

Role of Packaging in Industrial Development

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SUMMARY

The author has given in details the importance of packaging in modern marketing of produce. Details of market requirements, employment potentials, value of output, packaging for exports, utilisation of carrying capacity, and scientific approach in packaging has been discussed.

Proper packaging increases the market value of produce, carries the product to the consumer safely and facilitates storage. This needs a scientific approach in selection and designing of packaging.

INTRODUCTION

There are occasions when a wide-spread controversy between packaging promoters and critics leave many in doubt whether one needs packaging at all. Fortunately, the inter-dependence between the producers, intermediaries and the consumers are fast changing the complexion of this controversy. All the stake holders of modern business, viz. Government, stock holders, customers, managers, consumers need goods in their useworthy conditions untouched, unspoiled, unpolluted, easy to transport, handle, store, uninterrupted supply over time and space. Packaging is a vital link in the flow of goods and is playing a pivotal role in the entire distribution system. It is no exaggeration to say that the wheels of the Industrial Development will slow down, if not come to a halt, without the existence of an efficient distribution system. The challenge of production greatly lies on culminates in consumption.

By and large, every stage of industrial and consumer's consumption is influenced by distribution efficiencies which among other things, are affected considerably by the packaging system.

MARKET EXPANSION

It is a rare situation to arise where there is no room for advantages to be gained by market expansion. For instance, in respect of a large number of our agricultural products specially those that are perishable, the markets remain to be limited in size shrinking thereby the income accruing to the farmers on the one hand and affecting the availability of the products to the urban consumers on the other hand.

It is often stated that 30% of vegetables produced in the country fail to reach their destination markets and perish at the point of production. Such a loss is colossal and amounts to several hundred crores every year. There can be pronounced marketing benefits with a distinct contribution to profitability, if packaging, storage and transportation operations were improved, strengthened and extended to those areas which suffer from these due to their inadequacy or near absence. Often opportunities for improvement are lost because distribution is regarded or seen as a disjointed operation. There are instances where solutions are sought to a series of spasmodic problems, each problem solved to the best of someone's ability in isolation but not as an integrated operation. For example, attempts at improving the graphics on packages, without regard to the conditions of handling, transportation, storage and point of sales displays have not produced the desired results as part of the products has reached its destination in disfigured, torn and dented forms.

A largely substantiated claim can be made that the emergencies of good packaging leads to the improvements in the quality of life. Imagine what would have been the state of our every day lives if goods were not available at places, times and in quantities we demand, our health without life saving and other disease preventive drugs, the hygiene and cleanliness if goods were handled by human hands without a protective barrier, the economies of production if preservation and protection facilities offered by packaging were not existing. It is true that in the Western countries excessive packaging has brought within fold the problems of litter and pollution, but concurrently the field of convenience has expanded multifold. Today, the packaging revolution means to a consumer in the West an easy access to pre-cooked

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food, frozen sea-food of various origin are bying with each other to gain his/her acceptance, great savings in time are affected by shopping under one roof. The spread of super-market philosophy of low prices, low margin, high volume have become meaningful as the products as diverse as food and cameras, liquor and textiles, readymade garments and stationery, domestic appliances and sport goods, toys and ammunition weapons, drugs and vegetables, etc. in wide assortment are available in the departmental stores, super and or hyper markets for consumer benefits. Packaging innovations and creativity had played and are playing a pivotal role in making such operations a great success.

Welfare of the people is an avowed objective of any Government. In a country like ours, where infrastructural facilities of transport, roads and communications are still to extend to a large segment of our economy, the demands placed on the distribution system to reach the rural markets for manufactured goods and agricultural inputs are stupendous. Maximising consumer satisfaction in his unwritten bill o rights.

It is left to the role of packaging to equip the consumer with information about the use of bewildering array of products, so as to ensure the dependability and safety with which products should perform. Recent studies suggest that many of our products do not fulfil this basic requirement and contain information which either is too inadequate or is given in the form least understable to the consumers. The need to overcome this short-coming is of paramount importance particularly for our consumer where innocence simplicity and apathy characterise his personality.

EMPLOYMENT IN PACKAGING

Packaging Industry by its nature is labour-intensive and offers immense scope for a high degree of employment per unit of investment. Further, the packaging industry is capable of spreading itself to every nook and corner of the country provided the markets for its various products are close-by.

