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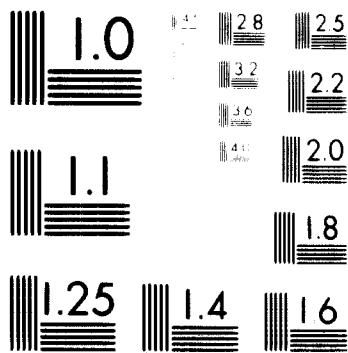
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# Report

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The Economist Intelligence Unit

INDUSTRIAL DEVELOPMENT SURVEY  
FOOD, BEVERAGE AND TOBACCO INDUSTRIES

October, 1970

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INDUSTRIAL DEVELOPMENT SURVEY  
FOOD, BEVERAGE AND TOBACCO INDUSTRIES

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## INTRODUCTION

Food, beverages and tobacco, the manufacturing category discussed in this section, deals with the processed products covered by the I.S.I.C. numbers 20-22. They represent, as one of the traditional light industries, a most important part of the economies of developing countries and one which still offers opportunities for progress and expansion. For the most part in this report, food, beverages and tobacco, though diverse in nature and content are dealt with as a whole, except where it is occasionally more convenient to separate them, such as in the section on trade where the trends of the food and the beverage groups are significantly different. Similarly the various regions are usually considered as regions unless there are useful individual country observations to be made. The main weight of the article falls on the developing economies but there are sections on both the developed market and centrally planned economies and important comparisons are made between these areas.

The terms of reference together with regional definitions, are included in the volume "General Industrial Review".

## ASIA

### Economic Trends

Output. Data on output are given in Appendices I and II. During the latter half of the last decade output of food, beverages and tobacco in the Asia region has increased at an average annual rate of some 6.7 per cent. This compares with a growth rate of only 3.9 per cent from 1960 to 1965. However, in absolute terms Asia continued to produce, in 1969, only 5 per cent of world output but 38 per cent of the total output of Developing Market Economies, a slight increase on the 36 per cent of 1965. Food, beverages and tobacco remains the most important manufacturing category in almost all the Asian countries, for example in Thailand accounting for more than half of total manufacturing output. Only in countries with certain particular manufacturing products such as India with textiles, Malaysia with rubber and Iran with petroleum does this category fail to be the most important.

However, a general observation is that the growth rate of food output is generally slower than that of the other manufacturing sectors. Usually however, the absolute size of the more dynamic sectors is so much smaller than food that it may be some time before food output ceases to be the largest.

Employment. In an examination of employment there are two particular points of interest, employment opportunities and productivity. The latter of these is considered more fully under technological trends.

In the Asian developing area the growth rate of the numbers employed in food, beverages and tobacco was from 1960 to 1965 2.3 per cent, since when there has been no growth. Thus in terms of employment opportunities, not much is offered in the food processing sector. India dominates the employment situation since just under half the Asian total is employed in that country, though Indian output is less than a quarter of the output total. The situation in India goes a long way to explaining the low output per man in Asia.

Trade. The destination of Asian exports is predominantly to the developed economies. The remainder is mostly intra-regional trade with only a very small proportion of exports going to the other developing regions, though in the Middle East part of Asia, at the junction of three continents, there is a higher level of inter regional trade. Taiwan is the dominant exporter of food products followed by the Philippines, Thailand, the Ryukyan Islands, Iran and Malaysia. Taiwan is also the most significant exporter of beverage and tobacco products.

#### Technological Trends

In Asia production in most of the food sectors is led by India. This however is the result of that country's enormous size and when the individual outputs per man are compared it is other more developed countries such as China (Taiwan) and Korea which are the industrial leaders. In beverages and fish products these two countries are more important than India even in terms of absolute output.

Of all the developing regions Asia has the lowest output per man, much lower than even the average for the whole developing world. In dollar terms output per man has increased from 511 in 1960 to only 590 dollars in 1967, though in 1966 a peak of 606 dollars was reached. This output per man is less than one eighth of that of the Developed Market Economies, just over one twelfth of the Centrally Planned Economies' and only slightly more than half of the Developing Countries' average. The position of Asia in comparison to the rest of the world during the last decade has been a slight deterioration, since the continent has not kept pace with the world rate of growth in output per man.

As for individual products there have recently been developments in Asia to boost processed fruits. In Malaysia, the Pineapple Cannery of Malaya has been formed as a cooperative for the processing of small holders' pineapples. This cooperative processes sixty per cent of the total small holders' produce and in 1975 should have an intake of over 300,000 tons. Growth of fruit processing has been particularly rapid in China (Taiwan) also. In India there is a scheme of export subsidies and import



entitlements. The aim in encouraging fruit processing is to help reduce the size of the harvest peaks and bring more steady trade to the area. Developments in skimmed milk are to help alleviate protein deficiencies. Condensed milk trade from the developed countries is being superceded by the establishment of milk recombination plants utilising imported milk powder and milk fat or domestic vegetable fat for local consumption of condensed or evaporated milk. Such plants are often joint enterprises of local interests and exporters of dairy produce such as New Zealand or Australia, and can also be used to make other foods such as bread and various animal feeds.

