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NATIONAL CENTER FOR TRANSPORTATION SYSTEMS PRODUCTIVITY AND MANAGEMENT



# ECONOMIC DEVELOPMENT AND WORKFORCE IMPACTS OF STATE DOT HIGHWAY EXPENDITURES

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# ECONOMIC DEVELOPMENT AND WORKFORCE IMPACTS OF STATE DOT HIGHWAY EXPENDITURES

- What? --Research measures impact of GDOT highway expenditures jobs and economic activity between 2009 – 2013
- How? --The IMPLAN model generated 6 categories of impacts at each geographic level: total output, value added in production, new jobs, household income, small business revenue and tax receipts.
- Unique in that it examined six impacts for each of Georgia's 159 counties, seven GDOT Highway Districts and for the entire statewide economy.



# WORKFORCE IMPACTS OF GDOT HIGHWAY EXPENDITURES: Research Rationale

- Anemic job market recovery means understanding the impact of transportation infrastructure investments is a national.
- President Obama's 8/31/2011 Memorandum: "...expedite permitting and environmental reviews of high priority infrastructure projects with significant potential for job creation."
- Understand the impact of the Federal Fiscal Stimulus Program – significant implications for fiscal policy
- Georgia's job recovery has been among the slowest in the nation.
- Optimize GDOT's allocation of scarce resources to maximize local economic development
- Be more responsive to stakeholders



