

“Logistics Insight in Export and Import of Air Cargo”

Aman Prashar

Roll No.

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UNDER THE GUIDANCE OF: MS. JYOTI NAIN

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INTRODUCTION

The term Logistics came into existence during 2nd World War to develop sound supply of weapons, food, military troops fighting all around the globe. Later on, the military concept was entered into the business world and the term business logistics was coined.

The activities involved in Logistics include freight, transportation, warehousing, materials handling, protective packaging, inventory control, marketing, customer services etc. It means the scientific planning, controlling and supervision of material-person-energy and information flow in the system.

Logistics is the business of making the Cargo available in the right form at the right place and at the right time at the least possible cost. It provides an acceptable service to the customer in a cost effective manner reducing time and adding value to the product involved in the transfer process. This is the point where the concept of air freight was thought over and came into being.

The regular and fast exchange of goods by air from one point on the globe to another within a short span of few hours has helped to raise the standard of living and industrial development in many of the developed and underdeveloped countries. The gradual build up of air cargo traffic during the last three decades speaks for the sudden boom in the entire air freight network. In the present age of wide bodied aircraft the development of air cargo has grown beyond the dream of every optimist. Today's air freight items include every thing from an apple to an elephant. Items with short span of life and items like life saving drugs etc. are now a regular feature of the air freight. Thus to match the ever increasing demands of the business logistics in this jet age, air freight is the only answer. Compared to other modes of transport, namely road and rail – aviation requires less capital for building infrastructure – it costs less to build a network of airfields than to provide the same level of connectivity (roads and railway systems) between a numbers of places.

The two factors that play role in the growth of Air Cargo are GDP (Gross Domestic Product) and the shift that is taking place as Indian products move up the value added chain. Both factors contribute to positive growth of the air cargo industry.

Liberalisation of the economy has further boosted both exports and imports. Cargo tonnages between India and the world have grown steadily for years, except for a slight dip in 1991. At present the growth rate for all cargo (surface, sea and air) is 10 percent. Air cargo accounts for 40 percent of the total, mostly textiles and textile goods, followed by precious and semi-precious stones, jewellery, handicrafts, carpets leather goods, chemicals and pharmaceuticals. Sectors poised for growth in the coming decade are floriculture, fruit and vegetables, meat and packaged foodstuff.

1. OBJECTIVE

The objective of the project, “Logistics insight into Air Cargo Import and Export”, is to study

- application of logistics in import and export
- use of logistics in air cargo
- the role of different entities in the whole process
- import and export procedures and documentation
- statistical analysis and representation of import and export data
- problems and suggested solutions for the system.
- Logistics and its application in import and export
- Logistics in air cargo

2. LOGISTICS AND ITS APPLICATION IN IMPORT AND EXPORT

Logistics can be defined as:

“The process of planning, implementing and controlling the efficient, cost-effective flow and storage of raw materials, in-process inventory, finished goods and related information from point-of-origin to point- of-consumption for the purpose of conforming to customer requirements.”

- Logistics is the process of strategically managing the movement and storage of materials from suppliers to customers, beginning from the sources of supply and ending at the point of consumption. It includes not only the

physical transfer of goods from one point to the other but all the transactions including order processing, invoicing and other commercial or legal documentation like checking, inspection, weighment, clearance etc. necessary connected with the flow of cargo.

- Logistics generate wealth for the country by adding value and creating a competitive advantage for the country's business. India with its large manufacturing and technological base, land mass, maritime tradition, geographical location must take advantage of the logistics revolution to promote export of value added cargo by competing with the other countries who have already taken advantage of the same. The performance of Indian Airports should be improved by raising the productivity of the Airport Labour and the cargo handling equipment to the international standard.

- SOME OF THE LOGISTICS POLICY OBJECTIVES:

To improve utilization of capacity available in the existing transport infrastructure consisting of both nodes and links. The node is the fixed point of logistics system where cargo is at rest and link is the transportation system that connects the nodes. The supply chain is the co-ordination and integration between these nodes and links so as to optimize the flow of materials to improve the supply chain performance as well as to bring down the supply chain cost.

To take all necessary actions to encourage shippers as well as transporters to pool their best efforts to minimize the resource cost of moving each ton of cargo.

To take appropriate steps to minimize the non-productive time (and related cost) spent during transport.

To encourage domestic transport industry as well as multimodal transport operators, freight forwarders to compete on equal terms with outsiders (Foreign Companies).

To encourage domestic transport and related service providers to regard their service as part of the overall logistics function so that greater value is added.

To encourage airports and airlines to regard themselves as the maritime link in a long logistics chain and at the same time function primarily as providers of service to their customers.

Adoption of EDI involving shipper's airports and shipping interests.

To simplify customs documentation, inspection and clearance or banking procedures.

- In international trade, cargo moves from one country to another country by truck, rail, sea and air. It may be only one mode of transport or by more than one mode depending upon quantity of goods, distance between the two countries, timeframe and the cost.

- Factors that influence the shipping service – speed, frequency, reliability and cost are the prime factors to a shipper for shipping his goods.

Speed - Speed is important to the shipper who desires to market his goods against an accurate arrival date which may be achieved by selecting the fastest service available and thereby obtaining the minimum interval between the time

goods are ordered and date of delivery at their destination. Speed is particularly important to manufacturers of consumer goods as it avoids expense and the risk of obsolescence to the retailer carrying large stock. The need for speed is perhaps most felt in the long distance trades where voyage time may be appreciably reduced and the shipper given the benefit of an early delivery. These various needs are recognised by airlines that provide an aircraft with maximum speed at a cost which will fulfil the requirements of the shipper.

Frequency of service – It is most important when goods can only be sold in small quantities at frequent intervals. Here the airlines will phase his flying to meet shippers' requirements, while the aircraft must be suitable in size, speed and equipment for the cargo offerings. The shipper of perishable fruit and vegetables also relies on frequent as well as aircrafts to obtain maximum benefit from the season's crop.

Reliability – It is an essential requirement to the shippers engaged in the via air service, whose goods are sold against expiry dates on L/C and import licences. Further more, the shipper relies upon the operator to delivery his goods in good condition. To the shipper, therefore, reliability infers that the aircraft will fly and arrive at the advertised time. The airlines will look after the cargo during pre-shipment, throughout the fly and after discharge till delivery.

Cost – In the airlines trade the freight costs are more stable and controlled. The airlines is able to hold the rate at a fair level to show a profit margin but he must be careful not to hold his rates so high that they price the goods out of the market

- **Freight Forwarders:** The freight forwarder is concerned with the transport arrangements of all kinds of goods across international frontiers. In reality, he is responsible for the co-ordination of various forms of transport and related ancillary activities embracing documentation, customs clearance, booking cargo space, packing etc. for any particular international consignment. The freight forwarder's knowledge must therefore, be very extensive as he is responsible for the consignment from the time he has secured it to the point it is delivery to the consignee at the final destination. He must be in a position to advise his principal as to

Most suitable service available which may be road transport throughout, rail transport, air freight or container.

Reserving freight space and co-ordinating all sorts of transport to carry goods from exporter's premises to the destination.

Packing, marking and labelling as per requirement of the carrier and customs authorities in the other countries specially in case of hazardous goods.

Advising on insurance and obtaining coverage for individual services.

Customs clearance procedure including documentation.

Schedule and transit times of the transport service available.

Advice on financial arrangements for the cargo in the destination country.

Planning routes and means of conveyance and preparing all inclusive estimates of costs. In short the freight forwarder must have a good knowledge of commerce, the finance of international trade, forwarding practice including door to door delivery.

- **Transport distribution analysis** – This involves the process of deciding the most ideal mode(s) of transport and route for the particular consignment. The ultimate selection may vary seasonally and by quantity. Some services vary considerably in summer/winter due to market demand and climatic conditions. Moreover, the dispatch of a small quantity urgently required may be ideal for air freight but a larger consignment less urgent for dispatch may be suitable for a deep sea container schedule under consolidation arrangements.
- The exporter must continuously review his international distribution arrangements and should consider the evaluation of transport mode/routing suitability etc.

3. LOGISTICS IN AIR CARGO

3.1 HISTORY AND DEVELOPMENT

When we talk about the development of the air freight, we generally speak how over the years the cargo movement has increased in terms of items and directions. The air transport system began primarily as a passenger carrier. Still now it is predominantly a passenger transportation system. Unlike the water and rail transportation systems whose financial strength entirely depends upon the freight receipts, the economy of air carriers is still based on passenger earnings. In the cargo front the Airlines began as transporters of some valuable light goods in the same Aircraft with the passengers.

15th October, 1932 was a great day in the Indian aviation history, when the doyen of the modern aviation system in India, Mr. J. R. D. Tata in his maiden flight carried commercial mail from Karachi to Mumbai in his single engined de Havilland puss moth. In 1933 a total of 20.72 tons of mail was carried. Thus with this the growth increased steadily.

Freight transportation by air is no longer just a luxury now. In many cases the cost of air transport is more than balanced by less packing cost, speedy conveyance, reduced inventory investment and almost the elimination of the risk of pilferage and missing of goods.

World War II saw some recession in the movement as the majority of the aircrafts were requisitioned by the Royal Government for the war purpose. Civil Aviation resorted to normalcy again from January 01, 1946. Since then it has never looked back.

So far as India is concerned **M/s. Blue Dart** has become the pioneer in the domestic field. They have purchased and totally converted two B 737-200 aircrafts as exclusive freighter and setting a landmark in the history of air cargo transportation in the country.

The changes were also noticed in the direction. It was only U.K in 1975 and now more than eleven countries all over the world are on the Air India Cargo Movement map. It spreads over Tokyo in east to New York in west.

As regards the commodities, only traditional items were carried in the early days of export which has been now transformed into many non traditional items ranging from industrial items to finished materials. Thus we may say that the development in air freight has certainly been noticed in tonnage, directions and also items.

Realizing the importance of air cargo trade some national and international organisations have developed. These organisations act as the think tank and formulate major policies for improvement and development of cargo transportation system. Some of the major international air transport organisations are

a) International Civil Aviation Organisation (ICAO): This is a special body of the United Nations, governing aviation among the member countries. It was established under the convention of International Civil Aviation, which was adopted in 1944. The aims and objects of ICAO are essentially to develop the principles and techniques of International Air Navigation and to foster the planning and development of international air transport.

b) International Air Transport Association (IATA): This is a voluntary non political organisation of airlines established in 1945 under president ship of Mr.

W. R. Bresch, President (Cargo), American Airlines as its head. Its membership is open to all scheduled airlines registered in countries which are members of ICAO. On Jan 01, 1988 IATA had 168 members. The airlines engaged in international operations are active members while domestic airlines are associate members of IATA.