#### Investment Trends

The pattern of investment in Asia varies considerably from country to country. A few countries such as Korea or China (Taiwan) are much nearer to a developed situation and hence use more sophisticated means of production, having been fortunate enough to receive larger quantities of foreign aid than their neighbours. They are two of the top producers of food, beverage and tobacco products in Asia thanks to the greater quantity of capital invested in this sector. However, this is due only to a greater overall level of investment and not through discrimination in favour of food processing. The basic Asian situation is of low investment generally. In spite of heavy Asian dependence upon foreign aids the foreign exchange constraint has been such as to severely limit economic growth. This lack of foreign exchange has limited the quantity of goods the continent can import and is certainly damaging in food processing where much of the new and best machinery has to be imported. Thus in many of the technical developments in food processing Asia is not able to keep abreast of the developed world.

#### Future Trends

According to output statistics the annual growth rate in the Asia developing region has been erratic, with rates of over 10 per cent from 1965 to 1966 and 1968 to 1969, 5 per cent from 1967 to 1968 and no growth at all from 1966 to 1967. The average growth rate over the decade has been just more than five per cent and trends in technology and investment have undergone no dramatic transformation which would alter the future

progress of the industry. If, as expected, growth does continue at this average rate, then in 1973 output would be just less than 5,700 million dollars.

## LATIN AMERICA

### Economic Trends

Output. Data on production of food beverages and tobacco are included in Appendices I and II. From 1965 to 1969 the growth rate of output has been 4.3 per cent, the same figure as from 1960 to 1965. Latin America's contribution to world output was in 1969 still seven per cent while it's share of the Developing Market Economies' total fell slightly to 52 per cent from 54 per cent in 1965. Food, beverages and tobacco is the largest manufacturing group in all the Latin American countries especially in the least and intermediate developed economies of the region. In Nicaragua, Costa Rica, the Dominican Republic, El Salvador and Guatemala for example, more than half of the manufacturing output comes from this source. One notable feature of the Latin American region is the industrial dominance of three countries, Brazil, Argentina and Mexico, who produced in 1969 57 per cent of the region's total food processing output, an increase of two per cent over 1965. The annual growth rates over the 1965-1969 period of these three countries' food, beverages and tobacco output was in every case higher than the average for the region, ranging from Brazil's 4.8 per cent to Mexico's 6.0 per cent.

Employment. During the latter part of the last decade from 1965 to 1968 the average annual growth rate of employment has been 4.4 per cent faster than the 2.5 per cent in the first five years. These changes include great variations across the continent from an absolute decline in Argentina to rapid growth in Mexico. In 1960 Argentina employed 415,000 persons and in 1968 only 295,000, whereas Mexico employed 473,000 in 1960 and 952,000 in 1968. Mexico thus offers greater employment opportunities, Argentina greater productivity.

Trade. The pattern of Latin American trade is similar to that of the other developing countries. Exports go mostly to the developed economies and in only small amounts to the other developing areas, a trend which is, if anything, being increased by the growth of regional economic cooperation within the continent. Argentina with 113.4 million dollars of food product exports in 1967 is the leading country followed by Brazil and Mexico.

### Technological Trends

Product Range. Throughout Latin America there is a wide variation of product importance and product performance. Argentina is one of the more advanced countries, so with the help of its large beef production, it is one of the largest world exporters of canned meat. Argentina also produces the most butter, though Brazil is the dominant country in terms of dried milk and cream output. Chile has the greatest output of frozen and salted fish while Brazil and Venezuela produce the most tinned fish. Brazil and Mexico supply most of the tinned and bottled vegetables and fruits and along with Venezuela juices too. Useful new developments, discussed later, however, are helping the smaller Latin American countries to enter this sector. Frozen vegetables and fruits are of significance only in Mexico which is competitive thanks to payments to growers being only half of those in the U.S. Overheads are high, however, with the growing season only short. The beverage industries are as expected largest in Mexico, Brazil and Argentina with beer especially important in Mexico and wine in Argentina.

Value Added per Person. Latin America is the most technologically advanced of the three developing regions. Although output per man has only grown slowly from 2,039 dollars in 1960 to 2,172 dollars in 1967, slower than the world average and slower still than the developed world the position of the continent compares more favourably with the rest of the world than either Africa or Asia. However, its performance is still such that the lead of the developed countries is increasing. Of the individual countries it is again Mexico, Brazil and Argentina which dominate the scene. Although total output in Mexico has increased the fastest of these three, output per man has declined. In Brazil output per man has increased slightly but in Argentina progress has been rapid with an increase from 1,690 dollars per man in 1960 to 3,295 dollars per man in 1968.

Technical Changes. Some of the most interesting developments are in the fruit processing sector where it is possible to use simpler and cheaper techniques to encourage progress by developing countries. In Mexico for example small fruit juice processing plants which take an input of around 50 tons have been established. Units of this size allow an industry to rely initially on the home market and then to expand into exports. Already some of these new factories in Mexico have obtained valuable trade with the United States. A development like this is very useful for the least developed Latin American

countries. Costa Rica, Puerto Rico, Guatemala and Nicaragua are all experimenting in this sector. Also in Latin America as well as in the developed world, there are new developments in foam mat drying to produce instant fruit juice powders which would save on weight bulk and storage.

