

Economic survey of the transportation industry of the united states research pape...

[Countries](#), [United States](#)



Abstract

According to the United States Census Bureau under the Department of Commerce (2013), the United States of America has a population of 313 million (as of 2012 census) that needs to move from one place to another and requires goods and services to be moved as well for their many needs. Twenty three percent (23%) of this population is above eighteen (18) years of age and can legally drive a motor vehicle across the United States' 3, 531, 905 square miles of land .

Transportation is made up of three very distinct components, transportation infrastructure, vehicles and transportation operations. Infrastructure in transportation terms consists of the assets that are installed to make transportation possible. These installations include the roads, railways, airways, waterways and pipelines that are necessary for movement as well as the adjunct infrastructure needed for servicing them such as airports, railways, bus stations, warehouses, terminals, depot for fuelling, seaports and others . The infrastructure and terminals work together for servicing both the people and products. Transportation vehicles are those that utilize these infrastructures. These include motor vehicles such as automobiles, buses, trucks and trains on land and airplanes and helicopters on the air. These also include ships and freight handling equipment. Transportation operations on the other hand refer to the manner of operations of these vehicles and infrastructures and are concerned with issues relating to how these are financed, regulated and developed. Transportation infrastructures, vehicles and operations can be public and private in nature .

The importance of transportation goes beyond mere transportation of goods,

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services and people. As a matter of fact, the survival of a nation's economy is hinged on the careful balance held largely by its transportation sector. According to Dr. Rodriguez and Dr. Notteboom of Hoftra University (2013) says that the transportation sector is a very important component of any economy because of its impact on the welfare of people and the development of nations. Efficient transport systems are instrumental in providing economic and social opportunities such as employment and investments. An efficient transport system also ensures that no missed economic opportunities are suffered by a nation. Imagine paying for higher costs of goods and services because of inefficient transportation, when improving transportation systems alone increases revenues and reduces costs for enterprises. Efficient transportation systems also help address environmental and social costs which are as important as transportation's economic effects. Consider the amount of employment generated by the production of a particular good for example. Investors would want to locate this in an area where there is good access to raw materials and good access to the intended market. Producers would then purchase their other requirements within close proximity to these production centers, thus creating a multiplier effect. If the transportation system is available or can be made available, economic progress would eventually happen, as production is matched up with demand and as workers earn wages that enable them to purchase other products and services to improve their way of living, on their own. Generally, the effect of transportation can be direct in that it influences the creation of employment, the development of consumer or production markets and makes costs lower and trade more efficient; and indirect in that

it causes multiplier effects such as increase in consumer spending acquired from an increase in purchasing capability, value-added services, increase in public spending from taxes, creation of new markets for related products and services, among others .

Economic Survey of the US Transportation Industry

An examination of the US Transportation Sector demands the examination of the impacts of the different economic activities that groups in the transport sector are doing or are trying to accomplish. A good example is the production of steel. Steel is used in all industries being a raw material for factories, equipment and products. Steel making companies require the transport of iron ore at the most efficient transport levels (i. e. costs) to be competitive in the marketplace. These companies have a myriad of choices of possible transportation schemes to bring iron ores from their production source to the company's steel furnaces. Thus to examine the transport sector, it is important to examine how mobile goods and services have gotten as it is a direct indication of transportation efficiency.

According to Dr. Rodriguez and Dr. Notteboom (2013), mobility is a fundamental characteristic of economic activity. The greater the mobility offered by the existing transport industry, the more capable the economy is of attracting investments, making use of its resources, and maintaining economic stability. In a nut shell, a high level of mobility is needed for economic progress. At the macroeconomic level, transportation and mobility are inter-linked and has a direct effect on the productivity of the nation, on the amount of employment available, fulfilled, or required and the overall

level of activity of the country. According to the same study by Dr. Rodriguez and Dr. Notteboom, developed countries account for a contribution anywhere from six (6) to twelve (12) percent of the Gross Domestic Product (GDP). According to Select USA, the transportation industry is highly competitive in the United States of America. . Investments are made in the transport sector to affect the flow of goods and services as well as to influence the position of market players in the industry. The investment in the transport sector by these players in 2011 amounted to about US\$ 1. 3 trillion which is reportedly about 8. 5% of 2011's Gross Domestic Product (GDP). Based on the definition used by Dr. Rodriguez and Dr. Notteboom for level of investment as an indicator of transportation mobility, the United States' investment for 2011 alone indicates that the country's transportation industry has created high mobility for economic activities.

