OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.

DISCLAIMER

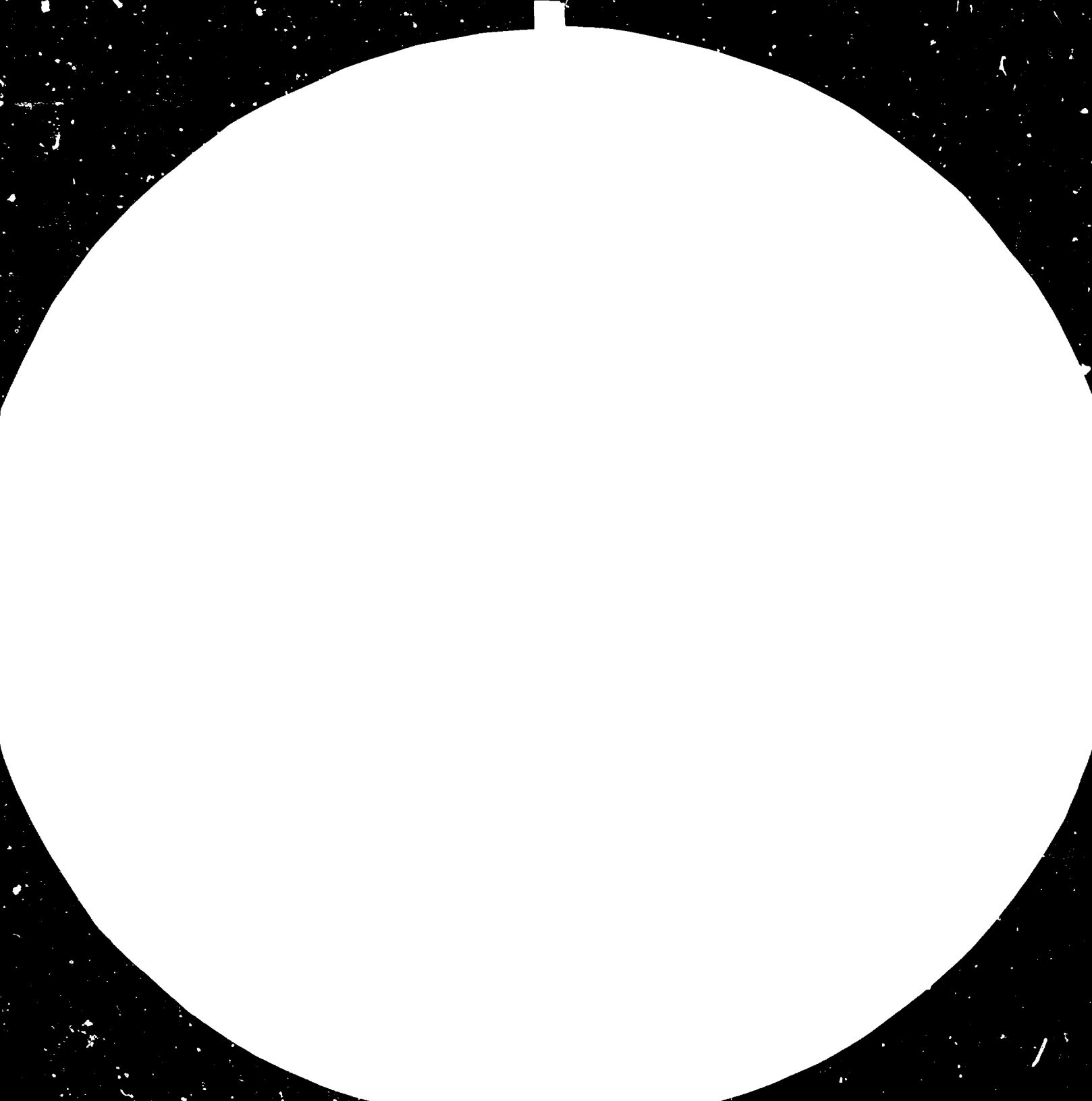
FAIR USE POLICY

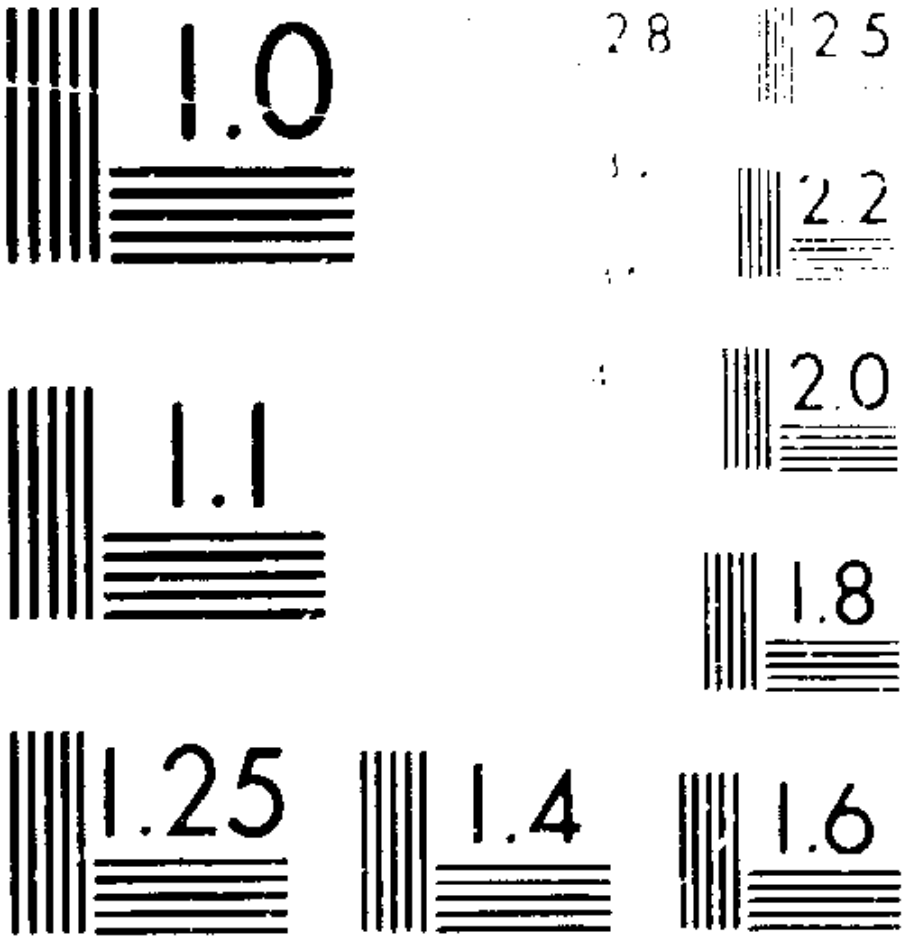
CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org




2.8
2.5
1.0
2.2
2.0
1.1
1.8
1.25
1.4
1.6

12895

Distr.
LIMITED

ID/WG.404/3
3 October 1983

ENGLISH

United Nations Industrial Development Organization

Expert Group Meeting on measures and forms in promoting integrated development of the vegetable oils and fats industry within the food-processing industry

Alexandria, Egypt, 24-27 October 1983

PRODUCTION AND MARKET SITUATION FOR THE FOOD-PROCESSING INDUSTRY WITH SPECIAL EMPHASIS ON VEGETABLE OILS AND FATS *

prepared by the

UNIDO secretariat

* This document has been reproduced without formal editing.

V.83-62382

CONTENTS

CONTENTS

Tables/Charts

CONTENTS

Tables/Charts

I. Introduction

Among the principal agro-based industries, comprised of the leather and leather products industry, tobacco industry, textile industry, wood industry and food processing industries, the latter forms the major part of the agro-based industry accounting for an average of 60% of their output.

The food-processing industry is a leading industrial sector, and for several decades to come it is likely to remain the largest industrial sector, particularly for most developing countries.

