ICAO

ECONOMIC DEVELOPMENT
CASE STUDY

The economic importance of air cargo in the international trade

Dominican Republic

General information

-GDP (current US$ billion, 2016): 72.34
-Merchandise trade (per cent GDP, 2016): 38
-Human Development Index (HDI, 2015): 0.722 high human development category
-HDI rank: 99/188
Source: World Development Indicators Database, World Bank.

Air cargo traffic data:

-Number of airports: 8
-Number all cargo movements: 4 968 ▲ 0.7 per cent (2016)
-Number of freight International tonnes: 102 725 ▲ 0.9 per cent (2016)
During 2017, Las Americas International Airport located in Santo Domingo city captured the **64 per cent** of freight International tonnes. Source: ICAO&ACI Common Form I. Airports Traffic.

Introduction

Dominican Republic is a small island developing state (SIDS) in the Caribbean. It occupies the eastern two-thirds of the island of Hispaniola, which is between the Caribbean Sea and the North Atlantic Ocean, and has its western border with Haiti. It is the second largest country in the Antilles, following Cuba. The country lies in the middle of the hurricane belt and is subject to severe storms along with occasional flooding and periodic droughts from June to October. As recently as September 2017, the island was impacted by two strong hurricanes—Maria and Irma. These meteorological phenomena paralyzed economic activity for several days, decreasing labor productivity.

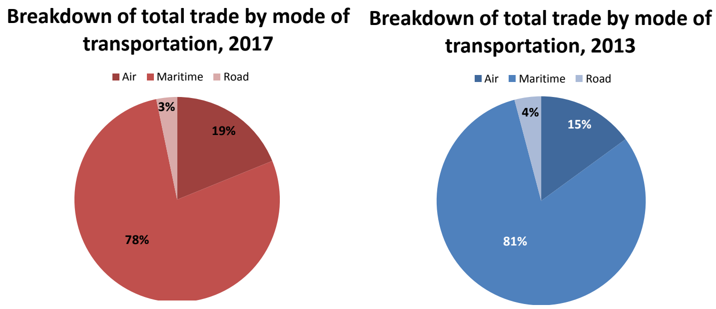
Dominican Republic has an open economy and market-oriented policies, such as liberalized trade and private investment, particularly in tourism. Tourism contributed to the economy with USD 7 177.5 million at the end of 2017.

According to the Central Bank the economy grew 4.6 per cent in 2017. The most dynamic sectors were: hotels, bars and restaurants (6.7 per cent); financial services (4.4 per cent); agriculture (5.8 per cent); duty-free zone manufacture (4.6 per cent); transportation and storage (5.0 per cent); construction (4.1 per cent); trade (3.0 per cent) and local manufacture (2.9 per cent).

Regarding exports of goods and services, these registered a growth rate of 4.7 per cent, explained by the expansion of exports of ferronickel and silver at 68 per cent and 20.9 per cent, respectively, and the growth of 12.4 per cent in national industrial exports. Similarly, there was also an increase of 6.8 per cent in income from tourism, as a result of a 4.3 per cent increase in the arrival of non-resident foreigners and 2.2 per cent in the average daily expense in US dollars of tourists.

International trade and air cargo performance

Graph 1

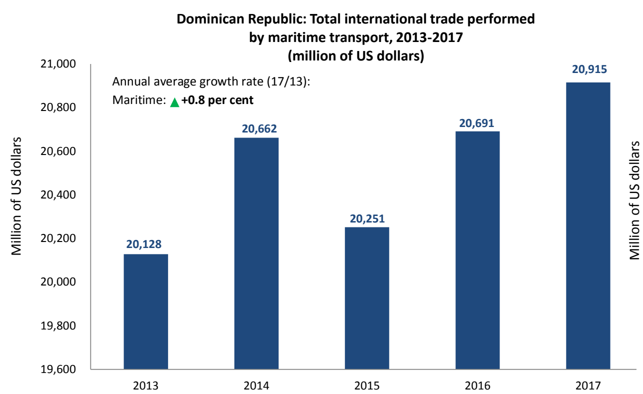


Source: Dirección General de Aduanas (DGA). Departamento de Estadísticas.