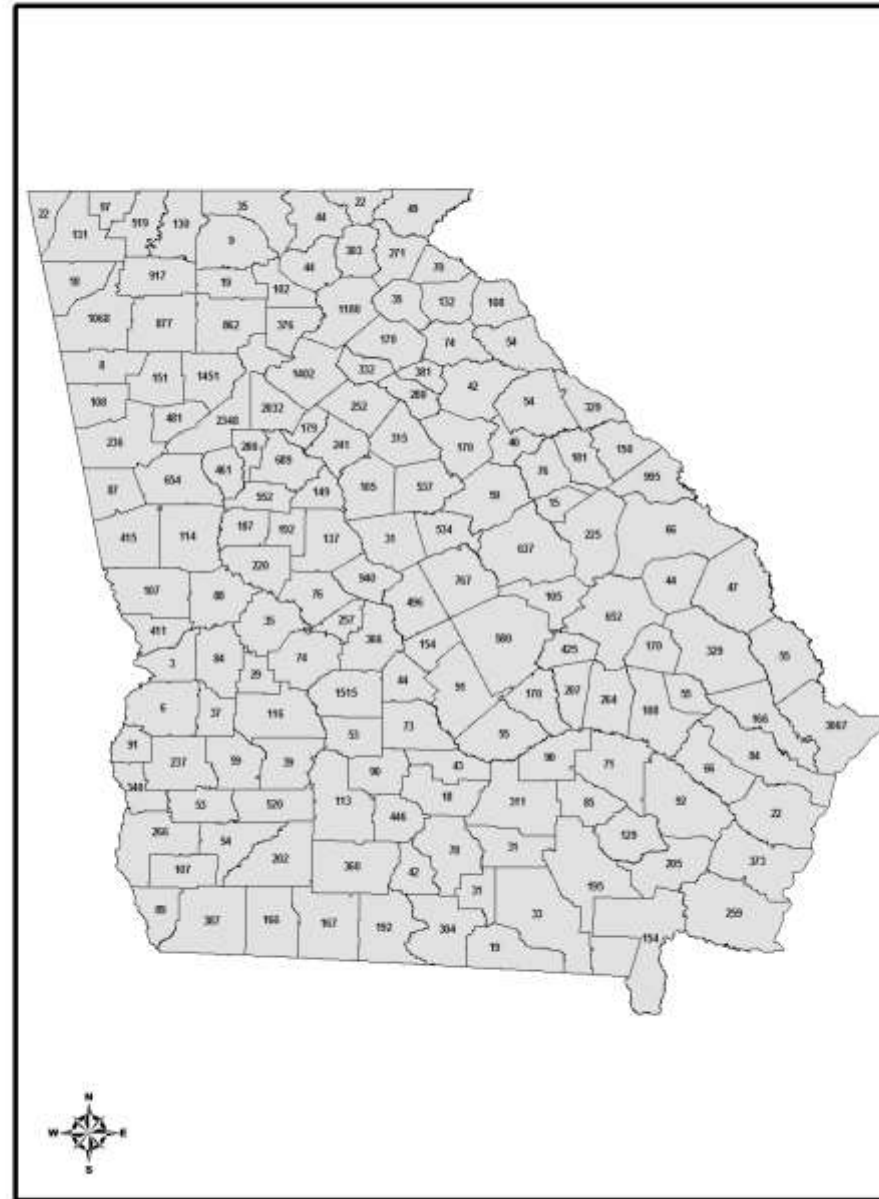
# WORKFORCE IMPACTS OF GDOT HIGHWAY EXPENDITURES

## Summary of GDOT's HIGHWAY EXPENDITURES

- GDOT's capital expenditures on highway projects total \$3.1 billion (2009 – 2013)
- Number of different projects totaled 1,271.
- Projects were implemented in each of Georgia's 159 counties, average cost was \$2.5 million and median cost was \$425,395.
- The largest cost of highway projects occurred in Chatham County (\$212.1 million, 6.9% of the total); Fulton County second (\$187.8 million, 6.1%). Multiple awards occurred in each county.
- During 2012, most recent full year for which data were available, GDOT spent \$911.0 million on highway projects
- Between 2009 and 2011, GDOT spent \$1.26 billion, of that amount \$604.1 million was the result of the Federal Fiscal Stimulus Program

# WE MUST MOVE FROM THE GENERAL TO THE SPECIFIC

1. TOTAL NEW JOBS & ECON. ACTIVITY CREATED (GENERAL)
2. LOCAL AREA IMPACT (SPECIFIC)
3. HOW?- CHARACTERISTICS OF PROJECTS (INDUSTRY), LOCAL SUPPLY CHAIN (LINKAGES) AND HOUSEHOLD SPENDING PATTERNS (LEAKAGES)



# METHODOLOGY

IMPLAN model derives multipliers based on input-output tables that replicate the linkages between 440 sectors of the local economy. Multiplier expresses the outcome per dollar spent in a particular industry

Direct expenditures (initial project expenditures); Indirect expenditures (supply chain linkages); Induces expenditures (household demand resulting from additional income)

## ECONOMIC ACTIVITY MEASURED

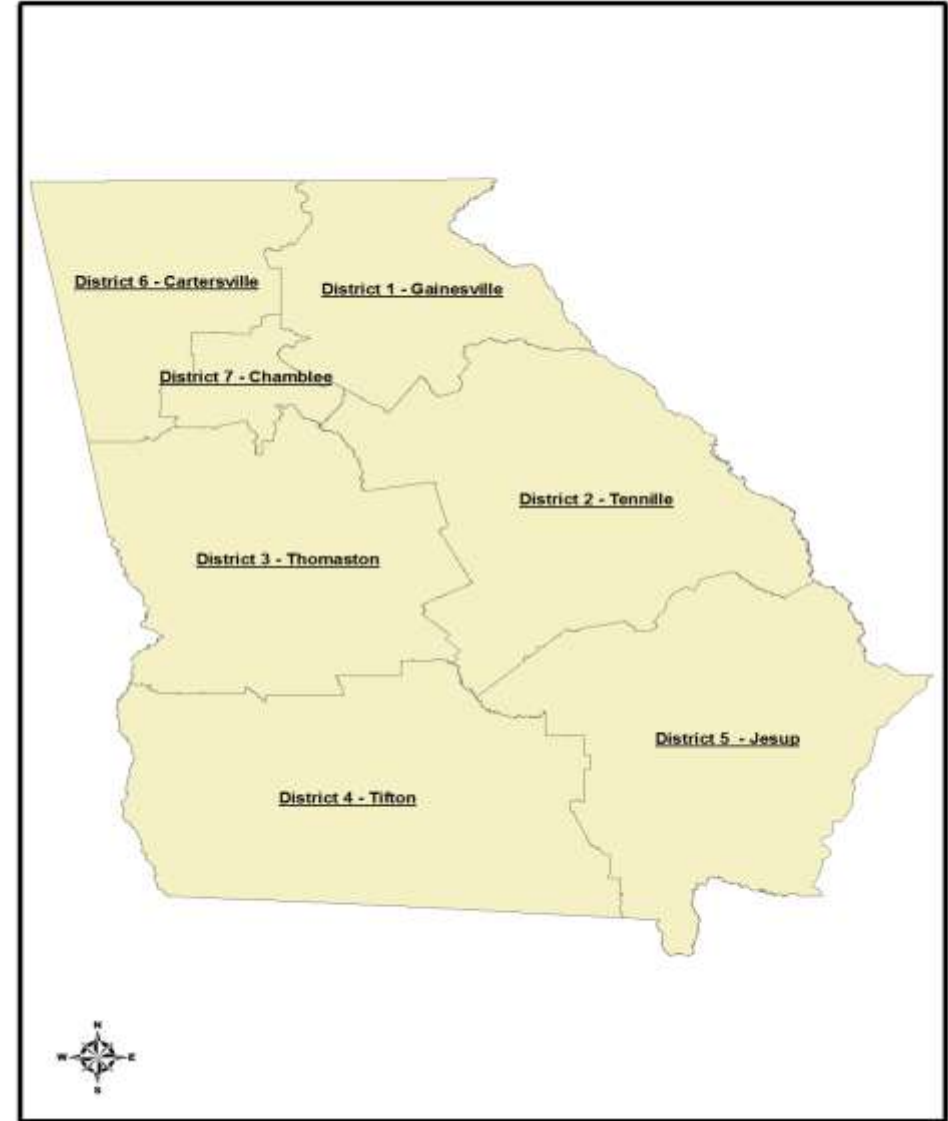
1. Total economic output (sum of all direct, indirect and induced expenditures)
2. Value added in production (final sale price minus cost of the intermediate goods)
3. Employment (the total number of new jobs created, both full-time and part-time)
4. Wages (total payroll cost of new employees via wages and salaries = new household income)
5. Small business and proprietor's income (revenue of self-employed & unincorporated cos.)
6. Taxes (sales taxes, property taxes, motor vehicle licenses, excise taxes and special assessments)