One of the main features characterizing this industrial branch and differentiating it from other manufacturing industries,is its multi-pronged structure, as ten different industrial branches fall under the general name "Manufacture of Food and Beverage". This heading is used in the United Nations International Standard Industrial Classification of All Economic Activities (ISIC) for three major groups 311, 312 and 313. Practically the groups 311 and 312 are aggregated as one category named "food products". Sometimes the statistical data are combined for the three groups 311, 312 and 313 (beverages), in few cases also data for the group 314 (tobacco) are incorporated into the food and beverages variables.

The draft World-Wide Study on the Vegetable Oils and Fats Industry 1975-2000 1/ concluded that the following industrial branches should be included in the food-processing industry: meat and meat processing industry, dairy industry, fruits and vegetable industry, fisheries industry, vegetable oils and fats industry, cereal industry, sugar industry, chocolate and confectionery industry, animal feed industry, and beverage industries. This classification was confirmed by the Global Preparatory Meeting for the First Consultation on the Food-Processing Industry held in Vienna in 1979. 2/

The complexity of this industrial branch induces considerable difficulties when evaluating its performance. The Yearbook of Industrial Statistics provides the most extensive and comprehensive statistical data on different food products, going deeply into the 6 digit ISIC classification. However, the data are compiled for production only in physical units.

