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EXPORTS, THE ECONOMY AND TRANSPORTATION:  
THE IMPORTANCE OF RECOGNIZING WORLD TRADE  
AS A FACTOR IN STATE AND LOCAL  
TRANSPORTATION DECISION-MAKING

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## EXPORTS, THE ECONOMY AND TRANSPORTATION

### The Importance of Trade and Exports

The United States is a nation dependent on trade. Although we are a nation rich in natural resources, capital, people and ideas, without international trade our economic well-being would suffer. In fact, over 15 percent of our multi-trillion dollar economy is tied directly to exports and imports. The United States accounts for nearly 15 percent of the value of world exports and imports even though we have only about five percent of the world's people. In some sectors, particularly agriculture, the United States is the dominant trader in the world. The US now accounts for three quarters of world corn and soybean exports, half its wheat exports, one-third of the cotton and peanut trade, and one-fifth of the rice trade even though we contribute a much smaller share of world production of these crops. In Iowa, the state which I am most familiar with, the direct value of exports alone approaches 20 percent of the state's economy. No less than 12 percent of the state's manufacturing employment and much of our agricultural production is related to export activity. Iowa has been one of the leading states in value of agricultural exports over the last 10 years, contributing about nine percent of the national total.

Both the exports and imports which make up total trade are important to the efficient functioning of any economy. However, since 1976 a serious imbalance of trade has developed in the United States. This imbalance, which has approached \$50 billion in recent years, is attributable both to large purchases of imported petroleum and increasing purchases of machinery, transportation equipment and other manufactured goods from overseas.

Agricultural trade is vital in paying our energy bill. Nearly half of Iowa's total agricultural export receipts and one-third of Iowa's total export receipts now go to pay for petroleum products imported from other states or nations. If we are to return to a more healthy balance of trade one of two

things must happen; either exports must rise dramatically in value or imports must decrease. The latter does not appear possible--US demand for petroleum and other products produced overseas is expected to remain high. Raising the value of our exports would seem to be the only way to attack our multi-billion dollar trade deficit. Recent projections in fact foresee an "explosion" in coal and grain exports over the next 20 years.

#### Coal and Grain: America's Growth Exports

In 1977, approximately 250 million tons of goods were exported through US ports. Recent forecasts indicate that domestic port facility demand may exceed 600 million tons by the year 2000. Roughly 85 percent of this growth would come from two commodity groups--coal (55 percent) and grain (30 percent).

Increases of such magnitude could be characterized as nothing short of explosive. For example, in 1975, only 65 million tons of coal were exported from the US, and nearly one-sixth of this was trade with Canada. In the early 1970s, only about 35 million tons of feed and food grains were exported from the US. But by the year 2000, US exports of coal and grain have been projected to reach over 250 million and 200 million tons respectively, partly as a result of the world's population growing at a rate of 200,000 new people per day. Most of this growth is occurring in Africa, Asia, the Middle East and Latin America. At \$25 per ton of coal and \$5 per bushel of grain, the value of new trade generated beyond 1980 levels in these two commodities alone would approach \$25 billion, or about half of the nation's current trade deficit and half of the US imported energy bill.

#### "Constrained Abundance"

Such tremendous growth would not come without greatly increasing demands on our domestic freight transportation system. Coal and grain exports of the magnitude projected, along with growing domestic intercity freight traffic,

would lead to a doubling in demand for trucking, rail freight and inland waterway services in the US. In Iowa, the growth in freight traffic would be no less astounding. Truck traffic on parts of Interstate 80, the major east-west highway link through Iowa, would rise to nearly 10,000 vehicles per day within 20 years. This is a facility which handles about 15,000 total vehicles and about 5,000 trucks per day today. One-hundred-fifty trains would move through Iowa each day on rail lines which now carry fewer than 70. And, over 20 million tons of materials would move through Iowa river ports which handled 12 million tons in 1980.

