A Review of Proposed State Funding of the Northwest Tennessee Regional Port and Industrial Park

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EXECUTIVE SUMMARY

This report provides a brief review of Younger Associates' economic impact study of the proposed Northwest Tennessee Regional Port and Industrial Park and a brief analysis of the Corps of Engineers' study of the same facility. Findings of our analyses show that:

- Though optimistic, the Younger Associates economic impact study is basically correct in its findings.
- There is evidence of demand for completion of the port and industrial park.
- The construction of the port and industrial park will bring jobs, income, and tax revenue to the citizens of Northwest Tennessee, though perhaps not as much as Younger estimated.
- Prospective major employers for the industrial park are likely to seek incentives and other government assistance that will be in addition to the initial costs of the port and the industrial park.
- While the site is remote, the Corps of Engineers' cost/benefit cushion of 1.89 indicates that the port will strengthen the area's economy more than enough to justify the initial national, State, and local investments in the area.
- A recommendation for the State to invest in the project is supported by the "regret criterion." While it is uncertain how large the benefits of the project may be, it is certain that if the project is not completed, there will be no benefits to the citizens of Northwest Tennessee.

The proposed Northwest Tennessee Regional Port and Industrial Park has the potential for bringing jobs, income, and tax revenue to the citizens of Northwest Tennessee.

PART I. PROPOSED STATE FUNDING OF THE NORTHWEST TENNESSEE REGIONAL PORT AND INDUSTRIAL PARK: A CRITIQUE OF YOUNGER ASSOCIATES' ECONOMIC IMPACT ANALYSIS

This section concentrates on the economic impact analysis by Younger Associates of the proposed Northwest Tennessee Regional Port and Industrial Park at Cates Landing. Of particular interest in this review is the projected economic impact from ongoing port and industrial park operations.

Primary Assumptions

The one-time impact of construction of the port and the associated industrial park appears accurate. The analysis appears to be straightforward and uses standard economic impact methodology (RIMS II methodology of the U.S. Bureau of Economic Analysis). The influx of millions of dollars in construction money will undoubtedly produce a positive economic impact on the area. However, the size of the impact is a function of the number of dollars introduced into the local economy.

The estimated impact from ongoing operations of the port and the industrial park, particularly the industrial park, is a bit more speculative. While the use of the RIMS II methodology is not in question, one of the critical assumptions deserves more scrutiny: $100,000 in capital investment and three jobs created per acre for the 1,000-acre industrial park. There is no guarantee that 3,000 jobs and $100 million (1,000 acres x $100,000) in capital investment will materialize over time. According to the Younger report, these estimates are based upon the historical experiences of other developments in Tennessee. The jobs and tax revenue listed are not likely to materialize in the absence of the port and the industrial park, particularly the industrial park.

Yet, there is support for the estimate of $100,000 of capital investment per acre in a March 22nd presentation to the Governor. In the first section of the report under the caption "They Came"–"They Saw"–"They Left" [sic], the last bullet point on the page states:

> In the last ten years over $1 billion in direct capital investment has been lost. Missed projects include: American Yeast, Excalibar Minerals, IPSCO, ConAgra, NUCOR, Grain Processing Inc.

While some announced intentions do not materialize, some do. Had the port been in existence when the businesses were looking, it is likely that at least some of them would have followed through with capital investment and jobs. If only 10.0 percent of the $1 billion had materialized, that would amount to $100 million in capital investment, which is equal to $100,000 per acre for 1,000 acres. Because of this, Younger Associates' estimate of $100,000 of capital investment per acre appears to be reasonable.

One thing that is clear from both the Younger Associates report and the March 22nd presentation to the Governor is that the bulk of the economic benefits of this project stem from industrial park development and not from the port component. However, the two components are inseparable: without the port, there probably would be no industrial park development.

Without the industrial park, the port would add little to the local economy, even if all of the letters of commitment to use the port came to fruition (but, these commitments may be dependent upon completion of the industrial park). This is demonstrated in Tables 1 and 2. Table 1 presents five years of estimated port operating revenue (per Younger Associates). The total operating revenue from the last column in Table 1 was used in Table 2[1] to determine the with an estimated economic impact from port operations alone.