#### Investment Trends

Latin America suffers from the main investment problems of the developing world in that there is a shortage of capital investment both from the domestic and the external market. Traditionally in Latin America there has been a suspicion of foreign investment, a fear that the area's resources were being exploited and that the investor was taking the profit. On top of this what foreign capital there is tends to concentrate in the high profit making industries that is the large heavy industries, with the result that the percentage of investment in food beverages and tobacco is much less than that sector's total percentage contribution to output. Since the individual firm processing food products is usually small, there is also less opportunity for access to finance from the domestic money market. With small output, capacity frequently underutilised, equipment out of date and poor entrepreneurial skills there is also limited availability for self-financing out of profits. It is the high tariff barriers common to the Latin American markets that has kept many small, family businesses going. This has not helped food processing to become more competitive on world markets.

#### Future Trends

Of the developing countries Latin America has had the lowest growth in output but also the most steady, some 4.3 per cent during the whole decade. With a continuation of this growth rate output would expand to almost 7,500 million dollars. One force that could possibly boost this figure is the expansion of markets through the development of intra-regional trade encouraged by economic groupings.

## AFRICA

### Economic Trends

Output. The average annual growth rate of food, beverages and tobacco in Africa was 4.6 per cent from 1965 to 1969, a decrease from the 5.7 per cent of the previous five years. This means the importance of Africa in the total world industry remains extremely low. In both 1965 and 1969 the African share of total output was 10 per cent of the developing countries' total and only one per cent of the world total. As with the other developing regions food is usually the leading industrial product. Even where it is not the biggest category, such as in Tanzania where textile production is greater and in the Congo where basic metal production is very important, it remains the next largest with a share of industrial output of at least one fifth. In Uganda the share is almost fifty per cent of total industrial production.

Employment. In Africa the number employed in the food processing industries has increased rapidly from 412,000 in 1960 to 658,000 in 1967. Thus although the absolute numbers involved are low, in relative terms there are considerably greater employment opportunities in this sector. It also means however, that over the same period Africa has in fact suffered a decline in output per man. This is unlike the situation in the other two developing areas where growth in employment has been slower but where productivity per man has not declined.

Trade. Africa conforms to the pattern of Latin America and Asia in the destination of trade but has differed slightly in the rate of growth. This difference is caused by the importance in the North African countries of the wine trade which has declined quite dramatically during the nineteen sixties following upon independence and a drop in sales to France. This has affected the overall performance of the food, beverages and tobacco sector. In food products alone the Ivory Coast has been one of the better performers with 21.6 million dollars of exports in 1967.

### Technological Trends

Product Range. Most types of processed foods are produced in developing Africa but on such a completely different scale from those in the developed world. In the processed meats sector Tanzania and Kenya produce significant amounts but in recent years there has been no growth in the total output. In most other products such as dairy, canned fruit and vegetables, juices and confectionery, the leading countries are the more developed, for example - Morocco, Algeria and Egypt. In fruit processing however, there has been some expansion in Ghana and the Ivory Coast especially in pineapple processing in the latter country. In Kenya pineapple canning figures prominently in a programme negotiated with the World Bank for expanding the amount of credit available to small farmers.

Value Added Per Person. In the continent as a whole output per man has actually declined from 1960 to 1967 though the low was reached in 1966 and the trend may now be upwards. In absolute terms African output per man is much higher than in Asia, but not as high as in Latin America. The figure of 1,530 dollars per man in 1967 is just under half of the developing countries' average, but less than half the world average and less than a third of the developed market economies.

Technical Changes. As for individual technical improvements one of the most significant is the meat irradiation scheme that was authorised in 1968, following the approval of irradiation of wheat products, canned bacon and potatoes by the U.S. Food and Drug administration. The plant in Tanzania was designed for the whole production process from slaughtering to distribution. Irradiation is potentially an extremely useful new process for the developing countries, since it keeps food fresh for much longer periods, requires no special handling and facilitates delivery. African countries adopting this process would stimulate their food industries, benefiting both home consumption and employment, income and export opportunities. The Tanzanian plant is the first of its type.

### Investment Trends

The problems of investment in food processing are even more severe in developing Africa in a situation where foreign private investment concentrates in the higher profit making extractive industries to the neglect of an industry which requires great effort in the supply of the basic unprocessed product, quality control and the provision of markets to make a reasonable profit. Equally the governments of the African countries are loathe to deny investment to their heavier industries where they feel the main hopes for their countries' economic growth lie, so again food may be neglected. Foreign aid to Africa has not been increasing to an extent desired by the recipient countries and here also food processing is not considered a high priority. Thus the food sector is left very much to its own devices in the form of self-financing from profits and private loans from the underdeveloped domestic sources of finance.

