An Analysis of the Indian Container Stuffing Industry

Mariappa Babu Baskar* & S Pragadeeswaran**

Abstract

Logistics is a vital aspect of overseas marketing. To succeed in an overseas market, a firm must set up a proper entry method and wisely handle extensive logistics problems. Containerization has acclaimed a revolution in international logistics and yet a container is functionally no more than a box. Container enabled Logistics includes important decision areas such as transportation, consignment and container handling, warehousing, and information control. Historically, management’s focus for cost cutting was production. But managers now recognize that production efficiency has reached a point at which further cost savings are difficult to achieve. Increasingly, managers are turning to logistics activities as a possible cost-saving area. Among the five key decision areas of international logistics, consignment handling is one such area where cost saving is imperative. Consignment loading is the process of stuffing the export consignments into a container. In business terms, the consignment loading is called a ‘container stuffing’ or simply ‘stuffing’. Like in any industry, container stuffing business too is driven by the following five competitive forces. An analysis of the competitive forces using Porter Five Forces Analysis reveals that the intensity is high in all five competitive forces in Indian stuffing industry. The exporters have a number of options as to the place where export consignments are loaded into containers and the point at which the responsibility for the cargos are taken over by the vessel owners. The factors such as responsibility, hold and delay of stuffing depend mainly on the export contract and place of stuffing chosen by exporters.

Key words: Logistics, Container, Containerization, Container Stuffing, House Stuffing, Prior Stuffing, CFS Stuffing, Factory Stuffing, Export Contracts.

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Introduction:
A major problem for the exporters today is the transport of the products from their country to the customer’s overseas destination. Though transporting goods overseas follows the same principle as shipping within the country, the mechanics and complexities in the international logistics are entirely different. International Logistics is a vital aspect of overseas marketing. To succeed in an overseas market, a firm must set up a proper entry method and wisely handle extensive logistics problems (Ballou, 1999). If a firm chooses exportation as an entry strategy then it must concentrate on two factors. First, the firm has to find overseas buyers for its products. Second, it has to choose a proper logistics network to promptly honour the export contracts (Christopher, 1994 & McDonald, 1999).

Nowadays, containerization is the increasingly popular method of shipment of the export consignments. The Section 2(e) of Dock Workers (Safety, Health and Welfare) Rules, 1990 (which was formulated in accordance with Dock Workers (Safety, Health and Welfare) Act, 1986 (54 of 1986) and Dock Workers (Safety, Health and Welfare) Regulations, 1989 by the Ministry of Labour, Government of India) refers container as an article of transport equipment of a permanent character and accordingly strong enough to be suitable for repeated use and as specified under national or international standards (Ministry of Labour, 1990). The advantages of containerization are clear: better protection, cheaper packaging, easier handling and door-to-door delivery (Axtell, 1994:173).

The container empowered international logistic system includes important decision areas such as transportation, consignment loading (container stuffing), container loading, warehousing, and information control. Historically, management’s focus for cost cutting was production. But managers now recognize that production efficiency has reached a point at which further cost savings are difficult to achieve. Increasingly, managers are turning to logistics activities as a possible cost-saving area (Burg, 1989). An empirical study shows that logistics functions represent almost half of total marketing costs of a company and amount to approximately 20 per cent of a nation’s GDP (Boone and Kurtz,
1992: 492). Therefore, in recent years, logistics activities have received increasing attention.

The loading of consignment into a container is called “Stuffing”, a more suitable term to distinguish consignment loading from container loading (Johnson and Garnett, 1971: 71). The consignment loading (also called as container stuffing) is the process of stuffing the export consignments into a container, whereas container loading refers to the process of loading the ‘stuffed’ container onto a vessel.

**An Analysis of Competitive Forces in Indian Stuffing Industry**

A study is made using the Porter Five Forces Analysis to see the intensity of competition in the container stuffing industry. The aim of the study is to identify the players in the present container stuffing industry and to understand the intensity of competition among the players. As like in any industry, container stuffing business too is driven by the following competitive forces (refer Figure: 1):

- Intensity of various forces within the industry
- Bargaining power of buyers
- Bargaining power of suppliers
- Threat of substitutes
- Threat of new Entrants

**Intensity of various forces within the stuffing industry:** The conventional place of stuffing is at Port, employing Port Trust workers. The port stuffing is influenced by many factors such as:

1. Port space;
2. Strike, and picketing of port workers;
3. Difficulty in consolidation of consignments in LCL (Less-than-container-load) containers;
4. Different shape and size of consignments, etc.