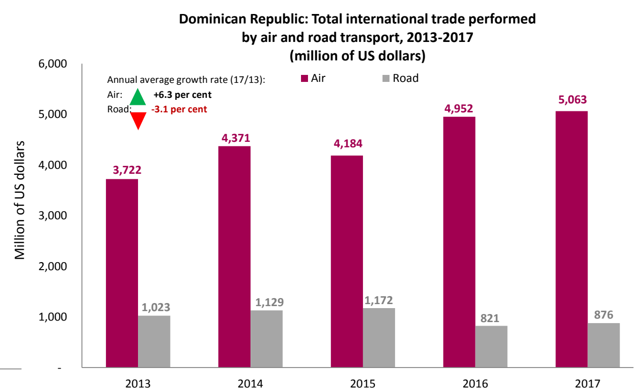
During 2017, total international trade of Dominican Republic grew 1.5 per cent, reaching USD 26 855 million. Air transport moved 19 per cent of total international trade, while maritime 78 per cent and road 3 per cent. Today's panorama differs from 5 years ago, when air transport caught the 15 per cent of total international trade, while maritime 81 per cent and road 4.0 per cent.

In 2017, the total of international trade performed via air transport grew 2.3 per cent compared with 2016, while maritime and road grew 1.1 and 6.7 per cent, respectively. During the last five years (2013-2017) the annual average growth rate for air cargo was 6.3 per cent while maritime was 0.8 per cent and road had a negative growth rate of -3.1 per cent. This trend indicates the dynamic performance of air transport during this period.

Graph 2

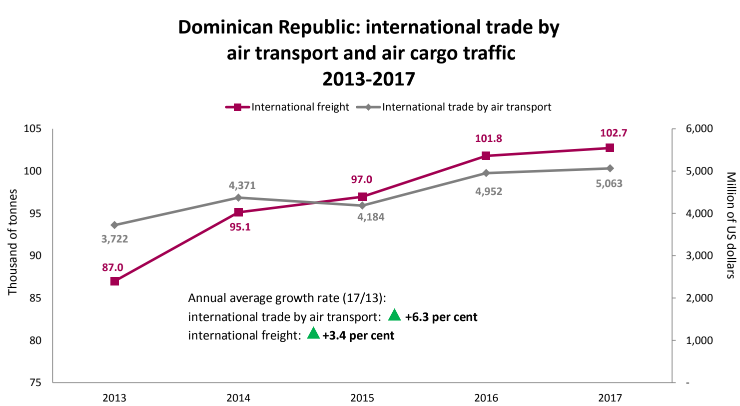


Graph 3



Source: Dirección General de Aduanas (DGA). Departamento de Estadísticas.

Graph 4



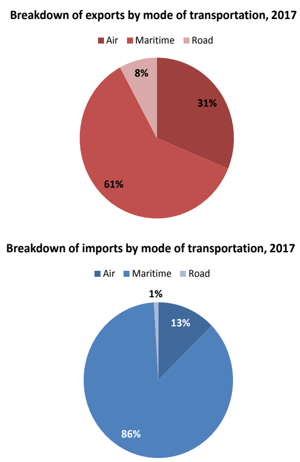
Air cargo has a considerable dependency to the variations of the gross domestic product (GDP) and international trade mainly in the import direction and the internal handling of cargo. Therefore, air cargo tends to present strong elasticity in periods of expansion and/or economic retraction. The following graph shows the correlation among the international freight and the international trade via air transport. In the last five years, the annual average growth rate for international freight was 3.4 per cent while for the international trade by air transport was 6.3 per cent.

Note: International freight is measured in thousands of metric tonnes. International trade by air transport is measured in million of US dollars.
Source: Dirección General de Aduanas (DGA). Departamento de Estadísticas and : ICAO&ACI. Air Transport Reporting Common Form I.

