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STIMULATION OF INDUSTRIAL DEVELOPMENT THROUGH
MODERN MANAGEMENT OF DISTRIBUTION ^{1/}

by

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1. Introduction

In the light of the basic needs policy of the World Employment Conference* modern distribution - especially the distribution of food - is a vital requirement particularly for the population in the rapidly growing urban centres. It is furthermore an economic activity of substantial proportions, the volume of which is often underestimated because of the unspectacular appearance of food retailing outlets, markets, brokers offices, etc., particularly in developing countries. In Paris, the sheer size of the antiquated system designed to provide food to the metropolis was once a tourist attraction. As the Halles disappeared the city became the forerunner of an entirely new - and controversial - system of distributing food: the network of hypermarkets where consumers buy food - and non-food articles - on sales areas of one hectare each. Wholesale markets in developing countries are very often very impressive as for instance the supersized market in the city of Buenos Aires. It tends, however, to be overlooked that in the same city 64,000 retail stores procure the population with its nutritional requirements, and that these retail stores represent a far bigger economic activity than the combined activities of sellers and buyers at the wholesale market.

It is, perhaps, of interest to observe that the distributive sector even in highly industrialized countries makes a contribution to the gross national product which comes close to or even exceeds the contribution made by all manufacturing industries combined. As food distribution represents about half of the activities of the distributive sector, food wholesaling and retailing becomes one of the most important economic activities in any country. This is a natural consequence of industrialization and urban concentration. It normally exceeds the contribution which is made by the food processing industries to the respective gross national products of many developing and industrialized countries. Food processing, in turn, is the leading manufacturing activity, particularly in developing countries where it reaches a share of up to 32% of total manufacturing industry (for instance in Indonesia). Its average share of the gross national product as a percentage of all manufacturing activities is 23% in developing countries.

* Within the programme of action of this Conference in 1976, the need to strengthen distribution systems is mentioned repeatedly, for instance in the beginning within the framework of macro-economic policies (point 7b) and within the ambitus of overall employment policy (point 11).

It is observed that in the process of economic development, the creation of new production capacity receives limelight attention. It is overlooked too often, that industry cannot exist or grow without equally modern distribution facilities.

What implications are there in the modernization of food distribution systems? What does modernization mean in this respect? The answer to this question will focus on two aspects of distribution which both are inter-related:

- The creation of vertically and later horizontally integrated distribution systems;
- The appearance of technical innovations in retailing and wholesaling.

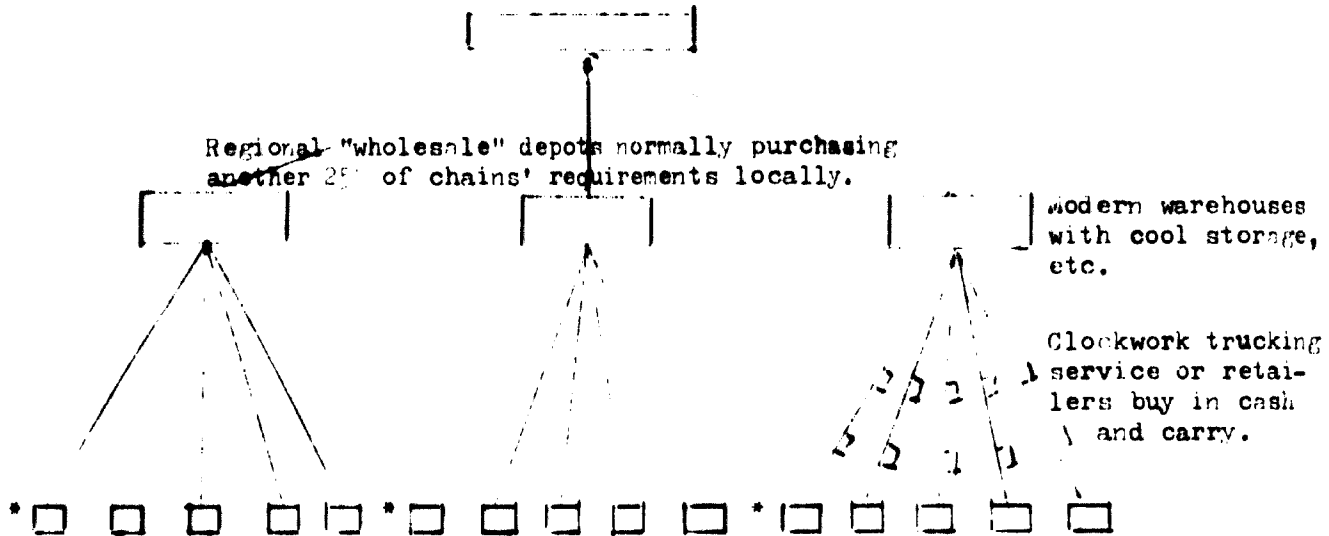
2. Discussion

A) The impact of economic changes in food distribution:

