & Taxes (TP)		Sound Materials
	{	Actors		Lighting Materials
		Stage Management		Costume Cleaning
	{			Special Effects
				Programs
	{	Storage		Royalties/Scripts
		Elevator		
	{	Janitorial	{	Board Activities
		Pest Control		Donor Cultivation/Appreciation
	{	Building Repairs		Financial Expenses
		Equipment Repairs		Professional Accounting
	{			Services
		Security		
	{	Utilities		

Figure 2 depicts the within Gwinnett versus outside Gwinnett distribution of expenditures across each of the four categories. The Aurora Theatre's largest expense category is payroll, accounting for just over 57 percent of all expenditures. Only 40 percent of the \$954,112.87 in payroll costs compensated employees residing within Gwinnett. Out-of-county payroll accounted for 49 percent of payroll expenditures, and the remaining payroll expenses, \$110,897.32, comprise the bulk of our geographically unidentified expenses.

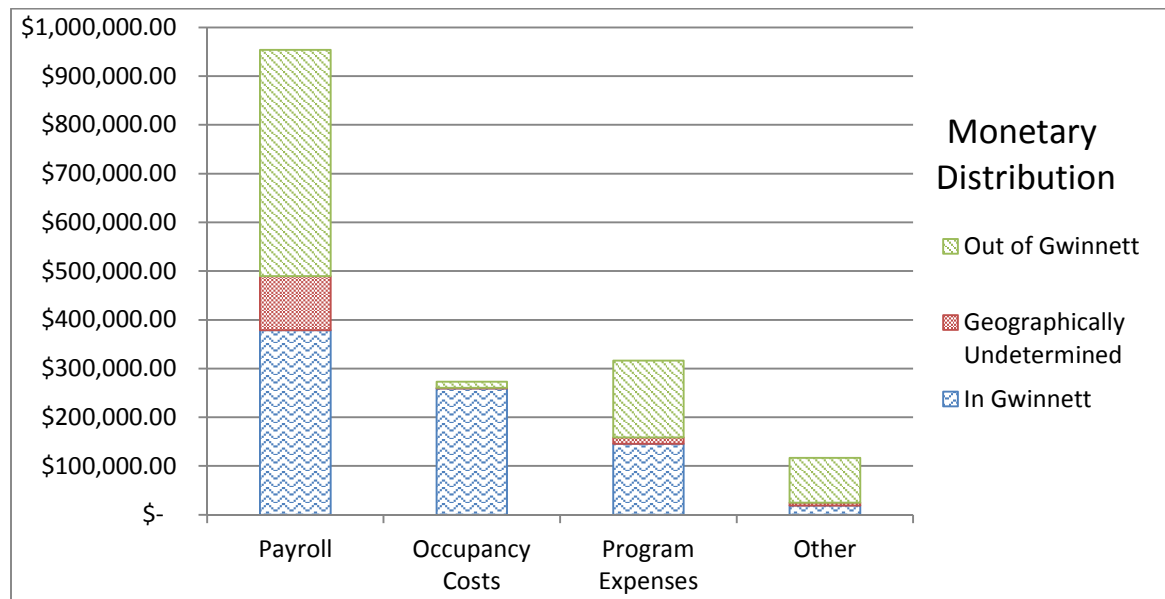


Figure 2: Monetary Distribution within and outside of Gwinnett by Expenditure Category

Occupancy costs are much lower than payroll, but more than 95 percent of the \$272,859.64 classified as occupancy costs remain within Gwinnett County. Program expenses, which comprise close to 20 percent of all expenditures, are more evenly split between Gwinnett and other areas. Finally, the majority of the Other category, which includes professional services and insurance, flows largely outside of Gwinnett County.

Calculating Multiplier Effects

Although the previous section discusses data aggregated into four categories, for purposes of calculating the local effects, we reverted to the line items on the Profit-Loss Statement. Each item was assigned to an industry represented in the RIMS data, and therefore received the most accurate multiplier available for that particular expense. For example, the multiplier for payroll is 0.885. For every thousand dollars paid to an employee in Gwinnett, economic activity in the county increases by \$885. The multiplier is less than one because payroll recipients are likely to save money or spend significant amounts of their income on items produced outside of the county.