Nature of the international trade… there is a trade superavit in air cargo transport

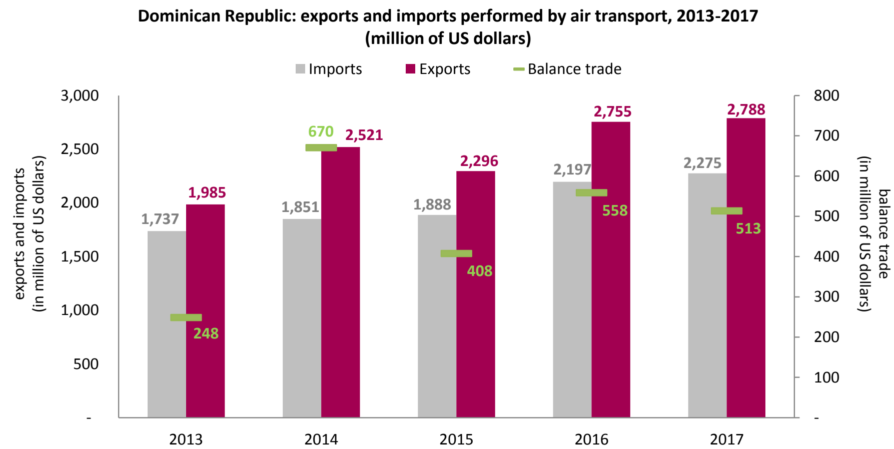
Depending on their economic and trade policies, some economies may be import or export focused.

Graph 5



Source: Dirección General de Aduanas (DGA). Departamento de Estadísticas.

Graph 6



Source: Dirección General de Aduanas (DGA). Departamento de Estadísticas.

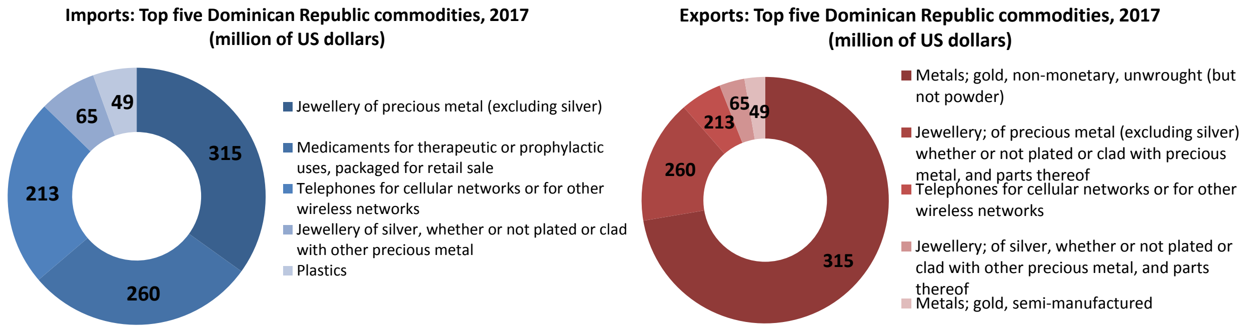
During 2017, in terms of international trade value, 31 per cent of the exports from Dominican Republic to the rest of the world were performed using air transport, while 61 per cent used maritime and 8 per cent by road. On the other hand, regarding the imports to Dominican Republic, 13 per cent were moved by air, 86 per cent by maritime and 1 per cent by road. This indicates that air cargo and road transport systems in Dominican Republic are **export-focused** while maritime is **import-focused**.

Graph 6 emphazises the **export-focused** trend since 2013. As an annual average growth rate exports and imports have grown by 7.0 per cent and 5.5 per cent, respectively. Displaying superavit balances from USD 248 million in 2013 to USD 513 million in 2017, translated to annual average growth rate was +15.6 per cent during that period. As explained before, the export nature may be explained by the type of merchandise that Dominican Republic is carrying by air cargo from its territory to the rest of the world. In this case, the main exports are grouped in the chapters: 71[1], 85[2] and 90[3] that are considered as high-value goods; only these three chapters account for 26.4 per cent of the total exports value. The main imports are grouped in the chapters: 85, 71 and 30[4] which account for 7.9 per cent of the total imports value.