The variables related to gross output, value added, gross fixed capital formation, number of employees, number of establishments are collected only for aggregated category "311/2 Food products" and "313 Beverages", thus making the assessment of industrial activities for specific food-processing subsectors impossible. Hence the amount of production in physical units, remains practically the only indicator for their evaluation.

1/ Document UNIDO/ICIS.46, September 1977.

2/ Document ID/WG.295/1, January 1979.

The variables mentioned above are provided by the Yearbook of Industrial Statistics only for individual countries. Therefore it makes it difficult to use them for evaluation of the aggregated category "food products and beverages" related to the world economy and to the regional groups. Summing up of figures related to individual countries faces a serious obstacle as the latest available data for different countries vary considerably from each other. There are also other obstacles, such as non-comparability of data due to different methodologies adopted in collecting and processing data (for example number of employment, number of establishments), or owing to the fact that some of these variables are not available in all countries (for example value added, or gross fixed capital formation) or because of aggregation of food products and beverages, and sometimes also tobacco into one category.

In light of the above explanation and apart from the evaluation of the production of specific food-processing subsectors, assessed in physical units, the paper contains an estimation of the present situation in the aggregated food-processing sector for the world economy and three different group of countries, through analysis of two indices, namely "Index numbers of industrial production" and "Index numbers of industrial employment". Both indices relate to the aggregated group "31" e.g. food, beverages and tobacco.

Apart from the assessment of the production trend, the paper analyses the international trade in processed food products, in global terms. This analytical part is based on the data included in the last edition (1981) of the United Nations Yearbook of International Trade Statistics. However the main emphasis is placed on the production aspects of the food-processing industry development, since the only part of the processed food-products is a subject of international trade. Besides, the primary objective of the development of food processing industries is to satisfy the nutritional needs of the population. Above all it can be done through increased domestic production, supported by international trade. It does not exclude, in any case, the expansion of production designed for exports, particularly when the comparative advantages from foreign turnover are obvious.

The second part of this paper is devoted to presentation of the current production and market situation for the vegetable oils and fats industry. Selection of this specific food-processing subsector is closely related to the decision of the seventeenth session (1983) of the Industrial Development Board, calling for convening a second consultation meeting on food processing with special emphasis on the vegetable oils and fats industry.

The main statistical sources used for presenting the economic situation on this specific branch were: FAO Production Yearbook and FAO Trade Yearbook as well as the UN Yearbook of Industrial Statistics. The main emphasis was placed on analysis of the production and trade trends in vegetable oils output during the period 1976-1981, since the First Consultation on Vegetable Oils and Fats was convened in 1977. The assessment of the current quantity of oil production and trade, particularly in developing countries, should contribute to a better estimation of adequate policy measures proposed in the past for increased production of oils and fats and other products based on oils in developing countries, thus enabling extended consumption of oils and diversification of markets in these countries. It also aims at identifying the most critical constraints influencing the present stage of vegetable oils and fats industry development.

Finally, the paper will assist in facilitating the identification and selection of the most adequate issues to be considered by the Second Consultation.

II. Production and market situation for the food-processing industry

(1) Production

i. Evaluation of aggregated food, beverages and tobacco industries production and employment indices

As Table 1 shows, the percentage weight of world food, beverages and tobacco production, estimated for 1975, accounted for 10.8% of all industrial production, and 13.3% of total manufacturing. The percentage weight of developing market economies for food, beverages and tobacco production reached the level of 10.3% for all industrial production, but in relation to the manufacturing sector, 19.9%. For the world economy, the percentage weight of total manufacturing in relation to all industry (including mining and quarrying, manufacturing and electricity, gas and water) amounted to 81.1% and for the developing market economies only 51.8%.

In other words, the relative importance of food, beverages and tobacco production was higher for the group of developing market economies than for other groups of countries; for developed market economies, the percentage weight of food, beverages and tobacco in total manufacturing was 12.3%, and for centrally-planned economies 13.7%.

Moreover, while the percentage weight of food, beverages and tobacco in world light manufacturing amounted to 37.5%, the same percentage weight for developing market economies reached 44%.