Economic integration in the area of food distribution means, that, in one country with a population of 60 million for instance, only 50 to 100 persons need to be convinced today of a given product to ensure its distribution in 90-95% of all retail stores, as only that many decide on the products to be purchased. It also means regional and national purchasing of 40-50,000 independent retailers through two retailer cooperatives, plus a similar amount of retailers organized in about a dozen wholesaler cooperatives and both systems coexisting with an important organization of consumer cooperatives and a certain number of retail chains. The integration follows the same pattern for each one of the different networks:

Model of an Integrated Food Distribution System

Central Purchasing and Coordinating Office normally buys approx. 25% of the systems requirements in large quantities from domestic and foreign manufacturers, food processors, agricultural co-operatives, importers, etc.



* Retail outlets: Unless owned by the system, they buy up to 50% of their requirements from suppliers outside the system. Items such as fresh fruit and vegetables, locally manufactured goods and products which are sold by door to door service of manufacturing companies (freshly roasted coffee for instance).

As it was observed in all countries studied, integrated systems work with smaller margins than non-integrated systems, as long as they compete with each other. This is the case practically everywhere. Only horizontal integrations of trades with specific products have been observed to develop monopolistic patterns, particularly in developing countries.

Vertical integrations - in view of their economic power and difference in orientation - have been strong enough to break such monopolistic patterns by searching direct access to the producer.

The advantages of such integration to the development of food processing

industry are:

- The reduction of the selling cost of the industry, which now can organize its sales system in a more efficient way;
- The security of a reliable demand represented by periodic large quantity purchases, once an article is introduced;
- Finally - and perhaps somewhat more controversial - the imposition of high quality standards combined with low cost production which the food industry must accept from the modern purchasing offices of integrated distribution systems.

Selling cost by the industry, in the absence of integrated systems, is best illustrated by the experience in one developing country with a total population of 10 million people, where the following conditions were observed. One manufacturer of milk and dairy products and a sales volume in the order of \$ 80 million per year maintained 300 salesmen to visit continuously the some 60,000 retail outlets of the country. Another manufacturer of sweets, candies and similar items with total sales in the order of \$ 30 million had 400 delivery cars visiting the same retail shops and maintained 9 large cool deposits for redistribution in different areas of the country. Retailers, who were interviewed complained about the up to 30 sales representatives they received daily to promote different items of different manufacturers. Food manufacturers, who cannot maintain such an impressive sales force are either reduced to small scale, high margin production or have to look for strong partners as happened to another company in the same country, which maintained four independently operated sales systems in the capital city where it was selling an equal number of different product lines.

One might argue, that the benefit of integrated food distribution systems in these cases would not be to industrial development but exclusively to the consumer, who would pay less for the products as a consequence of the reduction of cost on manufacturers level. However, simplified distribution procedures would make it possible for other

companies to enter the market, and through competition increase their combined volume of production as has been observed in many similar cases.

The possibility of periodic large quantity purchases, once the articles of a food manufacturing company are introduced in integrated systems, by the sheer size of demand represented by them, is an additional advantage to food processors, in particular to those companies which would otherwise have had to rely on sporadic purchases by market wholesalers. It is not necessarily an advantage to those firms, who already have a strong market position through their organized - but costly - sales force.

The controversial question, whether the power displayed by modern purchasing offices is of advantage to the food processing industry, might be answered as follows:

Those companies, who learn to comply with higher quality standards, which tend to be imposed by these offices, and who are able to reduce their production costs through rationalization, will have a more than proportional growth as they will absorb the sales of less competitive firms in their areas. The capacity to produce according to standards and at low cost, is one of the prerequisites to industrial growth.

It may be of interest to observe several other tendencies which sooner or later adversely affect the less efficient companies:

- The increasing capacity and interest of governments to control the quality of food items sold to the population;
- The increasing pressure for higher quality from the population itself. In some countries a pronounced interest in the keeping dates on packages is observed. These have to be printed now on the package. Thus, it is unthinkable these days, that one can find food products in retail stores, which have been on the same shelf for one or two days. This was still possible 20 years ago in smaller retail stores, for instance in Western Germany.

It has been said that product policy is the key to industrial development and, in particular, to exports. Therefore, a country with modern

integrated food distribution systems possesses a most valuable tool to raise the standards of its own industry - and agriculture - to the level required for competition in international markets.

