Ground Handling Regulation in India

A comparison with international policies and practices

By

NAME: ARJUN M LAL

SAP ID: 500031549

GUIDE NAME: VINAYAK VIJAYAN

DESIGNATION: FACULTY (AVIATION & GDS)

ORGANISATION: SPEEDWINGS AVIATION ACADEMY, KOLLAM BRANCH, KERALA STATE.

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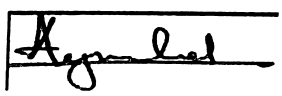

ARJUN M LAL

CHARUVILA VEEDU

EDANJUMULLA

SASTHAVATTOM P.O.

695305

KOLLAM Branch

Second Floor, ROBY ARCADE, Near South Indian Bank, S.N College Jn. Kollam, KERALA.

Head Office: COCHIN

Enchackalody Towers, Above Post Office, Kaloor, Kochi.682017, www.speedwings.org

Declaration by the Guide

This is to certify Mr Arjun M lal, a student of Executive BBA (Program), Roll No 50031549 of UPES has successfully completed this dissertation report on **"Ground Handling Regulation in India A comparison with international policies and practices"** under my supervision. Further, I certify that the work is based on the investigation made, data collected and analysed by him and it has not been submitted in any other University or Institution for award of any degree. In my opinion it is fully adequate, in scope and utility, as a dissertation towards partial fulfilment for the award of degree of Executive BBA.

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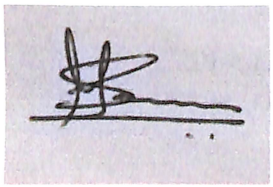


GUIDE NAME: **VINAYAK VIJAYAN**

DESIGNATION: FACULTY

H. No: 14/1972B

Karuvelipaddy

Cochin-682 005

Mob: +91-98951 98800

E-mail: vinaivijay@gmail.com

Date:26-10-2014

Place:KOLLAM

Table of Contents

Acknowledgment.....ii

Table of Contents.....iv

List of figures.....v

List of Tables and Illustrations.....vi

Acronyms & Abbreviations.....vii

Executive Summary / Abstract.....ix

Chapter 1: Introduction.....1

1.1 Overview.....5
1.2 Background.....6
1.3 Purpose of the Study.....8
1.4 Research Hypotheses.....9

Chapter 2: Literature Review.....12
2.1 Review Area Broad.....13
2.2 Review Area Narrow.....46
2.3 Factors critical to success of study.....48
2.4 Summary.....49

Chapter 3: Research Design, Methodology and Plan.....52
3.1 Data Sources.....53
3.2 Research Design.....54
3.3 Data Analysis Procedures.....55

Chapter 4: Findings and Analysis.....57
4.1 Findings.....58
4.2 Analysis.....60
4.3 Correlation/ Regression Analyses.....61

Chapter 5: Interpretation of Results.....62
5.1 Interpretation of Results.....63
5.2 Comparison of Results with Assumptions (Hypotheses).....64

Chapter 6: Conclusions and Scope for Future Work.....65
Conclusion.....66
Future work.....67
Bibliography.....68
References.....69

LIST OF FIGURES

GROUND HANDLING.....3

GATTS.....13

LOGO OF AAI.....21

LOGO OF AERA.....26

SECURITY OF GROUND HANDILING OPERATION.....37

PASSENGER AIRLINES.....39

LOGO OF SATS.....41

LOGO OF BHADRA.....43

QUALITY OF GROUND HANDLING SECURITY.....44

DGCA.....49

List of Abbreviations

AAI- Airport Authority of India

ACI- Airports Council International

AERA- Airports Economic Regulatory Authority

ASB -Aviation Security Branch

ASIC- Aviation Security Identity Card

BCAS- Bureau of Civil Aviation Security

CAA- Civil Aviation Authority

CARC- Civil Aviation Regulatory Commission

CASA -Civil Aviation Safety Authority

DGCA -Directorate General of Civil Aviation

Directive -Council Directive 96/67/EC of 15 October 1996 on Access to the Ground Handling Market at Community Airports

DOIT- Department of Infrastructure and Transport

GATS -General Agreement on Trade in Services

IATA-International Air Transport Association

ICAO -International Civil Aviation Organization

IGHC- International Ground Handling Council

NACIL- National Aviation Company of India Limited

WTO- World Trade Organization

EXECUTIVE SUMMARY/ ABSTRACT

Ground handling is an essential service that is required by an aircraft operator before take-off and after landing. Due to security concerns at Indian airports, the Bureau of Civil Aviation security (BCAS) issued a circular making it mandatory for all ground handling service providers to undergo security clearance and background checks of its employees before issuing the airport entry pass. Subsequent to this rule, the Directorate General of Civil Aviation (DGCA) in India issued a new ground handling regulation in 2007 that restricted the number of service providers as well as self handling by aircraft operators (excluding the national airline) at six major airports in India. The private aircraft operators filed a suit against the government. This case is being heard in the Supreme Court of India at the time of writing this paper. The main purpose of this research is to identify ways to modify the existing regulation by establishing a fair, non-discriminatory ground handling regulation that is beneficial to all the major stakeholders in the Indian aviation industry, without compromising on safety, security and space constraints at airports. This research identified the main issues of the existing ground handling regulation in India and comparisons were made primarily with the European Council Directive that was issued in 1996. The International Civil Aviation Organization (ICAO) standard and recommended practices, along with other international practices, were compared with the Indian scenario. Security practices at airports, safety standards for ground handling, competition, and price and quality regulation were also discussed. Recommendations were proposed to improve the current regulation based on literature review, integration of various opinions from professionals in ICAO, safety and security regulators in Australia, airlines, airports and ground handling companies in India and outside.

CHAPTER 1

INTRODUCTION

INTRODUCTION

This research project is part of my course work for the program Masters of Aviation Industry Management at RMIT University, Australia. Ground handling regulation in India is a very topical issue in Indian aviation. The global ground handling market is estimated at an annual turnover of between $30 billion and $40 billion depending on the services that are included in ground handling activity (WTO, 2007). In India alone, the estimated size of the ground handling market is about 1500-2000 crores Indian rupees, which is approximately $ 335 – 447 million (Hindustan times, 2011). As predicted by the International Air Transport Association (IATA), by 2014 India will be the fifth largest domestic market with about 69 million passengers (The Hindu, 2011). In this situation ground handling, which is an essential service required by all airlines, is of utmost importance. Any rule or regulation applicable for this service will directly impact the primary stakeholder of the service, i.e. the aircraft operators. As a result of the ground handling regulation that came into effect in 2007 in India, airlines with both domestic and international operations (excluding the national carriers) have been facing a number of issues. Well-experienced existing ground handling companies operating in India will also be affected when the new ground handling regulation is fully implemented. If effective regulations were not in place, airports would be facing safety and security concerns as well as the availability of space for ground handling operations in an economical manner. Therefore this paper will give an overview of various international practices recommended by the International Civil Aviation Organization (ICAO) and the major rules and regulations relating to ground handling practiced in Europe and in Australia.

Ground handling

❖ Meaning and Definition of Ground Handling

There is no international standard definition for ground handling. Ground handling service basically means the services required by an aircraft operator before take-off and after landing. According to ICAO, it refers to the "services necessary for an aircraft's arrival at, and departure from, an airport" (Secretariat, 2000a). IATA describes it as "an essential part of the overall product airlines offer to their passengers" (Smet, 2010). In the Indian context, ground handling means: ramp handling, traffic handling and any other activity specified by the Central Government (Gohain, 2007). Many airlines subcontract ground handling to airports, handling agents or even to another airline. According to the International Air Transport Association (IATA), conservative estimates indicate airlines outsource more than 50 per cent of the ground handling that takes place at the world's airports. Ground handling addresses the many service requirements of an airliner between the time it arrives at a terminal gate and the time it departs on its next flight. Speed, efficiency, and accuracy are important in ground handling services in order to minimize the turnaround time (the time during which the aircraft must remain parked at the gate). Airlines with less-frequent service or fewer resources at a particular location sometimes subcontract ground handling or on-call aircraft maintenance to another airline, as it is a short-term cheaper alternative to setting up its own ground handling or maintenance capabilities. Airlines may participate in an industry-standard Mutual Assistance Ground Service Agreement (MAGSA). The MAGSA is published by the Air Transport Association (the current version is from 1981) and is used by airlines to assess prices for maintenance and support to aircraft at so-called MAGSA Rates, which are updated annually based on changes in the U.S. Producer Price Index. Airlines may choose to contract for ground handling services under the terms of a Standard Ground Handling Agreement (SGHA) published in the International Air Transport Association (IATA) Airport Handling Manual. Airlines may also contract for ground handling services under non-standard terms.

A detailed description of this service is given in subsequent sections of this paper. The primary aim of this service offering is to ensure passenger comfort. While cabin cleaning comprises the bulk of the effort, it also includes tasks such as replenishing onboard

consumables (soap, tissues, and toilet paper, reading materials) and washable items like pillows and blankets.

❖ Objectives

The main purpose of this research was to identify ways to modify the existing regulation by establishing a fair, non-discriminatory ground handling regulation that Ground handling regulation in India – a comparison with international policies & practices is beneficial to all the major stakeholders in the Indian aviation industry, without compromising safety, security and space constraints at airports.

This research project was conducted through the following process:

1. Identification of various issues related to the ground handling regulation in India.
2. Assessment of the positive and negative impacts of the new ground handling policy issued in 2007.
3. To understand various international policies and practices on self-handling.
4. To understand the ground handling policies of ICAO and airports in USA, Europe and Australia.

5. Evaluation of international policies to obtain insights on ways to solve the issues of ground handling identified previously.

1.1 OVERVIEW

Ground handling is an integral part of airline operations. IATA strives to lead the industry toward improved safety and operational efficiency in ground handling by setting standards and assisting in the implementation of global solutions. Airlines outsource more than 50% of ground handling and this trend is increasing. To support smooth cooperation between all stakeholders, IATA works with all airline partners, including ground handlers, airports, service providers, aircraft manufacturers, standardization bodies, and regulators under the umbrella of the IATA Ground Handling Council (IGHC). It has also introduced the IATA Safety Audit for Ground Operations (ISAGO) to optimize and harmonize safety standards for ground operations for all stakeholders. Ground handling is a crucial service which is necessitated by an aircraft operator before take-off and after landing. Ground handling is of two types: ramp handling which includes cleaning the plane etc. and traffic handling which includes services like refilling the water tank, air conditioning, wheel chair lifts etc., there is no global standard definition for ground handling. International Air Transport Association (IATA) predicted that by the year 2014, India will be the 5th largest domestic market in the aviation sector. Considering the security apprehensions, the Bureau of Civil Aviation security issued a circular mandating all ground handling service providers to go through security authorization and background checks of its staff prior to issuance of entry pass. Subsequently, DGCA also issued a regulation restricting the number of service providers and self handling by private aircrafts on six major airports in India. This will not only affect the domestic carriers (excluding national carriers) but also international airlines as well. The chief private stake holders in the aviation industry highly criticized the regulation and filed a writ petition in the High Court of Delhi opposing the same but the decision was given in the favour of government of India. So the petitioners moved to the Supreme Court, against the decision of the High Court, the same is pending. This paper will give an over view of the same regulation and the limitations and recommendations for the same IATA actively drives the development of ground handling operations standards and procedures and promotes global consistency and harmonization.

- **WHAT to do: the Airport Handling Manual (AHM)**

The only industry-approved standard for safe and efficient airport operations, and the reference for the latest ground handling policies and safety guidelines. AHM also includes the only industry-recognized contract template, the Standard Ground Handling Agreement (SGHA).