[1] It should be noted that Memphis MSA multipliers were used instead of Lake County multipliers since the Bureau did not have immediate access to the Lake County multipliers. Even so, the use of Memphis multipliers is acceptable since the two sets of multipliers do not have enough variation to impact the conclusions presented here. Whether Memphis multipliers or Lake County multipliers are used, the conclusion that the port alone will create few jobs remains the same.

Table 1. Estimated Operating Revenue of the Northwest Tennessee Port at Cates Landing

	Tonnage	Wharfage	Other Fees	Land Leases	Total
Year 1	960,000	$192,000	$48,000.00	$ 26,000	$266,000
Year 2	998,400	$199,680	$53,913.60	$ 79,560	$333,154
Year 3	1,038,336	$207,667	$62,300.16	$216,400	$486,367
Year 4	1,079,869	$215,974	$69,111.64	$331,080	$616,166
Year 5	1,123,064	$224,613	$78,614.50	$365,820	$669,047

Source: *Overview & Projected Budget* (Cates Landing Northwest Tennessee Port & Industrial Park), Younger Associates, April 2001.

Table 2. Estimated Economic Impact of Cates Landing Port Exclusive of Industrial Park

		Multipliers and Multiplier Impacts		
	Total Port Revenue (1)	Output (2) 1.8366	Earnings (3) 0.3389	Employment(4) 12.1907
Year 1	$266,000	$ 488,536	$ 90,147	3.2
Year 2	$333,154	$ 611,870	$112,906	4.1
Year 3	$486,367	$ 893,262	$164,830	5.9
Year 4	$616,166	$1,131,650	$208,818	7.5
Year 5	$669,047	$1,228,772	$226,740	8.2

(1) Entries in this column were derived in Table 1.
(2) Each entry in this column represents the total dollar change in output that occurs in all industries for each additional dollar of output delivered to final demand by the industry corresponding to the entry.
(3) Each entry in this column represents the total dollar change in earnings of households employed by all industries for each additional dollar of output delivered to final demand by the industry corresponding to the entry.
(4) Each entry in this column represents the total change in number of jobs that occurs in all industries for each additional $1 million of output delivered to final demand by the industry corresponding to the entry.
NOTE: Multipliers are based on the 1998 Benchmark Input-Output Table for the Nation and 2000 regional data and are for the water transportation industry for the Memphis MSA.

As shown in Table 2, port revenue rises from $266,000 in year one to nearly $670,000 by year five. Accordingly, the economic impact rises from less than $500,000 in output, $90,147 in earnings, and 3.2 jobs in year one to over $1.2 million in output, $226,740 in earnings, and 8.2 jobs in year five. While the benefits from the port alone may be insufficient to justify further investment, the port and the industrial park are linked together and will support the investment in the port facility.

In the Younger Associates estimate of the annual impact of operations of the proposed industrial park, total direct wages and benefits of the 3,000 direct employees are cited as being $121,830,000. This equates to approximately $40,610 per job and may be slightly high. No source could be found for the estimate. Using the year 2000 U.S. Bureau of Labor Statistics estimate of 27.0 percent as the percentage of total compensation equal to benefits allows a breakdown of Younger's estimate into the separate components of wages and benefits: Wages per job would equal $29,645, while benefits per job would be $10,965. Note that the wage figure of $29,645 per direct job is less than the estimated wage per indirect job of $32,488 used by Younger.

The wage per indirect job used by Younger is cited as the annual average manufacturing wage of $32,488 (in 2000 dollars) for Dyer County and may be slightly high. In 2000, the average wage for all production occupations[2] for Dyer, Gibson, Lake, and Obion counties was approximately $11.28 per hour, or approximately $23,462 annually, and is over $9,000 (or 27.8 percent) less than the Younger figure. It is possible that the Younger figure represents a more specific type of manufacturing, perhaps durable goods manufacturing. However, regardless of the type, most potential tenants are likely to be involved in some form of production-related employment.