### Future Trends

Growth of output in Africa slowed after the beginning of the last decade but has over the last few years recovered again to about 5.4 per cent per annum. If this rate continues output will go to 1,200 million dollars in 1970 and 1,400 million dollars in 1973. This however, remains an extremely low absolute level of output. One reason for the African region not expanding any more quickly and in fact suffering the slow down in growth in the middle of the decade has been the poor progress in technological development. The later improvement in 1967 in output per capita in Africa will have contributed to the better performance at the end of the decade.



## DEVELOPING COUNTRIES - SUMMARY

### Economic Trends

Output. The output situation of the food processing industry is similar in all of the developing countries. Though the aggregate growth rate 5.3 per cent is at least higher than that in the developed market economies, the share of total world output remains only 13 per cent, the same as in 1960. Even in Africa where progress began from such a small base no rapid change has occurred. Apart from a few exceptional countries food, beverages and tobacco is the most important industrial category in the whole of the developing world, the greatest variations in this pattern occurring within rather than between each region.

Employment. During the sixties employment in the developing countries has increased more rapidly than in the developed market economies but just slightly slower than in the centrally planned economies. Compared to other manufacturing industries in the developing world the rate of growth of employment in food, beverages and tobacco has been slower than all others except for textiles, the other leading traditional industry.

Trade. In terms of trade it is convenient to consider food products separately from beverages and tobacco because of the two quite different trends. Table 1 shows that trade in food products with the Developed Market Economies has increased by 12 per cent per annum between 1964 and 1968 compared with an annual increase in world trade of only 7.4 per cent. Thus in 1968 the developing countries provided 19.9 per cent of exports to the Developed Market Economies compared with 16.9 per cent in 1964. Beverages and Tobacco trade from developing countries however, declined by 16 per cent per annum, leading to a drop in world share from 20.8 per cent to 8.1 per cent. From 1964 to 1968 the average annual increase in food products' trade from the developing world was slightly higher than the average for all manufactures. This lead was lost, however, in the last year of this period.

Table 1. Imports of Selected Groups of Manufactures by 18 Developed Market Economy Countries from Developing Countries and the World 1964, 1967, 1968 (million U.S. \$)

SITC Number	Product	From World		From D.C.'s		Average Annual % Increase		D.C. Percent- age Share					
		1964	1967	1964	1967	1964-68 World	1967-68 World	1964	1968				
Ex 0	Food products	2,662	3,553	3,793	480	678	755	7.4	12.0	6.8	11.3	16.9	19.9
Ex 1	Drink and tobacco products	1,250	1,435	1,596	261	145	130	6.4	-16.0	11.4	-10.5	20.8	8.1
	Total manufactures	67,186	90,074	104,626	6,261	8,230	9,642	11.7	11.0	16.2	17.2	9.5	9.2

Source: U.N. Commodity Trade Statistical Papers, Series D and special tabulations by the U.N. Statistical Office.  
 Note: D.C.'s - Developing Countries.

Consumption. The demand for food, beverages and tobacco is more inelastic than for other consumer products, such as motor cars or refrigerators. However, at the low level of consumption existing in the developing countries this is less the case, so that as incomes increased there would be a significantly increased demand. In some particular processed foods and for processed foods as against unprocessed, staple foods there is in fact greater income elasticity of demand. Demand is further stimulated by the drift to the cities. Hence the production of processed foods needs to become more efficient to meet the growing demands that a growth in income creates. This growth in demand however, does not disguise the smallness of the domestic consumption base which leaves the developing countries still dependent on trade for the success of food processing industries. The proportion of processed food output consumed at home varies from country to country. Whereas in some countries exports may be low and food processing more important as an import substitute, in others where there is a particularly well developed industry such as the Ivory Coast where fruit canning has been expanding rapidly and in North Africa where wine production is high and home consumption low because of the Moslem populations, the quantities of those products that are exported can reach very high levels, surpassing three quarters of total output.

#### Technological Trends

Apart from a few individual country exceptions each of the developing regions produces a similar range of processed foods and each lags badly behind the countries of the developed world in terms of production. In output per man the position is also an unhappy one. Where there is growth, except for the occasional case such as Argentina, it is only slow. This means that they are not improving their position relative to the developed world and are in fact allowing a wider lead to be opened up.

It is generally found that the most advisable step for these countries is to opt first for more simple techniques of food preservation, for example chilling, smoking or salting instead of the more expensive refrigeration. Also advisable is the industrialisation of the traditional staple foods such as soya sauce, fish paste, wheat flour substitutes, coconut products, rice and others. However, it is possible that more radical developments like

irradiation can be extremely helpful in the early industrialisation of some products. Food processing technology is very suitable for developing countries since it is often able to operate at a fairly low size level. However, it is also highly competitive, offers only a small return on total sales and is very demanding from a quality point of view.

#### Investment Trends

In food processing the problems of investment in the developing world are basically similar. The whole problem operates within the total constraints found with investment difficulties in all industry, shortage of capital, misapplication of resources, lack of labour and entrepreneurial skills. On top of this food, beverages and tobacco suffer from being considered a low investment priority and capital is directed towards larger ventures. Hence the developing countries are not able to make as much use as possible of a manufacturing sector which can operate efficiently on a smaller scale, offers employment opportunities on a local level in rural areas.