- HOW to do: the IATA Ground Operations Manual (IGOM)

IGOM has been developed in response to industry demands for enhanced ground operational safety and damage reduction. IGOM is the core manual for all ground operations and provides standard procedures for the frontline personnel. The majority of Indian domestic routes have a flight time of 2.5 hours or less making them most suitable for narrow body or regional aircraft. In the future, on high density routes at slot-constrained airports such as Mumbai we may see the deployment of wide body aircraft, however these will account for a relatively small share of the national total. International services operated by foreign carriers are dominated by wide body aircraft; however the proportion of narrow body equipment has been increasing as a result of the entry of low cost carriers operating regional international routes to India from the Gulf and Southeast Asia. And going forward, re-engine A320neos and 737 MAX aircraft will be economical over a longer range making them suitable for deployment to a larger number of international destinations.

1.2 BACKGROUND

In 2007, the Director General of Civil Aviation in India issued a circular for information, guidance and compliance on the grant of permission for providing ground handling services at airports other than those belonging to the Airports Authority of India (AAI) (Gohain, 2007). Subsequently in the same year, the AAI issued a regulation to all airports owned by them, based on the circular issued by the DGCA called the Airports Authority of India (General Management, Entry for Ground Handling Services) Regulations, 2007 (AAI, 2007). These regulations invited wide criticism from the community of private aircraft operators in India. The primary reason for these regulations was identified in the circular (No.4/2007 dated 19/2/2007) issued by the Bureau of Civil Aviation Security (BCAS) which stated that "there are number of ground handling agencies working at the airports in the country without prior security clearance and background checks". As a result of these regulations, private aircraft operators could no longer carry out self ground handling at airports located at Delhi, Mumbai, Chennai, Kolkata, Bangalore and Hyderabad (Zaidi, 2010a) On 4th March 2011 the regulators of this service under the banner of Union of India were given a favourable

judgment against the Federation of Indian Airlines (consisting of mainly the private aircraft operators) in the High Court of Delhi.

Subsequently, the Federation of Indian Airlines has taken this case to the Supreme Court of India and the hearing is in process at the time of writing this paper. The Directorate General of Civil Aviation (DGCA) issued a regulation in the year 2007, restricting the number of service providers for ground handling services and barred private airlines to carry on ground handling services themselves. The primary reason for issuance of such a regulation were the security apprehensions, as a lot of ground handling agencies were working at the airport without security clearance and background checks. This regulation banned the private aircraft operators to carry out self ground handling service at Mumbai, Chennai, Hyderabad, Delhi, Bangalore and Kolkata. A similar instance can be traced back in the year 1996 when Europe Council Directive 96/67/EC was issued on access to the ground handling market at Community airports. Though, all the features of the Directive were taken into consideration while instituting the regulation which is being passed in India. Before the regulation passed in the year 2007, basically anyone could perform ground handling services, without any restriction on the number of ground handling operators that can provide such services. Now after the regulation passed by DGCA, now only the following can provide the ground handling services at 6 major airports in India:

1. Subsidiary companies of the national carrier AI i.e. Air India.
2. The airport operator itself or the joint venture partner of the airport operator.
3. Any ground handling service provider who has been selected through competitive bidding and who has achieved security clearance from the government, provided that he has to share the profits with the airport operator.

In India the estimated size of the ground handling market is about rupees 1500-2000 crores and this market is growing at a rapid pace and according to the predictions of International Air Transport Association (IATA), by 2014 India will be the fifth largest domestic market with about 69 million passengers. So it seems that ground handling is one of the most significant parts of airline services in India and so it can be understood that any law regulating this market will have great impact on the major stake holders of the service.

The first ground handling regulation was introduced in the year 2000 where aircraft operators were given option by the Airport Authority of India (AAI) to carry out their ground handling services on their own at an airport or make use of the services of any of the following:

- Airports Authority of India (AAI).
- The two national carriers of India (Air India & Indian Airlines).

- Any ground handling company licensed by AAI.

During this period, Air India and Indian Airlines controlled the majority of the ground handling services in India. Privately owned companies like Cambata Aviation could only have 20-25% market access. Subsequently, the government opened the market for foreign direct investment up to 74% which saw the entry of many new ground handling companies.

But in the year 2007 the Directorate General of Civil Aviation in India issued a regulation on ground handling, restricting the number of service providers and self handling by air craft operators at six major airports in India because of security reasons and this particular act of DGCA attracted wide criticism from the private airline community as ground handling constitutes an integral and inalienable part of any airlines□ business and it is one of the main and unique, selling proposition of the airlines differentiating the services provided by one particular airline from their competitors because of this regulation these airlines will no longer be able to maintain their USP and control the quality, cost and efficiency, level of performance that helped in providing comfort and satisfaction to the passengers which in turn is going to affect the profitabity of their business. The criticism was also based on the fact that the private airlines would lose their competitive edge by assigning their ground handling job to either to Air India, one of their competitors, or to airport operators.

1.3 PURPOSE OF THE STUDY

This research project is part of my course work for the program Masters of Aviation Industry Management at RMIT University, Australia. Ground handling regulation in India is a very topical issue in Indian aviation. The global ground handling market is estimated at an annual turnover of between $30 billion and $40 billion depending on the services that are included in ground handling activity (WTO, 2007). In India alone, the estimated size of the ground handling market is about 1500-2000 crores Indian rupees, which is approximately $ 335 – 447 million (Hindustan times, 2011).

As predicted by the International Air Transport Association (IATA), by 2014 India Will is the fifth largest domestic market with about 69 million passengers (The Hindu, 2011). In this situation ground handling, which is an essential service required by all airlines, is of utmost importance. Any rule or regulation applicable for this service will directly impact the primary stakeholder of the service, i.e. the aircraft operators. After more than three years of legal challenges, India's Supreme Court is likely to rule in mid-Apr-2014 in favour of the government's ground handling policy which was first proposed in 2007. Things can move

slowly in India; but when they do move, the scope of change can often be transformative. Such would be the case with the country's ground handling industry. But it would not all be smooth sailing. If the Court does rule to uphold the policy, the size and structure of India's ground handling sector will be dramatically transformed - significantly increasing the size of the contestable market for third party handlers almost overnight. CAPA estimates the market will be worth USD1 billion annually within the next ten years.

Indian carriers currently self-handle the majority of their domestic and international operations. The primary customers of third party handlers in India are foreign airlines, who are not permitted to self-handle. This is supplemented by some under-the-wing activities for Indian carriers. CAPA estimates the third party handling market was worth around USD200-220 million in FY2013.

However, under the incoming policy Indian carriers will no longer be permitted to self-handle at the six metro airports or at Cochin, and will be required to appoint one of the licensed handlers at each airport for both terminal and ramp handling.

1.4 RESEARCH HYPOTHESES

In my project my hypotheses is that, Ground Handling Regulation in India and its services. Ground handling is a crucial service which is necessitated by an aircraft operator before take-off and after landing. Ground handling is of two types: ramp handling which includes cleaning the plane etc. and traffic handling which includes services like refilling the water tank, air conditioning, wheel chair lifts etc., there is no global standard definition for ground handling. International Air Transport Association (IATA) predicted that by the year 2014, India will be the 5th largest domestic market in the aviation sector.

A research hypothesis is the statement created by researchers when they speculate upon the outcome of a research or experiment. Every true experimental design must have this statement at the core of its structure, as the ultimate aim of any experiment. The hypothesis is generated via a number of means, but is usually the result of a process of inductive reasoning where observations lead to the formation of a theory. Scientists then use a large battery of deductive methods to arrive at a hypothesis that is testable, falsifiable and realistic. This is too broad as a statement and is not testable by any reasonable scientific means. It is merely a

tentative question arising from literature reviews and intuition. Many people would think that instinct and intuition are unscientific, but many of the greatest scientific leaps were a result of 'hunches'. The research hypothesis is a paring down of the problem into something testable and falsifiable. In the aforementioned example, a researcher might speculate that the decline in the fish stocks is due to prolonged over fishing. Scientists must generate a realistic and testable hypothesis around which they can build the experiment. This might be a question, a statement or an 'If/or' statement. Some examples could be: Is over-fishing causing a decline in the stocks of Cod in the North Atlantic? Over-fishing affects the stocks of cod. If over-fishing is causing a decline in the numbers of Cod, reducing the amount of trawlers will increase cod stocks. These are all acceptable statements and they all give the researcher a focus for constructing a research experiment.

A hypothesis must be testable, but must also be falsifiable for its acceptance as true science. A scientist who becomes fixated on proving a research hypothesis loses their impartiality and credibility. Statistical tests often uncover trends, but rarely give a clear-cut answer, with other factors often affecting the outcome and influencing the results. Whilst gut instinct and logic tells us that fish stocks are affected by over fishing, it is not necessarily true and the researcher must consider that outcome. Perhaps environmental factors or pollution are causal effects influencing fish stocks. A hypothesis must be testable, taking into account current knowledge and techniques, and be realistic. If the researcher does not have a multi-million dollar budget then there is no point in generating complicated hypotheses. A hypothesis must be verifiable by statistical and analytical means, to allow a verification or falsification. In fact, a hypothesis is never proved, and it is better practice to use the terms 'supported' or 'verified'. This means that the research showed that the evidence supported the hypothesis and further research is built upon that. A research hypothesis, which stands the test of time, eventually becomes a theory, such as Einstein's General Relativity. Even then, as with Newton's Laws, they can still be falsified or adapted.

CHAPTER - 2

LITERATURE REVIEW

LITERATURE REVIEW

Study of available literature regarding the air transport, liberalization policies, competition in the network industries, domestic regulation and market access, developments under GATS, especially with reference to its five-yearly mandated reviews of Air Transport Annex, revealed that while there is a considerable body of research available on air transport and its liberalization, the area regarding duality of international regulatory environment of air transport and enlarging the scope of GATS Annex on air transport by adding some more auxiliary services are in a nascent stage of research. The present study attempts to fill in this gap and explores the possibility of defining the status of ground handling services, comparing the two international forums to arrive at the most rational and result oriented possible forum to negotiate the liberalization of ground handling services. Role of ICAO regulator and GATS provision are examined to find out the relationship between the commitment in the schedules of the Member States under the GATS air transport Annex vis-à-vis the market access. Literature reviews use secondary sources, and do not report new or original experimental work. Most often associated with academic-oriented literature, such as a thesis, dissertation or peer-reviewed journal article, a literature review usually precedes the methodology and results section. Literature reviews are also common in a research proposal or prospectus. Its main goals are to situate the current study within the body of literature and to provide context for the particular reader. Literature reviews are a staple for research in nearly every academic field. A systematic review is a literature review focused on a research question, trying to identify, appraise, select and synthesize all high quality research evidence and arguments relevant to that question. A meta-analysis is typically a systematic review using statistical methods to effectively combine the data used on all selected studies to produce a more reliable result.

GATTS

2.1 REVIEW AREA BROAD

As a reactive step by the BCAS on matters of ground handling security requirements at airports in India, the ground handling regulation by DGCA and AAI issued during 2007 restricted the number of ground handling service providers. Ground handling performed by airlines themselves (self handling) was restricted at 6 major airports in the country. In airports owned by AAI (other than Chennai & Kolkata), self-handling is permitted but restricted to foreign airlines operating in India as per the new regulation. The aircraft operators are required to obtain this service from any of the three entities mentioned in the regulation (Zaidi, 2010a). But because of certain issues with some of these entities (discussed later in this paper), international airlines with foreign registrations are also facing some difficulty. Therefore this research is focused on the following main questions.

1) What are the main issues with the new ground handling policy in India?

a) Why is self-handling at the airside not permitted at six major airports in India?

b) Are there any international ground handling policy standards/regulations that prohibit self-handling?

2) What are the major ground-handling rules and regulations practiced in USA, Europe and Australia?

3) Is India's ground handling policy consistent with the international standards, rules and regulations? If not, what are the recommendations to improve the current ground handling regulations?