The main objectives of IATA are to promote safe, economical air transport, to foster air commerce, to provide means of collaboration in among air transport enterprises engaged directly or indirectly in International transport services as well as to co-operate with the ICAO and other international organisation.

c) Air Cargo Agents Association of India (ACAAI): In India we have this association which exclusively deals with the air cargo agents.

3.2 ADVANTAGES

The freight rate by sending items through Air is more than the freight rates of sending the same items through sea. We still find more and more items being converted to air freight from sea freight. It is so because shipper always decides on the mode of transportation by examining its various advantages and disadvantages. The advantages will be combination of the following factor:

- Speed, efficiency and economy

- Packing
- Frequency and services
- Loading capacity
- Warehousing
- Reconditioning
- Insurance premium

Air cargo generally has higher cost from point to point than surface transportation. But this is only a part of the total costing. The direct freight charges only expenses on the long list of all the costs of distribution.

The other advantages of the cargo are also worth noticing:

a) Simpler Documentation

By using air cargo any one can make documentation simpler and also a door to door delivery.

b) Insurance

Insurance premium are much lower for air freight than for any other mode of transportation because of careful and minimum time transporting where as fewer transhipments reduce the risk of damage and pilferage.

c) Packing

Less packing materials are required for air cargo as it requires a compact packing. Packaging experts can ever advice on better packing on lower costing.

d) Interest on capital tied up in transit

Due to the speed in carriage of cargo by air in comparison to the surface transportation the capital amount which otherwise would have been tied up in transit is freed faster.

e) Multiple loading factors

The charges paid for loading, unloading, reloading in surface transportation is minimized due to the air freighting same between two points, moreover less risk of spoilage and loss.

f) Warehousing and Inventories

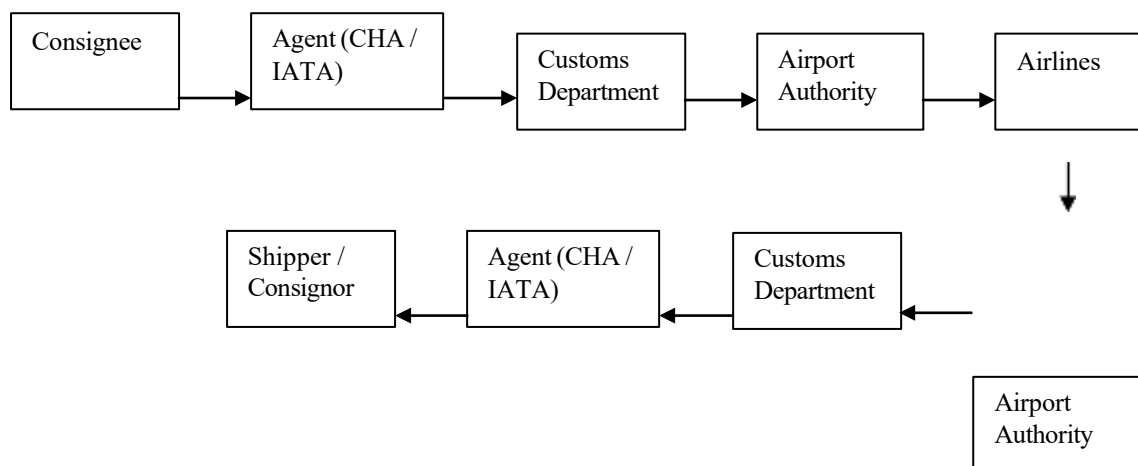
Producers and consumers have to invest and tie up money in warehousing for storage of goods, with quick delivery by air and consequent fast turnover the need of warehouse is reduced with resultant saving to shipper and consignee.

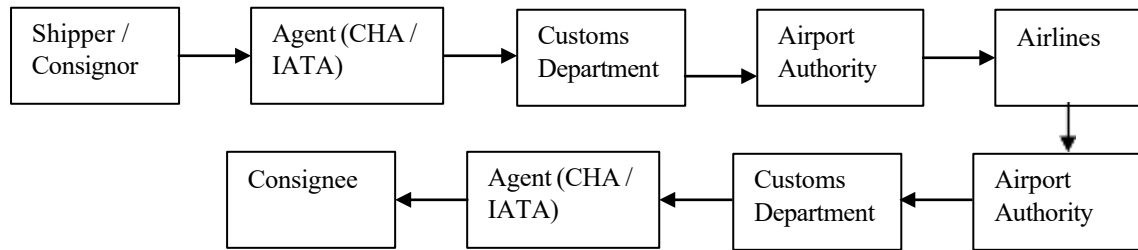
Some of the issues that relate to the air cargo community:

- EDI has still to take root in India and must be addressed seriously
- Cargo handling requires greater mechanisation fork lift trucks, cranes etc.
- Vertical spaces should be used more for storage
- Post liberalisation, even after considerable improvement, the average dwell time for consignments, is 21 days for imports and a much better (but still allowing scope for improvement) 3 days for exports.
- Also post liberalisation, imports through the four major airports have risen to 45 percent, thus reducing the directional imbalance.

4. METHODOLOGY

After doing a comprehensive study on the use of logistics in air cargo import and export our next focus will be on import and export process flows, which are shown below by schematic diagrams.

4.1 IMPORT PROCESS FLOW**4.2 EXPORT PROCESS FLOW**



From the above diagrams it is clear that apart from different national and international government authorities four different bodies are necessary for completion of an import/export process between a consignor and a consignee. They are namely:

- Freight Forwarder and IATA Agent
- Customs Authority
- Airlines
- Airport Authority

5. FREIGHT FORWARDERS AND IATA AGENTS

There is no doubt that the air transportation of cargo gives speedier transportation and it is comparatively costlier than the other modes of transportation. Apart from cost, however, there are other minus points such as non-availability of door-to- door service. The airlines being basically a carrier, in the initial stages, the individual or industry making use of the airlines had to bring their cargo to the air terminal going through the booking formalities including customs clearance, payment of duties etc. At the destination end similar procedural wrangle had to be faced before the party could take delivery and get the material at the work site. The passing of waybills from forwarder to destination used to pose another big hurdle which involved delays and consequent payment of demurrages.

5.1 MAIN ACTIVITIES OF AGENTS

- Air Imports Consolidation
- Air Exports
- Air Freight of Domestic Goods / Air Charters
- Booking of shipping space
- Customs clearance
- Documentation
- Packaging
- Warehousing

- Weighing and measuring the cargo
- Payment of freight, duties, taxes etc. on behalf of the consignor / consignee
- Insurance of cargo
- Procurement of transport, routing of goods and co-ordination of transport operation
- Advisory services to clients on all matters connected with import and export
- Trade-consumer needs new markets, competitive markets, terms trade, documentary audit etc.

5.2 SPECIAL BENEFITS – THE FREIGHT FORWARDERS GIVE

▪ **Consolidation** - The most prominent benefit the freight forwarders give is the benefit of cargo consolidation. By consolidating different consignee's packages in one container they can enjoy the advantage of economics of scale – "greater the weight", when booking the space in aircraft of any airlines. It becomes cheaper to one consignee, when shared by all consignees involved in a particular shipment. So the freight forwarders can offer a freight charge which is much less than the normal IATA rate and can be termed as "consolidated cargo rate".

▪ **Demurrage Free Clearance** – Freight forwarding agencies offer a demurrage free clearance of cargo for any shipment. Necessary documents for clearance of cargo are sent along with the packages by the help of freight forwarder's foreign counterpart. Consignee gets delivery order with supportive documents just after the arrival of the cargo. By filling the bill of entry the consignee can clear the goods without any demurrage.

5.3 ROLE OF THE FREIGHT FORWARDERS IN THE AIR CARGO DISTRIBUTION SCENARIO

International trade is linked with international transport. Both raw materials and finished products are subjected to consumers demand. This demand is of course met by proper transport facilities and the adequate transportation network that bridges the gap between demand and supply in international business.

Transport services do incur a cost, thus it is judicial enough to look into its cost effectiveness and efficiency. These aspects would determine the competitiveness of a commodity in the market. This would not only cover the mode of transport but the secondary services as parts, transshipment facility etc. that are incidental to transport.

Apart from the transport services the movement of goods in the international trade is subject to several procedural and documentary formalities at the hands of the public authorities, carriers and other agencies concerned. If the consignor/consignee does not take over these responsibilities, the freight forwarders undertake it on their behalf to process the movement of goods from the seller to the buyer. Traditionally known as the "Architect of Transport", a freight forwarder is likely to possess the knowledge of laws, rules and procedures relating to variety of subjects, including the customs formalities, foreign exchange transactions, freight calculations etc. He should be well aware of the market scenario, consumer needs, sophisticated sales techniques and export strategy to promote trade to its customers. He should be able to adopt himself to the changing conditions in international transport brought about by new technologies. The freight forwarders have thus become an essential link in international trade.

5.4 THE WORKING POLICY AND SYSTEMS

Most of the agents mostly deal with international and domestic Air Freight and consolidation. But in their traditional role they acted as a mediator between consignor and consignee on the one hand and customs handling on the other. They also act as mediator on behalf of the consignor in dealing with other public authorities like Airport Authority, export/import trade control authorities, exchange control authorities and organisations concerned with Insurance, Warehousing, Packing and Transport. This is necessary because the movement of goods in International Trade is subject to several procedures and formalities at the public authorities and other agencies involved.

They on behalf of their customers prepare the Shipping Bill and other documents required for processing goods in export trade and clearing imported goods. They handle claims against carriers for loss or damage to goods in order to protect the interest of their customers. They are also well versed with the procedures at the airport in handling goods for export or import trade.

It is necessary for them to ensure that customs regulation in respect of such goods is strictly followed. They are accountable to the custom authorities in this respect

The company safeguards the interests of the exporters and importers. It processes expeditiously the various documents and other formalities arising in this connection so that their customers do not miss shipping opportunities in the export trade or do not have to pay demurrage and other charges on account of delay in the clearance of imports.

They also render useful services to the air carriers. These include advising the shippers about the particulars of the services provided by the latter, booking of cargo in time and delivering it for shipment in a “ready for carriage” condition, thereby effecting substantial saving to the carriers on canvassing, pre-carriage formalities and documentation.

6. FREIGHT RATE CALCULATION AND RATE FIXING OF AIR CARGO

6.1 CALCULATION OF THE WEIGHT OF CARGO

This can be of two types

- Normal Weight: The actual weight shown by the weighing machine.
- Volumetric Weight: This weight can be calculated as

(Length x Breadth x Height) of cargo

6000

if the measurements are taken in centimetres then the volumetric weight

will be 1 cm x 1 cm x 1cm = 1 kg 6000

if the measurements are taken in inches then the volumetric weight will be 1 inch x 1 inch x 1 inch = 1 kg 366

Generally, the Airlines charge for a minimum amount up to a certain weight. However, Airlines charges normal weight or volumetric weight whichever is higher.