B) Impact of technical changes in food distribution

The advantages of technical improvements in food distribution are of an even greater importance to food processing industries:

The introduction of self service, while reducing the cost of retailing, requires prepackaging of products which were sold in bulk before. Not only the food industry, but in particular also the packaging industry, which registered substantial annual growth rates, benefit from this development. Prepackaging of milk, flour, sugar, dried vegetables, but also cheese, fruit, sausages, meat, etc. under generally better hygienic conditions than those existing in retail stores, is an industrial activity of mutual benefit to the consumer and the industry, which was greatly accelerated through this distribution method. As just one recent example of how the packaging industry is stimulated, the activities of canning, which are carried out by Spar in Spain, are worth mentioning. Some areas of the packaging industry are labour intensive and do not require highly skilled workers as in the case of wooden crates and packages.

The availability of refrigerated cabinets on the retail level, cooling facilities on the wholesale level and clockwork type trucking services make it possible to sell fresh products in retail stores, where previously large losses and deteriorations of quality were registered, when the purchases from the market could not be sold the same morning. There again, food processing in the form of grading and sometimes packaging is required.

The advent of efficient systems for the wholesaling and retailing of agricultural products makes food processing near the farm possible. The higher cost of grading and packaging is often more than offset by the elimination of waste. In this connection, a study of 11 agricultural products in a tropical country revealed losses between 18.6% (oranges) and 63.6% (avocados) from the producer to the consumer. In the case of avocados, these would have had to be sold to the consumer at least three

times the price paid to the farmer - just to cover the cost of waste, in transportation and handling. Such multiplications of price are indeed often observed in developing countries, at least part of which must be attributed to the inefficiency of the system. In another country it was observed, that only the morning milk was collected from farms, as the truck did not pass in the afternoon, with the result that the afternoon milk had to be thrown away. In the same area, where the study was made some ten years ago, a modern grading plant for oranges was started, which supplies much of its output on a large integrated chain of retail stores. The quality of these oranges is far above average, reliable, and the higher price paid to the farmer does not reflect in a higher price paid by the consumer because of the efficiency of the system.

A farmer cooperative, which had started with some industrial activity such as grading and packaging of oranges, has later integrated juice making and packaging facilities. It now exports part of its processed products such as juices and pulp. Slaughterhouses, which start to supply prepackaged meat to modern food outlets can more easily integrate other meat processing facilities once a certain size of demand for these is established.

As the latest development in improving food distribution to maintain a maximum of freshness and quality from the producer to the consumer, the growth of frozen food is of particular interest. Its impact not only stimulates the manufacturers, who specialize in this new type of product but also the manufacture of electrical cooling equipment. The benefits to the diet of the consumer derived from this new process, particularly in tropical countries, are unchallenged.

A technical innovation which has substantially contributed to the improvement of consumer goods distribution is simply the adequate size of stores. Adequate size, of course, means different things to different surroundings. 80 sqm, 200 sqm, 1000 square metres and any mixture of different sizes can be the optimum, depending upon density of population, assortment, income distribution, mobility, etc. In most developing countries, sizes of retail outlets are far below the optimum. In industrialized countries, the latest developments show a mixed tendency. One in the direction of supersized

stores, where up to 6000 different food items made by a large number of manufacturers - also medium-sized producers - are offered, and another development in the direction of discount stores, where only 300 different food products are sold with extremely low margins.

C) Discussion of problems

Problems of modernizing food distribution in developing countries have been seen in:

- The possible reduction of employment by increased productivity, and
- The requirement for important investment in modern shops, warehouses and transportation facilities.

The reduction of employment through modernization of distribution has not been proven. While many inefficient sales outlets disappear, new employment is created with the modern chains in different activities. Some studies appear to indicate that the proportion of the population employed in food distribution does not differ between developing and industrialized countries. Salaried personnel takes the place of store owners, semi-skilled labour that of unskilled persons.

It appears that the benefits to be derived from accelerating or at least not stopping the modernization of food distribution, highly compensate for the possible requirements of the economic system. Free labour could thus be employed in the new industrial activities of food processing, the manufacture and application of packaging material and the production of refrigeration equipment. It could in part also be employed in the construction of new distribution facilities.

The total cost on a macro-economic level would only be slightly higher than the cost involved in letting an antiquated system of food distribution persist in absorbing a large amount of adult persons who could usefully be occupied in value creating activities.

