Mississippi in the Global Economy and Its Transportation Implications
• Extension of LATTs I&II Study
• “Forward Thinking” on freight planning and policy needs
• My Thoughts:
  ➢ Regionalism is critical
  ➢ Latent capacity not being used
  ➢ Economic development and Transportation coming together
  ➢ Southeast must win for rest of US to win
People Need Stuff...

What do you drink everyday?

- **When** do you expect to get this?
- **Where** do you expect to get this?
- How much are you **willing to pay** in time or money to get it?
- What are **your expectations** about that product?
Outline

- Domestic Transportation in the State
- Globalization in Mississippi
- General Economic Trends and Forecasts
- Implications for Transportation in Mississippi
Domestic Transportation in Mississippi
How Does One Look at Freight Activity?

- Inventory Functions – physical characteristics, numbers of facilities, labor, equipment, infrastructure
- Engineering – structural integrity, deterioration
- Operational Reliability – delay, closures
- Economical and Financial – Cost/Benefit Analysis, capital and financial resources, jobs and taxes
- Safety and Security – number of accidents, exposure
- Markets – hinterlands, multimodal services
Evolution of U.S. Logistics

• 1950’s- Develop U.S. Infrastructure
• 1960’s- Start of Asian Import Trade
• 1970’s - International Financial Markets, Containerization
• 1980’s - Fax Machines, Intermodalism
• 1990’s - Just in Time, Internet, Tracking
• 2000’s – Security, Congestion
• 21st Century – Global Competitiveness

Clash of Infrastructure-Information
Total Freight Transportation in MS - 2008

### Tons
- **Within State**: 218.5 (43%)
- **From State**: 112.3 (22%)
- **Into State**: 174.6 (35%)

### Value
- **Within State**: 45,809.1 (49%)
- **From State**: 41,787.5 (45%)
- **Into State**: 5,768.0 (6%)

Source: Freight Analysis Framework
Total Freight Transportation within Mississippi by Mode - 2008

**Tons (in millions)**
- Truck: 81 (72%)
- Rail: 29 (26%)
- Water: 1 (1%)
- Pipeline & unknown: 1 (1%)
- Other intermodal: 1 (1%)

**Dollars (in millions)**
- Truck: 36,523 (78%)
- Rail: 9,557 (20%)
- Water: 560 (1%)
- Pipeline & unknown: 245 (1%)
- Other intermodal: 1 (1%)

Legend:
- Truck
- Rail
- Water
- Pipeline & unknown
- Other intermodal
2008 Top Commodities within Mississippi

Tons (in millions)

- Logs: 19 (29%)
- Gasoline: 14 (22%)
- Crude petroleum: 12 (20%)
- Nat. gas & other petro. prods.: 10 (15%)
- Cereal grains: 9 (14%)

Dollars (in millions)

- Mixed freight: 5,768 (30%)
- Machinery: 4,367 (23%)
- Gasoline: 3,657 (19%)
- Nat. gas & other petro. prods.: 3,086 (16%)
- Electronics: 2,376 (12%)

Source: Freight Analysis Framework, FWHA
2008 Top Commodities from Mississippi

Tons (in millions)

- Nat. gas & other petro. prods.: 83%
- Wood prods.: 6%
- Other ag prods.: 5%
- Basic chemicals: 5%
- Gasoline: 3%
- Mixed freight: 3%
- Electronics: 5%
- Machinery: 5%
- Textiles/leather: 6%
- Other: 11%

Dollars (in millions)

- Nat. gas & other petro. prods.: 48%
- Wood prods.: 19%
- Other ag prods.: 12%
- Basic chemicals: 11%
- Gasoline: 10%
- Mixed freight: 6%
- Electronics: 5%
- Machinery: 5%
- Textiles/leather: 3%
- Other: 5%

Source: Freight Analysis Framework, FWHA
2008 Top Commodities into Mississippi

**Tons (in millions)**
- Nat. gas & other petro. prods.: 123 (74%)
- Coal: 8 (5%)
- Gasoline: 8 (5%)
- Gravel: 21 (13%)

**Dollars (in millions)**
- Nat. gas & other petro. prods.: 45,809 (61%)
- Machinery: 6,452 (9%)
- Motorized vehicles: 6,363 (9%)
- Mixed freight: 5,662 (8%)
- Textiles/leather: 9,250 (13%)

- Crude petroleum: 6,452 (9%)
- Mixed freight: 5,662 (8%)
- Textiles/leather: 9,250 (13%)

This chart shows the distribution of commodities by weight and value into Mississippi in 2008.
Note: Major flows include highway segments with truck tonnage of more than 140,000 tons per year, between places more than 50 miles apart. 140,000 tons is equivalent to approximately twenty four trucks per day.