❖ Ground Handling Service

The meaning and definition of ground handling differs between countries. Although the general understanding of the meaning of ground handling services is quite similar, there is no one definition. The general understanding of ground handling includes all the services that are required by an aircraft before take-off and after landing (Regulation, 2011). However, air traffic services are not included as part of ground handling (Hajarat, 2007). Ground handling services are provided to the users of the airport within the airport premises. An airport user may be an airline, airport operator, or chartered services that are any person or company that is responsible for the carriage of passengers, mail and/or freight by air from or to the airport (Jackson, 1997). The European Union Council describes ground handling service as "an essential service for the proper functioning of air transport" and "an essential contribution to the efficient use of air transport infrastructure (Howl in, 1996). The International Civil Aviation Organization (ICAO) states that ground handling includes "services necessary for an aircraft's arrival at, and departure from, an airport" and is separated as terminal handling and ramp handling (Secretariat, 2000a). ICAO also notes that on certain occasions, line maintenance may also be included in the definition of ground handling (WTO, 2006).

The International Air Transport Association (IATA) states that ground handling is "an essential part of the overall product airlines offer to their passengers" (Smet, 2010). The International Ground Handling Council (IGHC) of IATA had divided the ground handling activities into fourteen subsectors and in 2003 this was regrouped into eight activities as shown in Table 1. These sub-sectors were categorised as operational or administrative functions (WTO, 2007).

The General Agreement on Trade in Services (GATS) of the World Trade Organization (WTO) describes ground handling as "services provided to aircraft, passengers and cargo at an airport" (WTO, 2007). GATS use ICAO's definition for its general framework and use the definition of IGHC of IATA for its operational and market sectors (WTO, 2006). The Directorate General of Civil Aviation (DGCA) in India has defined the meaning of ground handling as follows (Gohain, 2007):

(i) Ramp handling which shall include the activities specified in Annexure 'A';

(ii) Traffic handling which shall include the activities as specified in Annexure 'B';

(iii) Any other activity specified by the Central Government to be a part of either ramp handling or traffic handling.

❖ Self Handling

Self ground handling is a situation in which the airport user does not subcontract ground handling activity to a third party, instead performs these functions by itself (Howl in, 1996).

In most cases, airlines themselves do self ground handling for their flights (Regulation, 2011). The Council of European Union defines self handling in Article 2 of the Directive as *"a situation in which an airport user directly provides for himself one or more categories of ground handling services and concludes no contract of any description with a third party for the provision of such services; for the purpose of this definition, among themselves airport users shall not be deemed to be third parties where:*

-One holds a majority holding in the other; or

- A single body has a majority holding in each" (Howl in, 1996).

CARGO DOWNLODING

In the United Kingdom (UK), airports can have any number of self handlers and limitation is provided only with the approval of the Civil Aviation Authority (CAA) with respect to security, safety, space and available capacity (NEI, 2002).

❖ Mutual Handling

When one airline does ground handling for another airline, it is called mutual handling. This type of ground handling is seen at US airports. Such contracts between airlines enable services on common routes to be provided jointly and revenue to be shared. However, this method is gradually changing due to competition between airlines (WTO, 2007).

Classification of Ground Handling Services

Ground handling can be generally classified as airport operations at the terminal building and at the airside (Ashford et al., 1997). In the Indian scenario, the terminal building operations are called traffic handling and the activities at the airside are termed as ramp handling (Zaidi, 2010a). The functions or services included in ground handling differs between countries and sometimes differ from airport to airport. Table 1 shows ground handling services in their broad categories as defined by the IATA (WTO, 2007), European Union Council (Howl in, 1996), the DGCA in India (Gohain, 2007) and the CARC of Jordan (Hajarat, 2007). Table 1 shows how ground-handling activities are similar but termed and categorised differently by IATA and other countries.

Table 1| List of Ground Handling Services

IATA	**European Union Council**	**India**	**Jordan**
Representation, Administration and Supervision	Ground Administration and Supervision	**Ramp Handling**	**Schedule I**
Passenger Services	Passenger Handling	Aircraft Handling	Ground Administration and Supervision
Ramp Services	Baggage Handling	Aircraft Servicing	Passenger Handling
Load Control, Communication and Flight Operations	Baggage Handling	Aircraft Cleaning	Aircraft Services
Cargo and Mail Services	Freight and Mail Handling	Loading and Unloading	Aircraft Maintenance
Support Services	Ramp Handling	Cargo Handling Services	Flight Operations and Crew Administration
Security	Aircraft Services	Security	Surface Transport Catering Services
Aircraft Maintenance	Fuel and Oil Handling	**Traffic Handling**	
	Aircraft Maintenance	Traffic Handling	**Schedule II**
	Flight Operations and Crew Administration	Terminal Services	Baggage Handling
	Surface Transport	Flight Operations	Freight and Mail Handling
	Catering Services	Surface Transport	Ramp Handling
		Representational Services Security	Fuel and Oil Handling

Ground Handling Service Providers

There is no specific international rule as to who should provide ground-handling services at an airport. Generally, airport authorities, airlines or ground handling agents or a combination of these three carry out ground handling at airports (Ashford et al., 1997). The GATS prepared by WTO also confirms the above fact that the majority of ground handling services is provided by airlines themselves or by an airport operator or by specialist ground handling organisations. Sometimes these services are carried out by a combination of these entities (WTO, 2007).

ICAO

During May 1997, ICAO approved the recommendations developed by the Air Transport Regulation Panel (ATRP) for ground handling that contained model clauses on five "doing business" matters. ICAO recommended that Member States could use the model clauses as guidance in creating bilateral or multilateral agreements for deciding the parties to be involved in the provision of ground handling services. Table 2 shows the abstract of the model clause (Secretariat, 2000a).

Table 2| Model Clause on Ground Handling

Each Party shall authorize air carrier(s) of the other Party/Parties, at each carrier's choice to: a) Perform its own ground handling services; b) Handle another or other air carrier(s); c) Join with others in forming a service-providing entity; and/or d) Select among competing service providers.

ICAO ICON

The notes attached to this model clause clearly specify that air carriers are free to choose from various options available (as identified in Table 2) except in cases where there are constraints due to safety, security and space at airports. They also specify that in the case of these exceptions, the carriers that are restricted should be selected on the basis of objective, transparent and non-discriminatory procedures. (Secretariat, 2000a).

❖ United States of America

In USA, usually the aircraft operators or airlines perform these services. If an airline has an interline agreement with another, then ground handling equipment and services may be shared between these airlines also. In other cases, specialist companies that have an expertise in ground handling carry out this function, either by themselves or in collaboration with the aircraft operator (Ashford et al., 1997).

❖ United Kingdom

In UK, the CAA has established certain regulations on who can perform groundhandling service at airports. It can be performed by the following parties (Jackson, 1997):

- Any airport user, including an airline, can do ground handling by itself (self handling) and the airport operator cannot restrict the number of self handlers unless they justify that it may be due to safety, security or space constraints.
- The airport operator could have an agreement with a third party for such services provided these service providers are not directly or indirectly controlled by any of the following:
  - → The managing body of the airport, or
  - → An airport user who carries more than 25% of passenger or freight, or
  - → Anyone who is directly or indirectly, controlled by the managing body of an airport or any airport user.

❖ Australia

In Australia, there is no specific regulation as to who may be allowed to perform ground-handling services. The main service providers for airlines at the airports are companies that specialise in the ground handling function and they conduct this activity under safety standards set by Civil Aviation Safety Authority (CASA). There are about 16 ground handling companies in Australia. Qantas, the national carrier of Australia, provides this service for its own aircrafts as well as for other airline operators (Heilbron, 2011). Some of the main ground-handling companies in Australia are Menzies Aviation, Toll Data, Aero-Care and the Ground Handling Division of Qantas.

❖ India

Prior to the regulation issued in 2007, practically anyone could perform ground handling in India as long as they complied with certain conditions. The first ground handling regulation came into effect in the year 2000 where the Airport Authority of India (AAI) allowed an aircraft operator to either carry out their own ground handling services at an airport or utilise the services of any of the following (Gupta, 2000):

- Airports Authority of India (AAI)
- The two national carriers of India (Air India & Indian Airlines)
- Any ground handling company licensed by AAI

During this period, Air India and Indian Airlines controlled the majority of the ground handling services in India. Privately owned companies like Cambata Aviation could only have 20-25% market access. Subsequently, the government opened the market for foreign direct investment up to 74% which saw the entry of many new ground handling companies (WTO, 2006).

In 2007, the Directorate General of Civil Aviation (DGCA) issued a new regulation stating that ground handling at six airports (Delhi, Mumbai, Chennai, Kolkata, Bangalore and Hyderabad) could only be performed by one of the following three entities:

The airport operator by itself or its joint venture partner

- Subsidiary companies of the national carrier AI (National Aviation Company of India Ltd (NACIL) or their joint venture partners which specialise in ground handling services)
- Any ground handling service provider selected through a competitive bidding process on the basis of sharing revenue with the airport operator and which has attained security clearance from the Government

At all other airports, airline operators except for foreign airlines are allowed to self handle, in addition to the above three entities (Zaidi, 2010a).

It should be noted that the above mentioned six metropolitan cities account for more than 70% of air traffic in India. During the 2008-09 periods, out of a total of 108.88 million passenger movements, these six airports accounted for 78.69 million passenger movements (ACEXC, 2011). For this reason, Government policy on ground handling at these six major airports as well as other airports in India is of utmost significance to all airlines operating in India.

भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

LOGO OF AAI

❖ Regulation

Regulation is considered as a term that is sometimes difficult to be defined. It has different meanings to different people depending on where they come from. For some it may be a restrictive force that governments use to constrain liberties of certain people. For others, it serves the interests of the dominant class and sets power in a civilised form. Some people consider regulation to be that which is done only by the government (Levi-Faur, 2010). Therefore by understanding the multiplicity of meaning, Levi-Faur (2010) suggest that "regulation is the promulgation of prescriptive rules as well as the monitoring and enforcement of these rules by social, business, and political actors on other social, business, and political actors". The main purpose of regulation in a society is to attain optimum outcomes so that even if the market system fails, the regulations in place will protect the society from any downfalls. The aim of regulation is linked to an economic theory called General Equilibrium Theory. This theory highlights the need for regulation in a society, which is to solve a particular situation if the market system fails and to deal with the developmental factors of a country if it is still in the infant stages of growth and development (Hazra, 2007).

❖ Civil Aviation Industry

The convention of International Civil Aviation in 1944 (Chicago Convention) marked a significant event in the history of civil aviation where 52 States signed an agreement to co-operate in the civil aviation sector and decided to have uniformity in regulation and standards, procedures and organisation regarding civil aviation matters. As a consequence of this convention, ICAO was formed during 1947 (ICAO, 2011a). One of the main activities of ICAO is standardisation of practices and procedures of matters related to aviation. This is achieved by the establishment of International Standards and Recommended Practices published by ICAO (ICAO, 2011b). Member States are obliged to respect and follow these Standards and Recommended Practices but there is no mechanism to enforce compliance by Member States (ZoaEtundi, 2011). If any of the 190 Contracting States (as of this date) is not able to follow the standards or if they follow in a different form, it is required by them to notify these differences with ICAO, which are then circulated to all Member States. However ICAO does not have the mandate to enforce the implementation (Mishra, 2011). On the basis of the Chicago Convention and subsequent developments in the civil aviation sector, many

international bodies and regulations were established from time to time in different countries. As the scope of this paper is limited to ground handling services and their regulation, the subsequent section gives a brief overview of the current ground handling regulation in USA, Europe, Australia and India.

❖ Regulation of Ground Handling Services

Purpose

As discussed previously, one of the main purposes of regulation is to overcome market failures. Some of the market failures that may be prevalent in a society could be due to monopoly and informational asymmetries (Hazra, 2007). Most airports are considered as natural monopolies due to their market power (ACI, 2000a). Therefore ground handling service providers tend to follow the same characteristics of monopoly at airports in some countries. During the late 1990s, at some of the European airports, ground handling service related to passenger check-in and baggage handling was a monopoly (NEI, 2002). After understanding the significance of ground handling at airports, ICAO addressed various ground handling regulatory issues at its Montreal Conference in the year 2000 (Secretariat, 2000a). Hazra (2007) also states that the need for regulation in the civil aviation market may be attributed to safety, security and for the protection of the environment. He argues that most service providers generally know more than the ultimate consumers. This information asymmetry could cause market failures. Therefore certain standards and regulations should be established and monitored by audits and review. This aspect is also important for ground handling services because any failure in this essential function at airports could have harmful effects in the aviation sector.