The capital investment required in distribution will certainly deserve further study. If one assumed that 2-3 square metres of wholesaling and retailing space are required per consumer, the building requirements and its

respective cost can be estimated. In industrialized countries, the investment necessary will probably be somewhere in the order of \$ 1.000 to \$ 2.000 per inhabitant, but considerably lower in developing countries with a low cost of labour, using local raw materials. Subsidizing such activities should be considered.

In a highly industrialized country such as the USA, the capital invested in the retailing and wholesaling is in the order of several hundred billion US dollars. In developing countries the additional investment required would be smaller on a per capita basis but even higher for the total of the developing countries combined. Such huge developments will, of course, only be possible in years and maybe in more than a decade. As they will absorb local labour, local raw materials and finished products, they will, however, not normally be a stress to the balances of payment. The employment of a force of semi-skilled people in such labour intensive activities would have a multiplier effect on the economy as a whole.

The construction of wholesale markets such as the 50 terminal markets planned to serve the 60 million people population of the Indian province Bihar at a total cost of US\$ 23 million appears as a first step only. Such markets will have to be complemented by a substantially bigger investment in retailing and wholesaling facilities all over the state.

It may be argued that the continuation of traditional local retail markets, particularly in rural areas, will be preferable to the modernization of retail stores. The experience shows that, while such markets still continue performing their function, they are steadily losing in importance where more efficient systems appear in the trade. There are strong economic justifications for such developments. Investment in food distribution has been one of the most lucrative activities in the post-war area of industrialized countries. Although these developments normally start in urban surroundings, rural areas and rural consumers - for instance in Bolivia - have been observed to closely follow the pattern of purchasing and consumption of urban consumers.

It is felt that the waste as it presently exists in the form of spoiled

merchandize on the way from the farmer to the consumer, in terms of pseudo-employment of labour, in terms of badly utilized transportation and warehousing facilities, would be reduced substantially and that such reduction will more than compensate the economic cost of an improved infrastructure in food distribution.

3. Entrepreneurship as a prerequisite for modernizing distribution systems

It can be observed, that the moving forces behind the modernization of consumer goods distribution in industrialized countries are limited to a far smaller number of people, than for instance the universe of professionals which presently deals with the subject of industrial marketing. In Western Europe for instance, one could estimate, that there are only 2.000 distribution professionals against perhaps 100.000 marketing professionals. It may be assumed, however, that the overall impact of this entrepreneurial innovative group on the respective economies far exceeds the influence of the business oriented marketing professionals in industry whose role is becoming increasingly limited towards micro economic objectives.*

Considering now the practical possibilities which exist for entrepreneurial persons in governments and in the private sector of developing countries to accelerate modernization of their distribution sector, these have two main aspects:

- The acquisition of professional knowledge and skill in this field - the complexity of which is often underestimated.
- The development of initiative and socio-political - i.e. also financial support for implementation purposes.

In both respects, technical cooperation may be helpful. Although the provision of long-term experts will be difficult because of the limited number of professionals as yet available, short-term experts and consultants may provide expertise in a concentrated form. Fellowships to

* To illustrate this point: The fight for bigger market shares between industrial companies may have a stimulating effect on the economy as a whole; the organization of productive distribution systems, however, has a more immediate impact.

specialized schools - such as the London School for the Distributive Trades, Credoc in Paris, or organizations like the NRMA in the US (and there are many others) could be combined with study tours to distributive organizations, documentation centres, research institutes and specialized consultancy organizations in this field. Also some governments and semi-governmental bodies can provide substantial background material in this area.

The documentation, which has started to develop on this specific subject is large and comprises statistical comparisons as well as training courses for retail shopowners, models for the determination of where to put new wholesale depots or retail outlets and laws issued by governments (for instance Argentina) for the improvement of distribution facilities, etc.

With regard to the promotion of an awareness of the modernization programmes themselves, short symposia, ad hoc consultancy assignments, the publication of news letters and magazines, can be planned and carried out in collaboration with international consultants and experts.

Whether the initiative comes from the universities where chairs on distribution could be created, or from the governments who want to stimulate initiatives in this area as Spain successfully did fifteen years ago or from private entrepreneurs of which there exist a number of outstanding examples, it is important that it is well planned and then executed with the determination to achieve the desired practical results.

Technical cooperation between developing countries in this field has already started on a moderate scale. For an acceleration of the required process, intensified technical consultation between countries would carry very promising results.

4. Conclusions

UNIDO, in cooperation also with other agencies of the United Nations System, is concerned also with the creation of an awareness for the urgent need to improve distribution systems, which is particularly obvious in those countries where urban centres grow proportionally fast.

As a link between industry, agro-processing activities and agriculture on one side and the consumer on the other side, distribution systems in developing countries are the weakest member of the chain of economic development. Their strengthening will automatically benefit - more than proportionally - industry and consumer alike.