#### Future Trends

If the developing countries are to narrow the gap with the developed world in output of food, beverages and tobacco, they must grow a lot faster than these other areas. At the present time this is not happening and the trends are in favour of the developed countries. If one considers which are the most important variables in determining the performance of the food processing industry, there are the main headings markets, technology and investment. Food processing is under endowed in all these three but whereas the technology and investment required is on a smaller scale than in other industries and more adaptable to existing conditions in the developing countries, the markets need to be larger to produce the profits which cause the incentive for greater expansion of the industry. This can come from the home market, and processed foods are in demand in an economy of increasing wealth per head, but also from increased exports. The developed countries have traditionally protected their manufactures, and opportunities for the developing countries are dependent on concessions

made in tariff levels. How far such concessions go in the future is as yet uncertain but developments in trade liberalisation would make a considerable difference to the expansion opportunities of the developing countries and boost the growth rate of food, beverages and tobacco above the present rate of just less than five per cent. Whether this will happen however, remains to be seen.

## EUROPE AND DEVELOPED MARKET ECONOMIES

### Economic Trends

Output. The average annual growth rate from 1965 to 1969 was 3.6 per cent, a slight decline on the 4.0 per cent of the previous five years. The share of total world output has declined from 55 per cent in 1960, to 53 per cent in 1965, to 51 per cent in 1969. This however, has been a loss not to the developing countries but to the Centrally Planned Economies. In most of the developed economies food processing is usually the third largest contributor to industrial output, following basic metals and chemicals.

The trend for Europe alone has been similar, declining from an average annual rate of 4.3 per cent in 1960 to 1965 to 3.6 per cent in 1965 to 1969. As a proportion of total developed market economy output there has been an extremely small increase of less than one per cent between 1960 and 1969. Thus Europe has performed fractionally better than the total developed market area during the sixties.

Employment. In employment the developed countries have grown the most slowly at around one per cent per annum during the sixties. As elsewhere in the world the food industry is one of the slowest growing, though the growth rates in basic metals, mineral products and especially leather products and textiles have been even slower.

In Europe the pattern differs from that of the developed area as a whole. Since 1966 the numbers employed in food processing has actually declined slightly, owing to the slow growth rate of industrial output coupled with manpower savings through capital investment.

Trade. The Developed Market Economies dominate trade in food, beverages and tobacco from the developing countries. The leading importer in absolute terms is the United States and the growth of imports was in food 15.9 per cent per annum from 1964 to 1968 and in beverages and tobacco 11.7 per cent, compared with 15.3 per cent for manufactures generally. As a proportion of GNP the United Kingdom and the Netherlands import the highest level of food products from the developing countries but in general the amounts imported are similar throughout all the Developed Market

Economies. In beverages and tobacco there is a much greater variation between the countries, with France particularly importing a greater proportion.

One quite startling development in trade between Europe and the developing world is the decline in imports of beverages by the EEC. The average annual decline from the developing world was 20.0 per cent between 1964 and 1968 which reduced its share of beverage and tobacco exports to the EEC from 46.3 to 18.8 per cent. Imports of food by the EEC have increased but at a slower rate than by the total world market, so that the developing country share of exports to the EEC has declined from 22.5 per cent to 20.2 per cent.

#### Technological Trends

In all food products the dominant producers are to be found among the developed market economies. Even for products such as fruit processing where the more tropical countries could possibly have an advantage over the industry based economies without the required agricultural produce, there are to be found in the developed economies countries such as the U.S.A., South Africa and Australia with massive production. The European area produces some 20 per cent of total output.

Value Added per Person. In terms of output per man the developed market economies have a far superior performance both in absolute and growth terms. In the eight years from 1960 to 1968 the value added per person has increased from 4,116 dollars to 5,060 dollars. There is however, considerable variation between individual countries. The European area for example does significantly worse with a performance rather similar to the world average, though with a slightly faster rate of growth.

Technical Changes. In actual technological developments there is again a huge advantage. The developed world has the finance, the expertise, the markets, and the research facilities. Even where a developing country is adopting a new processing system the same process is being employed to greater advantage in the richer parts of the world. Israel for example has set a good example in the maximum use of its fruit juice processing facilities by using them in the off-season to process tomatoes, as has Turkey.

### Investment Trends

The position of investment in the developed countries is completely different from that in the developing countries. Though an individual government might complain that investment is too low it is in fact on a scale enormously greater. With food, beverages and tobacco being a less dynamic industry and for the most part in the control of private enterprise, investment in this sector usually originates from private means and does not obtain any of the state support that certain very heavy industries need. Thus investment is on a smaller, more localised level. The pattern throughout the developed economies is similar though in certain European countries with the problem of declining traditional industries in their less advanced areas, there has been considerable investment inducements for new industry to be established there. Often light industry of the food processing type has been a suitable development, particularly where it offered employment opportunities where unemployment was high.

### Future Trends

The developed market economies have grown more slowly than any other of the world regions but began from so much larger a base level. If the growth in output of food, beverages and tobacco remains at just less than four per cent per annum then output will rise to 54,500 million dollars which means that for the first time the Developed Market Economies will be producing less than half of the total world output.