Ton Miles of Truck Shipments by State for 2002
Transportation in the Mississippi Economy (Wages and Salaries)

Source: Bureau of Economic Analysis, U.S. Dept. of Commerce
Tenn-Tom Waterways Economic Benefit

**Economic Impact 1996-2008 (in Millions)**

<table>
<thead>
<tr>
<th>State</th>
<th>Direct</th>
<th>Indirect</th>
<th>Induced</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>$15,217.1</td>
<td>$550.3</td>
<td>$718.8</td>
<td>$16,486.2</td>
</tr>
<tr>
<td>Kentucky</td>
<td>$887.2</td>
<td>$163.1</td>
<td>$559.1</td>
<td>$1,609.4</td>
</tr>
<tr>
<td>Mississippi</td>
<td>$6,854.7</td>
<td>$1,333.0</td>
<td>$1,276.6</td>
<td>$9,464.3</td>
</tr>
<tr>
<td>Tennessee</td>
<td>$2,361.6</td>
<td>$38.1</td>
<td>$47.1</td>
<td>$2,446.8</td>
</tr>
<tr>
<td>Regional</td>
<td>$25,320.5</td>
<td>$2,093.3</td>
<td>$2,641.1</td>
<td>$30,054.9</td>
</tr>
<tr>
<td>United States</td>
<td>$25,320.5</td>
<td>$5,822.6</td>
<td>$11,380.6</td>
<td>$42,523.7</td>
</tr>
</tbody>
</table>

This table shows the impact from private investment and ports operating in the Tenn-Tom Waterway region.

**Employment Impact 1996-2008**

<table>
<thead>
<tr>
<th>State</th>
<th>Direct</th>
<th>Indirect</th>
<th>Induced</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>8,384</td>
<td>3,879</td>
<td>7,567</td>
<td>19,830</td>
</tr>
<tr>
<td>Kentucky</td>
<td>8,046</td>
<td>1,201</td>
<td>5,850</td>
<td>15,097</td>
</tr>
<tr>
<td>Mississippi</td>
<td>12,145</td>
<td>7,858</td>
<td>13,440</td>
<td>33,443</td>
</tr>
<tr>
<td>Tennessee</td>
<td>507</td>
<td>271</td>
<td>493</td>
<td>1,271</td>
</tr>
<tr>
<td>Regional</td>
<td>29,191</td>
<td>13,292</td>
<td>27,806</td>
<td>70,289</td>
</tr>
<tr>
<td>United States</td>
<td>29,191</td>
<td>29,001</td>
<td>79,471</td>
<td>137,663</td>
</tr>
</tbody>
</table>

This table indicates the number of jobs that were directly and indirectly created based on industry-to-industry transactions, as well as the number of jobs that were created based on employee spending in the local economy.
Globalization in Mississippi
How is Mississippi in the Global Economy?

- Imports
- Foreign Direct Investment
- Exporters
- Gateways
Importers

• The world feels closer
• The Chinese T-Shirt syndrome
• Assume all flows are one way
2007 Foreign Direct Investment in Mississippi

• Employed 24,500 workers in Mississippi.
• Major foreign investors: Japan, the United Kingdom, Germany, the Netherlands, Canada and France.
• 41 percent (10,100 workers) were in the manufacturing sector.
• Contributed 2.6 percent of the state's total private-industry employment in 2007.

Source: U.S. Department of Commerce, Bureau of Economic Analysis
What is the Demographic of MS Exporters (2007)?

Export-supported jobs (2006)
5.1 % of Mississippi's total private-sector employment.
13.1 % of all manufacturing workers in Mississippi depend on exports for their jobs.

1,247 Total Exporters of Record
931 Exporters were SME’s
- 75% of companies
- 34 % of value
Trends in the Mississippi Exporter Activity
1997 - 2009 by Total Dollar Value

(In Billions)

Source: WISERTrade: State Exports by Port Series Database
Exports by Metropolitan Statistical Area in Mississippi

Note: Excludes shipments from rural areas, or where address is unclearly attributable to a MSA

Source: Bureau of Economic Analysis, U.S. Department of Commerce, GDP by Metropolitan Area (millions of current dollars)
What does the Global Supply Chain Mean to the U.S.?