Graph 7 shows at the commodity level[5], the type of goods carried via air transport. Exports from Dominican Republic to the world are: gold, jewellery, mobiles and telecommunications and pharmaceuticals. On the other hand, the main imports coming to Dominican Republic are: medicines, jewellery, mobiles and plastics.

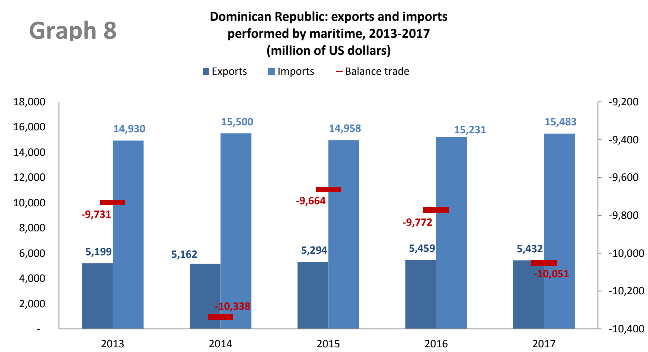
[1] 71: Natural, cultured pearls; precious, semi-precious stones; precious metals, metals clad with precious metal, and articles thereof; imitation jewellery; coin.
[2] 85: Electrical machinery and equipment and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers, parts and accessories of such articles and;
[3] 90: Optical, photographic, cinematographic, measuring, checking, medical or surgical instruments and apparatus; parts and accessories.
[4] 30: Pharmaceutical products
[5] Harmonized System (H5) at 6 digits.

Graph 7



Source: Dirección General de Aduanas (DGA). Departamento de Estadísticas.
Note: Figures are given in millions of USD dollars

Graph 8



Source: Dirección General de Aduanas (DGA). Departamento de Estadísticas.

The metal gold non-monetary represents 17 per cent of the total exports equivalent to USD 1.5 billion and this item is moved only by the air. As the data shows, high-value merchandise are moved by air, as well as sensitive electronics and delicate medicines. It confirms what advocates of air freight expansion highlight about the economic benefits of high-value exports. The trade superavit in terms of value for Dominican Republic is clear.

Since 2013 and until 2017 maritime transport system has been **import-focused** as shown in graph 8. As an annual average growth rate, exports and imports have grown by 0.9 per cent and 0.7 per cent, respectively. Displaying deficit balances from USD -9 731 million in 2013 to USD -10 051 in 2017, translated to the annual average growth rate was +0.6 per cent.

The main merchandise imported by maritime transport system are chapters 27[6],87[7] and 39[8], these three chapters capture 30.4 per cent of total imports value. Specifically, chapter 27 explains clearly why Dominican Republic is import focused. The imports of chapter 27, specifically the item 271012[9] (oil) accounts for 9.8 per cent (USD 1.8 billion) of total imports and the 61 per cent come from the United States, the equivalent to USD 1.1 billion. In the other hand, the main exports are grouped in the chapters: 90, 24[10] and 85 these three chapters account for 23.8 per cent of the total exports value.