With regard to Younger's direct and indirect wage and benefit estimates, both appear to be somewhat optimistic. Accordingly, all sales and other tax revenue estimates based on Younger's wage estimates are also optimistic. Adjusting the sales tax revenue estimates downward by the 27.8 percent difference results in estimated annual sales tax revenue of $1,434,525 and other tax revenue of $408,840, still positive but lower than Younger's estimates.

[2] 2000 average hourly wage for all production occupations in Non-MSA Region 3 (Dyer, Gibson, Lake, and Obion counties) from Tennessee Department of Labor and Workforce Development.

Other Points to Consider

- The Nissan automotive assembly plant in Canton, Mississippi, required a total of $1.4 billion in capital investment by Nissan and $363 million in direct incentives (excluding interest on the $363 million over 20 years) provided by the state of Mississippi. The plant is projected to provide about 4,000 direct jobs[3] when fully functional by 2005 (currently employs around 3,000). The multiplier impact of Nissan in Canton is estimated to result in a total of 16,212 jobs (which includes the 4,000 direct jobs). Much of the economic impact of the Nissan plant comes from suppliers who have moved to or are expected to move to the Canton area. The plant is located on approximately 1,200 acres, which equates to almost $1.5 million in capital investment and 3.3 direct jobs per acre of development.

- Birmingham Steel constructed and operated (briefly) a mini-mill in Memphis in the late 1990s. Built at a cost of around $215 million,[4] the plant employed[5] 250 persons on a total of 500 acres (equivalent to one-half of a job and $430,000 of capital investment per acre). Note that the cost cited here does not include public dollars that were spent on infrastructure improvements, tax abatements, and job training. Aside from the construction impact, the plant's operation was so brief that it had little impact on the Memphis economy.

- Prospective major employers for the proposed industrial park are likely to seek government-provided incentives and assistance including tax abatements, job-training programs for employees, and infrastructure improvements. The cost of these incentives will be in addition to the initial costs of the port and the industrial park.

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[3] See "The Economic Impact of Nissan in Mississippi," at <www.madison-co.com/nissan/theeconomicimpactofnissaninmississippi.htm>.

[4] See "Birmingham Steel Greenfield SBQ Billet Mini Mill, USA," at <www.steel-technology.com/projects/birmingham/>.

[5] See "Steelmaking Plants Shutdown or Idled Since 2000," at <www.uswa.org/uswa/program/adminlinks/doc>.

Conclusion

While the Younger Associates estimates of wages and tax revenues generated appear to be optimistic, there is evidence of demand for the completion of the port and the industrial park. In the absence of firm commitments for the industrial park, it may take many years for the State and local governments to recoup their investments in the project. Yet, if the port and industrial park are fully developed, it is possible that Northwest Tennessee could benefit substantially in jobs, income, and tax revenue that may more than cover the project's development costs.

The vast majority of the benefits of the port and industrial park will stem from development of the industrial park, and the development of the industrial park effectively hinges on completion of the port. Realizing the full potential benefit of Northwest Tennessee Port at Cates Landing would require completion of all phases of the planned development. While full development may open the door to opportunity, it will not guarantee it. On the other hand, failure to develop the port and industrial park will guarantee zero benefits for the citizens of Northwest Tennessee.

PART II. PROPOSED STATE FUNDING OF THE NORTHWEST TENNESSEE REGIONAL PORT AND INDUSTRIAL PARK: AN ANALYSIS OF THE CORPS OF ENGINEERS' ASSESSMENT

Feasibility and the Corps Analysis

The fiscal feasibility of the port project relies on funding from federal sources. From the Corps of Engineers' perspective, since the site is located largely above the flood plain, it has topographical advantages over alternative sites within 100 miles. The location is rated as Tennessee's second most attractive port site on the Mississippi River in terms of this topography, the location of rail service, and the availability of interstate access. (Tennessee's number one port site is in Memphis, which would compete against the proposed site.)