The performance in Europe alone has been slightly better than that of the average developed area though towards the end of the sixties, the difference grew less. The European technological performance has been less good thanks mainly to the greater use of old-fashioned machinery. As with the rest of the developed world, no dramatic changes in food, beverages and tobacco are expected and growth will be approximately four per cent at the beginning of the seventies, thereby increasing total European output to almost 22,000 million dollars by 1973.



## CENTRALLY PLANNED ECONOMIES

### Economic Trends

Output. The food processing industry has grown at an average annual rate of 5.6 per cent from 1965 to 1969, a decline from the 6.3 per cent of the years 1960 to 1965. The share of total world output has increased however, from 32 per cent in 1960 to 36 per cent in 1969 at the expense of the Developed Market Economies. In this region food, beverages and tobacco is the second most important contributor to total industrial output.

Employment. Employment has been growing during the last decade at an annual average rate of 3.3 per cent, just slightly more than the rate in the developing area. Unlike the situation in the rest of the world the food processing industry in the Centrally Planned Economies does not have one of the slower growth rates, but one that approximately equals the average for manufactures as a whole.

Trade. Exports from the developing to the Centrally Planned Economies are not large. The major exporters are Afghanistan and Iran with dried fruit, Cuba with alcoholic beverages and tobacco, Algeria with wine and Brazil with coffee essences and extracts. The pattern is thus slightly different from that in manufactures generally where India and Egypt are the main exporters. Similarly, exports from the Centrally Planned Economies are small, but recent years has seen a certain growth of exports of preserves and fruit to Western Europe, notably from Poland, Hungary and Bulgaria.

### Technological Trends

The technological performance in terms of output per man has been highest in the Centrally Planned Economies, actually reaching in 1968 7,051 dollars, which is almost twice as large as both the European and world averages. In Bulgaria for example there has been considerable efforts made to improve the output of certain processed foods and totals in fruits grew from 39,660 tons in 1960 to 91,798 in 1967. In processed vegetables the totals were 108,028 in 1960 and 177,850 in 1967, having been only 44,267 tons in 1958.

### Investment

Investment quantities in the Centrally Planned Economies are subject to state control and the latest state plan. In these countries consumer goods which is what the food processing industry provides are a lower priority and so the bulk of investment is concentrated at the heavy industry end. However, in certain goods with strong export potential there has been considerable government activity. Bulgarian canned fruit and vegetables is one of the most noticeable examples.

### Future Trends

Expansion in the Centrally Planned Economies slowed a little in the latter half of the sixties although remaining the fastest of the three main economic groups. It is estimated that the growth rate will be six per cent per annum, that is continuing the slightly lower rate, which would mean that total output of food, beverages and tobacco will expand to almost 42,000 million dollars worth of production.

## WORLD - SUMMARY

### Economic Trends

Output. The world situation in the food, beverages and tobacco processing industries has remained remarkably consistent. Growth rates have remained similar during the sixties and each region's contribution to total world output has changed only slightly, if at all. Since the growth rate of the food processing industry is usually slower than that of the more dynamic groups, the dominance of food is declining, and in the developed economies it is now in third position. However, since the more dynamic industries are relatively modern in the developing world food remains the most important sectoral category.

Employment. From 1960 to 1967 the average annual growth rate of employment in food, beverages and tobacco has been 2.2 per cent. Of course this has varied from region to region with the slowest rate being in the Developed Market Economies and the fastest in Africa. For overall productivity trends the situation is dealt with more fully under technological trends.

Trade. The pattern of world trade in food, beverages and tobacco has corresponded fairly accurately to that of manufacturing commodities as a whole with some particular country and commodity variations. Total world trade has increased and in the food sector the developing countries have kept slightly ahead of the world average growth. However, the disparity between the developed and developing remains large, while developing inter-regional trade remains minimal.

### Technological Trends

As with output so in technological developments, the developing economies have been failing to keep up with the progress made in the already more advanced parts of the world. Man-power productivity is low basically because of the small size of the industries, which are small because of the lack of markets. The food processing industry develops mainly in proportion to population, occasionally encouraged by external demand. Capital investment is low and what there is is often misused or diverted to the newer higher growth industries.

### Investment Trends

In developing regions, investment priorities have tended to favour heavy rather than light industries. Thus food processing has not perhaps received the attention it deserves. For the lower levels of capital investment needed and the low capital/labour ratio make it suitable for the scarce capital, abundant labour characteristics of developing countries.

### Future Trends

If the world output of food manufactures continues to expand at the rate it has been doing, 4.6 per cent, the total output in 1973 will be over 110,000 million dollars. Thus food products will continue to decline relatively in importance as a manufacturing group but will remain the most important one in the developing world, since present rates of change in the other manufactures are not sufficiently quick enough to alter that position. The progress that has been made is not dramatic and from the actions and intentions of world governments in recent years, it appears that nothing significant is impending to alter the present distribution.