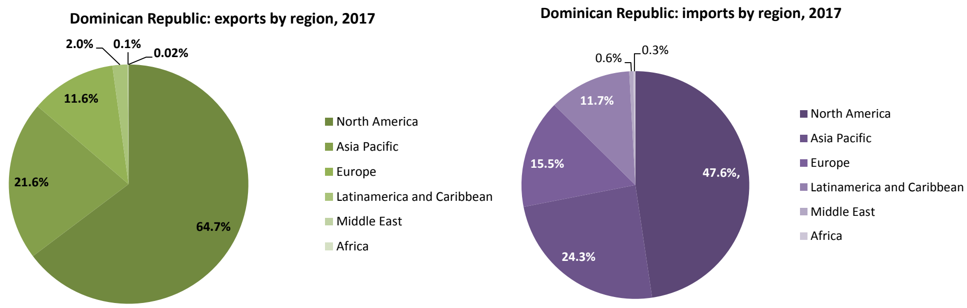
Road transportation is **export-focused**. In 2017 the exports by road captured 8 per cent of total exports while imports captured 1 per cent. The main merchandise exported by road are chapters 52[11], 39, 72[12] these three chapters account for the 2.8 per cent of the total exports value. The only destination for exports is Haiti. The imports of chapters 62[13], 30 and 48[14] represents 0.4 per cent of total imports.

[6] 27: Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes.
[7] 87: Vehicles; other than railway or tramway rolling stock, and parts and accessories thereof.
[8] 39: Plastics and articles thereof.
[9] Petroleum oils and oils from bituminous minerals, not containing biodiesel, not crude, not waste oils; preparations n.e.c, containing by weight 70per cent or more of petroleum oils or oils from bituminous minerals; light oils and preparations
[10] 24: Tobacco and manufactured tobacco substitutes
[11] 52: Cotton
[12] 72: Iron and steel
[13] 62: Apparel and clothing accessories; not knitted or crocheted
[14] Paper and paperboard; articles of paper pulp, of paper or paperboard

International trade partners by air cargo

When looked at by region, and at solely air cargo, the trade gap with North America is particularly salient.

Graph 9



Source: Dirección General de Aduanas (DGA). Departamento de Estadísticas.

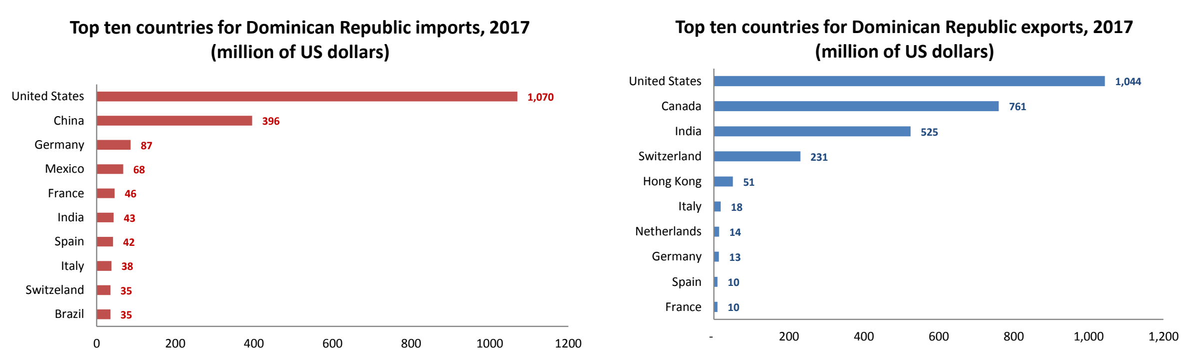
As shown above in graph 9, international trade performed by air cargo of Dominican Republic is centralized in the North American region which is reasonable due to the geographical proximity and the economic synergy among the economies.

As far as 2017, there is a superavit balance with the North American and Asia/Pacific regions that account USD 769.3 million, while there is a deficit with Europe, Latin America and the Caribbean, the Middle East and Africa totaling USD 256.1 million. However, the superavit with the North American and the Asia/Pacific region compensates the deficit with the rest of the world.

In 2017, the 64.7 per cent of Dominican Republic merchandise carried by air transport were exported to the North American region, followed by 21.6 per cent of Asia/Pacific, 11.5 per cent Europe, Latin America and the Caribbean 2.1 per cent and Middle East and Africa with 0.1 and 0.02 per cent, respectively. Regarding imports, the imported goods followed the before mentioned pattern. 47.6 per cent come from the North American region, 24.3 per cent from Asia/Pacific, 15.5 Europe, 11.7 Latin America and the Caribbean and 0.6 and 0.3 per cent, respectively.

