The Aviation Industry and the World Economy

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The world economy is greatly affected by the key elements of international free trade or the lack thereof, the availability and use of natural and human resources on the planet, and international politics and ideologies. Each country competes in the international arena to advance the economy in their country in the hope of establishing or maintaining a desirable quality of life.

Exactly what do we mean when we say “economy” and how is the world economy different than national or local economies? The economy is a system consisting of producers and consumers engaged in the trade of goods and services using some type of currency that results ideally in the needs of everyone being met or exceeded. Every person and every company is both a producer and a consumer and every able person is employed with a high standard of living in what most people envision as a perfect local or national economy.

The world or global economy is a collection of national economic systems in countries that compete in the international marketplace and engage in international trade. The world economy is in fact dependent on the global exchange of goods and services and natural resources between countries based on the laws in each country and the international agreements between countries. The aviation industry facilitates the world economic system in many ways. High speed transportation itself creates a catalyst for international trade. The benefits of cutting edge aviation technology is often first realized in the military as it affects the national security and is often used as a political tool to control other countries and their economies. Aviation technology, on the other hand, can be used as a tool to establish cooperation and peace between countries.

My research into the world economic systems has revealed that there is not a single accurate definition for a global or world economy and there are many conflicting opinions about how the national and global economic systems should operate. There are some diametrically opposed fundamental political economic ideologies that affect our national economy and the global economy. Most countries today have a mixed economic system and they participate in international trade. The differences have to do with the government ownership of capital, land, and natural resources and the level of market controls affecting supply and demand. In the U.S. the federal government controls the banking system through the federal reserve system, passes federal income tax laws, and regulates many aspects of businesses, especially aviation. The federal government is the primary negotiator of international treaties and trade agreements which affect aviation.

Global Aviation Market Competition
Companies in every major city in America compete with every other similar company in countries across the world. Being able to quickly get to another part of the world to establish new customers or to open a new factory is one important benefit of air transportation. Everyone is trading and competing in a global marketplace and aviation is the safest and fastest way for people to connect with others across the
world. As competition increases citizens, companies and communities will depend on aviation as never before.

There is plenty of evidence to support the claim that aviation is important to the global economy. For example, in the U.S. one out of every four enplanements is a person ending the trip in another country. Many commodities and emergency parts and supplies go overseas by air in addition to millions of passengers with aircraft flying billions of miles each year. Every year, civil aviation contributes about 3.5 trillion dollars to the world economy and is a catalyst for other sectors of the world economy.

There are many countries developing civil aviation that simply do not have an efficient ground transportation system, and aviation becomes essential for competitive business travel. For example, at the time of this writing, India’s commercial air transportation industry was growing annually by a factor of five. China is also growing rapidly in general aviation and airline activity and is growing in manufacturing capabilities. China is expected to be the biggest customer for new jet airliners over the next decade.

**The Economic Impact of Air Transportation**

Air transportation greatly accelerates international trade, and therefore you can also say that the aviation and aerospace industry is an engine that drives a significant part of the world economy. Economists cite two kinds of economic impacts that an industry like aviation has – direct and indirect. The charts in the audio script show the direct and indirect economic impacts of the air transportation industry. Taking a look at the direct customers of air transportation, we have two categories of air transportation which are passenger travel and freight and mail transport. The suppliers of air transportation services include all of the industry components needed to make the two types of air transportation services possible. The four categories of suppliers are first air carriers, other aircraft operators and affiliates, second airports, air navigation services and affiliates, third other industries and business services, and fourth aerospace manufacturers and affiliates.
The direct demand for air transportation itself creates a catalytic demand for other businesses that benefit from air travel. The tourism business benefits greatly from air transportation. Fast economical transportation of passengers and freight to touristic locations like, for example, the Hawaiian Islands is the catalyst for the development of a huge tourism industry there. Hotel and vacation tours businesses spring up as more tourists are able to fly in to the location which in turn creates jobs in motel construction and hotel services and food service and related businesses. The extra economic development from an industry like air transportation is referred to as the economic multiplier. A 2 billion dollar direct economic impact of aviation transportation to a local economy often results in a 5 billion dollar economic impact and thus the economic multiplier would be 2.5.

Air transportation is a large segment of the freight business. Air freight companies like UPS or FedEx, for example, are able to make money by consolidating small parcels picked up using ground transportation into large freight packs transported by air. The money collected for individual small package shipment is much more than the cost of shipping the large consolidated pack shipment.

Indirect Economic Impact [5]

Both direct and catalyst demands generated by air transportation help other types of business to be able to make a profit as a result of transportation services. Florists are able to offer fresh flowers for special occasions with fast air shipments of flowers from different parts of the country and overseas. Overnight just in time parts shipped to factory assembly lines reduce the need for inventory and the factory is able to realize more profit. Engineering consultants are able to quickly travel to customer sites to fix factory production problems creating an international consulting service that companies are willing to pay top dollar for to avoid production shutdown. Key executives are able to travel all over the world to land big contracts beating out the competition.
Government and Private Debt and the Effect on the Aviation Industry

The government in most countries establishes a banking system and prints currency. The U.S. dollar has been very stable for a long period of time resulting in the U.S. becoming a trusted borrower. The U.S. government and other governments often spend more money than is taken in through taxes and from other countries. This amount of spending not covered by income or revenues minus spending at the end of every year is called the deficit. The deficit every year is added to the deficit spending of past years to become the public or government debt. However, when the government takes in more money than it spends, a surplus is created that can be used to pay down past debt or to save for the future.