Usually the rate structure published by the airlines looks like:

<u>0 – 45 kg</u>	<u>45 – 100 kg</u>	<u>100 – 300 kg</u>	<u>300 – 500 kg</u>	<u>500 kg +</u>
Rs. 170/kg	Rs. 152/kg	Rs. 128/kg	Rs. 101/kg	Rs. 98.8/kg

Suppose, one shipper wants to book a cargo of 267 kgs, now the agent will see how the charges can be calculated so that the rate becomes cheaper. Here, the rate would be

267 kgs x 128/kg = Rs. 34176, where as agent will charge it as 300 kg shipment @ Rs. 101/kg which becomes Rs. 30,300 and it is cheaper than earlier. This is the way to charge freight for air cargo.

6.2 RATE FIXING

For all air cargo agents rate fixing for a cargo is a decision making problem and requires tie up with airlines, good relation with shippers, so that they give cargo to the agent's preferred carrier. and constant communication with branch offices of agent to update the overall tonnage information, here the rate benefit goes to the agent suppose for a shipment of 500 kg+ one airlines has published rate of Rs.

98.8. Now this Rs. 98.8 has to be written in the airway bill. The airlines always give 5% commission to the agents irrespective of capacity of that agent. Now if that particular airlines has tie-up with one agent for giving real benefit in exchange of procuring a certain amount of tonnage branch wise, nation wise and internationally the pricing becomes interesting e.g.

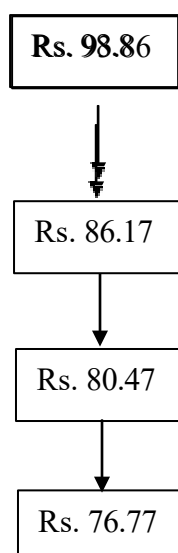
Less 5 %

If zone wise cargo uplift secured Less 5 %

If internationally cargo uplift secured Less 5 %

the branch agent gives certain cargo

Published rate given by the airlines Less 5 % commissi

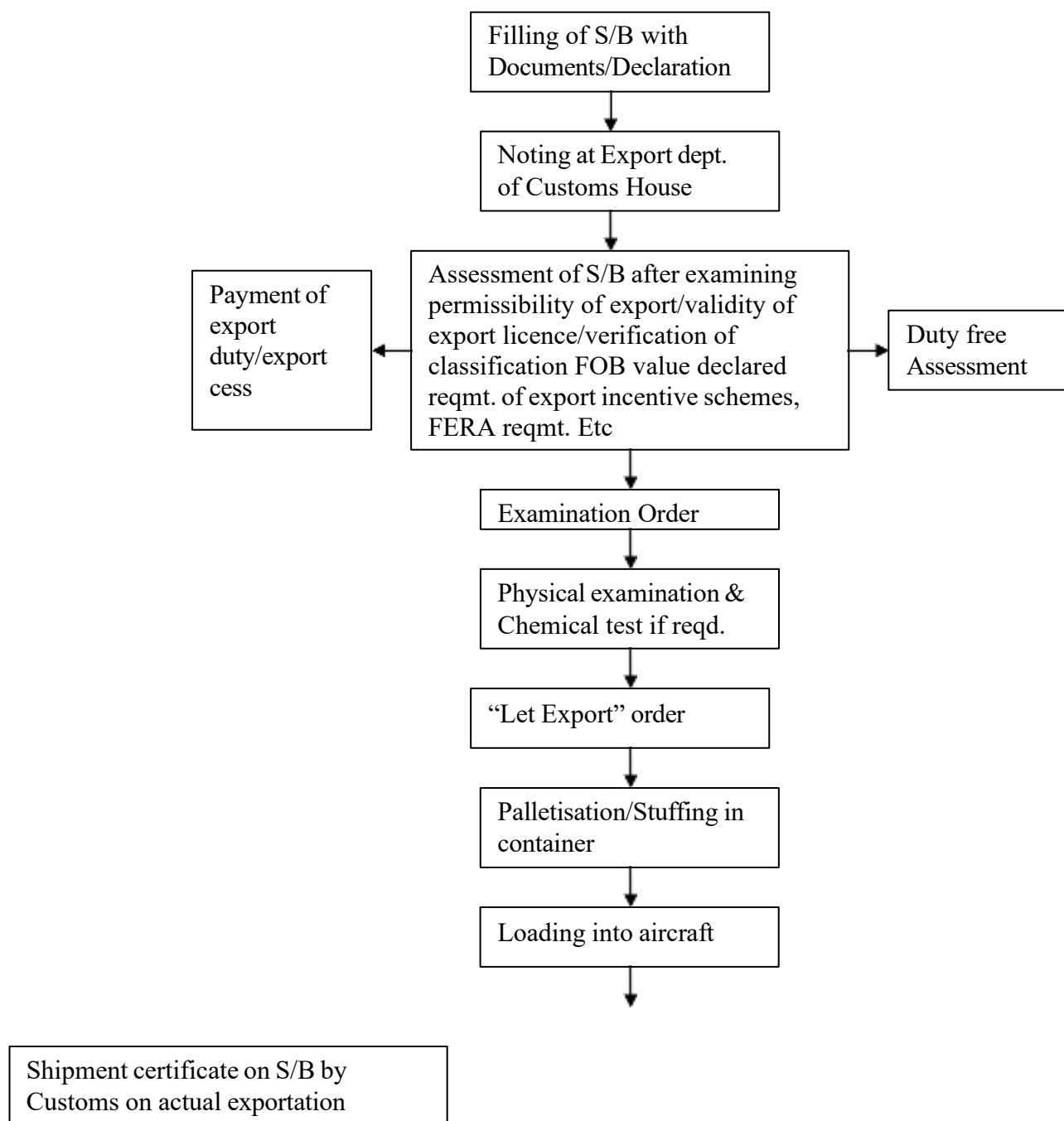


So, the agent can fix a freight rate for its shipper in between Rs. 98.8 and Rs.

76.77 per kg. Agent passes a percentage of its profit to the shipper in order to retain valuable clients. This rate benefit is only possible if the agent has nation– wide as well as international-network.

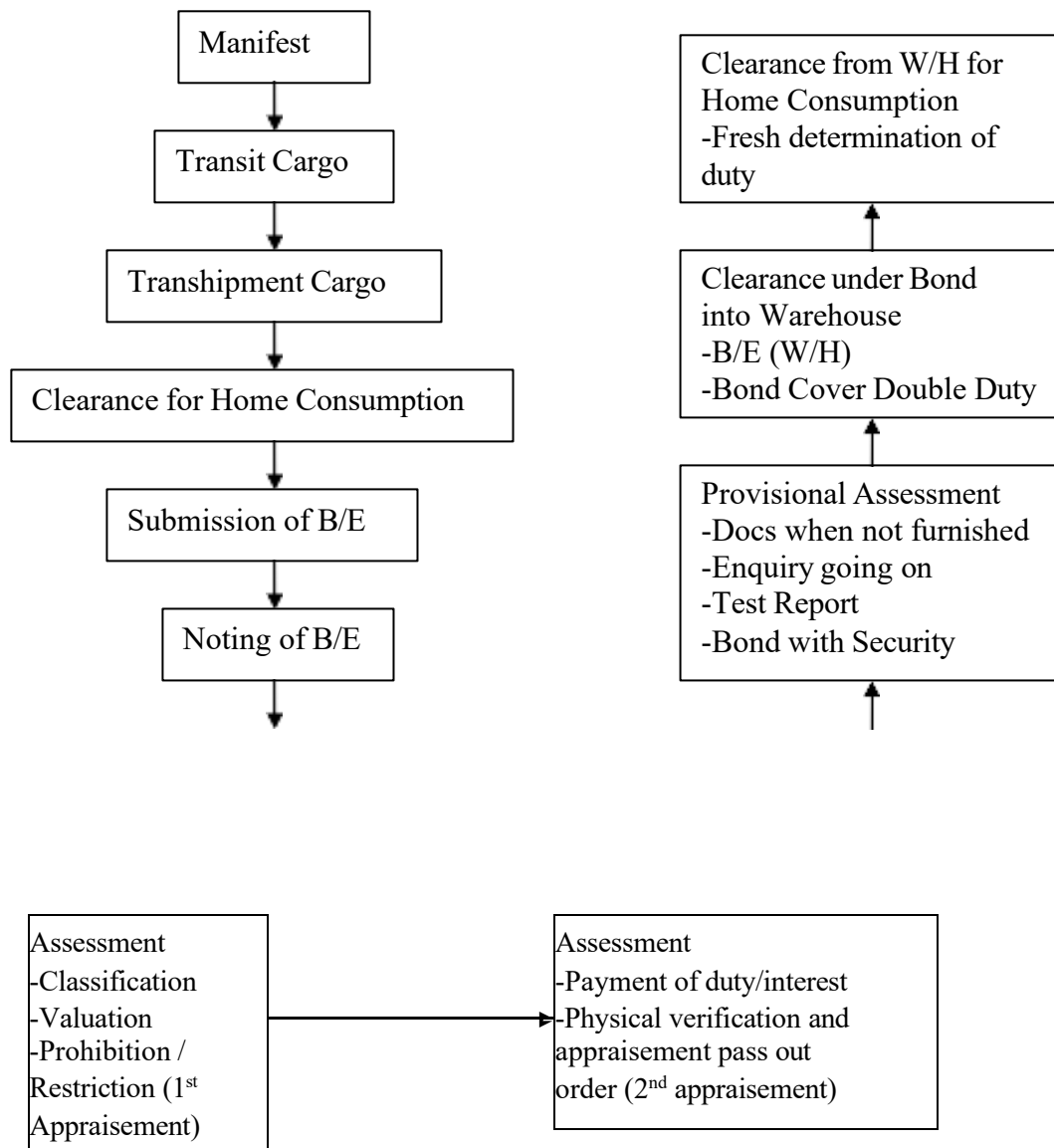
6.3 CLEARANCE OF EXPORT CARGO – FLOW CHART

The provisions of Shipping Bill right from its filing with Customs Department till actual exportation of goods are shown below:



6.4 CLEARANCE OF IMPORT CARGO – FLOW CHART

The provisions of Bill of Entry right from its filing with Customs Department till actual receiving of goods are shown below:



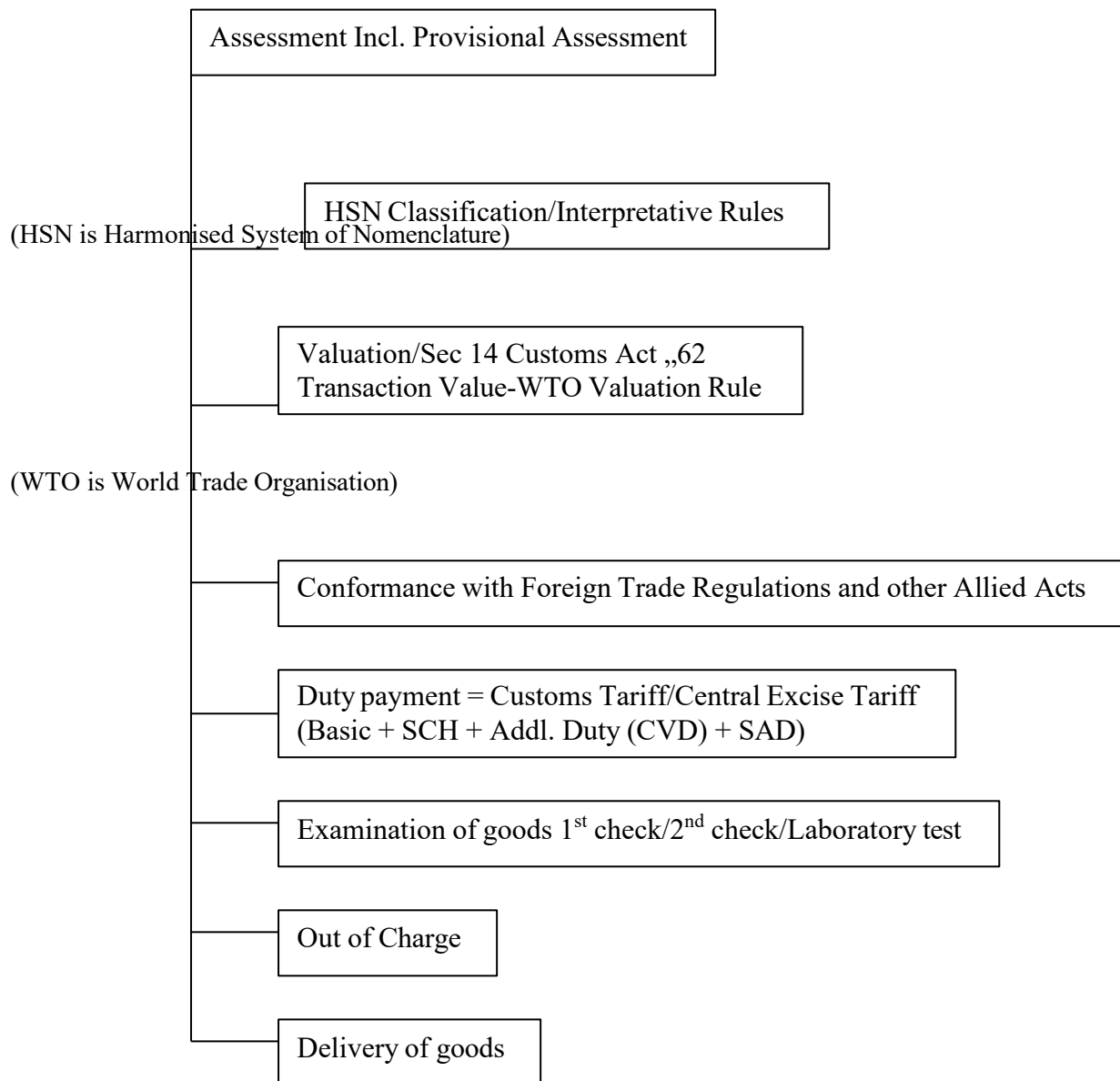
6.5 CLEARANCE PROCESS

Customs clearance process is designed to account for all imports to facilitate customs duty collection through assessment process.

Process involves:

Import General Manifest the Customs Department	:	To be submitted by the Carrier Rummaging the Aircraft	:	By
Aircraft entry Inward the carrier under supervision of Customs Custodian	:	To be granted by the Customs Department Unloading	:	By

Noting Bill of Entry : By Importer Followed By:



7. AIRLINES

Air transportation means movement of cargo and passengers through air from one place to another place by means of aeroplanes. The operators of this commercial service are known as Airlines Company. We will discuss role of airlines in air cargo movement as passenger movement is out of our scope. The main activities of any airlines can be classified into two parts. They are products and services.

7.1 PRODUCTS

Airlines portfolio of products are designed to provide customers with straight forward freighting solutions that are simple to use, easy to understand and focused on their key requirements for reliability and proactive communication. All

products have clearly defined, globally consistent standards and specifications, supported by a unique recovery promise and are designed to work with our extensive mainline and freighter networks.

7.2 SERVICES

Leading cargo airlines in the world operating at the heart of global trade, ships a wide variety of products all over the world - every single day. For instance British Airways' freight-handling centre at London's Heathrow Airport, the 83,000 square metre, and technologically advanced structure symbolises British Airways World Cargo's commitment to its global freight customers.

The range of services, supported by the very best application of electronic services, including Track and Trace system, combines speed and flexibility with value for money, making airlines as the first choice for customers transporting goods anywhere in the world.

PACKAGES includes

- Service Package for dangerous goods. Specially trained and certified staffs handle cargo according to the legal regulations.
- For goods requiring a constant temperature, Service Package based on modern cooling technology. These are ideal for the transportation of pharmaceutical products such as vaccines, plasma and biotechnological material.
- Service Package for perishable goods such as fruits/vegetables, flowers, fish/seafood, meat and dairy products. Upon request, arrangement can be made for the shipment to receive temperature-sensitive handling all the way to the consignee.
- If the value of the shipment means that it requires the highest possible security, then a different Service Package is there. It is ideal for the transportation of goods such as jewels, gold, bank notes, credit cards and traveller cheques.
- Special Service Package for theft-endangered goods such as silver or artwork, or goods from the telecommunications, electronics and IT industries.
- Service Package for shock-sensitive goods. Highly sensitive products such as machines for the semi-conductor industry are protected against shock and vibration throughout the entire journey.

7.3 SPECIAL CHARACTERISTICS OF GOOD CARGO HANDLING AIRLINES

- Time definite – This service offers to have the opportunity to optimize logistics chain according to any individual requirements. It also stands for time definite and that means that freight and all necessary documents are available for pick-up at the destination station at the promised time. This is made possible by using "time frames", which include all handling, transport and transit time and are based on the fastest connection between export and import station. Customers are saved from complex route planning and complicated calculations. A time frame begins with the "LAT", the "Latest Acceptance Time", on the export side and ends with the "ToA", the "Time of Availability", on the import side. The "Latest Acceptance Time", is the time when your freight and all accompanying documents need to be delivered to the Cargo export station. The "Time of Availability" is the time at which your freight and all documents are available at the destination station. Every time frame is identified by a "Time Frame Number", which enables a fast and uncomplicated booking procedure. With electronic booking channels customers are even able to do bookings any time.
- Quality Assurance – Pro-active Communication service offers a top product worldwide. Simply deliver and

collect shipments at the schedule time frames and the rest will be done by the airlines. To be able to offer a reliable and consistently high service in all stations worldwide, they have developed internal quality standards for each particular part of the process, from booking right through to delivery. These standards are applicable for all shipments and are permanently monitored. If for some unexpected reason a delay does occur, airlines notifies customers immediately to jointly coordinate the necessary steps.

- **Tracking** - Status information in real time and 24 hours a day, every shipment can be tracked at any time and at all points of its journey. By using tracking system there is a chance to retrieve up-to-date status information concerning the freight around-the-clock. The current position of the freight and the route it has taken up to this point can be instantaneously received by stating the Airway Bill number. A good tracking system is based essentially on barcode scanning which means that every shipment receives a barcode label with the Airway Bill number on it when it is accepted by the airlines. This is registered by a laser scanner at all the crucial points along the whole transport chain. Within a few seconds anyone can retrieve this important status information concerning his shipment throughout the world.

- **Capacity Guarantee** - Reserve freight volumes. This Capacity Guarantee service, which is unique in the airline industry, is offered by Lufthansa Cargo. If reservation is submitted in time and the weight of the shipment does not exceed specific limits, Lufthansa sends an automatic confirmation the same instant (some destinations may be subject to restrictions). That means:

- Saving time and money through automatic confirmation
- Customers can count on the airlines even in peak seasons
- They provide capacity for the shipment even at short notice

- **Performance Guarantee** - If shipment fails to be made available at the import station within 3 hours of the confirmed time of availability, the customer is entitled to claim up to 100% of the paid freight charges. Some of the good airlines' performance guarantee applies even in the case of delays caused by technical problems. The customers pay only for the promised performance.

- **Charter** – This is a special service for unusual requirements. If the customers have an unusual shipment to dispatch or the cargo is extraordinarily big or small, or the freight needs to travel to a distant corner of the world, or the merchandise is particularly sensitive or time-critical this service is very beneficial.

7.4 IATA AREAS

IATA has broadly divided the world into three different areas. They are:

- **IATA Area 1** - Comprises all of the North and South American continent and the adjacent islands, Greenland, Bermuda, the West Indies and the islands of the Caribbean Sea, the Hawaiian Islands (including Midway and Palmyra).

- **IATA Area 2** - Comprises all of Europe (including the European part of Russia) and the adjacent islands, Iceland, the Azores, all of Africa and the adjacent islands, Ascension Island, that part of Asia lying west of and including Iran.

- IATA Area 3 - Comprises all of Asia and the adjacent islands, except that portion included in IATA Area 2, all of the East Indies, Australia, New Zealand and the adjacent islands, the islands of the Pacific Ocean, except those included in IATA Area 1.

8. THE AIRPORT AUTHORITY OF INDIA

The Airports Authority of India (AAI) formed by the merger of IAAI and NAA through Airports Authority Act (No.55 of 1994), came into existence on 1st April 1995. AAI manages five international airports, 87 domestic airports and 28 civil enclaves. Their mission is Progress through excellence and customer satisfaction with world class airports and air traffic services fostering economic development.

8.1 FUNCTIONS

- To control and manage the entire Indian airspace (excluding the special user airspace) extending beyond the territorial limits of the country, as accepted by ICAO.
- Provisioning of Communication and Navigational aids viz. ILS, DVOR, DME, Radar, etc.
- To Design, Construct, Operate and Maintain International Airports, Domestic Airports, and Civil Enclaves at Defence Airports.
- Development and Management of International Cargo Terminals.
- Provisioning of Passenger Facilitation and Information System.
- Expansion and Strengthening of Operational areas viz. Runways, Apron, Taxiways, etc.
- Provisioning of Visual Aids.