The following graphs show the top ten air cargo international trade partners, by country, of Dominican Republic.

Graph 10



Source: Dirección General de Aduanas (DGA). Departamento de Estadísticas.

Air transport moves the merchandise to and from different countries. During 2017, in terms of Dominican Republic's exports, the main destination countries are: United States, Canada, India, Switzerland and Hong Kong. In terms of imports, the merchandise mainly come from United States, China, Germany, Mexico and France.

Connectivity

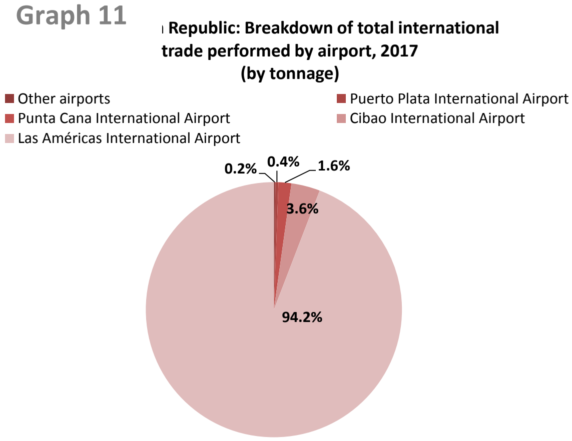
Dominican Republic has eight international airports along the island. These airports attend various markets around the world.

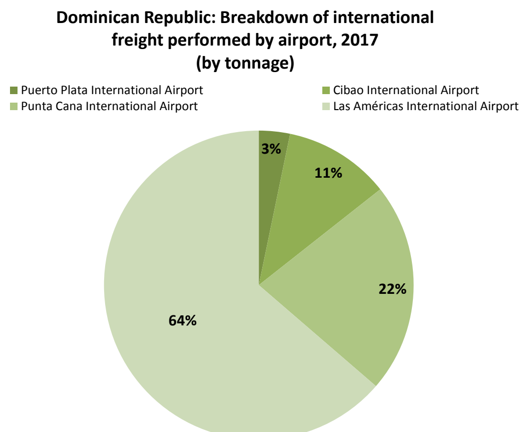
IATA Code	Airport name	City
AZS	Aeropuerto Internacional de Samana	Samaná
BRX	María Montez International Airport	Barahona
JBQ	Aeropuerto Internacional La Isabela-Dr. Joaquín Balaguer	Santo Domingo
LRM	La Romana International Airport	La Romana
POP	Aeropuerto Internacional Gregorio Luperón	Puerto Plata
PUJ	Aeropuerto Internacional Punta Cana	Punta Cana
SDQ	Aeropuerto Internacional Las Américas	Santo Domingo
STI	Aeropuerto Internacional del Cibao	Santiago de los Caballeros

Source: Plan Nacional de Logística y Transporte de Carga – PNLog, Dirección de Infraestructura y Logística. BID y Ministerio de Economía, Planificación y Desarrollo (MEPyD).