Current Regulatory Framework

As ground handling activities are services performed at airports (that are generally considered a monopoly) and have an impact on the safety and security of civil aviation operations, a degree of regulation is important for ground handling functions as these are vital services offered for all airlines. There were no international regulations for ground handling until the late 1990s. They varied from country to country. However, bilateral air service agreements contained some limited rules regarding this aspect. In 1996, the European Union (EU)

promoted competition on a regional level by liberalising the existing rules on ground handling services (Secretariat, 2000a). The ICAO does not have material by which a country can base regulations for ground handlers. It basically differs between countries (Smet, 2010). Some of the recommendations regarding ground-handling rules are found in its Airport Economics Manual. The General Agreement of Trade in Services (GATS) prepared by World Trade Organisation (WTO) governs air transport services within a specific annex called Annex on Air Transport Services. Currently this Annex is under its second review that commenced in September 2005 (WTO, 2011). A special working group of IATA called IATA Ground Handling Council (IGHC) consists of ground handling service providers who have an opportunity to participate in setting standards for ground handling. They have a couple of working groups who are currently developing policies and recommendations on certain ground handling topics. IATA's Airport Handling Manual was also prepared by IGHC (IATA, 2011). Besides the above international organisations, each country has its own rules and regulations that govern ground handling activities. In most of the countries there are no separate regulation related to ground handling services, as these are part of other regulations related to airports or within the bilateral service agreements. The European Union (EU) Council has a specific regulation called the Council Directive 96/67/EC (Directive) which governs all ground handling policies at Community airports of the European Union (Howlin, 1996). On the basis of this Directive, the UK Civil Aviation Authority (CAA) introduced the Airports (Ground Handling) Regulations 1997, which is the regulatory framework of ground handling for all airports in the UK (Jackson, 1997). In The Bahamas, the Civil Aviation Department has an Advisory Circular (AC-12-006) for 'Acceptable Ground Handling Arrangements' as a regulation for Air Operator Certificate (AOC) holders as well as their ground handling service providers (CAD, 2008). In Jordan, Ground Handling Services (Part 140) is under its civil aviation law (Hajarat, 2007). In Lebanon, Ground Handling Regulation is a subpart (Part III – Subpart 310) of the Lebanese Aviation Regulation (DGCAL, 2005). In India, the first ground handling regulation came into effect during the year 2000, and in September 2007 the Director General of Civil Aviation issued, another regulation that covers the rules for granting permission for ground handling services at airports other than those belonging to Airports Authority of India (AAI) (Gohain, 2007). Subsequently in October 2007, the AAI published in the official gazette the Airports Authority of India (General Management Entry for Ground Handling Services) Regulations, 2007 (AAI, 2007). As ground-handling services are one of the main functions carried at an airport, it is important to understand various regulatory mechanisms that operate within the

airport environment. The subsequent section gives an overview of airport regulations and various economic regulations practiced at airports.

Regulations at Airports

Airports Council International (ACI) believes that regulation is required for airports in certain cases where an airport would have a high degree of market power, where there is evidence that airports will take advantage of their market power if not regulated and where the airport users are not protected by other general legislation. A country needs to explore the pros and cons of regulation before imposing it, as regulation imposes costs, bureaucracy, and inflexibility and restricts creativity. (ACI, 2000a) Gillen (2007) argues that airport regulation is based on the best ways that countries use to pursue efficiency objectives and non-efficiency objectives. According to him, regulations are based on different motives of the governments of different countries. Some of the possible reasons for regulating airports could be for maximising revenue on privatisation, promoting and protecting airline competition, disciplining pricing behaviour in an economy or to protect current/former national carriers. Countries around the world use different forms of economic regulation for airports as they are considered as natural monopolies. One important classification would be based on single till, dual till or shared till (hybrid) approach (IATA, 2006). In order to better understand the role of economic regulation of a country on ground handling, it is important to know the difference between aeronautical and non-aeronautical activity which are the main sources of revenue at an airport, and also various price mechanisms used at airports. An airport generally has two main sources of revenue. One is from aeronautical facilities and the other from non-aeronautical and commercial activities (ACI, 2000b).

Aeronautical revenue comprises of revenue from air traffic operations such as landing charges, passenger service charges, parking and hangar charges, cargo charges, security charges, noise related charges and any other charge for air traffic operations. Non-aeronautical revenue includes income from duty free shops, restaurants, bars and cafes operating within the airport premises. It also includes revenue from rentals, automobile parking, revenue from commercial activities operated at airports and aviation fuel and oil concessionaries (ICAO, 2006).

- **Is ground handling an aeronautical or non-aeronautical activity?**

The definition of aeronautical services provided by Airports Economic Regulatory Authority (AERA) of India, in its white paper issued during 2009, is a little different from that of ICAO mentioned in the above paragraphs. Ground handling services relating to passengers, cargo and aircraft is part of aeronautical activity. In addition to this, supplying fuel to the aircraft at an airport is also part of aeronautical service (AERA, 2009).

LOGO OF AERA

The Association of Private Airport Operators (APAO), in response to AERA's white paper on Economic Regulation at Airports, has commented that competition does exists for ground handling at airports and that ground handling and cargo handling should be taken out of regulatory contexts and that it would harm the existing contracts signed by major airports in India (APAO, 2010). The Airports Council International (ACI), in its Annual Report of 2010 classifies the revenue from ground handling as part of aeronautical services, which is about 5% in 2010 (ACI, 2010). The Operation Management and Development Agreement (OMDA) between AAI and DIAL (one of the members of ACI) signed during 2006, classifies ground handling activities including cargo handling as a non-aeronautical activity (Pandey et al., 2010). In addition to this contradiction, it is also seen that ACI's Director of Economics had

classified ground handling as a non-aeronautical activity (WTO, 2007). ICAO considers the revenue from ground handling as a separate source of revenue, neither aeronautical nor non-aeronautical. However, if ground handling is performed by special ground handling enterprises and if the airport imposes concessions and or fees as rent, then such revenue shall be treated as non-aeronautical revenue (ICAO, 2006). The Australian Competition and Consumer Commission have included ground handling including equipment storage and refuelling as an aeronautical activity (ACCC, 2009). From the above details, it is understood that ground-handling services are generally considered as an aeronautical activity.

❖ Price Regulation at Airports

Ground handling services, being one type of service offered at airports is largely affected by price regulation at airports. The different types of price regulation are explained below:

☐ Single Till Approach

Single till is a pricing mechanism for airports whereby the revenue from non aeronautical and commercial activities is used to offset aeronautical costs. This reduces the aeronautical charges paid by the airlines. There is no legally binding requirement internationally for a country to choose this type of price regulation (ACI, 2000b). This principle practically does not make any distinction between aeronautical and non-aeronautical activity at an airport, but instead considers an airport as an integrated business so that all airport revenues are considered for determining airport charges (AERA, 2009). The airlines and passengers are expected to benefit from this regulation. ICAO and IATA recommend the single till regulatory approach (IATA, 2007).

In some cases, revenue from non-aeronautical activities is more than that from the aeronautical sources of revenue. Generally, the activities at the airside are considered less profitable compared to commercial activities. As the primary aim of an airport is to provide a means of efficient air transport, ICAO supports single till. ICAO also believes that the establishment of commercial and non-aeronautical activity is only to support the main purpose of an airport and not the other way round (Secretariat, 2000b).

It is also important to note that ICAO, in its policy on airport charges, recommends full development of all commercial activities at airports by considering efficiency of operations at the terminal, moderate prices charged to the public and what the passengers require. However, concessionaries that are directly related to airport operation such as in-flight

catering, ground handling and fuel should be exempted (ICAO, 2009). Some of the airports that follow single till regulation is Vienna (Austria), Berlin, Cologne, Dusseldorf and Munich in Germany, Dublin (Ireland), Oslo (Norway), and airports in Portugal, Spain, Sweden and United Kingdom (non aeronautical revenues are included) (Gillen, 2007). In India, AERA favours single till approach as recommended by ICAO and IATA.

- **Dual Till Approach**

In the dual till approach, revenues, costs and assets of an airport are categorised under aeronautical or non-aeronautical activity (AERA, 2009). Hamburg Airport was the first in Europe to set a dual till system in the year 2000. It is a complex method of price regulation because in this method the categorisation of which is aeronautical and non-aeronautical must be clearly specified (Gillen, 2007). For the purpose of assessing airport charges, only aeronautical charges are taken into consideration (IATA, 2007). Most airports find that the use of the dual till regulatory system is beneficial for them. For this reason, the ACI supports dual till and had also advised AERA against a single till regime (ACI, 2010). ACI also argues that the single till regime has some problems that are overcome by the dual till system. If commercial revenue is used to offset aeronautical losses, private investors might lose interest in expanding the commercial sector of the airport that could earn a lot of profit. In the event of an increase in air traffic, the single till regulatory approach might not be in a position to cater to the needs of congestion, as against dual till, which would have enough revenue generated from aeronautical sources by itself (ACI, 2000b).

- **Shared Till (Hybrid) Approach**

Delhi International Airport Limited (DIAL) and Mumbai International Airport Limited (MIAL) in India use the shared till Inflation-X Price Cap model for calculating aeronautical charges. Instead of using all the non-aeronautical charges to offset aeronautical charges as in the dual till approach, in the hybrid model of DIAL and MIAL 30% of the gross revenue of non-aeronautical charges are used. Copenhagen Airport (Denmark) and Budapest (Hungary) also follow a hybrid till approach (AERA, 2009). Generally, airlines prefer the single till approach of pricing as compared to dual till. Airports, on the other hand, prefer dual till

pricing (Giddings, 2011). Mainly privatised airports choose to opt for dual till pricing so as to consider the two sources of revenue distinct and be able to make profit in both separately.

To summarise, the effect of price regulation at airports on ground handling services is as follows:

- **In a single till regime:**

If ground handling is considered as an aeronautical service, it is considered as an essential service for all airlines and the price is regulated along with all other aeronautical services so that airlines are not charged heavily for this service. But if this service is taken as a non-aeronautical activity, then it does not come under the purview of regulation, which allows the airport operator or ground handling company to consider it as a business operation and to charge any price for this service depending on the market forces of competition.

- **In a dual till regime:**

The classification of ground handling as an aeronautical or non-aeronautical activity does not really matter in a dual till regime because both the sources of revenue are considered separately and income from this service is used to absorb only the cost of providing this service. Therefore in India, Airports Authority of India, airports formed under the Public Private Partnership model (e.g.: DIAL, MIAL, HIAL, BIAL etc) and other privatised airports in the country will have to comply with AERA's regulation, which is a single till model with the inclusion of ground handling service as an aeronautical activity. Revenue from concessionaries would be used to cross-subsidise the cost of this service, thereby providing a reasonable price for airline operators.

❖ Ground Handling Regulation in India – 2007

The main catalyst for introducing the ground handling policy in 2007 was due to national security concerns. The immediate step to solve this problem was to restrict the number of people entering the sensitive areas of airport, especially the airside. In order to achieve this the BCAS made security clearance and background checks of all airport employees very strict. Outsourcing was also banned. Subsequently, the DGCA decided to restrict the number of ground handlers, especially at 6 major airports in India that would ultimately reduce the number of people doing the same work (Itz, 2011). Although the reason for introducing the new policy was genuine, the steps taken to achieve this end were not completely fair to all the stakeholders. The following section shows the advantages some stakeholders had over others.

It should also be noted that this regulation has many similarities with the European Council's Ground Handling Directive published during 1996 for all its Community airports.