Mobility can be examined from a microeconomic level as well. At the microeconomic level, mobility is measured as a linkage between the producer of goods and/or services, the consumer of these goods and/or services and the cost of bringing the products from their production location to their consumption destination. According to the book published by Dr. Rodriguez and Dr. Notteboom, transportation average between ten to fifteen percent (10 to 15%) of household expenditures and about four percent (4%) of production costs .

A study conducted by the NSSGA in 2007 indicated that the average household in the United States spent 18% of its annual earnings on transportation. This exceeds the 2013 projections of Dr. Rodriguez and Dr. Notteboom, with respect to the data presented by NSSGA which was based

on the national census of 2005. The breakdown of the household spending according to this report state that consumers spend most on housing (32%), miscellaneous purchases (22%), transportation (18%), food (13%), health (6%), entertainment (5%) and apparel (4%) in 2005. The eighteen percent share in the United States is driven by the purchase of new vehicles, purchase of fuel, related vehicle expenses (such as maintenance) and purchase of transportation other than vehicles (such as airline tickets). The study also note that the highest income earners in the US economy (20% highest) spent an average of 17.3% on transportation, the next highest earners (20% next highest) 19.3%, the middle earners (20% middle earners) an average of 19%, the low-middle earners (next 20%) an average of 18.4% and the lowest 20% earners of the economy 14.3% .

An updated report by the Bureau of Labor Statistics (2013) reports that most of the household spendings have increased in 2012 including that of transportation. Expenditures on transportation have increased by 8.5 percent between the years 2011 to 2012 as compared to the year 2010 to 2011. In 2012, the contribution of transportation expenditure to the household expenditure is 17.5% while in 2011, the contribution of transportation expenditure to total household expenditure averaged at 16.7%. Please see the table below for the breakdown of US household expenditures. The report further states that gasoline expenditures, which are driven by gasoline prices have increased from 2010 to 2012 by 29.6%. However, despite the increase in fuel prices, overall transportation expenditures continued to expand rather than contract; as more people sought to purchase new vehicles in 2012. A marked 20.3% rise in the

expenditures for new vehicles was observed in 2012 with respect to purchases in 2011.

The United States transportation system can therefore be ranked as very high given the contribution of transportation to the household expenditure patterns. This also means that the United States households have high mobility, as evidenced by their high expenditures in fuel and purchase of new vehicles.

Another microeconomic indicator of the state of the transportation sector is its effect on the relationships between consumers and producers. Producers will locate in locations of geographical advantages. These advantages could be in terms of space, cost of labor, and proximity to raw materials and/or the market. Karnani (1983) in his journal article entitled "The Trade-Off Between Production And Transportation Costs in Determining Optimal Plant Size" stated that it is an important part of manufacturing to decide on the shipping radius of a proposed manufacturing facility. This is because there is a natural trade-off between the production size (i. e. economies of scale) and the resulting cost of transportation of products manufactured. The economies of scale on production dictate the acceptable levels of transportation costs for the particular manufacturing facility . Thus this means that a manufacturing facility can increase its size as long as the transportation costs are, with respect to the size of the facility, minimized or optimized. For manufacturers, the transport cost can be optimized through setting of effective routes that enable interaction with more customers or suppliers, by improving transport performance through actions that decrease the amount of time products are

moved, by increasing reliability through ensured punctuality, insurances against reduction or damages, by wider exposure which means the distribution to larger markets and through the sourcing of a more diverse raw material base .

For manufacturers, it is important to understand and try to minimize transport costs. Transport costs differ from product to product and therefore it is up to the firm to optimize the movement of its products and services. Transport cost is defined by Rodriguez (2013) as a monetary measure of that producers must pay to a provider of transportation. Transport costs include the fixed (infrastructure) and variable (operating) components. Transport costs varies and is affected by several factors that include geography, energy (fuel) costs, infrastructure costs and availability, regulatory restrictions, and customer requirements for transport of products. The biggest factor to consider is of course the distance and accessibility of the product from the intended market. Distance can be expressed in terms of length and/or time but it is the trade-off between “ space” for “ cost” that creates a variation in transport costs. The type of transportation used is also influenced by the distance and as such creates variances in terms of transport efficiencies. Secondly, the type of product affects transportation costs. Some products will require special handling and packaging while some can be moved without a lot of specific requirements for movement. Another factor is the economic scale of transport. In some instances, there is a minimum volume required for moving products while in others there is no restriction. Some products are moved in bulk to reduce costs while others are shipped in smaller units due to a different valuation of the product.