The multiplier for telecommunications, however, is 1.5293. For every \$1000 spent on telecommunications in Gwinnett County, the local economy grows by \$1,529.30. In other words, the original \$1,000 is used to pay for services provided by the telecommunications company. That company then uses revenue to pay employees or purchase other local services (and some services outside Gwinnett County), thus increasing the effects of this area of spending beyond the initial expenditure.

Given Aurora Theatre's \$805,574.07 in expenses that stay in Gwinnett and the \$130,411.40 that might stay in Gwinnett, we estimate that the effect of the Aurora Theatre's spending on Gwinnett County is between \$976,115.56 and \$1,110,097.39. (These figures include the spending by the Aurora but exclude the services provided by Aurora.) In other words, the effects on Gwinnett from Aurora Theatre's spending alone could exceed \$1 million if all of the geographically unidentified expenses are actually paid to recipients in the county. Based on the additional economic activity generated by the Aurora Theatre's expenditures, we estimate that the Theatre creates an additional 5 - 6 jobs in the county, excluding those jobs supplied directly by the theatre.

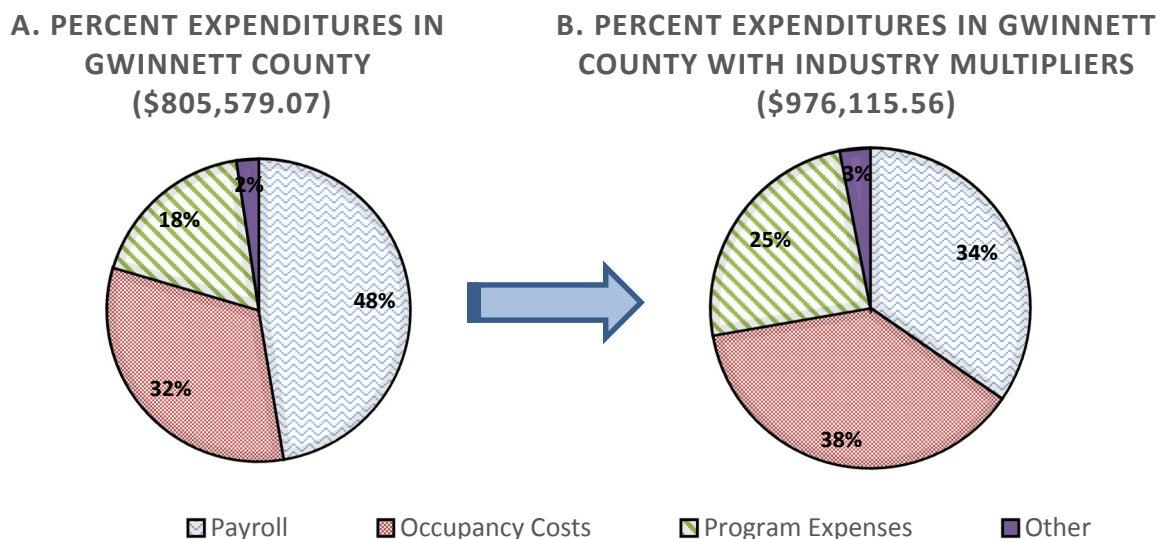


Figure 3: Comparison of expense category ratios to the effects created by each category for the county

Graph A in Figure 3 shows the ratio of the Aurora Theatre's expenditures within Gwinnett County. As mentioned earlier, payroll is the largest component at 48 percent, followed by Occupancy Costs (32%), Program Expenses (18%) and Other (2%). In Graph B, we demonstrate how the multipliers for each category alter the significance of each expense category when we consider the total effects of these expenditures for the county as a whole. As a result of payroll's multiplier being less than one and other industries having multipliers larger than one, we find that the significance of payroll diminishes. Whereas the theatre's Occupancy Costs and Program Expenses within Gwinnett were relatively equal in magnitude to payroll expenses in Gwinnett, we find that the combined effects of Occupancy and Program Expenses comprise almost two thirds of the effects on Gwinnett County.

Related Economic Effects

Patrons of the Aurora Theater are likely to visit local restaurants before or after attending performances. A non-random survey of patrons prior to seasonal entertainment revealed that 75 percent of patrons dined out prior to the show or planned to dine out immediately following the performance. Three quarters of these respondents indicated that their selection of restaurants was within close proximity to the theatre.