**Appendix I. Output by Region and Socio-Economic Grouping in Food, Beverages and Tobacco**  
(million U.S. \$)

	1960	1963	1964	1965	1966	1967	1968	1969
1. Asia	2,935	3,121	3,345	3,560	3,925	3,923	4,121	4,619
2. Latin America	4,333	4,795	5,056	5,341	5,627	5,906	6,069	6,329
3. Africa	721	841	888	951	970	1,007	1,073	1,137
4. Developing Countries <sup>a</sup> (Adjusted Total) <sup>c</sup>	7,989	8,757	9,286	9,848	10,522	10,836	11,263	12,085
5. Europe	12,987	14,767	15,577	16,043	16,624	17,021	17,506	18,459
6. Developed Market Economies	33,487	37,866	39,524	40,799	42,481	43,697	44,806	46,954
7. Centrally Planned Economies	19,617	23,293	24,212	26,657	28,025	29,815	31,371	33,076
8. World <sup>b</sup>	61,093	69,916	73,022	77,304	81,028	84,348	87,440	92,115

a. Total of 1 + 2 + 3. b. Total of 4 + 6 + 7. c. Including estimates for countries for which data is unavailable.

Source: UNIDO.

**Appendix II. Indices of Production of Food, Beverage and Tobacco Industries**  
(1963 = 100)

	<u>1966</u>	<u>1969</u>	<u>Annual Average Growth Rate, 1966-1969 (%)</u>
Asia	126	148	5.5
Latin America	117	132	4.1
Africa			5.4
Developing Countries	120	138	4.8
Europe	113	125	3.4
Developed Market Economies	112	124	3.4
Centrally Planned Economies	120	142	5.8
World	116	131	4.1

Source: U.N. Monthly Bulletin of Statistics.

**Annex III, Industrial Employment in Food, Beverages and Tobacco by Region and Socio-Economic Grouping**  
('000 persons)

	1960	1963	1964	1965	1966	1967	1968
1. Asia	5,742	6,043	6,203	6,440	6,482	6,648	n.a.
2. Latin America	2,125	2,272	2,472	2,403	2,597	2,719	2,720
3. Africa	412	489	578	611	696	658	n.a.
4. Developing Countries <sup>a</sup> (Adjusted Total) <sup>c</sup>	8,420	8,954	9,411	9,615	9,942	10,196	n.a.
5. Europe	4,468	4,610	4,622	4,678	4,715	4,701	4,669
6. Developed Market Economies	8,136	8,476	8,515	8,621	8,746	8,818	8,855
7. Centrally Planned Economies	3,567	3,700	3,877	3,970	4,166	4,316	4,449
8. World <sup>b</sup>	20,123	21,307	21,886	22,402	23,004	23,463	n.a.

a. Total of 1 + 2 + 3. b. Total of 4 + 6 + 7. c. Including estimates for countries for which data is unavailable.  
Source: UNIDO.

**Appendix IV. Indices for Industrial Employment in Food, Beverages and Tobacco**  
(1963 = 100)

	<u>Developed</u> <u>Market Economies</u>	<u>Centrally</u> <u>Planned Economies</u>	<u>Developing</u> <u>Economies</u>
1960	96	92	94
1961	97	95	95
1964	101	102	104
1965	102	107	107
1966	103	111	110
1967	104	115	114
1968	104	n.a.	n.a.

Source: UNIDO, based on United Nations, *The Growth of World Industry, 1967*, Vol.1 (E/F 69. XVII. 13) and information provided by the United Nations Statistical Office.



**Appendix V. Value Added per Person Engaged in Food, Beverages and Tobacco by Region and Socio-Economic Grouping**  
(U.S. \$ per person)

	1960	1963	1964	1965	1966	1967	1968
1. Asia	511	516	539	553	606	590	n.a.
2. Latin America	2,039	2,110	2,045	2,223	2,167	2,172	n.a.
3. Africa	1,750	1,720	1,536	1,556	1,394	1,530	n.a.
4. Developing Countries <sup>a</sup>	949	978	987	1,024	1,058	1,105	n.a.
5. Europe	2,907	3,203	3,370	3,429	3,526	3,621	3,749
6. Developed Market Economies	4,116	4,467	4,642	4,733	4,996	5,081	5,060
7. Centrally Planned Economies	5,500	6,295	6,245	6,715	6,727	6,908	7,051
8. World <sup>b</sup>	3,036	3,281	3,335	3,507	3,522	3,641	n.a.

a. Total of 1 + 2 + 3.      b. Total of 4 + 6 + 7.

Source: E.I.U. estimates from UNIDO data.

**Appendix VI. Average Annual Rate of Growth of Output of  
Food, Beverages and Tobacco by Region and Economic Grouping  
(%)**

	<u>1960-1965</u>	<u>1965-1969</u>
Asia	3.9	6.7
Latin America	4.3	4.3
Africa	5.7	4.6
Developing Economies	4.3	5.3
Europe	4.3	3.6
Developed Market Economies	4.0	3.6
Centrally Planned Economies	6.3	5.6
World	4.8	4.5

Source: UNIDO and E.I.U.

