



DEVELOPING AND ENHANCING AIRLINE INDUSTRY'S CARGO WAREHOUSING OPERATIONS AND PRODUCTIVITY IN THE GLOBAL COMPETITIVE MARKET

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Abstract:

The research is conducted at Jet Airways NSCB International Airport Kolkata. With the airline's cargo business growing manifold in the last four years, the organization is laying special emphasis on its cargo segment. The purpose is to develop it as a global air cargo market leader by way of emulating the cargo systems of International giants like Lufthansa Cargo and British Airways World Cargo. In the present scenario, the business competition between airlines' is very high and all the time it has been found that there is a dearth of passenger load compared to the cargo load, where proper servicing from the warehouse to accommodate cargo management is poor. This not only makes it difficult for the company to guess the improvement of the high volume of passengers but also at the same time it is worried about the lack of management in the warehousing operations causing substantial financial loss. Therefore the organization feels that a proper study has to be made to improve the warehouse efficiency so that the offloading of cargo can be stopped and in consequence a substantial reduction in yearly compensation can be made. The airline also feels that by plugging the discrepancies, number of new customers can be increased. The present compensation charges that Jet Airways has to bear on an yearly basis is around Rs. 30 lakhs. By improving the warehouse efficiency, it is aimed that the discrepancies of offloading can be plugged and an approximate Rs. 20 lakh to Rs. 30 lakh can be saved. Since the magnitude of the problem is very high, the research was undertaken to have a detailed view of the problem and to analyse the gaps where there is scope for improvement in the efficiency of warehousing operations.

It is expected that with the help of this research study the present unsystematic operations of warehouse can be structured effectively, improvement in the work efficiency can be achieved by avoiding the off loadings, the yearly compensation loss can be stopped resulting in further business enhancement. To gauge the loopholes in the present operational system, a detailed analysis of International Cargo (Export and Import) and domestic outbound and inbound cargo was undertaken and the stage-wise "Critical Problematic Areas / Gaps (CPAs)" of the cargo warehousing functions were identified, with the purpose to solve the said problems on the basis of proposed recommendations. Based on the analysis of CPAs, the outcome of demand analysis was realized by virtue of repositioning the cargo inventory vis-à-vis service. It was found out that in some of the flights maximum off loadings takes place regularly and in some group of flights there is maximum space wastage on regular basis which ultimately results in loss of business for the airline. Therefore the aircraft series repositioning is proposed with reference to its cargo load.

On the basis of the above findings, a automated tracking system is recommended whereby it is proposed to develop an integrated online software system enabling the agencies involved in the cargo operations viz., Indian Customs, domestic airlines, international airlines, exporters and destination to have a direct access with each other and each establishment's database is shared by all the stations, resulting in a transparent interchange of data and knowledge on exact status of cargo at each stage, thereby locating its traceability. The success of this tracking system is largely dependent on the Bar-Coding System of the Inventory software. The proposed results of implementing revised tracking system would be the additional revenue generation for the airline, which is based on the Saving of compensation due IT implementation.

The research details the total compensation savings of Rs. 28 lakhs after IT implementation in the warehousing operations and this would be saved straightaway by overcoming the discrepancies and moreover, the same would be plugged at the point of occurrence itself.

Key Words: Airline Warehousing, Supply Chain Management, Information Technology, Cargo Inventory, Cargo Tracking System, Bar-Coding System, Manpower Utilization and Productivity

Introduction:

The research is conducted at NSCB International Airport Kolkata. In the present scenario, the business competition between airlines' is very high and all the time it has been found that there is a dearth of passenger load compared to the cargo load, where proper servicing from the warehouse to accommodate cargo management is poor. This not only makes it difficult for the company to guess the improvement of the high volume of passengers but also at the same time it is worried about the lack of management in the warehousing operations causing substantial financial loss. Therefore the organization feels that a proper study has to be made to improve the warehouse efficiency so that the offloading of cargo can be stopped and in consequence a

substantial reduction in yearly compensation can be made. The airline also feels that by plugging the discrepancies, number of new customers can be increased.

The present compensation charges that the airline has to bear on an yearly basis is around Rs. 30 lakhs and the internal escalation of the other operating costs is approximately Rs. 20 lakhs. By improving the warehouse efficiency, it is aimed that the idle capacity of the space can be filled up by 25% to 30% and by plugging the discrepancies of off loading, an approximate Rs. 20 lakh to Rs. 30 lakh can be saved. Since the magnitude of the problem is very high, the airline proposed the researcher to make a study in the above area. For such reasons, the research was undertaken to have a detailed view of the problem and to analyse the gaps where there is scope for improvement in the efficiency of warehousing operations.