As the index of industrial production indicates, the world annual growth rate in the years 1968-1980, for food, beverages and tobacco, was lower than for all manufacturing and all industry and accounted for 3.8%. However it exceeded the annual growth rate for light manufacturing which amounted to 3.6%. This leads to the conclusion that food, beverages and tobacco industries were developing at a slower pace than other industrial sectors, particularly heavy manufacturing, but among the light manufacturing these industrial branches were the most dynamic components, exceeding the average growth rate for aggregated light manufacturing.

This is also the case with the developing market economies, where food, beverages and tobacco, reached the annual growth rate of 5.2%, while the total manufacturing was developing at a pace of 6.4% annually, all industries 5.2%, and light manufacturing only 4.8% annually.

TABLE 1: INDEX NUMBERS OF INDUSTRIAL PRODUCTION
1975 = 100

ISIC	Branch of Activity	Percentage Weight (1975)	1968	1970	1971	1972	1973	1974	1976	1977	1978	1979	1980	Annual Growth Rate (1968-1980)
World (a)														
31	Food, beverages and tobacco	10.8	75	82	86	90	95	98	104	108	112	115	117	3.8
31-33, 342 355-56, 39	Light manufacturing (e)	28.8	77	85	89	94	100	101	107	110	114	117	118	3.6
341, 351-4 36-38	Heavy manufacturing (f)	52.3	71	80	84	92	102	105	109	115	121	128	129	5.1
3	Manufacturing	81.1	73	82	86	92	101	104	108	113	119	124	125	4.6
2-4	All industry (g)	100.0	73	82	86	93	101	104	108	113	118	123	124	4.5
Developing Market Economies (b)														
31	Food, beverages and tobacco	10.3	69	79	83	88	94	97	108	114	120	123	127	5.2
31-33, 342 355-56, 39	Light manufacturing (e)	23.4	69	77	82	88	95	98	107	111	117	119	121	4.8
341, 351-4 36-38	Heavy manufacturing (f)	28.4	53	65	71	80	91	99	107	117	124	129	133	8.0
3	Manufacturing	51.8	61	70	76	84	93	98	107	114	121	125	128	6.4
2-4	All industry (g)	100 0	66	78	83	91	101	104	109	115	118	122	121	5.2
Developed Market Economies (c)														
31	Food, beverages and tobacco	10.6	80	86	90	94	98	100	105	108	111	114	116	3.1
31-33, 342 355-56, 39	Light manufacturing (e)	29.3	85	91	94	100	106	104	108	111	113	117	116	2.6
341, 351-4 36-38	Heavy manufacturing (f)	56.9	81	90	92	99	110	111	110	114	120	126	125	3.7
3	Manufacturing	86.2	83	90	93	100	109	109	109	113	117	123	122	3.3
2-4	All industry (g)	100.0	82	90	92	99	108	108	108	112	117	123	123	3.4
Centrally-Planned Economies (d)														
31	Food, beverages and tobacco	11.9	68	76	80	84	89	95	101	107	109	112	115	4.5
31-33, 342 355-56, 39	Light manufacturing (e)	30.9	64	74	78	82	88	94	104	109	114	117	123	5.6
341, 351-4 36-38	Heavy manufacturing (f)	36.0	51	62	68	74	82	91	108	117	125	131	138	8.6
3	Manufacturing	86.9	55	65	71	77	84	92	107	114	121	126	133	7.6
2-4	All industry (g)	100.0	56	66	72	78	85	92	106	114	120	125	131	7.3

Source: Yearbook of Industrial Statistics, United Nations 1980, Volume I, pp. 588-592.

(a) Excluding: Albania, China, Democratic People's Republic of Korea and Viet-Nam.

(b) Including: Caribbean, Central and South America, Africa (other than South Africa), Asian Middle East and East and South-East Asia (other than Israel and Japan).

(c) Including: North America, Europe (excluding centrally-planned economies), Australia, Israel, Japan, New Zealand and South Africa.

(d) Including: Bulgaria, Czechoslovakia, German Democratic Republic, Hungary, Poland, Romania and the USSR.

(e) Light manufacturing includes: food, beverages, tobacco, textiles, wearing apparel, leather products, wood products, furniture (31-33), printing and publishing (342), rubber and plastic products (355-56), other manufactured products (39).

(f) Heavy manufacturing includes: paper and products (341), industrial and other chemicals, petroleum refineries and coal products (351-54), non-metallic mineral products, basic metal industries, metal products, machinery and equipment (36-38).

(g) All industry includes: mining and quarrying (2), manufacturing (3) and electricity, gas and water (4).