Due to the nonrandom nature of the data and the fact that it was collected during a seasonal period, we have decided to make more conservative estimates of the patrons' expenditures at local restaurants. We assume that 50 percent of patrons dine out either before or after a performance and spend an average of \$15 per person. We recognize that dining out may be more likely for evening performances and less likely for mid-morning shows such as the Aurora Children's Playhouse. We also believe that individuals travelling to Aurora Theatre from outside of Gwinnett (31.5% of all attendees) are more likely to dine out than residents of Gwinnett, and Lawrenceville in particular. By creating conservative estimates of both the proportion dining out and the amount spent per patron, we believe that even if one portion is overestimated, the underestimation of the other will roughly compensate. As such, we are proposing a minimum bound to the effect of patrons' dining habits.

During the 2012-2013 season, the Aurora Theatre served 51,305 patrons. If half of these individuals dined in Gwinnett County and spent an average of \$15 (excluding taxes and gratuity), local restaurants benefited directly with increased revenues of \$384,787.50. Assuming a modest 15 percent gratuity, wait staff received an additional \$57,718. Finally, we consider the effects for the government. The sales tax in Lawrenceville is six percent, but two thirds of sales tax revenues are forwarded to the state. Nonetheless, Gwinnett County benefits from the remaining two percent, or \$7,695.75. Given the restaurant and payroll multipliers in Gwinnett County and our lower bound estimate for patrons' expenses (food purchases, taxes, and gratuities), we estimate a total effect for Gwinnett County of at least \$701,986.20. (One could reasonably argue that restaurant expenses are twice this amount, suggesting an effect of more than \$1.4 million.)

It is also important to note that spending in restaurants is a significant source of job creations. Including six percent sales tax but excluding tips, the \$407,874.75 patrons spent in restaurants is expected to create 5.48 jobs in Gwinnett County. Again, this excludes the effects of gratuity and is based on a conservative estimate of spending.

To reiterate, we believe we are underestimating the effects of patrons' dining expenses. It is likely this effect is much larger, but we feel confident that the Aurora Theatre creates at least an additional \$701,986.20 for the Gwinnett economy through the spending of theatre patrons. Further development of downtown Lawrenceville would likely increase this effect as well, attracting more diners and increasing patrons' non-food expenditures.

Uniqueness of Income

There is a reasonable assertion by economists who frequently conduct economic analyses that the effects of certain organizations on a community may be overstated. If one organization was not available, residents would merely select an alternative, and thus, an expenditure would still occur. For example, if the Aurora Theatre were not providing quality entertainment, a resident may substitute a trip to the local movie theater or a Gwinnett Braves' game in exchange for a live performance experience. If an alternative expenditure would occur, then removing an organization from the local economy would create less of a void than a naïve economic impact study would suggest.

Granted, a movie or baseball game is hardly comparable to performing arts, and the Aurora Theatre adds to the community in dimensions that the alternatives cannot. That said, there may still be a portion of the economic impact that is overstated. In this section of the report, we highlight the revenues that are unique to the Aurora Theatre and would most likely be lost to Gwinnett County if the Aurora Theatre ceased operations.

The first source of funding unique to the Aurora Theatre is the patrons from other counties whose trips into Gwinnett County are predicated by their desire to specifically visit the theatre. It is possible such visitors could substitute in a Gwinnett Braves game, but if the patron loves the arts, a baseball game is a poor substitute. Even if the patron enjoys movies, it is much less likely that someone from another country will travel to Gwinnett for a standard movie rather than visiting their local cinema. As a result, we believe the 16,166 patrons coming from other counties represent a unique income stream. If out-of-county patrons spend an average of \$20 on tickets and concessions at the Aurora Theatre, then this set of individuals contributes \$323,320 to the theatre's revenues. Given that 48 percent of expenditures remain in Gwinnett, and the average multiplier for the theatre's expenses is 1.2117, we estimate that expenses by out-of-county patrons contribute \$188,048.09 to the Gwinnett economy in addition to the ticket sales, for a grand total of \$511,368.09.

A second source of unique funds originates from grants and contributions, a source of revenues unique to the nonprofit sector. Of the \$352,764.11 in grants and contributions received by the Aurora Theatre, \$161,808.46 originates from agencies outside of Gwinnett. Although it is uncertain whether the grants made by agencies within Gwinnett would still stay in Gwinnett if the Aurora Theatre did not exist, we believe it is unlikely that the grants from outside would be awarded to organizations within Gwinnett. Following the same assumptions above, that 48 percent is spent in Gwinnett with a multiplier of 1.2, we estimate that the total effect of grants and contributions from non-residents is \$255,918.85.