Another factor that affects transportation is the cost of the energy used in the transportation process. As shown in the preceding section of this report, the consumption of fuel drives costs and the lower the expenditure on fuel, the more efficient the transportation system is.

Curiously, trade imbalances also affect transportation costs. In economies that are involved in international trade, imports and exports are dictated by their transport costs and transport costs are affected by trade balances.

When there are more imports than exports, transport costs for imports are seen to be higher than those for exports to enable the local economy to compete with the cheaper products coming into the host market. When the situation is reversed, the transportation costs are also reversed in favour of importation. The transport cost policies are related to infrastructure availability as well. The capacity of these infrastructures to satisfy the volume of product or persons that demand movement affect the cost of transportation and the use of the different mode of transportation. Lastly, government regulations have a very profound impact on transportation costs, especially since government regulates fees as well as the competitive playing field, in the transportation sector .

The Economic Importance of Transportation

An economy that endeavours to be progressive must include the development of transportation systems in its macroeconomic and microeconomic considerations. History teaches us that transportation affects the societal development of civilizations. In any civilization that has evolved in the world since the beginning of time, the impact of the ability to move

people and materials has dictated the success, survival and even the demise of these civilizations. History also shows us that no single mode of transportation was instrumental in development and it has always been combination different types of transport modalities. The standard principle of heavily investing in transportation to affect wealth generation still holds however, there are several investments that produce marginal returns. Thus it is the judicious understanding of investment in transportation that makes investments effective in the long-run.

Another important understanding of the US transport industry is that because of its importance and impact, that it should be considered as a factor of production. This means that on top of what economists define as factors of production (capital, labor, land), transportation can be regarded as an equivalent because of the ramifications of transport efficiency on economic activity.

Finally the effect of transportation on labor and employment is also profound and while there are no metrics on the amount of jobs created per dollar invested in transportation, it is important to note that transportation is a major employer directly and indirectly of human talent. Producers and consumers are also affected, in employment terms, by transportation efficiency and the amount of jobs and employment generated in an economy such as that of the United States is an indicator that the economic activity of the country is very high.

References

Ask. (2013). Why Is Transportation Important. Retrieved September 13, 2013, from Ask. Com: [http://www. ask. com/question/why-is-transport-important](http://www.ask.com/question/why-is-transport-important)

Bardi, E., Coyle, J., & Novack, R. (2006). Management of Transportation. Thompson South-Western.

Bureau of Labor Statistics. (2013). Consumer Expenditures - 2012. Retrieved September 13, 2013, from Bureau of Labor Statistics: [http://www. bls. gov/news. release/cesan. nr0. htm](http://www.bls.gov/news.release/cesan.nr0.htm)

Chopra, S., & Meindl, P. (2007). Supply Chain Management. Pearson.

Cooper, C. P., & Shepherd, R. (1998). Tourism: Principles and Practice. Retrieved September 13, 2013, from Financial Times: [www. financialtimes. com](http://www.financialtimes.com)

DOLE. (2013). High Growth Industry Profile: Transportation. Retrieved September 13, 2013, from United States Department of Labor and Employment: [http://www. doleta. gov/brg/indprof/transportation_profile. cfm](http://www.doleta.gov/brg/indprof/transportation_profile.cfm)

Kharnani, A. (1983). The trade-off between production and transportation costs in determining optimal plant size. Strategic Management Journal, Volume 4, Issue 1, 45 - 54.

Lay, M. G. (1992). Ways of the World: A History of the World's Roads and of the Vehicles that Used Them. Rutgers University Press.

NSSGA. (2007). Measuring Transportation's Share of GDP Including Household Transportation Expenditures. Retrieved September 13, 2013, from NSSGA. Org: The logistics and transportation industry in the United States is highly competitive. By investing in this sector, multinational firms position

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themselves to better facilitate the flow of goods throughout the world's largest consumer market. International

Quick Facts. (2013). State and Country Quick Facts. Retrieved September 13, 2013, from United States Census Bureau: <http://quickfacts.census.gov/qfd/states/00000.html>

Rodriguez, D.-P., & Notteboom, D. (2013). Transportation and Economic Development. Retrieved September 13, 2013, from The Geography of Transportation Systems: <http://people.hofstra.edu/geotrans/eng/ch7en/conc7en/ch7c1en.html>

Rodriguez, J.-P. (2013). The Geography of Transport Systems. New York: Routledge.

Stopford, M. (1997). Maritime Economics. London: Routledge.

WikiInvest. (2013). Transportation. Retrieved September 13, 2013, from WikiInvest: <http://www.wikininvest.com/industry/Transportation>