



VALUE OF AIR CARGO

AIR TRANSPORT AND GLOBAL VALUE CHAINS

The web in the air... enabling trade on the ground

The study – Value of Air Cargo: Air Transport and Global Value Chains – offers quantitative measures on the critical enabling role played by air cargo in supporting integration into the global trading system. The study found a strong association between better air cargo connectivity and higher total trade value – **a 1 % increase in air cargo connectivity is associated with a 6.3% increase in total exports and imports**. Furthermore, countries that have well developed air cargo connections combined with good quality customs services and smart borders, are better at integrating into global value chains.

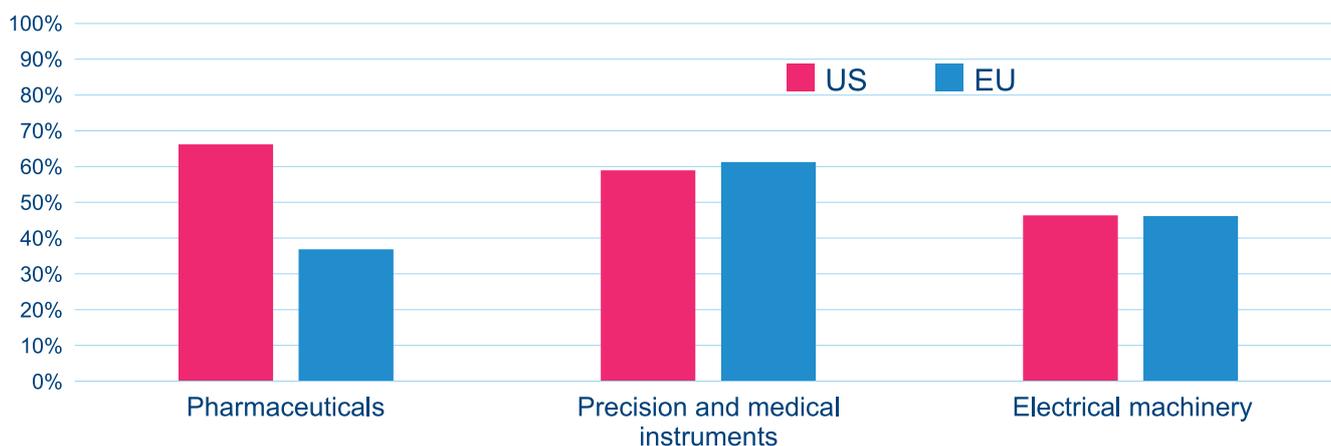
Global trade and air cargo

Global trade has played a key role in fostering economic development and making countries more competitive and productive – thus supporting income growth and poverty reduction. As a share of global output, trade is now at about three times the level it was in the early 1950s. This increase has mostly been driven by non-commodity exports, made possible by trade liberalization and subsequent distribution of production processes beyond national borders¹.

In 2015, airlines transported 52.2 million metric tons of goods valued at USD 5.6 trillion. Air cargo is key in supporting the current global trading system, with an estimated 35% of value of global trade carried by air, even though it covers less than 1% by volume. The role of air cargo is even greater for trade in advanced industrial, high value goods, and other sectors that rely on rapid, reliable and secure transport. As illustrated in the chart below from available data on imports to the US and EU.

The report by Developing Trade Consultants, commissioned by IATA, further investigates the relationship between air cargo connectivity and participation in global trade. The study – Value of Air Cargo: Air Transport and Global Value Chains – found that air cargo is a critical enabler of supporting integration into the global trading system. Countries that have better air cargo connectivity (measured by the Air Connectivity Index) also engage in more trade in value terms. The study does not attempt to quantify a causal relationship but the associations identified key characteristics that enable countries to better integrate into the global trading system. The study found a strong association between better air cargo connectivity and higher total trade value – as stated above a 1% increase in air cargo connectivity is associated with a 6.3% increase in total exports and imports.

Share of imports transported by air, by commodity and value



Source: Developing Trade Consultants. Note: EU imports 2014 - EU ComExt, US imports 2015 - US Census Bureau

¹ IMF, Changing Patterns of Global Trade <http://www.imf.org/external/np/pp/eng/2011/061511.pdf>

Connecting to Global Value Chains

The pace of expansion in global trade has slowed in recent years but its importance as an enabler of economic prosperity remains essential. A critical part of the current global trading system is the emergence of global value chains (GVC) – with production processes located across different countries. Participation in GVCs enable countries to specialize in narrowly defined tasks, such as component production, research and development, or assembly. Tasks originating in a variety of countries are then combined through a complex network of trade and investment links, to produce finished goods—like cars, computers, cellular phones, and even aircraft. The latest estimates from the World Trade Organization indicate that GVC trade has grown faster than trade overall - increasing its share from 36% in 1995 to 49% in 2011. That means about half of global trade now takes place as part of GVCs.