8.2 ROLE OF AAI IN IMPORT AND EXPORT PROCESS

IMPORT

- Delivery Order obtained from airlines/console agents
- Bill of Entry filed with Customs
- Approach custodian's counter for location cum forwarding slip
- Packages brought to examination area for Customs examination
- Customs examines the package
- Approach Customs duty counter for payment of Customs duty
- Obtain customs out of charge order
- Contact custodians billing counter for generation of TSPC bill, Demurrage bill and Gate pass by handling relevant documents
- Go to cash counter to obtain order for final Gate pass

- Hand over green copy of Gate pass for delivery of cargo
- Receive cargo at delivery gate in the presence of customs gate officer

EXPORT

- Arrival of cargo at the air cargo complex
- Presentation of documents at the billing counter
- Generation of advance T.C (Terminal Charges) – 4 copies
- Physical admittance of cargo
- Off loading of cargo from vehicle on the ramp
- Weighment of shipment
- Produce for customs examination (examination area)
- Clear customs duty
- Let Export Order (LEO) from the customs
- Shifting of customs examined cargo to bonded cargo area
- Shifting of cargo for palletisation/containerization on request of airlines
- Loading of cargo based on customs arrival
- Actual palletisation/containerization
- Release of cargo to airlines through release permit (given by the custodian)
- Physical upliftment of cargo by airlines
- Deposition of EGM (Export General Manifest)

Import/Export consignment of the following nature can be cleared on round the clock basis on KBE (Kachha Bill of Entry)/Shipping bill:

- Human remains (dead body)
- Human eyes/other parts
- Life-saving drugs
- New paper and magazines
- Live animals
- Perishable cargo
- Urgent export shipment
- Diplomatic mails

The cargo will be stored in the International Air Cargo Complex under the control and supervision of customs. Authority will be the custodian of the import cargo delivered by the carriers. The responsibility for export cargo would be that of the shipper or his agent before customs examination or the customs in respect, of detained cargo and during examination and of the carriers after customs examination.

The airport of destination on all Bhutan shipments must be shown as Kolkata. Consignees/Agents must clear shipments at Kolkata and make their own arrangements to forward shipments Kolkata/Paro, Bhutan.

8.3 AIRPORT CLASSIFICATION

Airports are presently classified in the following manner:

- International Airports

These are declared as international airports and are available for scheduled international operations by Indian and foreign carriers. Presently, Mumbai, Delhi, Chennai, Calcutta and Thiruvananthapuram are in this category.

- Domestic Airports

- Customs Airports with limited international operations - These have customs and immigration facilities for limited international operations by national carriers and for foreign tourist and cargo charter flights. These include Bangalore (CE), Hyderabad, Ahmedabad, Calicut, Goa (CE), Varanasi, Patna, Agra (CE), Jaipur, Amritsar, Tiruchirapally, Coimbatore, Lucknow.

(CE - Civil Enclave)

- Model Airports - These domestic airports have minimum runway length of 7500 feet and adequate terminal capacity (400 passengers or more) to handle Airbus 320 type of aircraft. These can cater to limited international traffic also, if required. These include Bhubaneswar, Guwahati, Nagpur, Vadodara, Imphal and Indore. Rest 6 Nos. of airports, developed under Model Airports concept have graduated to the classification of Customs Airports, given above.

- Other Domestic Airports - All other 71 domestic airports are covered in this category.

- Civil Enclaves in Defence Airport - There are 28 civil enclaves in Defence airfields. Twenty civil enclaves are in operation.

8.4 REGULATORY AGENCIES AT AIR CARGO COMPLEX

- Customs
- Assistant Drug Controller
- Export inspection agencies

- Plant quarantine
- Bank
- Airlines
- Freight Forwarders
- Console agents

8.5 PRIVATE SECTOR PARTICIPATION

- The Government of India keeping in line with its policy of liberalisation decided to corporatize Delhi, Mumbai, Chennai, and Calcutta airports in order to induct the much needed capital for expansion and modernisation of these airports to world class standards. Accordingly, AAI sought for consultants, both for Financial and Legal to advise AAI for the entire process. AAI issued advertisements seeking Expression of Interests (EOI) globally from prospective financial and legal consultants. Action for appointment of financial consultant is on hand.
- Government has decided to set up a parallel Cargo Terminal at IGI Airport by way of a joint venture between AAI and private sector, in order to offer an option to users so as to achieve better services and increased efficiency through healthy competition. AAI has invited Expression of Interest for appointment of a Consultant for advising on the modalities of forming a Joint Venture.
- AAI signed MOU in the month of May, 1999 with Karnataka State Industrial Investment & Development Corporation Limited (KSIIDC) to establish a new airport of international standards at a site near Devanhalli, Bangalore by bringing in funds from the private sector to handle both passenger and cargo, domestic and international traffic to meet the growing demand of Bangalore city.
- AAI signed MOU in May 1999 with Cochin International Airport Limited - the new airport constructed at Cochin (in Kerala State) jointly by State Govt and Private Sector. The MOU provides for limited equity participation of AAI towards the cost of CNS/ATM facilities and also for rendering the services for operation and maintenance of CNS/ATM facilities on chargeable basis.

8.6 FUTURE PLANS

The AAI has drawn ambitious long term plans to meet challenges posed by ever increasing air traffic and advancement in aircraft technology. Some of the major plans for implementation of ICAO CNS/ATM programme are –

- Replacement of ground based Communication, Navigation and Surveillance (CNS) with Satellite based CNS system.
- Establishment of Differential Global Positioning System (DGPS).
- Automation in the Air Traffic Control Services.

- Establishment of Automatic Dependent Surveillance (ADS).
- Coverage of the Indian land mass through Satellite Communication, VHF Data Links and Monopulse Secondary Surveillance Radar with Mode 'S' Capability.

9. INTERNATIONAL TRADE BY AIR – IMPORT AND EXPORT

The parties involved in international trade:

1. Exporter
2. Importer
3. Commercial banks
4. Reserve bank – Exchange control
5. DGFT (JDGFT) – Trade control
6. EPCs/CBs/FIEO – Trade promotion
7. Sales tax authorities – Revenue control
8. Income tax authorities – Revenue control
9. Central Excise – Revenue control
10. Customs collector ate – Revenue control
11. ECGC
12. Roadways
13. Railways
14. Shipping lines
15. Airlines
16. Multimodal operators
17. Freight brokers
18. Freight forwarders
19. Export inspection agencies
20. Port trust
21. Insurance underwriter
22. Chambers of commerce
23. SGS – Surveyor
24. Legalization of importing country
25. Indian Council of Arbitration, New Delhi

Obligations of seller and buyer in international trade

	Seller (Exporter)		Buyer (Importer)
1	Execution of contract analysis	1	Execution of contract terms
2	Production of sample as per contract	2	Acceptance of sample
3	Bulk production - conformation of quality	3	Check up quality
4	Inspection as per contract	4	Detail inspection terms
5	Delivery as per contract	5	Watch delivery
6	Prior shipment – information to buyer	6	Advice shipment schedules
7	Price analysis – contract terms	7	Wait for shipment documents
8	Forward shipment/proof of shipment documents	8	Check up documents
9	Ensure 100% contractual terms	9	Ensure quality, quantity and other contractual terms
10	Consider for revival of contract	10	Consider for revival of contract

9.1 PROCESS CONTROL – EXPORT

Pre-shipment Documentation

- Receipt of documents required for effecting Export
- Verify the documents as per work instructions for Exports
- Deficiency to be brought to the attention of the customer and corrections obtained
- Where these approvals are already obtained, the documents can be arranged for submission to Customs.
- Submit documents for assessment

Booking of space

- Airlines are to be contacted for space and intimate number of AWB specifically mentioning No. of cartons / Packages / Weight and the dimensions
- Obtaining carting order
- Send Pre-alerts to buyers wherever necessary
- Receive Cargo
- Pick-up of cargo from customer godown

- Prepare AWB/HAWB
- Prepare necessary stickers/labels for affixing on the cargo
- Affixing the labels of\n each package
- Move the cargo to IAA godown Examination
- Submit the cargo for custom examination
- Hand over the cargo and documents and obtain receipt from the Airlines Post-Shipment Documents

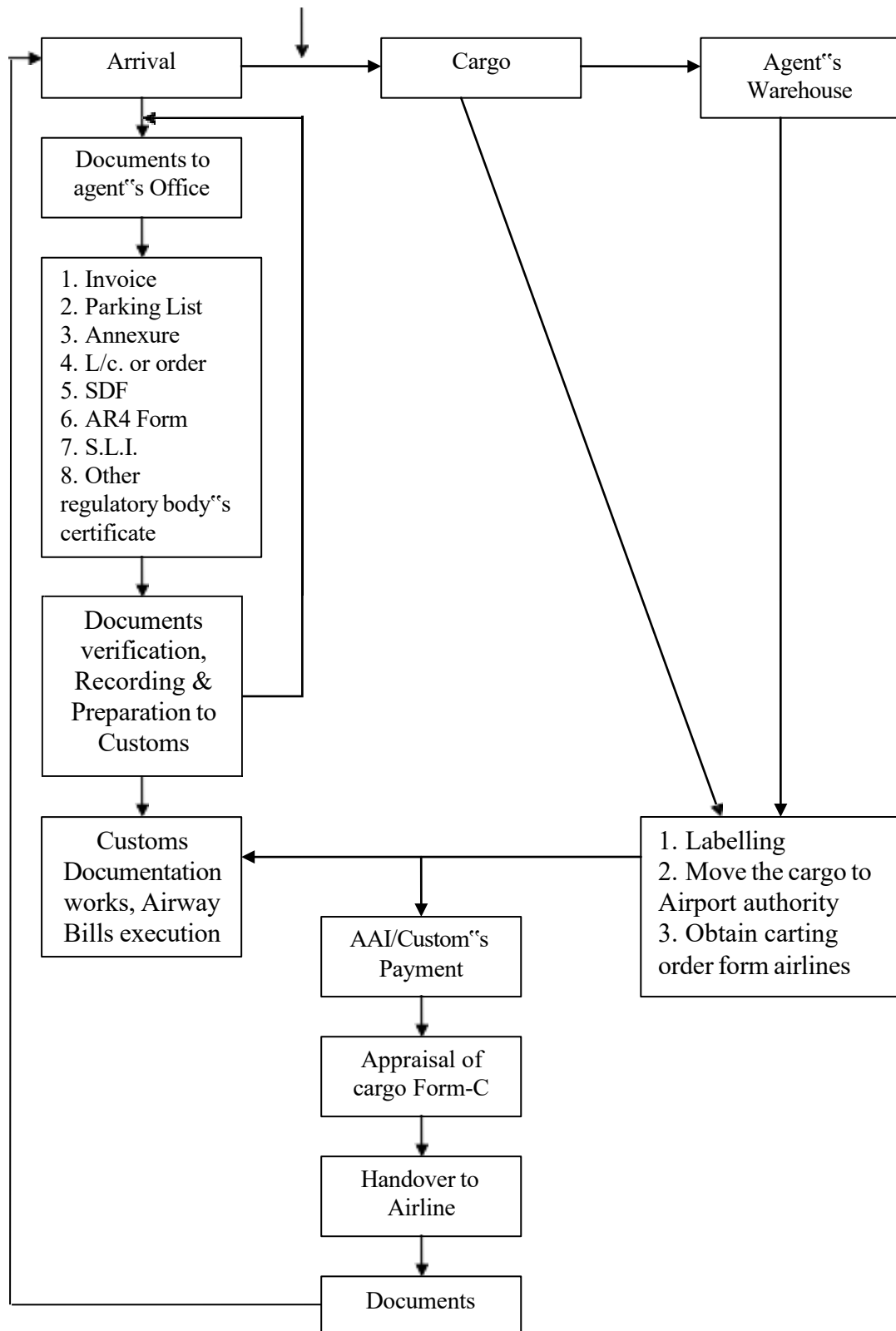
Hand over post-shipment documents to the shipper. Send flight details to the shipper by courier where necessary

Post-Shipment Work

- Obtain short shipment service wherever applicable obtain E.P. copies and triplicate the copy for drawback purpose.
- Hand over E.P. copies to the shipper.
- Collect bank attested invoice for filling Drawback.
- Inform shipper about delivery over phone

EXPORT PROCESS FLOW DIAGRAM

Booking of space with airlines



List of documents to be submitted by the Shippers

A.