Modernization of the distribution system does not have to lag behind industrialization processes. On the contrary, it may even stimulate and accelerate them as it probably did in the post-war area within the industrialized countries. Changes in this field may, however, take such strong personalities as that of a Duttweiler in Switzerland, who fully revolutionized the sector, which, until the creation of Migros, had been completely antiquated.

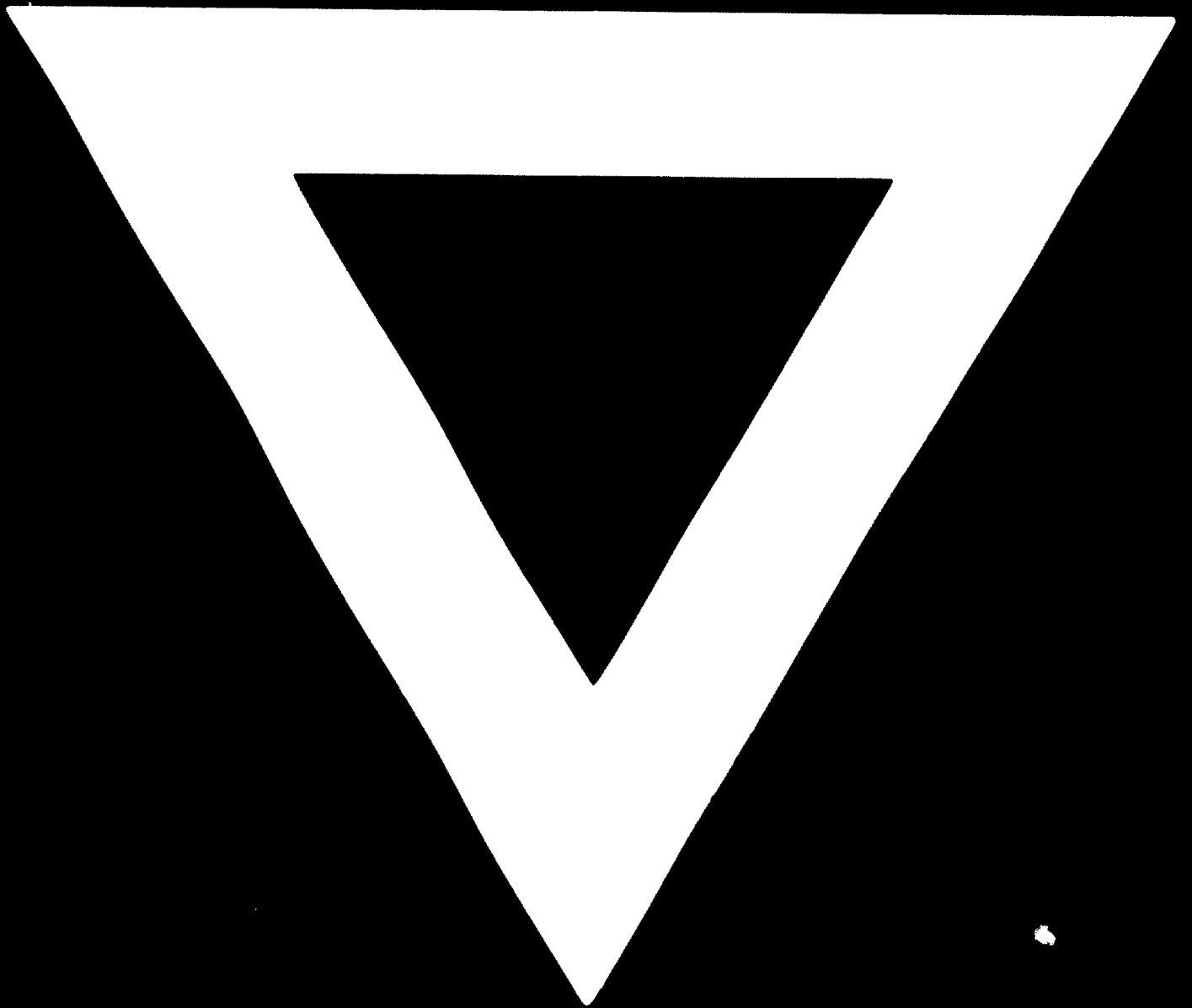
As it attacks vital problems of procurement and economic growth at their roots, the strengthening of distribution systems can be considered as even more important to a country's overall industrial development, than the improvement of marketing capacity in industry - which is recognized by many countries to be the key to successful industrialization programmes.

UNIDO offers to design technical cooperation projects in this field and inquiries are welcome to:

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