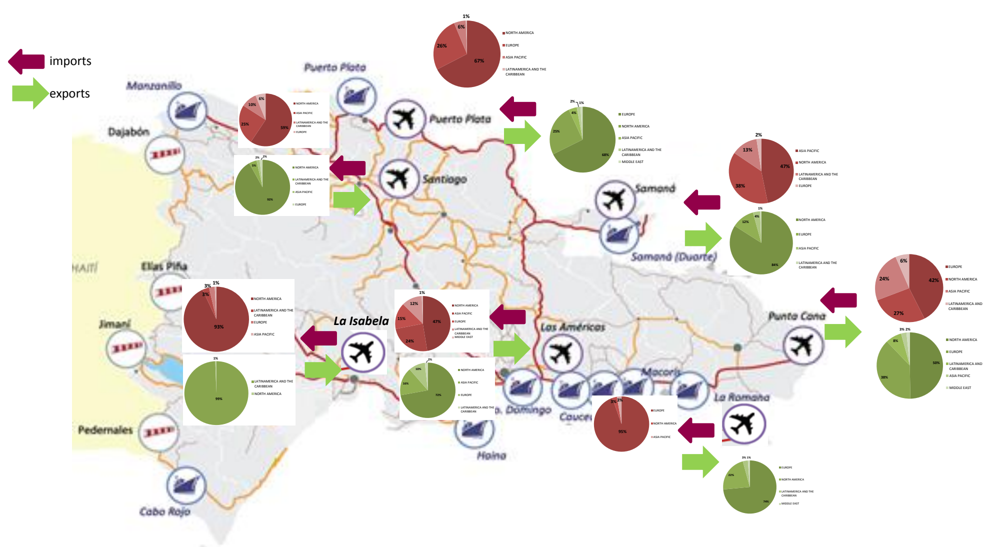
Las Americas International Airport, located in the capital Santo Domingo, is its busiest and most important air cargo airport. It captures the 94.2 per cent of the total value of international trade and the 64 per cent by tonnage.

Graph 11





Source: Dirección General de Aduanas (DGA). Departamento de Estadísticas.



Source: Plan Nacional de Logística y Transporte de Carga – PNLog, Dirección de Infraestructura y Logística. BID y Ministerio de Economía, Planificación y Desarrollo (MEPyD).

The map shows the airport location and the origin and destination by region from the merchandise entering and exiting Dominican Republic. In terms of exports, the main exit airports for Dominican Republic goods to the North American region are: Las Americas (Santo Domingo) (64 per cent); Cibao (Santiago de los Caballeros) (91 per cent); Punta Cana (48 per cent) and Samaná (97 per cent). Puerto Plata (62 per cent) and La Romana (67 per cent) are the exits to Europe. La Isabela (Santo Domingo) dispatches 95 per cent of the exports to Latin America and the Caribbean.

In the other hand, the main entry airports for Dominican Republic imported goods from North America are: Las Americas (47 per cent); Cibao (Santiago de los Caballeros) (59 per cent); Puerto Plata (67 per cent) and La Isabela (93 per cent). Punta Cana (42 per cent) and La Romana (95 per cent) takes in the merchandise coming from Europe. Finally, Samaná airport (47 per cent) welcomes the goods coming from the Asia Pacific.

Conclusion

Today, air cargo retains its central role in the economic expansion, with emphasis on developing markets. As a trade facilitator, air cargo increases the global reach of businesses, allowing them to bring goods and products to distant markets in a more convenient and faster way. As Dominican Republic is a SIDS, it has faced various challenges in order to access the global market.

During 2017, total international trade for the Dominican Republic grew 1.5 per cent, reaching USD 26,855 million--a good year. Air cargo yielded a better result because it grew 2.3 per cent compared to 2016. This was a positive result of the improved of global economic conditions. In the last five years, the annual average growth rate was 6.3 per cent. Air transport caught the 19 per cent of total international trade, while maritime 78 per cent and road 3.0 per cent.

Air transport is playing a key role in Dominican international trade, allowing the country to connect to distant markets and to be part of the global supply chain. The Dominican air cargo transport network was **export-focused** from 2013 to 2017, displaying superavit balances that translated into an annual average growth rate of +15.6 per cent.

Air cargo reliability is one of the key factors for the transportation of high value and sensitive merchandise as the ones described before.

The Dominican airports dispatch and receive goods coming from all over the world. Las Americas airport located in Santo Domingo is its busiest air cargo airport, capturing 94.2 per cent of the total value of international trade.

Finally, air cargo is playing a role as a trader facilitator for SIDS, offering an opportunity to link remote markets and to connect them across continents and oceans, as Dominican Republic show with its reach to faraway markets like Hong Kong and India, as well as several European markets.