Sl. No.	Documents	Sl. No.	Documents
1	Commercial Invoice	10	Lr/RR/AWB
2	Packing List	11	Sample
3	SDF	12	Additional document required for shipment under DEEC/Sec. 74
4	Frtd. Cert. Duly signed/stamped	13	Bank Name
5	AR4 form	14	Bank address
6	Quota form	15	Bank account number
7	Export deal (DEEC/Drawback/Free)	16	RBI code number
8	Letter of Credit	17	IEC code number
9	Sales Contract	18	Bin No.

B. In case of Metal items

Certificate duly certified and signed by the competent authority regarding net weight of constituent elements in the final product along with the value of each.

C. In case of garments

- Declaration whether items dyed or bleached
- Declaration whether garments are power loom or handloom
- Quota certificate
- Approval certificate by the Textile Committee
- Volume
- Dimensions of the packages

D. In case of textiles

- T.C. Sample/Quota
- TEXPROCIL/AEPC registration copy

- Handloom Certified Invoice
- G.S.P.
- Visa for only cotton goods meant for USA
- Combination form duly certified (textile)
- Textile committee inspection certificate

E. In case of Machinery

- E.I.A Certificate
- Catalogue/drawing/literature
- Certified copy of AR4 form

Export Documentation

Export Documentation is of two types

1. Pre-shipment documents (PRSD)
2. Post-shipment documents (POSD)

Pre-shipment documents (PRSD) for Drawback consignment and Duty-free consignment

- | | | |
|---|---|-------------|
| 1. Attested copy of Letter of Credit with order | : | 1 copy each |
| 2. Packing list | : | 8 copies |
| 3. Export invoice | : | 8 copies |
| 4. GR form/SPI form | : | 2 copies |
| 5. Inspection certificate | : | 2 copies |
| 6. Shipping Bill | : | 4 copies |
| 7. Application for advanced licence | : | 1 copy |
| 8. Xerox copy of Adv. Licence by DGFT | | |
| 9. DEC certificate on form – original and duplicate | : | 3 copies |
| 10. Under taking on forms for customs | : | 2 copies |

Post-shipment documents (POSD) for Buyer advance document and Bank copies

1.	Invoice	:	1 copy
2.	P/Note	:	1 copy
3.	P/List	:	1 copy
4.	B/L /AWB	:	1 copy
5.	Certificate of Origin	:	1 copy
6.	SDF form	:	2 copies
7.	Quality Control certificate	:	1 copy
8.	Export Contract	:	1 copy
9.	AR-4 form from Central Excise Department	:	1 copy
10.	Inspection certificate	:	1 copy
11.	Bank certificate (on format)	:	4 copies
12.	Invoice (Custom passed)	:	4 copies
13.	B/L /AWB (for bank)	:	1 copy
14.	Freight certificate	:	1 copy
15.	Shipping bill (Export Promotion copy)		
16.	Insurance premium certificate		
17.	GSP (fax copy only)		
18.	Intimation		
19.	GR (Export Promotion copy)		
20.	Invoice (custom)	:	1 copy
21.	P/Note (passed)	:	1 copy
22.	Insurance premium receipt		
23.	B/L /AWB – as per L/C		
24.	Inspection certificate – as per L/C		
25.	Original copy of L/C		
26.	Bill of Exchange	:	2 copies

9.2 PROCESS CONTROL – IMPORT

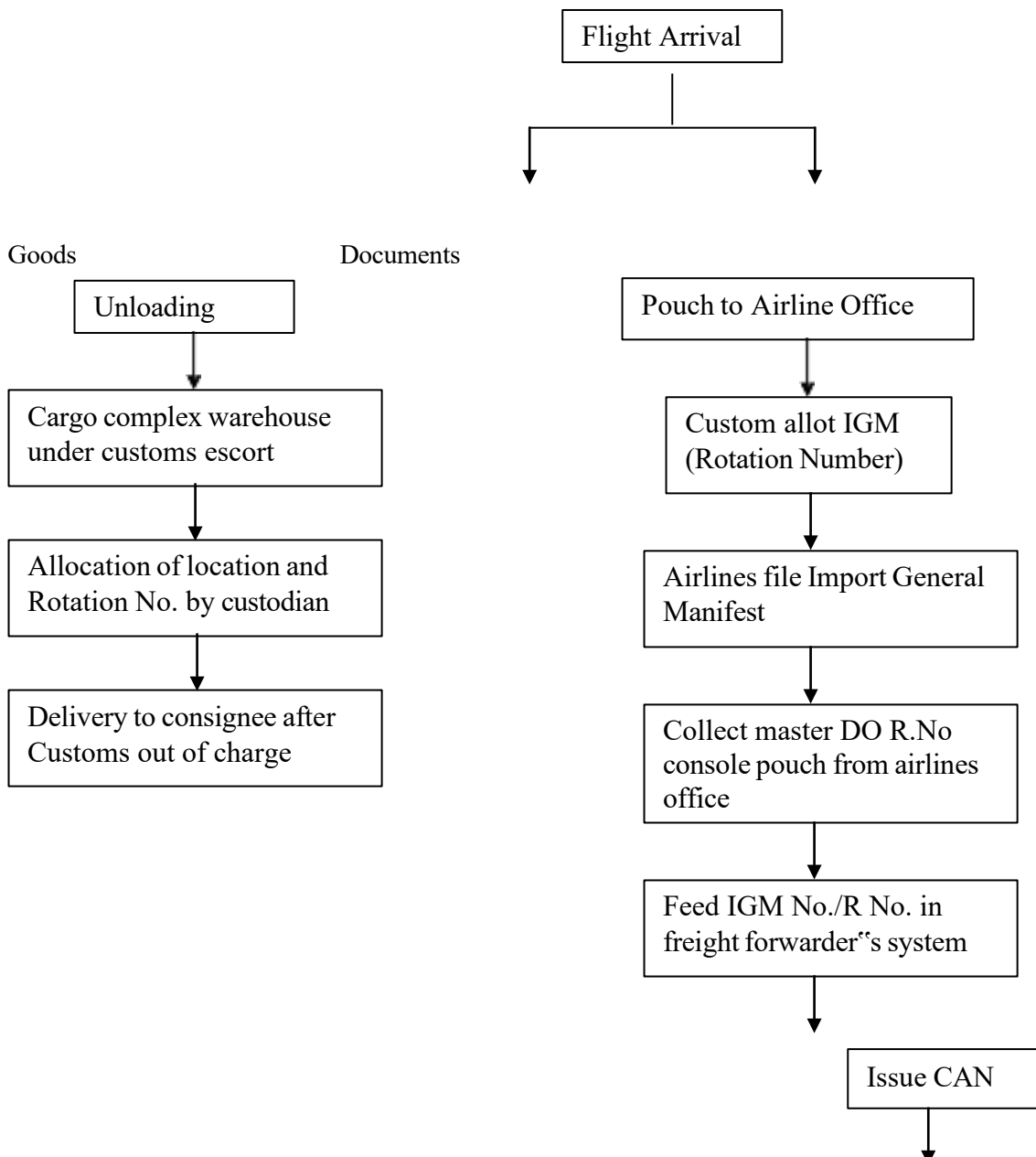
Documents generally required for Import procedures

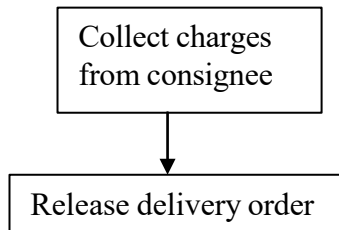
- Delivery Order
- Bill of Entry

- Airway Bill
- House Airway Bill
- Invoice
- Packing List
- Import Licence
- Catalogue and other relevant documents if any

Bill of Entry is filed with customs and Delivery Order is given by the airlines.

IMPORT PROCESS FLOW DIAGRAM





10. CONSTRAINTS AND PROBLEMS OF THE SYSTEM

Problems are a part and parcel of any operation. Finding out solutions to problems adds to the essence of work. Thus like any other trade, International trade does face problems in and around the domain of air cargo logistics. Delving into the details of the various types of problems would be of much help.

- Freight forwarders at times do not prefer to take the risk of storing the shipper's cargo at their own warehouses, so as to avoid giving demurrage for any damages done to the cargo, to the client. Considering the sensitive nature of the export cargo shippers also mostly rely on their own storages. Following this practice increases the scope of transit delay due to heavy traffic congestion in Mumbai, which may lead to missing of the flight, detention of the cargo at the airport and can even severe the relationship with the buyer.
- In a scenario like Mumbai, where the market is not very big and the return from the business is not very high, it may not be always possible for the freight forwarders to keep a big dedicated transportation team to cater to the client's need. Most of them take the service of third party. If any emergency cargo needs to be delivered or collected they may fail to provide efficient service due to non-availability of own vehicle.
- In most of the freight forwarder's office the import and export sections are separated, but most of the operational activities, administrative activities and documentation happen simultaneously and often by the same person, thereby causing mixing up of activities and unintentional delay.
- The city offices of most of the freight forwarders are situated at a distant place from the airport which may at times cause delay in the arrival of personnel and documents to the airport and vice-versa, leading to late decision making, less productivity, rise in cost and lesser profit.
- Fleet scheduling is a major planning process of any freight forwarder. They face problems in scheduling as the shippers do not stick to their commitment at times. They are also very reluctant to realise the importance of time. The exporters inform them to send their vehicles at a fixed time, while they engage themselves in packing activity. As the vehicle reaches the exporter's premises they find that the cargo is not ready, for which they have to return or wait unnecessarily. Though the operations department of the freight forwarding agent's office verifies before hand whether the cargo is ready and gives them a proper time for collection, but in many cases it has been found that exporters misguide them by telling them that the cargo is ready.
- Detention charges are generally not charged in fear of loss of customers. Even though freight forwarders try to compensate it by increasing the transport charges later on. Charging or not charging detention charges does not reduce the total logistics time therefore increasing the cost. Hence, the logistics chain cannot be optimised by this practice. This sometimes hampers the international trade and the relationship between sellers and buyers.