- U.S. logistics costs - $1.4 trillion in 2007
- 10.1% of US GDP
- Projected to be 1/3 of National GDP by 2020 (up from ¼ in early 2000’s)
General Economic Trends and Forecasts
The Future is Uncertain Globally…

- Changing U.S. policy
- Changing Import Sourcing
- Foreign Direct Investment trends
- Expansion of Transshipment hubs in region
- Free Trade negotiations
- Cuba
- Panama Canal Expansion
- Promoting US exports
- Transparency and Security
And Domestically.

- Automotive Industry in Southeast
- Biofuels
- Alternative Energy Corridors
- Emergence of National Logistics Hubs
- Changing Urban and Rural demographics
- Carbon footprint and Sustainability
- Promoting Small Businesses
Forecasts of Southeastern US Gateways (Non Texas) (IHS Global Insight)
Forecasts of Gulf Coast (Non Texas) Containerized Tons (Million Mtons) (IHS Global Insight)
Mississippi - Transportation Forecast by Mode (2008 - 2035)

Shipments by Value

($ Millions)

Within State 2008  From State 2008  To State 2008  Within State 2035  From State 2035  To State 2035

Source: FWHA Freight Analysis Framework
Forecasted Traffic in U.S. Freight Analysis Framework
Senior executives surveyed worldwide

- 14% - infrastructure is “completely adequate”
- 90% - quality and availability of infrastructure directly affects their business.

- 77% - infrastructure needs
  - become more important over the next five years
  - system remains inadequate
Comparison of Estimated Peak Period Congestion – 2002 - 2035
Infrastructure Aging Also...

- Evolution of projects
- Design life – life cycle management
- Changing traffic patterns
- Bridge Collapses
The Realities of A Multimodal Freight System

• Highway Capacity
  - growing less than 1% a year since 1980
  - NHS Connectors

• Rail line system miles
  - Rail abandonment in 1980’s
  - Some capacity added on mainline tracks

• Waterway network is fixed
  - River system underutilized
  - Lock and Dam modernization and maintenance
Can Waterways/Railroads Be Part of Solution?

- Balance with existing international/coastal flows
- Determine ways to encourage private sector investment in equipment, services
- Work with states/cities for truck congestion
- Federal and State Multiagency planning, data, analysis
Implications for Transportation in Mississippi

What does this mean for me?
1. The South becomes even more competitive in the world economy
2. South shifts from manufacturing to service sector which improves manufacturing
3. Migration continues as the South becomes “land of opportunity”
4. South develops knowledge based economy
5. South leads way in education reform
6. Contiguous counties around major metropolitan areas will be the action in the south
7. South becomes practically the only location for automotive plants
Without Planning This Would Have Been a Mess
Can the State be Competitive Globally?

• Promote Business:
  – Support businesses in global trade
  – $1 billion in new exports generates 19,000 jobs

• Connectivity
  – Ports, gateways, multimodal systems
  – FHWA estimates that $1 billion in highway investment supports 10,870 jobs

• Recognize policy pressures maybe in conflict with these goals
Setting the Stage

• Transportation projects must fit into a broader, regional (global) view

• Frameworks for prioritizing and developing facilities inadequate for new needs
  - Mixed dedicated funding
  - No strategic vision or authorization

• Ad Hoc National policy and direction related to freight operational improvements
Institutional Challenges Abound

- Civic pride and legacy obligations
- Ownership issues (private, public terminals)
- Economic development needs
- Communicate value
- Competitive industries
- Land Use planning
Strategies Recommended By LATTS

- Utilization of Existing Infrastructure
- Add Physical Infrastructure
- Increase Operating Throughput
- Corridor Approach for Investing
- Develop Agile Freight Operations
- Improve Clearance at Gateways
- Attention to Connectors

- Encourage Technology
- Integration of Information
- ITS Applications
- Increase Public Awareness
- Improve Institutional Relationships
- Improve Freight Profile
- Partnerships
So What? Can we be proactive with Freight Corridors?

- Need to develop strategic intermodal corridors and their connectivity
- Capacity expansion – waterways, dredging, railroad corridors, interstate highways
- Resolve conflicts at multimodal intersections (bridges, grade crossings, etc.)
- Recognition that multimodal corridor tradeoffs exist
- Authorized corridors should be built pending funding
Total State Expenditures versus Transportation Expenditures for Mississippi (1992 - 2009)
Final Thoughts?

• Mississippi benefits
  ➢ From previous investment in public and private freight infrastructure
  ➢ These facilities connect the State with world markets, generating jobs
• The State – growth is with external markets
• The lack of systems approach-
  ➢ May result in congestion and unreliability
  ➢ Will add costs to doing business in Mississippi
Thank you

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