❖ Highlights of the Merits and Problems of the New Ground Handling Regulation

☐ Advantages/Benefits to Stakeholders:

1. As the number of airport entry passes issued is now limited to the direct employees of the aircraft operator, airport operator or ground handling company, security would be better maintained at the airports in the country (Mishra, 2011).
2. Safety and security training given to a limited number of staff members is considered to be more efficient as compared to a larger population. BCAS is also able to efficiently monitor the number of airport entry passes as the number of applications processed and maintained is comparatively less (Mishra, 2011).
3. All airport operators, including AAI and privatized airports, are able to have economies of scale in ground handling operations at the airside as there would be maximum utilisation of the existing equipment and other resources, especially at busy and congested airports in the country (Ashraf, 2011).
4. The national airline of India (Air India) and its parent company (National Aviation Company of India Limited) have a leading edge in this policy as they are allowed to provide ground handling services for all airlines operating at all airports in the country including foreign airlines (Paulus, 2011).

☐ Disadvantages/Problems

1. All aircraft operators in India (excluding the national carrier, Air India) are not permitted to self-handle at the airside in Delhi, Mumbai, Kolkata, Hyderabad, Chennai and Bangalore Airports. This makes it difficult for the aircraft operators as they have already invested heavily in ground equipment and have also trained their employees over the past years (Manmohan, 2011).

2. Foreign airlines operating in India are facing difficulty because of the limited number of good choices of ground handling service providers at certain airports, especially that operated by Airports Authority of India (Itz, 2011).
3. Most airlines, especially foreign airlines, are not very satisfied with the quality and performance standards of the national carrier as a ground handling service provider. There have been various cases of security threats caused by the ground handling employees of Air India in some airports operated by Airports Authority of India (e.g. Trivandrum International Airport) (Paulus, 2011).
4. All though the new policy states that the airlines have a choice of three ground handling service providers, in reality the Airports Authority of India has asked the airlines to choose from only two service providers in airports in South India – the national carrier and its subsidiary (AISATS) or the consortium of Bhadra International India Limited and Novia International Consulting APS (Paulus, 2011).

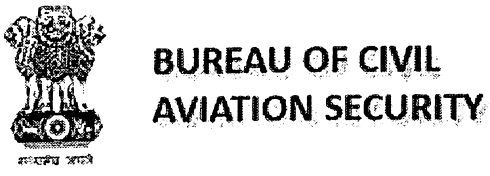
5. The policy states that "all concerned agencies shall ensure that state-of-the-art equipment is used and best practices are followed" for ground handling (Gohain, 2007). However the DGCA hasn't clarified the definition of best practices of ground handling equipment to be used by the all service providers.
6. Safety clearance and other specifications related to safe ground handling operations at airports are not clearly specified in the new ground handling policy. The airlines and the airport operators usually set the safety standards. The DGCA has not clearly described this aspect in the new policy.
7. BCAS has issued a circular that requires 13 security functions to be the prime responsibility of the aircraft operator in 2009. However the new ground handling policy prohibits the aircraft operator to perform these activities (Manmohan, 2011). Therefore there is lack of clarity by the regulators in defining responsibility and accountability for providing ground handling services.
8. Some airline operators are of the opinion that the circumstance under which the ground handling tender at airports in India (especially that at Chennai and Kolkata airports) was not conducted in a very transparent manner. One of the Indian companies who were awarded the ground-handling contract at airports owned by AAI has no previous experience of ground handling. These issues have caused a concern for some airline operators in India.

❖ Discussion and Analysis of the New Ground Handling Regulation and a Comparison with International Policies and Practices

□ Security

⸸ BCAS in India and ASB in Australia

As seen earlier, the new ground handling regulation in India was developed in response to the circular issued by BCAS (Circular no. 4/2007 dated 19.02.2007) regarding the instructions on deployment of ground handling agencies at the airports. The significance of this circular increased after the Mumbai terror attacks (Itz, 2011). The principle factor discussed in this circular is security clearance of ground handling companies and background checks of their employees (BCAS, 2007). This reactive step taken by BCAS is highly significant because the number of outsourced ground handling services had been increasing. It started becoming difficult in fixing accountability and responsibility in operations (Paulus, 2011).



Airports are considered as a sensitive area where anti-social elements generally tend to operate. Therefore the security steps taken by BCAS for the deployment of ground handling agencies at airports are clearly seen as a positive step to improve the national security of the country. In addition to the security clearance of the companies and the background checks of the directors and employees of the company, BCAS also made it mandatory for all employees to complete the Aviation Security Awareness Programme before they are issued with airport entry permits (BCAS, 2007). In Australia, The Aviation Security Branch (ASB) under The Department of Infrastructure and Transport (DOIT) sets standards and policies to ensure security at airports including that at the airside. ASB conducts a review of these standards and ensures that they are consistent with international obligations. The ASB also monitors compliance with these standards and procedures, and checks if they are consistent with the Aviation Transport Security Act 2004 and Aviation Transport Security Regulations 2005. ASB coordinates with intelligence agencies for developing standards based on intelligence advice (DOIT, 2011).

There are different layers and processes to maintain and ensure security. One of the main tools is the issuance of an Aviation Security Identity Card (ASIC). Any person operating at

an airport, especially at the airside, is required to have an ASIC. This identification card is issued by DOIT after performing considerable background checks of the individuals who have applied for it. This is the first layer of security that the ASB ensures (Cook, 2011).

The second layer of security is the Access Control Card issued by the airports in Australia. It works with the help of electronic scanners whereby access is restricted to security sensitive areas and the areas within the airport premises are marked with different levels of access for individuals. For example, check-in staff may not be permitted to the Customs controlled area or ramp, thereby restricting the Access Control Card of these staff members to such areas (Cook, 2011). Similarly, BCAS is in the process of implementing biometric technologies for all airport entry permits issued in the country. BCAS would be responsible for program delivery, system administration and training of personnel for implementing this measure. Airlines, airport operators, Indian Customs and Immigration, ground handling companies and security agencies would be the primary users (BCAS, 2011). This system as followed in developed countries such as Australia is expected to further improve the security system of all airports in the country.

Correlation Between Security Levels and Number of Ground Handling Operators

As highlighted earlier, the new ground handling policy is expected to improve the security concerns at airports as the number of ground handling agencies allowed to operate is curbed to mainly three entities. However it may not necessarily be an effective measure.

A study on the impact of the European Directive on access to the ground handling market reveals that no indication was found that proved that there was any correlation between the number of ground handling providers and the number of security events at airports in Europe. The common security measures taken for all the staff and vehicles allowed to operate in the airport environment were adequate to maintain the level of security. However the study did not draw any conclusions on the impact of security at European airports as adequate data was not received from airports due to confidentiality reasons (Airport Research Centre, 2009).

When the UK Civil Aviation Authority (CAA) had to decide on the application submitted by Gatwick Airport (during 2007) regarding the number of suppliers of airside ground handling services, the CAA decided to remove the restrictions that were imposed as there were no counter arguments received. All ground handling staff were subject to security vetting and

had to comply with the security standards established by the Department of Transport (Bush, 2007).

From the above it is clearly seen that in the European markets, there are no evidences of correlation between restriction of the number of ground handling operators within the airport and improvement in the security levels in a country. What matters most are the standards and procedures established for improving the security at airports by the concerned authorities? If there is a foolproof security method of controlling the access at airports and if other security measures are adequate (just as in most developed countries) the number of ground handling operators operating at the airside would not be much of a security concern in India. Therefore restricting the number of ground handling operators at the airside, including the restriction of airline operators to self handle may not necessarily improve the security concerns in the country.

- **Safety**

In countries like Australia, there are no specific regulations for ground handling operations. Generally, airlines themselves have certain specifications for their ground handler. CASA formulates safety guidelines for ground operation and ensures that these safety standards are adhered to. Some of the safety guidelines are in certain sections of the Civil Aviation Act 1988. CASA should also have copies of the operation manual of aircraft operators in Australia for review and audit purposes.

CASA also takes steps in implementing Civil Aviation Safety Regulations 1998 and various Civil Aviation orders issued from time to time for ensuring safe ground handling operations at Australian airports (Heilbron, 2011). In India, the DGCA is the apex authority responsible for civil aviation safety. It is a body operating under the Ministry of Civil Aviation, Government of India. It is clearly mentioned in the new ground handling policy that security clearance and adequate levels of background checks by the BCAS must be completed before a ground handling service provider is issued a permission to operate. But one of the main issues that have not been addressed is the requirement of safety clearance from DGCA, which is also of prime importance in a ground handling operation. The subject of ground handling services has been recently assigned to the Aerodrome Safety Department of the DGCA. The safety oversight of this service is expected to take a longer time (Rawat, 2011). Although the new regulation requires the service providers to follow "best practices" in ground handling operations, the subject of 'Airside safety procedures for ground handling operations at

airports' and the 'Requirements for the issue of safety clearance for ground handling' is currently a draft document only. It should also be noted that it has been more than three years since the ground handling regulation was issued. In recent years, it has been seen that most airline operators and airport operators have been implementing their own safety management system. Ground handling operation being part of an important operation at an airport, coordination between all the stakeholders is of utmost importance. Therefore to provide a safe ground handling operation, all entities involved need to cooperate among them and also follow the specified standards set by the regulators.

The National Authority of Civil Aviation (ENAC) in Italy submitted a working paper on the topic "Handling Liberalisation and Regulation" during the Conference on the Economics of Airports and Navigation Services held in Montreal during 2008. In its submission, a standard certification process of ground handling service providers was illustrated. It explained the regulation to be followed and various organisational aspects (such as training of inspectors, checklists, etc.) within ENAC to implement this regulation in Italy (ENAC, 2008).

Safety certification of ground handling operations is highly significant in the Indian scenario. There is a need for qualified and trained safety professionals within the regulatory regime to implement international safety standards in the Indian aviation industry. These factors act as a foundation before any other regulation in the country is implemented. Safety clearance and the certification process for ground handling operations should be implemented at Indian airports as early as possible.

Coordination Between the Regulators

The aviation industry is very dynamic. Therefore it is important for regulators, implementers, facilitators, operators and users to coordinate among themselves for safe and secure operation. The coordination should start from the top level. Unfortunately, the new ground handling policy has evidently shown a lack of coordination between the policy makers, especially between the DGCA and BCAS. As seen before, the BCAS is an independent regulatory authority in India that frames policies and procedures related to security standards in accordance with ICAO's standards and recommended practices. The DGCA is the apex regulator to ensure safe civil aviation practices. In 2009, BCAS issued a circular (AVSEC Order no. 3/2009 dated 21/8/2009) specifying thirteen security functions to be the prime responsibility of the aircraft operator. The extract of the circular that was issued by the BCAS highlighting these security functions is shown below (BCAS, 2009).

1. Access control to the aircraft
2. Aircraft security search/security check during normal as well as bomb threat situations
3. Screening of registered/unaccompanied baggage till acceptance at check-in counters
4. Surveillance of screened baggage till acceptance at check-in counters
5. Security control of the checked baggage from the point it is taken into the charge of the aircraft operator till loading into aircraft
6. Passenger's baggage reconciliation/identification
7. Security of baggage tag, boarding cards and flight documents
8. Security of mishandled/unaccompanied/transit transfer baggage
9. Secondary checks at ladder point of aircraft
10. Security of catering items from pre-setting stage till loading into aircraft
11. Security control of express cargo, courier bags, cargo, company stores, parcels, mail bags and escorting from city side up to the aircraft
12. Receiving carriage and retrieval security removed articles
13. Any other security functions notified by the Commissioner from time to time.

This order (AVSEC 03/1009) issued by BCAS contradicts some aspects of the ground handling policy issued by DGCA in 2007. The new policy prohibits airlines to carry out the above mentioned security functions by aircraft operators, whereas BCAS specifically states that these security functions are only to be carried out by the aircraft operators (BCAS, 2009). In the case of a foreign airline, one of the requirements for operating in an Indian airport is that the standards in relation to safety and aviation security have to be properly maintained and administered by the country of the airline. The operating authorisation of the foreign airline may be revoked or suspended in the event of noncompliance of this rule (AIC 8/2010) issued by the DGCA (Zaidi, 2010c). This circular re-affirms the fact that for foreign carriers, (in fact for all carriers) safety and security is the primary responsibility of the aircraft operator.