- Problem of outstanding is a very serious in freight forwarding industry. The facility of credit is rendered by all service providers but the problem arises when the customers take too much advantage of this facility. As the payment stands pending, there remains no flow of cash and the freight forwarder can face severe cash crunch, as the airlines may have to be paid immediately. The company then uses their own fund to pay the airlines, thereby losing interest and decreasing the profitability considerably.
- Documentation in international trade is very time consuming. Some times it is repetitive, overlapping and prone to errors thereby causing unnecessary delay. There is also a shortage of skilled manpower for documentation which may increase cost. A computerised system can reduce the hassles of documentation to a great extent, but development and maintenance of such software requires a huge amount of capital investment on the company's part.
- In this competitive business environment, to ensure quality service, the freight forwarders sometimes have indirect obligations and responsibility to settle matters relating to transit delay and loss of cargo which is not in their hands. Transit delay is caused due to the cancellation of flight transshipment and incorrect tracking operation.
- Shippers often knowingly or unknowingly declare wrong weights and volume of cargo. Wrong declaration and cross labelling by shippers also cause delay in transit. They are allowed only 2% variation in cargo weight and volume. Short landing means that the complete consignment does not reach destination. Mishandling is caused due to repeated loading, unloading and reloading of packages. All these factors result in the increase of total logistics cost and transit delay.
- There is only one officer to handle wild life import and export through sea and air. It's very difficult for him to manage the demands of both the type of customers at a time. For customers also it is very difficult to get their jobs done on time.
- Concerned authorities like Export Promotion Councils and DGFT offices are situated very far off from the Mumbai airport. For any problem arises at the airport and they have to get the work done from these offices then a person has to travel to and fro from this office which will take more time and hence cost increases.
- For customs clearance a huge amount of paper work is required. Some of the customs people do not have the appropriate knowledge of all the documents required for international trade. There is also a lack of co-ordination between the people working in the customs department.
- People working for airlines some times do not check the documents very carefully before accepting them. This may create a problem for the shipper in the future.
- There is an absence of standardisation of packaging in this industry. This creates problem in storing packages in the air cargo complex warehouse, tracking of the packages properly and fetching them when the airlines furnishes a request for them for loading into the aircraft.
- The facilities provided by the Airport Authority of India in Mumbai are not adequate enough for faster movement of a cargo. 24 hours working facility is not given. The work done by the authority requires professional people in most of its positions for doing everything thing perfectly, in less time and without any errors.
- Infrastructural problems like roadways and railways hamper international trade considerably from Mumbai. Poor road condition and traffic jams in Mumbai makes roadways not a very reliable medium of transit, for which

transport logistics providers incur a huge loss. Logistics operators in railways also incur loss in their business due to late arrival and departure of trains.

- Due to the lack of infrastructure in Mumbai airport it's not possible for Airport Authority to scan all the packages kept in their warehouse properly. Only specific packages are scanned on paying some charges.
- Political scenario in Mumbai also creates many obstacles for the growth of international trade. Unnecessary strikes and bandhs called by different political parties and trade unions are making life difficult for the shippers. Shippers some time fail to keep their commitment due to this type of unwanted situations which is not under their control. As the leaders of these associations do not come from the working fraternity, they do not realise the problems arising out of these typical situations.

11. SUGGESTED SOLUTIONS OF THE PROBLEMS

- Freight forwarders should increase the number of vehicles in its fleet for catering to delivery or collection of an emergency cargo. Top management should analyse the company's position and try to arrange fund for an extra vehicle by which the company can earn competitive advantage over its competitors. They also should try to arrange infrastructure for door-to-door service.
- One branch office of the freight forwarders should be set up at a place nearer to the airport. It would be more beneficial if the office is set up within the air cargo complex. The whole operational department of the company should be transferred to the branch near the airport.
- Air freight operations department should be segregated from other activities. The export operation department and import consolidation should work together in order to achieve best co-ordination.
- Detention charges should be charged by the freight forwarders very articulately in terms of transportation charges. This delay due to exporters should be stopped, otherwise it would hamper the freight forwarders credibility to other shippers if their shipment is not sent to the airport in due time.
- The freight forwarders should have a dedicated marketing team with full aggressiveness. They should try to get new clients and fix a goal regarding the business. The marketing team should try to build a very cordial relationship with the clients. After service requirement gathering from the customers should also be done.
- Freight forwarders should try to give value added services like insurances, DGFT clearances, making the invoices from the exporter's information, collecting documents from the exporter's office etc.
- Freight forwarders should make tie-ups with three to four leading airlines internationally in order to get very low rates from them. Rapport with the airlines should be maintained steadily.
- Some profits should also be shared with the customers to build a good relation with them. Valuable clients should be given special value added services in order to retain them
- The problem of outstanding payment should be reduced drastically by taking offensive measures. The management may think of concessions if the due is paid well before the due date. The overall credit limit can be

extended by charging different slabs of penalty for different duration. ACAAI has rules that if any party has any outstanding with any cargo agents and the party shifts to another agent, the aggrieved agent can circulate notice among different agents asking them not to handle that particular party's consignment. This rule should be strictly followed by the freight forwarders. The clients can be categorised in order to handle them tactfully.

- The personnel from the freight forwarder's office should be cautious towards wrong declaration, mishandling and cross labelling to reduce partial responsibility.
- Universal bar coding should be used for packaging.
- Trained staffs should be assigned for doing specific type of jobs by all the entities taking part in the import or export process.
- Purchase and use of a computerised software package for documentation in order to reduce the huge amount of documentation required in the whole process.
- Shippers must be provided education on international trade and logistics. They must understand the importance of time and total logistics cost. A small mistake on their part can damage India's position in the world market which can make the country face severe trade barriers. Education can improve loyalty of the shippers toward their buyer. So that international buyers start relying on the Indian shippers more and more there by resulting in a growth of international trade. It also helps in improving the mentality of the shippers which in turn will benefit them by reducing the total cost and time for the whole process, increasing the profitability.
- The customs department should look into the matter of reducing the huge, rigorous and repetitive documentations needed for the clearance. They should provide skilled persons are different positions to improve the efficiency of the whole department. They must ensure that there is a total co-ordination between different employees of the department.
- Unified and simple documentation which can reduce time through out the process by reducing the complexity of paper work. It will also reduce the effort behind it which can be used in doing some other fruitful work. Professionalism and less paper work also help to improve the communication gap in the whole process. Hence improving the work environment and productivity.
- Only airlines have the advantage of having a single window document, namely Airway Bill (AWB), through out the world. So airlines people must be very careful while accepting relevant documents for a particular shipment from the shipper.
- Airport Authority of India should improve their infrastructure at the air cargo complex by installing efficient handling machineries, scanning and x-ray machines. They should also improve other facilities provided by them for faster movement of cargo. Provision of work for 24 hours should be there so as to improve their productivity. They should also try to employ professional and trained people at various positions of their organisation to improve the working potential of the whole department as a whole and provide better services to the shippers.

12. SWOT ANALYSIS

Strength

- Movement of cargo through air takes much less time than movement via other mediums of transportation. This lowers the total logistics cycle time required for a single transaction.

- The main idea of logistics lies with Just in Time (JIT) concept. This means availability of the cargo at the right place and on right time. So it is very clear that JIT can be achieved only through air transportation as this is the fastest medium of transportation. There by resulting in lesser inventory control and warehousing expenses.
- It is true that the freight for air transport is much higher compared to any other medium of transport. But if we compare the total logistics cost for a cargo movement internationally, which comprises of freight, time, warehousing, inventory control, materials handling etc. it is seen that the total cost is much lower than any other transportation medium most of the time.
- As the freight part of the air cargo is more, shippers try to provide less packaging to reduce the weight of the cargo. But less packaging does not reduce the safety of the commodity as there is lesser number of handling, loading, unloading and reloading compared to other mediums of transportation. So cost of packaging drastically decreases in this type of transition.
- Greater satisfaction can be provided to the customers by air transportation, as it takes less time and provides more safety to the cargo.
- In air cargo logistics carriers take the liability and settle the claims in case of damage, loss and pilferage to the cargo.
- After the cargo enters the air cargo complex it has to go through various phases like customs clearance, warehousing, weighing, scanning, loading, unloading etc. This process is carried out by authorised persons only. Until the cargo reaches its destination there is no access for general people. Thus resulting in high security for the cargo.
- The carriers provide a lesser rate for a higher amount of cargo. Freight forwarders take this benefit and consolidate the various small cargos received from different shippers into a single large cargo. The shippers in turn get benefited as they have to pay less for their portion of the cargo.
- Air transportation earns foreign exchange for the country just after sea transportation. This takes a major part in the country's economic growth.
- A single document, namely Airway Bill, is used for air transportation internationally. This document is recognised and used by all the airlines in the world. Use of a single document decreases the hassles of a huge documentation, saving time.
- For the movement of perishable items and life saving drugs, where time is the most important factor, air transportation is the only way. As the shelf life of the items is very less, other mediums of transportation cannot be chosen.

Weakness

- The freight for air cargo transportation is very high so it is not always possible for the shippers to bear the cost. Even if the shippers are able to bear the freight they do not use this medium to remain in competition with its competitors, who use a cheaper medium and provide a lower rate.

- Most of the shippers are not educated and commit some mistakes unintentionally. The shippers have to incur losses due to their mistakes and international trade receives a setback. For example, if the shipper wrongly declares the cargo's weight and the variation goes beyond 2% then the export order can get cancelled or the shipper can be heavily penalised by the airlines.
- Compatibility between the different cargos is a very big problem for the airlines. For example, tea is not compatible with incense stick. So if there is some place vacant in a flight loaded with a type of cargo there is a possibility of place another type of cargo in that vacant place. But if the second commodity is not compatible with former one the flight has to go vacant.
- Direct shipments get preference over transshipment. It results in transshipment delay and increases lead time. The decision regarding the transshipment cargo being loaded in the aircraft can even be taken by the pilot. Therefore sometimes for pilot's preference transshipment delay occurs.
- A big problem in this trade is the collection pattern prevailing in the market. This results in huge outstanding which makes the freight forwarders hesitant in accepting new account.
- Most of the freight forwarders have a tie up with foreign companies to make their presence felt internationally. So they have to share their profit with their foreign counterparts making the net rates less competitive compared to other multinational freight forwarders working from the same region.
- Lack of inter branch communication regarding client information is also a weakness. There should be more and more sharing of information relating to clients, who operate from more than one point within the branches.
- Packages are sometimes not scanned properly due to the lack of infrastructure. Not scanning packages properly can even destroy the security measures at the airport in India and abroad.
- In this whole process there are many areas where cash transaction takes place. This practice must be eliminated to improve the relationship between the involved parties and also to eliminate the possibility of misunderstanding.