The availability of Port space is a foremost important factor that impedes the choice of Port stuffing. Year-by-year, the volume of export increases but the number of Ports to handle the export consignments remains the same. Another important factor that lowers the amount of stuffing volume handled by Ports is the strike often called up by the Port
workers. In less-than-container Load situation, the Clearing and Forwarding Agents find extremely difficult to consolidate the consignments owing to the limited time availed to them by Port Authorities for stuffing. The difference in the shape and size of consignments pose as a long standing impeding factor that hardens the work of stuffing process, be it pier or house stuffing.

**Bargaining power of buyers and Suppliers:** The suppliers of containers are the liners (vessel owners) and container manufacturers / suppliers. Exporters, importers, Clearing and Forwarding Agents represent the group that avail the services of container stuffing. Except Ex-Work export contracts, all other sales contracts (FAS – Free Alongside Ship, FOB – Free on Board, CFR – Cost and Freight, CIF - Cost Insurance and Freight, DES – Delivered Ex Ship, DEQ – Delivered Ex Quay) emphasis container stuffing to be done by the exporter. In Ex-Work export contracts, the stuffing process has to be done by the importers through their Clearing and Forwarding Agents. After liberalization and globalization, the volume of export from India has increased in geometric progressions. These phenomena have increased the number of exporters and there exists an increasing demand for the suppliers of containers too.

**Threat of substitutes:** The Government of India has accorded ‘Star Trading House’ (STH) and ‘Super Star Trading House’ (SSTH) status to many manufacturer exporters wherein the exporters themselves stuff the export consignments into the container in the presence of Central Excise Authorities (unlike the other stuff process, wherein the stuffing is done in the presence of Customs Officials) and hand over the stuffed container directly to the vessel owners. This type of stuffing is also called as Factory Stuffing. The Port stuffing is completely avoided in this process through the multimodal transportation
Figure 1: Porter Five Forces Analysis of Indian Container Stuffing Industry

New Entrants
- CFSs
- ICDs
- Small Ports

Suppliers
- Liners (Vessel Owners)
- Container Manufacturers / Suppliers

Pier Stuffing
- Port Space
- Strike of Workers
- shape & size of consignments
- LCL and consolidation

Substitutes
- Star Trading Houses
- Super Star Trading Houses
- Multimodal Transportation

Buyers
- Exporters
- Importers
- C & F agents representing exporters & importers

New Entrants

Buyers

Suppliers

Substitutes

Pier Stuffing
facility, wherein the stuffed containers are loaded on the trucks, through roads / rails reach Ports and are loaded on to the Vessels directly.

**Threat of new Entrants:** The customs notified zones such as the Container Freight Stations (CFSs) and Inland Container Depots (ICDs) are posing as substitutes to Port stuffing. As per the Government data, there are 247 CFSs and ICDs in India as on 30^{th} June 2011. Inland Container Depots are customs notified zones when present in Dry Ports. The Government of India is in the process of reviving the small Ports to handle export consignments. These small Ports are to share the burden of overload problem currently faced by the major Ports in the future.

**The Responsibility of Stuffing:**

The exporters have a number of options as to the place at which the export consignments are loaded into containers and the point at which the responsibility for the cargoes are taken over by the vessel owners. The following are the three options of consignment loading:

1. **House Stuffing:** The export consignments can be packed in a container by the exporter himself at his premises and then hand over the stuffed container into the charge of the vessel owner. The vessel owner will be responsible for the cargo thenceforth until it’s delivered to the overseas consignee at his premises. This type of consignment loading is usually done by manufacturer exporters at their factory site with the help of the unskilled factory workers. The containers will be sealed by excise officers rather than by customs unlike the other two stuffing options. The Government allows only those companies who have excellent export track records to do house stuffing. In this manner the exporters can take advantages of the “through transport” facilities, which are offered by the container service. This stuffing is also called as “Factory stuffing”.

2. **CFS Stuffing:** The second option is container freight station (CFS) stuffing. A container freight station is a customs notified area or zone outside the port premises that is used for warehousing and for loading/ unloading the containers. These stations were created to circumvent the problem of bottlenecks in port container loading and unloading process. Huge storage shed in the zones help to store and off-load & on-load consignments. The CFS stuffing workers are well trained and skillful. The stuffing process is carried out in the presence of the CFS customs personnel. A Container freight
station is sometimes called as “Internal Containerization Depot” (ICD) when it’s present in a dry port. In India, there are ICDs at New Delhi, Bangalore, Assam besides a number of Government and private-owned CFSs. The shipper may send the export consignments by local transport to a Container Freight Station or Internal Containerization Depot for stuffing. The stuffed containers are handed over to the vessel owner in the CFS premises who will carry them overseas as directed.