As per the new ground handling policy, foreign airlines are prohibited from performing their own ground handling operation at the airside. At the same time, the requirements in AIC 8/2010 issued by the DGCA require the airlines (irrespective of whether they are Indian carriers or with foreign registrations) to be responsible for safety and security standards. In this situation, there may be questions as to who would be held accountable and responsible

for the maintenance of safety and security standards at the ramp (airside) if the new ground handling policy were to be implemented. Therefore it has been seen that the DGCA has contradicted its own standard while establishing responsibility and accountability of safe and secure ground handling operation at the airside.

❖ Responsibility and Accountability of Safety and Security for Ground Handling Operations

The responsibility for safety of ground handling practices at airports was a debated issue at the IATA Ground Handling Council (IGHC) in May this year (Hunter, 2011). Most airlines interviewed unanimously claimed that the primary responsibility of both safety and security lies with the aircraft operator, as they are answerable to the passengers directly for the service offered.

SECURITY FOR GROUND HANDLING OPERATIONS

A representative of a ground handling company in Australia is of the opinion that safety and security of ground handling activities at airports is the prime responsibility of both the airline and the ground handling agent (Blow, 2011). A company based in India is of the opinion that all the major stakeholders involved in provision of ground handling services to the passenger, especially at the airside, are primarily responsible for safety and security (Maharishi, 2011). Most ground handling companies generally believe that it is the responsibility of all the stakeholders involved in providing the service. Although it is true that all stakeholders are equally responsible for safety and security at the airside, it is important for the regulators of a country to clearly define the primary entity that is accountable for safe and secure practices of

different ground operations, especially at sensitive areas such as the airside or specify the functions that each party is accountable for.

In Australia, aircraft operators are allowed to perform their own handling or choose a ground handling service provider such as the airport operator or a specialised ground handling company. CASA requires the aircraft operators to be primarily accountable for safety and security at the airside. The Ground Operations Inspector in the Safety Oversight branch of CASA explained that safety at the airside is the primary responsibility of an aircraft operator (Heilbron, 2011). Cook (2011) of DOIT explained that the responsibility for security depends on a case-to-case basis. Generally aircraft operators are primarily responsible to ensure security of the passengers. They are required to ensure that the ground handling companies whom they employ follow the security standards and procedures as required by DOIT.

Therefore CASA, which oversees safety in Australia, and DOIT, which oversees security at the airside, together encourage the aircraft operators to be primarily responsible and accountable for a safe and secure ground handling operation at airports in Australia. Airport operators and ground handling companies are required to cooperate with the aircraft operators to achieve this objective. In India, the responsibility and accountability for safety and security of ground handling operation, especially at the airside, is not made clear in the new ground handling regulation. Only BCAS has made it very clear that certain security functions are the primary responsibility of the aircraft operator. The DGCA is yet to clearly specify the responsibility and accountability of safety aspects of ground handling. As explained before, most airlines unanimously agree that aircraft operators are primarily responsible for the safety of ground operations. One of the top officials in the Indian aviation industry believes that if the new ground handling policy were to be implemented, ground handling companies/airport operators should assume the primary responsibility for security at the airside as they are the only service providers for the airlines at the six major airports in India. It should also be noted that reputable ground handling companies generally assume a certain amount of liability in the event of any damage caused by their operation.

As the ground handling operation is performed by different entities, it is important that there is a level of cooperation between all the stakeholders. It is also very important for the regulators to clearly define and describe the primary entities that are responsible and accountable for each aspect of the ground handling operation at an airport. Lack of coordination and fixation of responsibilities might result in a blame game in the event of default of safety or security procedures.

❖ Ground Handling for Cargo Airlines versus Passenger Airlines

The new ground handling policy 2007, (amended in 2010) states - *"all cargo airlines, which have their own cargo aircrafts, may undertake self handling in their hub airports"*, Cargo handling services of passenger airlines is part of the definition of ground handling at the ramp. This is treated differently as compared to the cargo handling of airlines having their own cargo aircrafts. The Federation of Indian Airlines urged in the court that the new ground handling policy discriminated between cargo airlines and passenger airlines (Manmohan, 2011). One of the main reasons for issuing the new ground handling policy is to improve the security at the airside at major airports in the country. If security is the prime concern of the policy makers, the airlines questioned whether there was no security threat for cargo airlines that were allowed to operate in these same airports (Manmohan, 2011).

PASSENGER AIRLINES

Now that the ban in outsourcing of employees for ground handling is being implemented (for both cargo and passenger airlines), the security concerns at the airport is likely to improve as there are less people at the airside (Mishra, 2011). As explained before, the airport security measures in a country is the underlying factor that would improve security concerns in a country.

❖ Competition

ICAO's Annexure 9 (Facilitation) Recommended Practice 6.6, states as follows (ICAO, 2005):

It is recommended that aircraft operators, in agreement with, and subject to, reasonable limitations which may be imposed by the airport operators, be offered the choice of providing their own services for ground handling operations, or the option of having such operations performed entirely, or in part, by an organization controlled by another aircraft operator authorized by the airport operator, or by the airport operator, or by a servicing agent approved by the airport operator.

ICAO makes it clear that several choices should be given to aircraft operators with respect to ground handling arrangements, including providing their own services. In cases where airports provide such services or derive concessional revenue from their provision, appropriate guidance is contained in ICAO's policy on Charges for Airports and Air Navigation Services (Doc: 9082), with supplementary guidance given in Airport Economics Manual (Doc: 9532). These are some of the measures taken by ICAO to ensure competition and non-discriminatory practices in ground handling services (Mishra, 2011).

➢ **Rule 92 of Aircraft Rules, 1937 is defined as follows (Manmohan, 2011):**

The licensee shall, while providing ground handling service by itself, ensure a competitive environment by allowing the airline operator at the airport to engage, without any restriction, any of the ground handling service providers who are permitted by the Central Government to provide such services. Provided that such ground handling service provider shall be subject to the security clearance of the Central Government."

From these recommended practices and rules, it is clear that competition must be ensured for ground handling activities. However the restriction of airline operators (excluding the national airline, Air India) against self handling at certain airports, and restricting ground handling to the airport operator and/or other permitted ground handling companies alone, is against the recommended practices provided by ICAO. It has been seen that India's new

ground handling policy closely follows the model of the European Directive issued in 1996. However on comparison, it is understood that some of the critical conditions mentioned in this directive are completely avoided by the new regulation in India, which is as follows (Howlin, 1996): Whereas for certain categories of ground handling services, access to the market and self handling may come up against safety, security, capacity and available space constraints; whereas it is therefore necessary to be able to limit the number of authorized suppliers of such categories of ground handling services; whereas it should also be possible to limit self-handling; whereas in that case, the criteria for limitation must be relevant, objective, transparent and non-discriminatory; Whereas if the number of suppliers of ground handling service is limited, effective competition will require that at least one of the suppliers should ultimately be independent of both the managing body of the airport and the dominant carrier. At airports operated by AAI, the third ground handling service provider (besides the airport operator and the subsidiary company of the national carrier) is selected by the AAI on tender. This company selected by AAI is to be security cleared by the Central Government and have certain specific performance standards met. It is also required to pay a certain amount of royalty to the AAI on its revenue (AAI, 2007). In such cases, it has been seen that even though India's ground handling policy closely follows the European model, it has clearly violated one of the important norms to ensure competition, especially at Chennai and Kolkata airports (owned by AAI).

LOGO OF SATS

Many reputable foreign airlines have expressed concerns over this essential service required by them while operating in India. Although the new regulation specifies three service providers, AAI has required the foreign airlines to contract with either the AISATS (national airline and its joint venture) or the consortium of Badhra International India Limited & Novia International Consulting APS Denmark. However, on enquiry of whether AAI would provide

ground handling service, it has been said that the policy decision has not yet been taken (Paulus, 2011). It should also be noted that it has been 3 years since the new regulation was framed. The European ground handling model is also not a perfect one in achieving adequate competition. One of the impacts of the European ground-handling directive is that competition improved post liberalisation. But this healthy competition existed for only about 7 – 8 years since the issue of the Directive. During the past five to six years, excess competition has resulted in price wars between the service providers. Ground handling companies are expected to have 'creative' ideas to gain business. In future, there might be a situation where every bit of service will be invoiced (Rood, 2011). It might be for these reasons that the European Council has now decided to review the existing Directive. The public consultation process was closed during 2010 (CAA, 2011).

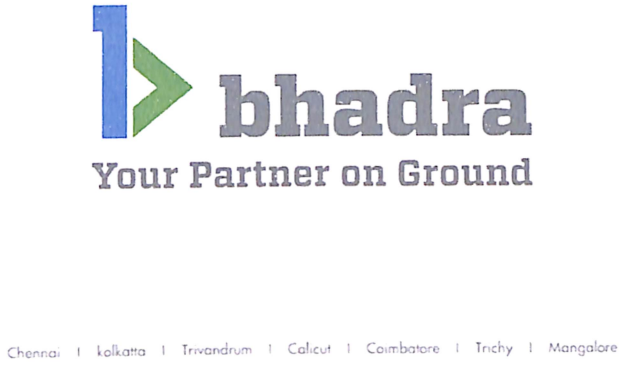
❖ Tender Conditions for Competitive Bidding Process

One of the tender conditions mentioned for providing a license for ground handling services is as follows:

The tender conditions along with the new regulation has clearly shown that the government of India has given AAI, airport operators and the national carrier preference over the other airlines operating within the country (private and foreign). Paulus (2011) argues that the tender conditions also have a bias towards Air India, being an airline allowed to operate as per primary rule in the regulation.

Another tender condition states as follows:

Consequent to the award, the successful tenderer will establish a new legal entity of its consortium/tie up arrangements/JVC and or Co. to represent the award in executing the license agreement with AAI for executing ground handling services to various airlines at Chennai and Kolkata Airports.



LOGO OF BHADRA

The legal entity that is formed in the southern region is currently unknown due to lack of data. It is been seen that Badhra International (one of companies who is awarded the ground handling service contract at AAI airports) is not an independent entity. It is part of the consortium formed with Novia International Consulting APS (Salmon, 2011).

❖ Price of Ground Handling services

As the European market were liberalised due to the European Council Directive, at most airports prices of ground handling services decreased intensively at an average of approximately 12% during 1996-2002. In contrast, at Helsinki Airport the prices increased mainly due to high traffic volume and adequate number of handlers. At Cologne Bonn Airport prices remained stable during this period. Generally, prices at most airports in Europe decreased. Competition was just one of the factors, other drivers being higher productivity and process improvements, economies of scale due to increasing traffic volumes and a stable number of handlers. It was also seen that during 2002-2007 prices continued to decrease, showing that there is intense competition in the ground handling market in Europe (Airport Research Centre, 2009). Generally, the cost of ground handling service is about 10% of the total airline budget (Itz, 2011). Without fuel it takes approximately 75% of the total airline operation costs (Ashraf, 2011). As seen earlier, AERA's decision is to implement the single till price regime at Indian airports. Currently, DIAL and MIAL follow the shared-till pricing model for all of its services. In the case of ground handling activity, service providers charge a levy on airlines if they are an airport operator. If the service provider is a different company, it often pays a concession fee / revenue share to the airport operator (AERA, 2009).

The classification of ground handling activity as an aeronautical or non-aeronautical activity would be affected by the economic regulation of an airport (single till, dual till and hybrid) in some cases. The financial model adopted by the airport as per AERA's final stand will also affect the prices of ground handling in future (Mishra, 2011). As seen before, AERA classifies ground handling as an aeronautical activity. This means that ground handling service would come under the purview of price regulation when AERA confirms its stand on single till price regime at Indian airports.

❖ Quality of Ground handling services

The study on the impact of quality of ground handling operation at airports in Europe concluded that at most airports there were changes in the quality of service since 1996. But there was no trend that was seen from the airports researched. This may be because the drivers for influencing quality varied between airports.