# Summary of Findings

- GDOT's highway expenditure of \$3.1 billion (2009 – 2011) created a combined economic impact of \$5.859 billion (or \$1.89 total economic impact per dollar of direct investment)
- GDOT's highway expenditures created 51,246 new jobs, or each million dollars of direct Highway expenditures generated 16.6 new jobs.
- Note: Jobs impact depended upon how much of the expenditures recirculated within the local economy.
- Recirculation is determined by characteristics of local supply chain (i.e. share of suppliers within the local economy) and the local household spending pattern (i.e. local vs. non-local purchases)



# Summary of Impacts by GDOT Highway District



# WORKFORCE IMPACTS OF GDOT HIGHWAY EXPENDITURES

## Summary of Findings: Employment Impacts

- District 1 – Gainesville: 5,872: Employment multiplier, 15.2
- District 2 – Tennille: 7,910: Employment multiplier, 15.5
- District 3 – Thomaston: 9,271: Employment multiplier, 16.4
- District 4 – Tifton: 5,569: Employment multiplier, 16.1
- District 5 – Jessup: 6,624: Employment multiplier, 15.0
- District 6 – Cartersville: 5,323: Employment multiplier, 16.1
- District 7 – Chamblee: 6,605: Employment multiplier, 12.9

# WORKFORCE IMPACTS OF GDOT HIGHWAY EXPENDITURES

## Summary of Findings: Household Income

- District 1 – Gainesville: \$261.9 million HH income multiplier, .675
- District 2 – Tennille: \$270.6 million: HH income multiplier, .529
- District 3 – Thomaston: \$325.8 million: HH income multiplier, .576
- District 4 – Tifton: \$186.0 million: HH income multiplier, .538
- District 5 – Jessup: \$248.6 million: HH income multiplier, .562
- District 6 – Cartersville: \$156.4 million: HH income multiplier, .473
- District 7 – Chamblee: \$436.9 million: HH income multiplier, .855

# WORKFORCE IMPACTS OF GDOT HIGHWAY EXPENDITURES

## Summary of Findings: Impact on Total Output

- District 1 – Gainesville: \$634.1 million: Output multiplier, 1.64
- District 2 – Tennille: \$759.9 million: Output multiplier, 1.49
- District 3 – Thomaston: \$910.3 million: Output multiplier, 1.61
- District 4 – Tifton: \$530.5 million: Output multiplier, 1.54
- District 5 – Jessup: \$664.0 million: Output multiplier, 1.50
- District 6 – Cartersville: \$448.6 million: Output multiplier, 1.46
- District 7 – Chamblee: \$880.0 million: Output multiplier, 1.72

# WORKFORCE IMPACTS OF GDOT HIGHWAY EXPENDITURES

## Summary of Findings: Small Business Revenue

- District 1 – Gainesville: \$42.5 million: Small Bus. Income Multiplier: .109
- District 2 – Tennille: \$53.7 million: Small Bus. Income Multiplier: .105
- District 3 – Thomaston: \$74.4 million: Small Bus. Income Multiplier: .132
- District 4 – Tifton: \$37.9 million: Small Bus. Income Multiplier: .109
- District 5 – Jessup: \$54.2 million: Small Bus. Income Multiplier: .122
- District 6 – Cartersville: \$52.0 million: Small Bus. Income Multiplier: .157
- District 7 – Chamblee: \$109.1 million: Small Bus. Income Multiplier: .214

# Conclusions

1. Economic Benefits differ a great deal across local areas: Total Output, Employment , Household Income and Small Business Revenue
2. State DOTs cannot alter local spending patterns, but they can influence local supply chain activity!
3. To maximize local economic development impacts, procurement policies must optimize local business engagement: For example:
  - 86% of the \$3.1 billion expenditures was awarded to Georgia prime contractors, while 14% went to out-of-state contractors (note: large variation by county)
  - Subcontractors were paid \$321.5 million, 89% was awarded Georgia subcontractors (smaller variation at subcontract level than prime level)

**Focus on procurement and small business policies that optimize local business engagement**