Table 1: An Analysis of different stuffing methods on delays

<table>
<thead>
<tr>
<th>Stuffing</th>
<th>Place</th>
<th>Who does the stuffing and their skills</th>
<th>Responsibility on delay</th>
<th>Risk of delay</th>
<th>Shipper’s control / hold on stuffing delays</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIER</td>
<td>Inside Port</td>
<td>Port Trust workers/ more skilled</td>
<td>Liner/ Ship owner</td>
<td>More</td>
<td>Less hold (Liner’s control)</td>
</tr>
<tr>
<td>HOUSE</td>
<td>CFS</td>
<td>Outside Port (CFS premises)</td>
<td>CFS workers/ more skilled</td>
<td>Less</td>
<td>Less hold (C &amp; F agent’s control)</td>
</tr>
<tr>
<td>SE - ORY</td>
<td>FACTORY</td>
<td>Outside Port (Factory / Business premises)</td>
<td>Factory workers/ less skilled</td>
<td>Least</td>
<td>Better hold (Own control)</td>
</tr>
</tbody>
</table>

3. Port Stuffing: The last option is port stuffing. The exporter may send goods to a port, where the consignments would be loaded into a container by port trust workers. This is the traditional and most popular option, followed in a number of countries. This stuffing
is considered to be unreliable one as the stuffing process is increasingly exposed to natural calamity and also human factors like strike, picketing etc. Further the stuffing broadly falls under two categories viz. Pier and House stuffing. The stuffing when takes place within the port is called ‘Pier stuffing’ and outside the port is called ‘House stuffing’ (refer Table: 1). So except port stuffing, the other two stuffing (CFS and Factory) are called House stuffing.

Figure 2: Responsibility of Stuffing Process

The exporters are keen on putting stuffing delays as they look upon stuffing (a part of logistic system) as an overhead cost on their production and marketing. Unfortunately, the stuffing skills of the workers, particularly in house stuffing are below margin. This is quite natural as exporters engage mill workers who have exquisite skill in manufacturing rather than stuffing. Moreover the factory workers have negative inclination towards stuffing. The simple reason for their attitude is that mostly they are not paid for this overhead stuffing services, though quite tedious. Usually the mill workers think that they do some favour for their employer (exporter). In the developing countries like India, the mill workers just obey their employer’s order as they don’t want fall as prey within the vicious circle of retrenchment.
Naturally, port workers and CFS workers are more skilled in stuffing than factory workers, as their primary work is stuffing. But in some countries like India, port stuffing is often unreliable. More than half the calendar year, port trust workers go on picketing and strike. The transport function is part of the promise made by the exporter to the importer. A price is specified to include dispatch up to a given point and sanctions can be imposed for failure to perform up to a destination in a given time (ITC, 1990). In most of the cases, the sales contract decides the obligation of stuffing (refer Figure: 2). The following are the international sales contracts and the associated obligations:

**Ex Works:** This is the simplest form quotation. But in recent days, it’s becoming less and less acceptable to overseas buyers, in particular in the less developed territories where so much business is available. In this form of quotation, the responsibility of the exporter ends till the consignments leave his factory gate. The importer has to make arrangements for carriage of the goods from the exporter country. Consequently, in this sales contract, the responsibility of consignment stuffing rests on the importer shoulder, which in turn is left to the mercy of methods prevailing in the exporter country (ITC, 1991: 7).

**Other Sales Contracts:** Except Ex Works, all other sales contracts (FAS – Free Alongside Ship, FOB – Free on Board, CFR – Cost and Freight, CIF - Cost Insurance and Freight, DES – Delivered Ex Ship, DEQ – Delivered Ex Quay) emphasis container stuffing to be done by the exporter who has better control over the stuffing operations. Though each sales contract has its own salient features, in all the above contracts the exporters are committed to do the stuffing operation (Branch, 1982 & Mahajan, 1996).

**Conclusion**

Whatever may be the stuffing (pier or house) or whoever does stuffing, there is an inherent need for cohesive and planned methods. Though Stuffing in present scenario can not be decided as useless, it is sub-marginal. There should be proper guidance and training to the stuffing workers. Better planning of the stuffing process is a must for efficient and economical implementation. It is global truth that an unplanned system will fail though was implemented properly. Stuffing proceeds needs some remedy at planning level rather than in implementation.
Thus stuffing is a part of the total cycle of delivery and needs as much forethought, planning, monitoring and management as any other stage in the business cycle, otherwise it can undo all the good achieved in the earlier stages.

References