QUALITY OF GROUND HANDLING SERVICES

In general terms, quality of service is influenced by the ground handling service provider, the service level agreements between the airline and infrastructure at airports such as better

facilities provided for ground handling (Airport Research Centre, 2009). One of the concerns raised by most airlines during the interview process was the quality of ground handling service offered by the national carrier (of India) in the past. Most of the rating given by the interviewees was 2-3 out of 10 (10 being the best). Quality of service distinguishes one airline from another. The level of service offered by the airlines determines the competitive edge one airline has over the other. In such a scenario ground-handling service is also a significant part of the ground operation. Although the initial regulation prohibited the airlines from performing self handling at the terminal building, a review was conducted by the regulators and thereafter additional provisions were included in the new regulation that allowed all airlines, including foreign airlines, to undertake self handling within the terminal building where there was passenger interface. This included passenger and baggage handling activities at the airport terminals (Zaidi, 2010b).

One of the functions of AERA is as follows (AERA, 2009): *"To monitor the set performance standards relating to quality, continuity and reliability of service as may be specified by the Central Government or any authority authorised by it in this behalf"*

The quality of ground handling services (an aeronautical activity) would also come under the purview of AERA. Once AERA publishes the actual Economic Regulation of Airports and Air Navigation Services, it would be expected that the quality of ground handling service offered at all airports would be monitored, and the inefficient performers would be replaced by entities that follow best practices. This will be a guide for all the foreign carriers who would be interested in operating their service to India and who are unfamiliar with the performance and quality standards of the ground handlers operating at an airport.

❖ General Agreement on Trade in Services (GATS)

The GATS of the World Trade Organization came into effect during 1995 to provide certain principles and rules for a multilateral framework for trade in services. It is important to note some of the main features of GATS. Firstly, GATS aims at the progressive removal of barriers to trade in service. Secondly, it aims to cover all tradable services in all sectors. Thirdly, the benefit of the country is balanced with all the goods and services offered and not just one particular sector (IATA, 1999). The literature review as part of this project revealed that ground handling services was included in GATS in its first Air Transport publication (WTO, 2006). As per GATS, ground handling services is directly related to airline operation. Not many officials in the aviation industry are aware of this agreement. But considering the

fact that there are quite a number of international ground-handling companies operating in India, the impact of GATS might be limited.

In the Middle East, the airport operator considers ground-handling services as a monopoly activity of the airports. However the service quality offered is considered top class (Itz, 2011). This agreement might be of influence in such regions. However there is no data to confirm it. Future research could be done on the impact of the inclusion of ground handling services in GATS in different countries.

2.2 REVIEW AREA NARROW

From the above data and discussion of various aspects of the issues in new ground handling regulation in India, the following are the recommendations made to achieve the main objective of this research – that is to identify ways to modify the existing regulation by establishing a fair, non-discriminatory ground handling regulation that is beneficial to all the major stakeholders in the Indian aviation industry, without compromising on safety, security and space constraints at airports.

1. An effective foolproof security system must be implemented at all airports in the country including the implementation of AEC program by the BCAS. The security system needs to be monitored from time to time and updates of technology must be made from time to time.
2. DGCA must implement safety standards pertaining to ground handling regulation including the criteria for safety clearance of all ground hand ling entities. Once the standards are set, the performance of the standards must be audited at regular intervals.
3. The safety and security regulators of India (DGCA & BCAS) must come to a combined conclusion on which entities would be accountable and responsible for the different activities of ground handling at airports.

4. AERA must take its final stand on its economic regulation of airports and air navigation services so as to regulate the prices of ground handling services (aeronautical activity) in India

5. AERA must either set its own quality standards for various ground handling services or monitor the performance of the quality standards set by the airport operators in the country (if that complies with international standards).

6. The proposed autonomous Civil Aviation Authority must be established at the earliest to coordinate between the regulators. This autonomous body must be completely separate from the influence of Indian politics and should implement the instructions as received from international organisations such as ICAO and IATA as applicable to the aviation industry in the country.

7. Airline operators must be allowed to choose from several different options of ground handling service providers including self-handling as per the recommendations given by ICAO. If, in any reasonable case, limitation to self-handling is imposed at the airports, it must be based on relevant, transparent and non-discriminatory factors.

These recommendations are by no means exhaustive. It is only the result of the research conducted during the short period of less than three months (duration of the course work). Further research might help to refine these recommendations that could be considered for the Indian scenario.

2.3 FACTORS CRITICAL TO SUCCESS OF STUDY

- Various idea about the books
- Proper idea about the topic
- Proper idea about the industry
- User Involvement
- Executive Management Support
- Clear Statement of Requirements
- Proper Planning
- Realistic Expectations
- Small Project Milestones
- Competent Staff
- Ownership
- Clear Vision and Objectives
- Hard working Focused Staff.

While some remained the same, some are no longer in the top ten (clear statement of requirements, realistic expectations, ownership, hard-working focused staff). At the same time new factors have moved into the top ten (emotional maturity, optimization, Agile process, project management expertise, execution, tools and infrastructure).

The identification of Project Management Expertise as a Critical Success Factor responsible for influencing the final outcome of a project is definitely positive news for project management discipline to continue receiving attention and executive sponsorship. Also the mention of "Execution" is important since time and again it has been shown that well laid plans are of no use if they cannot be executed well. So the focus on Execution is of utmost importance. Project Managers need to keep this list in mind during the various phases of the project and translate it into specific and actionable items for their own projects based on the relevance and importance of each of the success factor.

There cannot be one single list of top 10 success factors for all projects since projects by definition are unique. But the CHAOS reports definitely provide a good reference point to start identifying what are the top 10 critical success factors for your project.

2.4 SUMMARY

Ground handling is an essential service that is required by an aircraft operator before take-off and after landing. Due to security concerns at Indian airports, the Bureau of Civil Aviation Security (BCAS) issued a circular making it mandatory for all ground handling service providers to undergo security clearance and background checks of its employees before issuing the airport entry pass.

DGCA

Subsequent to this rule, the Directorate General of Civil Aviation (DGCA) in India issued a new ground handling regulation in 2007 that restricted the number of service providers as well as self-handling by aircraft operators (excluding the national airline) at six major airports in India. The private aircraft operators filed a suit against the government. This case is being heard in the Supreme Court of India at the time of writing this paper. The main purpose of

this research is to identify ways to modify the existing regulation by establishing a fair, non-discriminatory ground handling regulation that is beneficial to all the major stakeholders in the Indian aviation industry, without compromising on safety, security and space constraints at airports. This research identified the main issues of the existing ground handling regulation in India and comparisons were made primarily with the European Council Directive that was issued in 1996. The International Civil Aviation Organization (ICAO) standard and recommended practices, along with other international practices, were compared with the Indian scenario. Security practices at airports, safety standards for ground handling, competition, price and quality regulation were also discussed.

In the area of commercial aviation, damage from ground-related occurrences implies increased safety risks and economic consequences for all organizations involved.

- Ground handling performed by airlines themselves was restricted at 6 major airports in the country. In airports owned by AAI other than Chennai & Kolkata, self-handling is permitted but restricted to foreign airlines operating in India as per the new regulation.
- All aircraft operators in India excluding the national carrier, Air India are not permitted to self-handle at the airside in Delhi, Mumbai, Kolkata, Hyderabad, Chennai and Bengaluru Airports. This makes it difficult for the aircraft operators as they have already invested heavily in ground equipment and have also trained their employees over the past years Man Mohan, 2011.
- Foreign airlines operating in India are facing difficulty because of the limited number of good choices of ground handling service providers at certain airports, especially that operated by Airports Authority of India Itz, 2011.
- BCAS has issued a circular that requires 13 security functions to be the prime responsibility of the aircraft operator in 2009. However the new ground handling

policy prohibits the aircraft operator to perform these activities Man mohan, 2011. Therefore there is lack of clarity by the regulators in defining responsibility and accountability for providing ground handling services.

As the number of airport entry passes issued is now limited to the direct employees of the aircraft operator, airport operator or ground handling company, security would be better maintained at the airports in the country Safety and security training given to a limited number of staff members is considered to be more efficient as compared to a larger population. BCAS is also able to efficiently monitor the number of airport entry passes as the number of applications processed and maintained is comparatively less All airport operators, including AAI and privatized airports, are able to have economies of scale in ground handling operations at the airside as there would be maximum utilisation of the existing equipment and other resources, especially at busy and congested airports in the country. The national airline of India (Air India) and its parent company (National Aviation Company of India Limited) have a leading edge in this policy as they are allowed to provide ground handling services for all airlines operating at all airports in the country including foreign airlines .

This research project was conducted through the following process:

1. Identification of various issues related to the ground handling regulation in India.

2. Assessment of the positive and negative impacts of the new ground handling policy issued in 2007.

3. To understand various international policies and practices on self-handling.

4. To understand the ground handling policies of ICAO and airports in USA, Europe and Australia.

5. Evaluation of international policies to obtain insights on ways to solve the issues of ground handling identified previously.

CHAPTER 3

RESEARCH DESIGN, METHODOLOGY AND PLAN

3.1 DATA SOURCE

The two types of data; they are primary data and secondary data. The data in this project is the **secondary data.** The whole of the project is constituted by the secondary data.

Secondary data are statistics that already exist. They have been gathered not for immediate use. This may be described as "those data that have been compiled by some agency other than the user or researcher in question".

There are two distinctive sources of secondary data, they are

- Internal sources
- External source

Some of the external sources are

- ❖ Internet
- ❖ Published marketing research
- ❖ Books and journals
- ❖ News sources
- ❖ Directories
- ❖ Magazines and articles
- ❖ Research reports

3.2 RESEARCH DESIGN

In this research I use descriptive research.

Research design is simply a plan for a study. This is used as a guide in collecting and analyzing the data. It can be called a blue print to carry out the study. It is like a plan made by the architect to build a house, if a research is conducted without a blue print, the result is like to be different from what is expected at the start.

Descriptive research is used to describe characteristics of a population or phenomenon being studied. It does not answer questions about how/when/why the characteristics occurred. Rather it addresses the "what" question (What are the characteristics of the population or situation being studied?) [1] The characteristics used to describe the situation or populations are usually some kind of categorical scheme also known as descriptive categories. For example, the periodic table categorizes the elements. Scientists use knowledge about the nature of electrons, protons and neutrons to devise this categorical scheme. We now take for granted the periodic table, yet it took descriptive research to devise it. Descriptive research generally precedes explanatory research. For example, over time the periodic table's description of the elements allowed scientists to explain chemical reaction and make sound prediction when elements were combined.

Hence, research cannot describe what caused a situation. Thus, Descriptive research cannot be used to as the basis of a causal relationship, where one variable affects another. In other words, descriptive research can be said to have a low requirement for internal validity.

The description is used for frequencies, averages and other statistical calculations. Often the best approach, prior to writing descriptive research, is to conduct a survey investigation. Qualitative research often has the aim of description and researchers may follow-up with examinations of why the observations exist and what the implications of the findings are.

3.3 DATA ANALYSIS PROCEDURE

Many airlines subcontract ground handling to airports, handling agents or even to another airline. According to the International Air Transport Association (IATA), conservative estimates indicate airlines outsource more than 50 per cent of the ground handling that takes place at the world's airports. Ground handling addresses the many service requirements of an airliner between the time it arrives at a terminal gate and the time it departs on its next flight. Speed, efficiency, and accuracy are important in ground handling services in order to minimize the turnaround time (the time during which the aircraft must remain parked at the gate). Airlines with less-frequent service or fewer resources at a particular location sometimes subcontract ground handling or on-call aircraft maintenance to another airline, as it is a short-term cheaper alternative to setting up its own ground handling or maintenance capabilities.