Estimates of transportation cost savings that would make the project cost effective by Corps of Engineers standards are reasonably accurate, even if some of the analysis dates back to 1999. The changes in the Northwest Tennessee industrial economy over the last few years work against the demand for port facilities. However, the Corps' estimate of an 89.0 percent cost/benefit cushion (with the 1.89 ratio) should be adequate to suggest that the area's economy would be strengthened by the port more than enough to justify the initial national, State, and local investments in the area. While some recent job losses in manufacturing are permanent, there is likely to be some rebound in manufacturing from a business cycle recovery. Thus, the near-term prospects for the need for the port may be close to those estimated by the Corps.

Apparently, the Corps of Engineers is focusing its efforts on developing all economically-feasible improvements to the Mississippi River's transportation capacity. The Corps has determined that the proposed port meets its feasibility standards. However, the Corps often has to ration funds among feasible projects, leaving some attractive opportunities untaken.

While the proposed port site has valuable topographical assets and proximity to rail and highway access, it has one obvious weakness: In economic terms, its location is relatively remote. If the site were ten miles north of Memphis, it would already have been exploited for its economic potential. If the site had been developed years ago, the area would already have benefitted from industrial investments.

Decision Alternatives

Suppose the decision is made to deny funding for the proposed project. In the future, an economic report is likely to conclude that there is just enough industrial activity in the area to justify federal spending to save on transportation costs. There will be little proven ability to attract new industry because of the improved transportation. State officials will face the same qualitative decision factors as today and will probably wish that the 2005 choice had been to do the project.

The economic development payoffs to the State will not follow the pattern that could be anticipated from investment in infrastructure for a metropolitan area. There will be no smooth path of growing economic benefits. The State's investment will almost certainly deliver sizable fiscal payoffs sometime in the future. Once the park starts growing, the benefits may be very large relative to the investment. The main aspect of the risk is how long the State will have to wait for the benefits. In addition, the project is not an all-or-nothing risk since there are immediate, highly probable transportation cost savings detailed by the Corps of Engineers.

A recommendation that the State invest in the project can be supported by the "regret criterion" for decision making under risk and uncertainty. This criterion has been in and out of favor since the 1940s. While it has flaws, economists believe that many people follow the criterion's thought patterns, and it is certainly appropriate if outsiders are active in second-guessing decisions. The assumption is that the decision maker has to commit to a course of action before knowing some important fact. That fact is not known now, but will be apparent over time. When the uncertainty is resolved, then anyone can compare the benefit that the chosen course delivered versus the benefit that a different course would have delivered. Regret exists if there is a big

difference between the payoff from the best choice possible, given how the uncertainty resolved itself, and the payoff to the decision maker because of his actual commitment. Logically, people try to "minimize the maximum regret possible," which is nothing more than trying not to look bad if things don't go just right.

In this case, the uncertain factor is whether there will be heavy demand for industrial space at the proposed port. There is no way to make that determination now; only time will tell. One may hypothesize about the State's benefits under alternative choices and alternative business environments. Suppose there is no great future demand for industrial space in Northwest Tennessee. If the State invests in the project, then the State will receive relatively small annual benefits from the transportation cost savings. If the State does not invest in the project, then there will be no transportation cost savings.

Suppose there is demand for the industrial space that is eventually realized. If the State invests in the project, then the State will get relatively large benefits. If the State does not invest in the project, then there will be no benefits.

While it cannot be said how the issue will be resolved, there can be a best choice to avoid regrets. If the decision is made to withhold State funds, then the level of regret will be very large (if demand is good) or moderate (if only transportation cost savings are foregone). If the decision is made to proceed with State funding, then regrets are minimized regardless of how the industrial market demand develops since regrets would be zero in either market condition. The best choice is clear: Invest enough in the port and industrial park to make the project go.

Recommendation

Assuming that federal funds are used to partially support the port's construction, it is recommended that Tennessee meet minimum standards for matching funds. Additionally, Tennessee should be ready to make added investments in the area's infrastructure contingent upon prospects that arise in the

future. For example, the future Interstate 69 may be within 20 miles of the port. The State of Tennessee would find it cost effective to improve highways from the port to the interstate.