**Appendix VII. Food, Beverage and Tobacco Shares of World  
and Developing Economies' Output by Region, 1960, 1965, 1969  
(%)**

Region	1960		1965		1969	
	<u>D.E.'s</u>	<u>World</u>	<u>D.E.'s</u>	<u>World</u>	<u>D.E.'s</u>	<u>World</u>
Asia	37	5	38	5	38	5
Latin America	54	7	54	7	52	7
Africa	9	1	10	1	10	1
Developing Economies		13		13		13
Developed Market Economies		55		53		51
Centrally Planned Economies		32		34		36

Note: D.E. = Developing Economies.

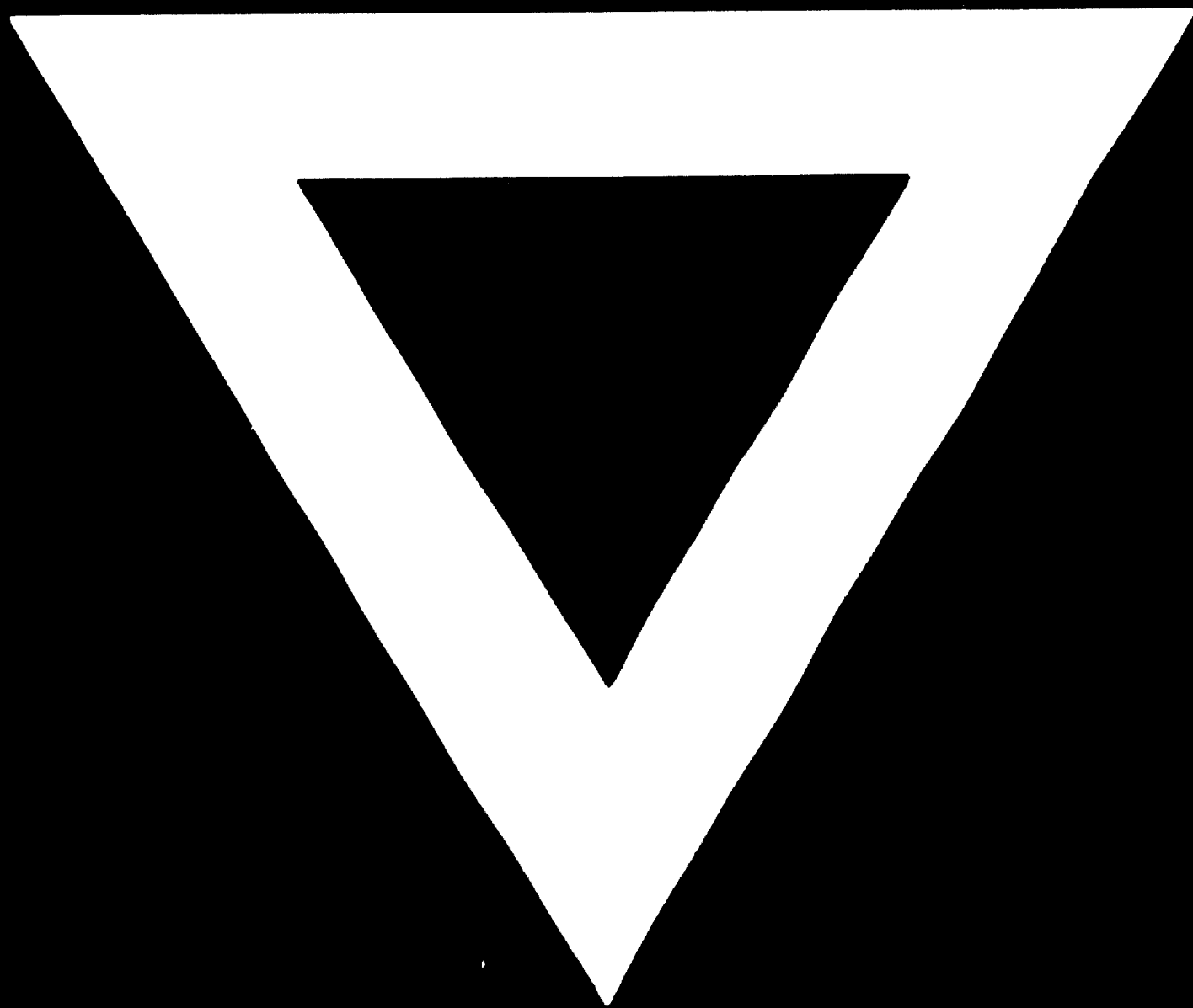
Source: UNIDO and E.I.U.

**Appendix VIII. Forecast Output by Region  
and Socio-Economic Grouping of Food, Beverages and Tobacco  
(million \$ U.S., constant prices)**

	<u>1970</u>	<u>1973</u>	<u>Annual Average Growth Rate (Compound) 1970-73</u>
Asia	4,850	5,650	5.2
Latin America	6,600	7,500	4.3
Africa	1,200	1,400	5.4
Developing Countries	12,650	14,550	4.7
Europe	19,200	21,600	4.0
Developed Market Economies	48,750	54,500	3.8
Centrally Planned Economies	35,050	41,750	6.0
World	96,450	110,800	4.6

Source: E.I.U. estimates.

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