Airlines may participate in an industry-standard Mutual Assistance Ground Service Agreement (MAGSA). The MAGSA is published by the Air Transport Association (the current version is from 1981) and is used by airlines to assess prices for maintenance and support to aircraft at so-called MAGSA Rates, which are updated annually based on changes in the U.S. Producer Price Index. Airlines may choose to contract for ground handling services under the terms of a Standard Ground Handling Agreement (SGHA) published in the International Air Transport Association (IATA) Airport Handling Manual. Airlines may also contract for ground handling services under non-standard terms. Due to security reasons the Government of India in the year 2007 prohibited the private airlines to perform self-handling and the number of service providers was also restricted at six major airports of India. This particular act of the government invited criticism from the private airlines and resulted in the divided opinions in the aviation industry of India. A similar instance can be traced back in Europe in October 1996, when Europe Council Directive 96/67/EC were issued for ground handling at community airports, though all the directives were not similar to those of regulation passed in India.

India being a growing market of aviation needs an effective rules and regulations to handle ground handling operations and so the making of these rules and regulations must be free from any politically motivated factors. Rule 92 of the Aircraft Rules, 1937 provides that the licensee of an aerodrome shall, while providing ground handling service by itself, ensure a competitive environment by allowing the airline operator at the airport to engage, without any

restriction, any ground handling service provider permitted by the central government to provide such service. This is subject to a proviso that such ground handling service provider should have security clearance.

The DGCA has issued AIC No. 03/2010 dated 2 June 2010 on the subject of 'Grant of permission for providing ground handling services at airports other than those belonging to the Airports Authority of India'. Clause 1.2 of this Circular provides that in accordance with the Airports Authority of India (General Management, Entry for Ground Handling Services) Regulations, 2000, an airline operator may carry out ground handling services at an airport either by itself or engage the services of any of the following, namely: (i) AAI; (ii) Air India or Indian Airlines; and (iii) any other agency licensed by the AAI. Other circulars/guidelines such as the BCAS Circular No. 4/2007 dated 19 February 2007 contain instructions on deployment of ground handling agencies at the airports.

On 18 October 2007, the AAI in exercise of powers conferred by section 42 of the Airports Authority of India Act, 1994 formulated the Airports Authority of India (General Management, Entry for Ground Handling Services) Regulations, 2007. Regulation 1.3 thereof provides that these Regulations shall apply to all airports and civil enclaves managed by the AAI, provided that they shall not apply to defence installations or enclaves or enclosures at the airports.

This research project was conducted through the following process:

1. Identification of various issues related to the ground handling regulation in India.
2. Assessment of the positive and negative impacts of the new ground handling policy issued in 2007.
3. To understand various international policies and practices on self-handling.
4. To understand the ground handling policies of ICAO and airports in USA, Europe and Australia.
5. Evaluation of international policies to obtain insights on ways to solve the issues of ground handling identified previously.

CHAPTER 4

FINDINGS AND ANALYSIS

4.1FINDINGS

The main issue of ground handling regulation issued in India during 2007 was with regard to security concerns within the country. In order to safeguard national security, the Government of India decided to restrict the number of ground handling service providers at 6 major airports in the country. Self-handling was also restricted at these airports. This decision by the Government created divided opinions in the aviation industry in India. A study on this problem revealed that the ground handling regulation in India (issued during 2007) is similar to that of Europe Council Directive 96/67/EC issued on 15th October 1996 on access to the ground handling market at Community airports. However, not all the aspects of this Directive were used while establishing the regulation in India. Interviews and the literature review revealed that the European Ground Handling Directive is also not a perfect model to follow as it has certain issues, which are currently under review by the European Council. It has been revealed in the documentation of the various reports and the initial deliberations regarding the issue of whether to expand the coverage of the Air Transport Annex of GATS to include the distinctly emerged two auxiliary services, namely the ground Handling and Airport Operation Services, that unless the domestic regulatory policies are harmonized towards the reduction or elimination of such conditions for market access, no half-hearted filing of commitment can lead to actual market access. Mere commitments under the Sectoral category along with simultaneous „MFN□ and „national treatment□ exemptions- horizontal

Commitments, constraints in the horizontal commitments for Mode 3 and Mode 4 defeat the very objective. Further, as already noted in these deliberations, the issues not related to economic liberalization like safety and security of air transport operations need to be addressed fully before a full-fledged expansion of GATS Annex is undertaken and

commitments on additional auxiliary services especially the ground handling are taken. There is a need for extensive discussions on the „request-offers□ received on the issue of inclusion of Ground Handling Services in the Annex as pointed out by the Members in the second review of the Annex. These are expected to be long drawn complex debates in the context of regulatory developments. India, being a growing aviation market, requires a certain level of ground handling regulation for effective and efficient ground handling operation. The regulatory authorities must be free from all political and other hidden agendas so as to ensure safe and secure civil aviation operations. Preference must be given to aircraft operators in choosing from several different choices of ground handling services including that of self-handling as per the ICAO recommendation, as aircraft operators are the primary recipient of this service. Limitations, if any, must be on relevant, transparent and non-discriminatory bases.

❖ Limitations

Due to non-accessibility of data on ground handling policy in USA, a major aviation market, this market is not widely discussed in this paper. As the research was conducted in Australia, participation from Indian officials about this topic is restricted to the interviews conducted via phone and through emailed questionnaires. Ground handling regulation in India is considered as a topical issue and also a very sensitive one, therefore participation from officials, especially the regulators, is also limited. The political, social, and organisational cultures in India are also not discussed within the scope of this paper.

4.2 ANALYSIS

Regulation is considered as a term that is sometimes difficult to be defined. It has different meanings to different people depending on where they come from. For some it may be a restrictive force that governments use to constrain liberties of certain people. For others, it serves the interests of the dominant class and sets power in a civilised form. Some people consider regulation to be that which is done only by the government (Levi-Faur, 2010). Therefore by understanding the multiplicity of meaning, Levi-Faur (2010) suggest that "regulation is the promulgation of prescriptive rules as well as the monitoring and enforcement of these rules by social, business, and political actors on other social, business, and political actors". The main purpose of regulation in a society is to attain optimum outcomes so that even if the market system fails, the regulations in place will protect the society from NY downfalls. The aim of regulation is linked to an economic theory called General Equilibrium Theory. This theory highlights the need for regulation in a society, which is to solve a particular situation if the market system fails and to deal with the developmental factors of a country if it is still in the infant stages of growth and development (Hazra, 2007).

4.3 CORRELATION/ REGRESSION ANALYSES

In my project, I use the correlation analysis. It is a statistical technique used for measuring the relationship or interdependence of two or more variable. Ground Handling Regulation in IndiaA comparison with international policies and practices. **Correlation**, a statistical measure of a relationship between two or more variables, gives an indication of how one variable may predict another. The descriptive techniques discussed above permit a statement, in the form of correlations, about that relationship. However, correlation does not imply causation; that is, simply because two events are in some way correlated (related) does not mean that one necessarily causes the other. For example, some test data indicate that boys receive higher math-aptitude scores on college entrance exams than girls, indicating a correlation of gender with mathematical ability. But before concluding that gender **determines** mathematics aptitude, one must demonstrate that both the boys and the girls in the study have had the same mathematics background. Some studies have shown that girls are discouraged from taking or at least not encouraged to take more than the minimum mathematics requirements.

CHAPTER 5

INTERPRETATION OF RESULT

5.1 INTERPRETATION OF RESULT

My **hypotheses are true.** Ground Handling Regulation in India and its services is my hypotheses. And the result is also tell India has a vital role in ground handling regulation as same as other countries. A hypothesis must be verifiable by statistical and analytical means, to allow a verification or falsification. In fact, a hypothesis is never proved, and it is better practice to use the terms 'supported' or 'verified'. This means that the research showed that the evidence supported the hypothesis and further research is built upon that. A research hypothesis, which stands the test of time, eventually becomes a theory, such as Einstein's General Relativity. Even then, as with Newton's Laws, they can still be falsified or adapted. This research project was conducted through the following process:

1. Identification of various issues related to the ground handling regulation in

India.

2. Assessment of the positive and negative impacts of the new ground handling

policy issued in 2007.

3. To understand various international policies and practices on self-handling.

4. To understand the ground handling policies of ICAO and airports in USA, Europe and Australia.

5. Evaluation of international policies to obtain insights on ways to solve the issues of ground handling identified previously.

5.2 COMPARISON OF RESULT WITH ASSUMPTIONS (HYPOTHESES)

RESULT: GROUND HANDILING INDIA HAS A VITAL ROLE IN AVIATION SECTOR

HYPOTHESES: GROUND HANDLING REGULATION IN INDIA A COMPARISON WITH INTERNATIONAL POLICIES AND PRACTICES

A research hypothesis is the statement created by researchers when they speculate upon the outcome of a research or experiment. Every true experimental design must have this statement at the core of its structure, as the ultimate aim of any experiment. The hypothesis is generated via a number of means, but is usually the result of a process of inductive reasoning where observations lead to the formation of a theory. Scientists then use a large battery of deductive methods to arrive at a hypothesis that is testable, falsifiable and realistic. This is too broad as a statement and is not testable by any reasonable scientific means. It is merely a tentative question arising from literature reviews and intuition. Many people would think that instinct and intuition are unscientific, but many of the greatest scientific leaps were a result of 'hunches'. The research hypothesis is a paring down of the problem into something testable and falsifiable. In the aforementioned example, a researcher might speculate that the decline in the fish stocks is due to prolonged over fishing. Scientists must generate a realistic and testable hypothesis around which they can build the experiment. This might be a question, a statement or an 'If/or' statement. Some examples could be: Is over-fishing causing a decline in the stocks of Cod in the North Atlantic. Over-fishing affects the stocks of cod. If over-fishing is causing a decline in the numbers of Cod, reducing the amount of trawlers will increase cod stocks. These are all acceptable statements and they all give the researcher a focus for constructing a research experiment.

CHAPTER 6

CONCLUSION AND SCOPE FOR FUTURE WORK

CONCLUSION

The main issue of ground handling regulation issued in India during 2007 was with regard to security concerns within the country. In order to safeguard national security, the Government of India decided to restrict the number of ground handling service providers at 6 major airports in the country. Self-handling was also restricted at these airports. This decision by the Government created divided opinions in the aviation industry in India. A study on this problem revealed that the ground handling regulation in India (issued during 2007) is similar to that of Europe Council Directive 96/67/EC issued on 15th October 1996 on access to the ground handling market at Community airports. However, not all the aspects of this Directive were used while establishing the regulation in India. Interviews and the literature review revealed that the European Ground Handling Directive is also not a perfect model to follow as it has certain issues, which are currently under review by the European Council. India, being a growing aviation market, requires a certain level of ground handling regulation for effective and efficient ground handling operation. The regulatory authorities must be free from all political and other hidden agendas so as to ensure safe and secure civil aviation operations. Preference must be given to aircraft operators in choosing from several different choices of ground handling services including that of self handling as per the ICAO recommendation, as aircraft operators are the primary recipient of this service. Limitations, if any, must be on relevant, transparent and non-discriminatory bases. There is no international standard definition for ground handling. Ground handling service basically means the services required by an aircraft operator before take-off and after landing. According to ICAO, it refers to the "services necessary for an aircraft's arrival at, and departure from, an airport" (Secretariat, 2000a). IATA describes it as "an essential part of the overall product airlines offer to their passengers" (Smet, 2010). In the Indian context, ground handling means: ramp handling, traffic handling and any other activity specified by the Central Government (Gohain, 2007). A detailed description of this service is given in subsequent sections of this paper.

FUTURE WORK

New entrants do still appear of course and there is evidence of alliance behaviours. In early Nov-2014 an alliance was announced between Aero ground Flughafen München GmbH (Germany), Gold air Handling of Greece and AAS Airline Assistance Switzerland, offering ground handling services across various locations to airline customers in Europe under the generic name ground.net. The first two are well-established but Airline Assistance is a relatively young company. Ground.net was founded in order to offer airline customers with network agreements an alternative to global players in the market for ground handling services. Apart from sales and marketing, the cooperation will also cover information technology, procurement of equipment, employee qualification and establishment of standardised operating processes. The intention in the long term is to expand the alliance to further ground handling companies and to establish a European ground handling network within ground.net. It will be a loose association of providers but also a cross-linked partnership able to offer and provide services across the network as a single group.

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