There is a demonstrable evidence available in the country to confirm the 'dispersal' nature of the packaging industry in most of the industrial and distribution centres in the country. Not only the industry offers excellent opportunities for employment but a large segment of the industry requires simple skills for producing the end products. This simplicity in skills is particularly beneficial for accommodating persons with relatively less sophisticated educational and technological backgrounds.

The industry occupies a pride of place in the total employment figures of the factory sector. According to the annual survey of the industries 1974-75, it is interesting to know that out of every five factories in

the country was engaged in the manufacture of food products thereby giving the food industry the largest share in the aggregate value of output. The food industry ranked second in terms of employment. The structure of the food industry's working is such that it predominantly leans towards packaging. While the industry accounted for 17% of the total output in the factory sector, 15% of the total employment, it can be safely surmised that half of the employment in the food industry is estimated to be engaged in packaging. Factory employment in 1974-75 accounted for 60.32 lakhs persons employed in various industries like cotton textile, chemicals and chemical products, basic metals and alloys, food products, wood and wood products, etc., etc.

For the end use industries, packaging constitutes a pivotal force in their distribution systems, as without it, the difficulties of deliveries can assume formidable expense and efforts. It is estimated that about 6.6 lakhs persons accounting for nearly 11% of the total employment may be deemed to be employed in the end use industries for the purpose of packaging. To this, we must add, persons employed in the packaging industry per se, including the packing material manufacturers, the converters. On the whole, it is estimated that atleast 20 lakhs persons are directly employed in the packaging industry.

VALUE OF OUTPUT

Product-package combinations are like the siamese twins and should always be viewed as an integrated whole. Rough indications in this direction are suggestive that 1.7% of our per capita income is spent on packaging, a major proportion of these on good-grains. The index of per capita expenditure on packaging of manufactured goods, is an important criteria for judging the status of development and the importance of secondary and tertiary sectors of the economy. In our country, jute based packaging occupies the first place followed by packages manufactured from paper and paper board, tinplate, black-plate, timber, LDPE and HDPE and plywood in order. With our limited forest resources, the substitution effect in finding alternative materials for timber has already been set in motion.

PACKAGING FOR EXPORTS

The export distribution is more complex with more permutations of choice and vulnerability to errors. Export errors can be more difficult and much more costly to correct. Among host of imponderables, most of them are uncontrollable. The exporter has no control or influence on the methods of handling, conditions of storage, transportation, displays, etc. both in the domestic and in the destination markets. In the international trade, multi-modal transportation is the rule rather than the exception. Majority of the export movements continue to depend upon different modes of transport, with structural

differences in operational conditions. A packed product from a factory in Ludhiana in the North may travel by lorry to the Railway Stations, by rail-road to Bombay, by ship to Hamburg in West Germany and lorry to warehouses and to the customers in various parts of the German market. The transfer of goods from one transport mode by result in multiple dangers and hazard of damage, pilferage, loss and delay.

Exposure to climatic hazards for different from those experienced in India is a feature of export operations and necessitates different packaging requirements. This consideration should not only apply to conditions of the destination markets but equally to the extreme conditions experience in transit inside a ship's hold or in a container, in unheated, unpressurised, cargo hold of an aircraft.

Not only for keeping the balance of trade parity, but also to get the maximum advantages of the production economies, it is imperative to take our exports of selected products to heights not yet assailed. Earnings through exports are important to country's economy and programmes of industrialisation. The value of recovery of our exports can rise substantially with a compositional shift from exports in bulk to packaged from in consumer packs. Simultaneously, there is a need to reduce the extent of losses suffered by our products despatched to various destinations in the overseas markets. According to a U.N. study, nearly 30% of the export earnings of the developing countries are loss due to inadequacy in packaging. The same quantum of loss may not be true for the Indian exports, however, by any reckoning, it is estimated to be of a very high order. The situation is quite alarming as India's recovery per unit of exports is low and simultaneously a sizeable portion of the earnings are lost due to faulty packaging.