Opportunity

- The government's complex Exim policy and less knowledge about international trade induce fear into the shipper's mind. They prefer to do national trade instead of international trade to avoid being part of these complex processes. If these policies are made simpler, the huge untapped Indian market can be exploited.
- Effective infrastructural development and good marketing strategies can also increase international trade considerably.
- If international trade of the country flourishes, a huge amount of employment can be generated in all the related sectors of this trade.
- New industries are coming up from in different parts of the country as a result of growth in exports. For

example, flowers from Midnapore, West Bengal are being exported to different parts of the world like Amsterdam. So India is earning a lot of foreign exchange from these new industries.

- Freight forwarders should look for more cargo consolidations even if it amounts to sharing profits with its foreign counter parts, there by increasing normal profit margin.
- Freight forwarders can take advantage of the global/national arrangement with prime carriers in offering better rates to their clients.
- Freight forwarders should try to procure more business from multinationals, corporate houses and export houses to eliminate the outstanding realisation problem. They should also allow more discounts to shippers for ensuring faster realisation.
- The inter liner, online and offline carriers together can capture more market shares by reducing the cost of carriage rather than doing it individually.

Threat

- With the improvement of ocean service day by day and lower freight charges of sea transportation, substantial quantity of air cargo, which originally moved on air in the past, is moving by sea.
- The choice of the route for the movement of a cargo can be chosen either by the shipper or by the consignee. There is a choice called “Free Choice” which lies with the freight forwarding agents. In this choice the agents try to send the cargo by its preferred carrier, taking the advantage of lower rate given by the airlines. But in most of the cases the agents are not allowed to use this choice, so they cannot reduce the freight of the cargo. This means lower profitability of the shipper and the agent.
- Moving on of the shippers from one agency to the other at any minor pretext. Although the ACAAI members can be persuaded, the market is filled with non ACAAI members and sub-agents where the control is not adequate.
- Shippers choose a cheaper medium of transportation to cut the cost and provide a competitive rate for their own products in the market.
- Emergence of multinational freight forwarders with their package of better rates coupled with undue credit and discounts is posing a threat to existing freight forwarders.
- Lower rates offered by sub-agents who have practically minimum or no overhead cost is also causing problems for freight forwarders.
- Shippers are turning into freight forwarders posing a big threat to the international trade of our country.
- Lower rate of incentive, profitability and higher level of risks lessens the energy of the shipper to do international business. The attitudes of the shippers are not towards global adoption.

- According to most of the shippers the political situation of Mumbai is not very suitable for doing international trade and providing logistics services, compared to other states of India.

13. A BRIEF OF THE PROCEDURES FOR EXPORTING AND IMPORTING CARGO FROM OUTSIDE INDIA AND TO INDIA

The goods which are transported through Air is brought to the cargo terminal and the cargo hubs/terminals are located in various parts of the country. For example: Delhi, Mumbai, Kolkata, Chennai, Nagpur, Amritsar, Hyderabad and many more. In order to import/export the goods, out of India's the following procedures of different governing bodies are fulfilled. The steps of which are mentioned below.

EXPORT

- Shipper/consigner- (who sends the goods) prepares an invoice and packing list for the goods / cargo to be sent.
- Based on the invoice and the packing list the shipper/consigner or his customs house agent (CHA) files the shipping bill with the customs. The shipping bill is a customs document which is processed for carrying out the export formalities.
- The IATA (International Air Traffic Association) agent who is also called a freight forwarder generates the Airway bill (AWB) for particular airlines after negotiating rates and incentive.as a matter of right the IATA agent generating the AWB for the shipper/consigner – (who sends the goods) get 5 % IATA commission on the freight from the airlines plus certain incentives as agreed.
- Agent approaches Airlines who issues a carting order (CO) which is a confirmation for carriage of the goods/cargo
- The agent approaches AAI(Airports Authority of India) along with carting order, AWB and shipping bill. AAI generates Terminal storage and processing receipt (TSP) after collecting the charges, based on the rates fixed by AAI.
- By showing the TSP, the truck or vehicle carrying the cargo enters the AAI export area where the cargo is offloaded in the truck dock area. The cargo is weighed and in case of any discrepancy of weight AAI penalizes the shipper or agent and amendment is carried out in all the documents because all charges of AAI and airlines are based on the chargeable weight.
- From truck clock areas the cargo is shifted to the examination area where customs official examines the content and values of the goods being exported and once the cargo is ok. Customs issues a “ LET EXPORT ORDER” after which only the cargo can be exported.
- The cargo is then x rayed/screened and is shifted to bonded area from where the airlines built the ULD's (Unit Load Device) which can be pallets/containers, etc and takes it to the aircraft for loading.
- In export AAI offers 24 Hours free storage in the examination area after which AAI raises a demurrage charges and the bill is raised to the shipper or the agent and 48 Hours free storage in the bonded area after which demurrage charges bill is raised to the Airlines.

IMPORT

In case goods or items are imported to India. The following procedures are followed in order to receive the goods.

- Once the cargo is brought by the Airlines deposit the cargo with AAI based on the IGM (IMPORT GENERAL MANIFEST). AAI being the custodies of cargo are responsible for safe storage of the goods.

- The airlines send a cargo arrival notice to consignee (The one who receives the goods) (Or the party who receives the goods). The consignee or his appointed customs house agent (CHA) approaches the Airlines with the cargo arrival notice who issues a DELIVERY ORDER and provides the consignee copy of the Airway Bill along with packing list and invoice.
- The agent files a Bill of Entry (BOE) with customs, based on the packing list and the invoice, which is authenticated by customs.
- The agent approaches AAI with the Delivery order, (AIRWAYS BILL) AWB copy and the (BILL OF ENTRY) BOE for location slip, which provides the details of the location of the cargo. AAI provided the cargo from the respective location to the agent.
- The cargo is examined by customs and after assessing the value and the content of the goods, customs gives a report. Based on this custom duty is paid to (if applicable) by the consignee.
- Then customs issues "OUT OF CHARGE" only after which the goods can be delivered to the consignee.
- The agent approaches AAI with this out of charge copy from customs, based on which Bank Challan is issued. The agent or the consignee pays the amount being the custodian of cargo. AAI charges the consignee for the storages processing of cargo depending on the chargeable weight. However, AAI offers on 72 Hours free period for storing the cargo. The AAI finally issues a gate pass to take the goods out of bonded area.
- The goods are delivered to the party based on the gate pass.

14. AIRLINE FUNCTION

EXPORT

- The airlines give the Airway Bill stocks to the IATA agents who give the business to the airlines.
- The agents give the booking of cargo to the concerned airlines against Airway Bill No. along with the no. of packages, weight of the shipment both gross & volume, dimension of each package & nature of goods.
- The Airlines give the Carting Order to the agent based on the details provided in Pt.2 which is a document, giving the flight details on which the cargo will be shipped. The onward flights details in case of multiple flights are normally sent to the agent through mail.
- Based on the Carting order, airway bill, shipping bill (customs document) the agent enters the cargo in the cargo terminal after paying the necessary charges to Airports Authority of India.
- The cargo is examined by customs and when found in order Customs issues the "Let Export Order", after which the cargo is moved into the bonded area from where it is released to the concerned Airlines.
- The airlines prepare a pre-manifest and loads the cargo in the ULD (Unit Load Device) which are normally Pallets and Containers. Once the cargo is loaded in the ULD's , airlines prepare the final manifest which is called the Export General Manifest (EGM)
- Based on the EGM, Customs/AAI releases the ULD's which the airlines carry and loads it in the aircraft.
- Since the aircraft load is to be balanced and the desired centre of gravity of the load should be in the centre of the aircraft, the loads are distributed uniformly in the different compartments of the aircraft based on a Load & Trim sheet which is prepared by an authorized person certified by DGCA (Director General of Civil Aviation) based on certain working formula's.

IMPORT

- The cargo which comes from abroad to India are manifested, the details of cargo such as Airway Bill No., No. of packages, weight of the cargo both gross & volume, nature of cargo are given in the manifest normally known as Import General Manifest. (IGM)

- Customs escorts the ULD's from the aircraft to the AAI Cargo terminal and then the airlines does the de-stuffing of the ULD's (which means, they open the ULD's and segregate the individual cargo since each ULD can carry multiple shipments.)
- Airline hands over the cargo to the Airports Authority of India based on the IGM and the Airway bill copies, who then stores the cargo in different sheds based on the dimensions of cargo
- The airlines send Cargo Arrival Notice to the importers who normally engage the Customs House Agents (CHA) to clear the cargo.
- The agent approaches airlines with the Airway bill copy sent either through post, mail or fax by the exporter in the origin for delivery order (DO). The agents collect the DO after making the required payment from the airlines.

The airlines function is restricted to just issuance of Delivery Order in Imports. The airlines only come in the picture in case of any amendments to be done in the documents with prior approval of Customs and Airports Authority of India. The details of the airlines function is provided by Singapore Airlines, NSCB Airport, Kolkata. However the function of airlines is same for all the airlines.

15. CONCLUSION

The growth of Air Cargo in India has reduced drastically in the last couple of years for the following major reasons:

- The charges of airlines have gone up by almost 50% due to the increase in fuel surcharge.
- Shipping lines routing the shipments through sea & ocean is almost 1/3rd of the airline charges and because of enhancement in technology shipping lines have started transporting cargo in a much shorter time as it used to take about a decade back. Even trucks and containers are reaching different sea ports from different parts of the country in just 4-5 days.
- In ships one can book a 20 ft or 40 ft container in a negotiated rate which comes to be very cheap and one can send a huge volume of cargo at one go. Whereas airlines can only carry big lot cargo in different flights.
- The capacity of a ship is almost 500 times of a Boeing-747; hence the carrying capacity is much more.

Another part which plays a major role is Customs formalities. Though the customs clearance formalities are somewhat same in both airport and sea port but then the checks at the airport are much more vigorous because of its nature of place. Moreover the airlines give a lot of importance to the security aspect which is not the same with the shipping lines as the containers are only uplifted on board after a considerable period during which time the risk factor almost becomes negligible. The exporters send their cargo by air mainly if there is a delay in manufacturing the products but the shipment has to reach on time or when the commodity is such which requires to be secured.

Taking Kolkata airport into consideration the movement by air is less compared to Mumbai, Delhi or Chennai because of fewer industries who are unable to match the Airline rates and due to the time taken by Customs for clearing the goods.

However, moving cargo through air has a lot of advantages such as it can reach cargo to un-popular places in the world in a shorter period. Now airlines have also started trucking to places where they don't fly or does not have an airport. Airlines have inter-line agreement with the other airlines where they can transfer the cargo to different destinations where they don't have services. Of course, keeping in mind the fast growing and competitive market, it has become essential for the exporters to ensure that their orders are not cancelled due to failure in reaching the goods on time hence; Airlines became the best mode of transport. In short, though the charges of an airline are high compared to shipping but due to its fast movement and connectivity, it will still remain the most important mode of transport.

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