We distinguish these revenue streams to emphasize the unquestionable economic impact the Aurora Theatre has on Gwinnett County. Without the Aurora Theatre, even if local patrons found alternatives, the Gwinnett economy would lose \$767,286.94 and 1.5 workers in addition to those employed by the theatre.

We began this section by discussing alternatives, but we wanted to formally state our belief that not only would non-residents decrease their visits to Gwinnett, but residents of Gwinnett may seek to fulfill their interest in performing arts by visiting neighboring counties as well. The additional outflow of residents' money would be significant. Estimates of this effect are beyond the scope of this paper, but we want to acknowledge that even more of the Aurora Theatre's Economic Impact could not be replaced by other entities that currently exist in Gwinnett County.

Concluding Remarks

The effect of the Aurora Theatre on Gwinnett County is both cultural and economic. With hundreds of performances and tens of thousands of visitors, the total effect of the theatre is \$3,244,547.47. In addition to the full and part time employees of the theatre, spending by the theatre generates more than 5 jobs for the local economy. Spending by patrons at restaurants generate an additional 5.5 jobs and contributes \$701,986.20 to the theatre's overall effect.

Based on alternative calculations not presented in this study, we believe that the proportion of local spending by the Aurora Theatre is roughly equal to that of performing arts theatres in other locations. That said, the theatre could still increase its economic impact by intentionally "buying local" whenever possible.

There are reasonable arguments as to why this effect could be overstated. The most common argument is that if the theatre did not exist, current patrons would spend more money on other forms of entertainment. We contend that this is only partially true. Residents of Gwinnett County could increase expenditures on goods and services outside of Gwinnett, and as such, Gwinnett County would not recoup as much of the lost economic activity as it might hope if the Aurora Theatre ceased to exist. Second, a significant portion of the theatre's revenues come from individuals and agencies outside of Gwinnett. We calculate that \$767,286.94 in economic activity would be lost as a result of decreased visitors and forfeited grants and contributions. Finally, we have likely underestimated the effect of the theatre on the restaurant industry, and as such, the true effect of the theatre could easily reach or exceed the \$3,244,547.47 evaluation we have calculated.

About the Authors:

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Taylor Smith is an Assistant Professor of Economics at Georgia Gwinnett College. He earned his Ph.D. from the University of Mississippi in 2013. Taylor researches in the areas of urban economics, spatial econometrics, charitable giving, and education. He currently teaches Principles of Macroeconomics, Introduction to Economics, and Business Statistics.

Amanda L. Wilsker, Ph.D.

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Syed Ali

Syed is a junior at Georgia Gwinnett College. He is currently pursuing a Bachelor's in Business Administration with a concentration in Economics and is regularly appointed to the Dean's List for stellar academic performance. He has interned under the General Manager of Mobilink, a franchise of Cricket Wireless. Syed emerges as a leader at GGC, currently serving as president of the Economics Club at Georgia Gwinnett College, and plans to enter a PhD program in Economics in the near future.

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Ethan is a junior at Georgia Gwinnett College. He is currently pursuing a Bachelor's in Business Administration with a concentration in Economics and is regularly appointed to the Dean's List for stellar academic performance. Ethan displays his entrepreneurial spirit as owner of A to Z Pickers, LLC. After earning a Bachelor's, he plans to enter a PhD in Economics program.

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Nathan is a junior at Georgia Gwinnett College. He is currently pursuing a Bachelor's in Business Administration with a concentration in Finance and is regularly appointed to the Dean's List for stellar academic performance. Nathan is the recipient of a "Children of NCR scholarship" and is a member of Sigma Beta Delta, the Business Honors Society. He looks to acquire an internship during the Spring 2015 semester. Upon graduation in 2015, he plans to enter the business world in hopes of becoming a business manager/owner.

Lee Waldrup

Lee is a junior at Georgia Gwinnett College. He is currently pursuing a Bachelors in Business Administration and is regularly appointed to the Dean's List for stellar academic performance. Upon completing his education in 2015, Lee plans to acquire professional experience in management or consulting and eventually enroll in an Executive MBA program.

Melanie Lee

Melanie is a sophomore at Georgia Gwinnett College. She is still deciding as to the direction she would like to take her undergraduate education, but her performance thus far is impressive, regularly earning her a place on the Dean's list. Upon graduation, Melanie hopes to work in the gaming industry.