The export movements are characterised by movements involving (1) longer transit times, (2) multi-modal transportation systems with frequent changes of mode, (3) periods of delays and storage at inter-modal transfer points, (4) international regulations such as markings, packaging material, standards, (5) prevalence of natural or artificially induced variations in climatic conditions and emergence of special hazards, etc. increase the risks to the product safety, quality deterioration. The real productivity of export trade lies in minimising the incidence of such losses and in protecting and preserving what has already been produced. The methods employed for minimising product damages are (i) improved packaging, (ii) use of more favourable transport means, (iii) unitisation, (iv) containerisation and (v) improved handling and storage. The visible quantifiable gains are the reductions in product losses and damages together with qualitative benefits of reducing periods of stock out, adverse customer relations and agonies in establishing the reliance of foreign buyers in the efficacy of Indian exporters. For instance, in markets

where product supply is limited, any reduction in the deliveries arising out of damaged goods is not viewed kindly. Crediting the customers for the amounts lost is no compensation for non-delivery. Similarly, losses suffered in transit have in the first instance the tendency to transfer the liability of the claim to the buyer or shippers leading to a series of protracted negotiations and correspondence. The terms of trade get expanded and often the buyers demand extra contractual compensations and insist on a particular type of packaging resulting in over-packaging, causing diseconomies by excessive use of packaging material, higher freight and insurance charges etc.

PACKAGING AND CARRIER UTILISATION

The productivity of carrier depends on :

- (a) The revenue earned, and
- (b) The speed of turn rounds.

In order to improve the levels of utilisation and quality of service the handling rate must continuously improve so that the time spent at the terminals or in transit delivery points could be minimised. Packaging and its related forms of unitisation of freight, design of handling systems, design of carriers are important considerations that can increase the productivity. Pallet loads often resorted to in sea-bound traffic and air-traffic have brought in a dramatic improvement in the rate of handling. It is hoped that more and more palletisation would be resorted to by our shippers specially those who are unitising the services of air and sea-cargo. The conditions of cargo hauled by road, remains to be as traditional as it was a decade ago. There is hardly any change in the methods of handling, stacking, loading and off-loading for the road transport. Consideration of packaging must be integrated to the system of carrier and their handling operations so that it can confer gains for everyone in the trade.

SCIENTIFIC APPROACH

In today's business parlance, the style of whole packaging requires a scientific approach for achieving optimisation in the various functions of packaging, viz. containing the product, protecting the product, carrying the product through distribution system, facilitating storage, informing the consumer and assisting him in merchandising of the product. The scientific approach required study of the product, its properties, the destination to which it has to go, the legislative measures it must satisfy, the inter-modal transport that carries it, the handling and storage it has to face, the climatic conditions it has to withstand, etc. With such high demanding attributes expected of packaging, it is quite natural to expect that the problem of packaging must be attended to with a skill that embodies knowledge of mechanical engineering, chemical engineering, physics, mathema-

tics, economics and coating. It is a pity that the concept of packaging has not merited the serious attention it deserves. In many quarters, defacto it is regarded as wrapping without much concern for product safety and its operation. In others, it is regarded as something which could be over-bearing and over-protective leading thereby to the diseconomies of various kinds which often results in making our packaging too expensive, extending it beyond the optimum level or in most of the cases making it too meagre and skinny. With the current state of the art and appreciation of packaging, one should not be surprised to come across colossal losses suffered by our economy. To show indifference to the protection of the product at great expense and to allow waste of resources, is nothing short of violation of business and economic obligations particularly for a country like that of India. In an economy where scarcity of resources is rampant, conservation and proper utilisation of resources should be a crusade for many rather than a hobby for the few. Investigation have shown that 80% of the damages can be avoided or minimised to a considerable extent provided effective packaging was attempted before the goods leave their origin. For instance, a package that is weak, is damaged in transit, is further prone to multiplying product damage as its contents become highly suscep-

tible to compression and dragging pilferage, etc. Prevention of these damages greatly lie within the sphere of influence of human beings. The care that could have been bestowed upon in designing, structuring, use of material of packages at the stage of product design itself, after taking into account, the environmental factors of climatic and journey hazards, handling and storage conditions, display and aesthetic consideration would go a long way in minimising the incidence of damage experience in transit and absence of attention getting attraction at the point of sales.

Packaging has a vital role to play in the industrial and economic development as it minimises the incidence of damages and thereby ensures a process of higher productivity in the phenomenon of nursing and protecting what has been already produced facilities expansion of markets. Even the theory of chance supports the contention that it is wiser to invest in areas which are certain to produce results than in areas which are prone to speculation to produce results. Expenditure on packaging is a sure and secure investment that is certain to yield results with a high degree of pay-off. It is hoped that the business and economic lights that eluded our entrepreneurs in the past would not be able to elude them anymore.