The public debt is money borrowed from another country primarily by the government of the country selling bonds to other countries. The bonds come to maturity at certain dates in the future and the money has to be paid back with interest. If a government pays off the bonds or loans on time, future lenders have confidence and are willing to lend money with a low interest rate. This amount of confidence is qualified as a credit rating.

The value of the goods and services in a country, called the Gross Domestic Product (GDP), is used to measure the economic strength of an economy. The ratio of the national debt to the GDP tells us how in debt the government of a country is. A look at the first chart in the script shows public debt as a percent of GDP for 2009/2010 for most of the countries in the world. The second chart shows the real wealth of the national treasury which is equal to foreign currency reserves and gold it owns minus external debt. The chart reveals that the U.S. and European Union have a large public debt because the treasuries are about a negative 14 trillion dollars for each. In contrast, China has a positive number of 2.21 trillion dollars. It should be no surprise that China has been a large purchaser of U.S. debt bonds. China is expected to be the biggest purchaser of aircraft as the country leads the world in economic growth. The China demand has increased commodity prices mainly the cost of crude oil which adversely affects profits in the air transportation industry.

By 2008, the U.S. and other countries had run up such huge national debts that a credit crisis began. The cause of the huge debt is the government spending more money than it took in for various reasons including natural disasters, economic problems, and government spending on social programs and the military. The U.S. Treasury would borrow more money by printing currency and selling U.S. Treasury Bonds. The credit rating had been the best in the world, but at the time of writing this status was being threatened because of the over 14 trillion dollar U.S. external debt. No one can say with any certainty what the consequences would be if a major country in the world like the U.S. were to default on its loans as it has never happened before.
Public debt as a percent of GDP (2009/2010)

Foreign currency reserves and gold minus external debt based on 2010 data from CIA Factbook
GDP (PPP) per capita (2008)

Purchasing Power Parity (PPP) international dollar units.

The debt problem affects the world and U.S. economies by the raising of interest on paying off debt or not being able to borrow more money in the future. The government’s attempts to lower the debt by printing more money results in the value of the dollar going down against other foreign currencies making the cost of commodities such as crude oil increase. The increase in the cost of fuel increases the costs of U.S. air carriers and causes profits to lower. The purchasing power parity (PPP) international units must be used in comparing national economies in the world because of the exchange rates between different types of currency. The purchasing power parity units relates to what a person or company can purchase in the international market adjusting for any inflation or deflation in the currency used for the purchase. For example, crude oil prices go up in U.S. dollars when the dollar weakens against the Euro or the Yen resulting in less purchasing power in the U.S. for petroleum based products.

Personal debt of private citizens has an economic impact as well. A country may have a large public debt, but if the citizens have large property assets and personal savings the economy will not be affected as much by the public debt. Financially well-off citizens are able to contribute more to paying down a national debt. If citizens are responsible financially, avoiding high personal debt, they will have more disposable income as a result of not having to pay such a large percentage of personal income for debt interest and are more able to purchase such things as housing and air travel. The average per capita income in the U.S. is about $50,000 per year in 2008 dollars which results in one of the highest standards of living on the planet. The higher the level of affluence, the higher the demand for air travel. Conversely, a large amount of private debt adds to the problem of the public debt.

A Silver Lining to the Oil Crisis
There is a silver lining to the oil crisis. The high price of petroleum fuels has sparked research in the development of bio-fuels and mixed fuels. At the time of writing the Federal Aviation Administration had
just approved the new combination fuel for jets consisting of a mix of both bio fuel made from non-food plants and conventional petroleum jet fuel. The military is expected to use the new fuel as well.

Despite the problems in the U.S. economy, aviation, at least internationally, has a bright future and it is this international growth that could help rebuild the U.S. economy. About three-fourths of Boeing’s customers are in foreign countries and Boeing sees a bright future for air transportation beyond 2011. “Boeing forecasts a $4 trillion market for new aircraft over the next 20 years. The company’s annual commercial aviation market analysis foresees a market for 33,500 new passenger airplanes and freighters between 2011 and 2030.” Boeing predicts that passenger travel will increase about 5% each year doubling passenger travel by 2030. The reason cited for the increase according to the Boeing market analysis is “the fundamental drivers of air travel — including economic growth, world trade, and liberalization — all point to a healthy long-term demand.”

The population of the planet continues to grow and therefore all industries, including air transportation will continue to grow. New technology gains in aircraft such as increased range and efficiency will be a catalyst for more air travel and for world economic growth as well. The Asian and Middle Eastern countries are expected to have rapidly expanding economies between 2010 and 2030 creating new markets for aircraft manufacturers in part because of the development of the aviation industry in each of these countries. All components of the economy are interrelated and aviation is clearly an economic engine that gets the world and national economies going. The strength of a nation is often determined by its transportation system, especially in the global economy.

**Online Resources**

2. “Can civil aviation industry become a “locomotive” for driving global economic recovery?” [http://www.globalnewspointer.net/?p=1132](http://www.globalnewspointer.net/?p=1132)
5. “Economic Contribution of Civil Aviation”: published by the International Civil Aviation Organization (ICAO)
7. “The Economic Impact of Civil Aviation on the U.S. Economy December 2009”: published by the Federal Aviation Administration