It is expected that with the help of this research study the present unsystematic operations of warehouse can be structured effectively, improvement in the work efficiency can be achieved by avoiding the offloading and by optimizing the manpower utilization with highest possible productivity, the yearly compensation loss can be stopped resulting in further business enhancement. The total expectation will be nearly a sixty lakh rupees earning to the airline.

The research work proposes to achieve the following objectives:

- To find out the present critical problematic areas / gaps in warehousing operations.
- Protection of loss of revenue / cargo / business due to the present system.
- Reasons and remedial measures to overcome operational problems.
- Recommend optimal manpower utilization with maximum productivity.
- How Information Technology can be the backbone in implementing the remedial measures.
- Recommend remedial measures with IT application.
- Cost Benefit Analysis with IT implementation.

Methodology, Findings and Limitations:

The present compensation charges that the airlines has to bear on an yearly basis is around Rs. 30 lakhs. By improving the warehouse supply chain efficiency, it is aimed that the discrepancies of offloading can be plugged and an approximate Rs. 20 lakh to Rs. 30 lakh can be saved. Since the magnitude of the problem is very high, the research was undertaken to have a detailed view of the problem and to analyse the gaps where there is scope for improvement in the efficiency of warehousing supply chain and operations.

It is expected that with the help of this research study the present unsystematic operations of warehouse can be structured effectively, improvement in the work efficiency can be achieved by avoiding the offloading, the yearly compensation loss can be stopped resulting in further business enhancement.

To gauge the loopholes in the existing supply chain system, a detailed analysis of International Cargo (Export and Import) and domestic outbound and inbound cargo was undertaken and the stage-wise "Critical Problematic Areas / Gaps (CPAs)" of the cargo warehousing functions were identified, with the purpose to solve the said problems on the basis of proposed recommendations.

Based on the analysis of CPAs, the outcome of demand analysis was realized by virtue of repositioning the cargo inventory vis-à-vis service. It was found out that in some of the flights maximum offloading takes place regularly and in some group of flights there is maximum space wastage on regular basis which ultimately results in loss of business for the airline. Therefore the aircraft series repositioning is proposed with reference to its cargo load.

Conclusion and Recommendations:

On the basis of the above findings, a automated tracking system is recommended whereby it is proposed to develop an integrated online software system enabling the agencies involved in the cargo operations and supply chain viz., Indian Customs, domestic airlines, international airlines, exporters and destination to have a direct access with each other and each establishment's database is shared by all the stations, resulting in a transparent interchange of data and knowledge on exact status of cargo at each stage, thereby locating its traceability. The success of this tracking system is largely dependent on the Bar-Coding System of the Inventory software and also by smoothening the supply chain operations.

The proposed results of implementing revised tracking system would be the additional revenue generation for the airline, which is based on the saving of compensation due IT implementation.

The research details the total compensation savings of Rs. 28 lakhs after IT implementation in the warehousing operations and supply chain and this would be saved straightaway by overcoming the discrepancies and moreover, the same would be plugged at the point of occurrence itself.

Salient Features of Research:

Therefore, the salient features of this research would be that:

- Compensations would be saved to the tune of Rs. 28 Lakhs.
- Optimal manpower utilization with maximum productivity in the critical Myanmar Airways flights of Kolkata Airport.
- Repositioning of Cargo Inventory vis-à-vis aircraft series planning and allocation is suggested to minimize off loadings and space wastage.

- Cargo tracking system is planned to be incorporated with the assistance of bar-coding system.
- An integrated online database sharing software system is suggested to track the transparent interchange of data and to trace the physical movement of cargo from origin till destination in the entire supply chain network.

References:

1. Shah N M (2018), An Integrated Concept of Materials Management, Rupa Publication, New Delhi.
2. International Air Transport Association (2020), TACT Aviation Manual, IATA Publication, Montreal.
3. Bhattacharya S C (2018), Modern Concepts on Materials Management, Sage Publication, India.
4. Dobler D W, Lee L J and Burt D N (2019), Purchasing and Materials Management, Tata McGraw Hill Publications.
5. Taff C A (2019), Management of Physical Distribution and Transportation, Prentice Hall of India Publication.
6. Gopalakrishnan P and Sundaresan M (2020), Materials Management – An Integrated Approach, Rupa Publication.
7. Gokarn P R (2017), Essentials of Materials Management, Sage Publication.
8. Ammer D S (2019), Materials Management, Tata McGraw Hill Publications.
9. International Air Transport Association (2019), Dangerous Goods Regulations, IATA Publication, Montreal.