Obviously, such increases in demand would call for an increasingly efficient use of transportation facilities and funding. Unfortunately, many of our transportation resources are not being allocated wisely at present. For example:

- Numerous rail lines and roads which were constructed to meet the transportation conditions of the early 1900s still crisscross the countryside. Some of these facilities are obsolete and in need of repair. Others cannot be justified in today's economy and represent dollar costs to our economy both in terms of "opportunity cost" and maintenance expenditures.
- Even though the total rail-water distance involved in moving grain from Omaha, Nebraska, to Tokyo, Japan via Pacific coast ports is nearly 60 percent less than the distance involved in moving the traditional route (rail or barge to the Gulf of Mexico, ship via the Panama Canal), Pacific rim grain handling facilities are not being developed rapidly. Routing via the Pacific coast would generate tremendous energy and equipment utilization savings. For example, railroad yard congestion at Gulf Coast loading points may cost an Iowa farmer more than 8 cents per bushel in terms of net freight car leasing costs borne by the grain elevator he ships through. These costs are ultimately passed along to the producer--the farmer.

- According to a recent article in Fortune, if all planned US coal export facilities are constructed, export capacity will exceed demand by 150 percent in the year 2000. The excess capacity alone would cost at least \$2 billion to construct--\$2 billion which would probably be passed along to consumers of coal and the electricity generated with it.
- In 10 years Iowa industry and agriculture may lose \$3.5 million in income from just one embargoed primary highway bridge. That \$3.5 million in lost income opportunity is 7 times the cost of replacing the bridge in the first place. Farmers and consumers bear the costs of embargoes even if indirectly.

Transportation: The Crucial Link Between Export Markets and a Healthy Domestic Economy

Meeting future export demand will depend on our ability to effectively plan and finance improvements in our distribution system. This ability will be dependent upon private and public sectors to cooperate in programs designed to allocate our transportation resources wisely.

Transportation is the crucial link between export markets and a healthy domestic economy. The costs of inefficient or inadequate transportation are enormous now. The Iowa DOT has estimated that Iowa could be losing as much as \$210 million per year in income to farmers from inadequate transportation opportunities. That \$210 million translates into 10,000 jobs, \$85 million in general fund revenues and \$840 million in Gross State Product each year. Further, provision of improved transportation could lead to an increase in value of Iowa farmland by as much as \$5 billion. That would translate into to \$100 million in property taxes for local governments and programs each year. Failure to keep up in our rate of investment in essential transportation services and facilities in the future will have consequences at least as large.

Conclusion: What Do Exports Mean To State and Local Transportation Decisions

Even seemingly local transportation decisions can be crucial to the efficient functioning of international trade. The two commodities likely to make up the bulk of increased US trade over the next 20 years, coal and grain, are extremely sensitive to transportation supply and cost. Numerous decisions made at the state and local level may in fact affect world trade in these commodities.

Further, local transportation investment is often substantially interrelated to or even driven by world trade. Today and in the future, state and local transportation decisions must be made with international distribution patterns in mind. Otherwise, enormously costly investments in highways, railroads, waterways and ports will be made in vain or will not be made where they are greatly needed to handle the US contribution to world trade in the year 2000.

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# GRAIN PRODUCTION AND EXPORTS

	Iowa Corn Production Per Acre	Total Iowa Corn	Iowa Soybean Production Per Acre	Total Iowa Soybeans	U.S. Grain Exports
1950	49 bushels	456 million bushels	22 bushels	42 million bushels	0.5 billion bushels
1960	64 bushels	773. million bushels	26 bushels	66 million bushels	1.2 billion bushels
1970	86 bushels	867 million bushels	32 bushels	185 million bushels	1.8 billion bushels
Today	128 bushels	1,728 million bushels	42 bushels	342 million bushels	5.1 billion bushels
1990	155 bushels	2,000 million bushels	55 bushels	440 million bushels	7.0 billion bushels
2000	167 bushels	2,500 million bushels	62 bushels	560 million bushels	8.9 billion bushels

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