Increasingly the ability of countries to effectively compete in global trade depends on their ability to source intermediate goods cost-effectively from imports (backward linkages) and similarly have the ability to export goods to other countries for use in onward export production processes (forward linkages). Rapid and reliable transport of component parts is a key consideration for GVC led firms in setting up their production networks, often making air cargo a natural choice. Air cargo plays a particular role in many manufacturing GVCs, where rapid shipments of components are used to support a just-in-time production model for combining and assembling parts.

The study – Value of Air Cargo: Air Transport and Global Value Chains – quantified the positive association between air cargo connectivity and integration of countries into GVCs. A key finding of the study is that countries that have well developed air cargo connections, combined with good quality customs services and smart borders, are better at integrating into global value chains. As part of the study, two air cargo specific indices – the Air Trade Facilitation Index (ATFI) and eFreight Friendliness Index (EFFI) – were developed to assess effectiveness of smart border regulation, customs services and logistics chain. The study found strong association between performance on these indices and GVC participation. A one percentage point increase in the ATFI and EFFI was each associated with a 0.3 percentage point increase in GVC participation.

Countries that have well developed air cargo connections, combined with good quality customs services and smart borders, are better at integrating into global value chains.

The Air Trade Facilitation Index (ATFI)

It is widely accepted that integration into GVCs is made easier by moving goods across borders quickly, reliably and cost effectively. The consideration of speed and reliability are all the more vital in the context of air cargo. The ATFI was developed to capture the dimensions of trade facilitation that are most important to air cargo. It aggregates measures of actual performance on trade facilitation as well as existence of supporting legislative framework.

Top performers:

1. Austria
2. Slovenia
3. Republic of Korea
4. Italy
5. Sweden
6. Netherlands
7. Finland
8. Japan
9. Canada
10. Denmark

The eFreight Friendliness Index (EFFI)

A key aspect of the quality of air cargo services relates to the ability to undertake transactions electronically. Electronic processing of cargo transactions can create time savings, reduce costs and administrative burdens as well as offer possibilities of enhancing the service offering. The EFFI measures actual penetration of electronic transactions in air cargo shipments and logistics chain. It also incorporates in its weighting consideration on whether customs accepts electronic processing, a key legislative requirement.

Top performers:

1. United Arab Emirates
2. Denmark
3. Hong Kong
4. Singapore
5. Sweden
6. Republic of Korea
7. Canada
8. Netherlands
9. South Africa
10. United States

Making sense of it at the country level

In addition to the global quantitative evidence marshalled in the report, there are also six case studies of specific countries and sectors. They cover a variety of GVC sectors in the manufacturing industry, and deal with developed and developing countries, at a range of income levels. The table below summarizes the most important enabling factors in each case, which has made GVC integration possible.

Country	Sector	Enabling factor
Costa Rica	Medical Equipment	Strong air connectivity to US market
Ethiopia	Textiles and Apparel	Coordinated cargo planning between airport and airline
Ireland	Pharmaceuticals	Connectivity combined with special cargo facility investment
Jordan	Pharmaceuticals	Rapid uptake in electronic processes and smart borders
Turkey	Textiles and Apparel	Strategic connectivity – enhanced security and reliability
Vietnam	Electronic Machinery	Integrated development planning

Policy Priorities

The study – Value of Air Cargo: Air Transport and Global Value Chains – identified key policy level and practical implementation interventions that are needed to be better positioned countries for GVC participation.

Legislative priorities are the ratification and implementation of:

- (i) 1999 Montreal Convention
- (ii) Bali Trade Facilitation Agreement of the World Trade Organization
- (iii) Revised Kyoto Convention.

Key practical air cargo specific implementation interventions that are needed:

- (i) Facilitation of electronic processing, through e Air Way Bill and eFreight
- (ii) Implementation of “single window” processing – ultimately enabling submission of all regulatory documents for trade via one channel
- (iii) Coordinated border agency procedures to reduce duplicative controls
- (iv) Implementation of risk management controls at border to combat illicit activities and facilitate compliant traders
- (v) Deployment of processes to approve release of shipments in advance of their actual arrival.

From an economic policy perspective, it is important to better understand the factors that enable countries, particularly developing ones, to join GVCs, and move up to higher value added activities. The area remains relatively under-researched, but the study - Value of Air Cargo: Air Transport and Global Value Chains - sheds light on the critical enabling role played by air cargo in supporting integration into the global trading system.