The same pattern of development was applied to the group of developed market economies and centrally-planned economy countries differing only in the proportions. The former were developing food, beverages and tobacco at a pace of 3.1% while the total manufacturing was 3.3% annually. The growth rate of total manufacturing for centrally-planned economies was 7.6%, heavy manufacturing even 8.6%, whereas food, beverages and tobacco growth rate reached only 4.5% annually.

Among the three main groups of countries, the highest annual growth rate in food, beverages and tobacco was recorded by the group of developing countries 5.2%, followed by the centrally-planned economies 4.5%, and developed market economies with 3.1%.

However, when evaluating the annual growth rate for all three groups of countries, one should keep in mind the average annual growth of the population, which in low-income countries accounted for 2.1% in the years 1970-1980, in middle-income countries 2.4% and for market-developed countries and centrally-planned economies 0.8%. [3/]

Relatively high growth rates in food, beverages and tobacco production for the group of developing countries, confronted with a high population growth, give in real terms a much slower growth rate per capita for this group of countries - contrary to the group of developed market economy countries and centrally-planned economies, where the real growth rate for food, beverages and tobacco was only slightly influenced by the very modest growth of population.

The analysis of Table 2, Index Numbers of Industrial Employment, leads to several motions. Above all, the annual growth rate of employment for food, beverages and tobacco industries, in the years 1968-79, was the highest for the developing countries, i.e. whereas the annual growth rate of employment for these industries reached the level of 2.6% for world economy, a 5.3% rate was recorded for developing market economies. Moreover, the growth rate of employment for these industrial branches was higher than for all manufacturing and all industry sectors. Only heavy manufacturing in developing countries reached a higher growth rate (5.7%).

The growth rate of industrial employment for food, beverages and tobacco industries considerably exceeded the same growth rate for light manufacturing which proves that industrial employment for these industrial branches was rising most dynamically among all light manufacturing sectors.

3/ World Development Report, 1982, World Bank, p. 143-144.

TABLE 2: INDEX NUMBERS OF INDUSTRIAL EMPLOYMENT

World (a)

ISIC	Branch of Activity	Percentage Weight (1975)	1968	1970	1971	1972	1973	1974	1976	1977	1978	1979	1980	Annual Growth Rate (1968-1980)
31	Food, beverages and tobacco	13.5	85	87	89	93	94	97	106	110	112	113	-	2.6 (1968-79)
31-33, 342 355-56, 39	Light manufacturing (e)	45.8	86	89	91	95	97	99	103	104	106	107	-	2.0 (1968-79)
341, 351-4 36-38	Heavy manufacturing (f)	46.4	87	92	92	95	99	101	102	103	105	106	-	1.8 (1968-79)
3	Manufacturing	92.2	86	91	92	95	98	100	102	104	106	107	-	2.0 (1968-79)
2-4	All industry (g)	100.0	87	91	92	95	98	100	102	104	105	107	-	1.9 (1968-79)

Developing Market Economies (b)

31	Food, beverages and tobacco	22.0	70	74	77	86	88	94	112	118	122	124	-	5.3 (1968-79
31-33, 342 355-56, 39	Light manufacturing (e)	65.5	69	74	77	85	89	95	105	109	113	116	-	4.8 (1968-79)
341, 351-4 36-38	Heavy manufacturing (f)	26.1	64	70	74	82	91	95	105	110	115	118	-	5.7 (1968-79)
3	Manufacturing	91.6	67	72	76	84	89	95	105	109	114	116	-	5.1 (1968-79)
2-4	All industry (g)	100.0	68	73	77	84	90	95	105	109	113	116	-	5.0 (1968-79)

Developed Market Economies (c)

31	Food, beverages and tobacco	10.1	101	101	101	101	102	102	100	103	102	101	101	—
31-33, 342 355-56, 39	Light manufacturing (e)	39.0	103	104	104	105	106	104	100	101	100	100	99	-0.3
341, 351-4 36-38	Heavy manufacturing (f)	54.4	97	102	100	100	104	105	100	101	102	102	102	0.4
3	Manufacturing	93.1	99	103	102	102	105	104	100	101	101	101	100	0.1
2-4	All industry (g)	100.0	100	103	101	102	104	104	100	101	101	102	101	0.1

Centrally-Planned Economies (d)

31	Food, beverages and tobacco	9.3	91	94	94	96	97	99	101	103	104	104	104	1.1
31-33, 342 355-56, 39	Light manufacturing (e)	35.0	90	93	94	96	97	99	101	102	103	103	103	1.1
341, 351-4 36-38	Heavy manufacturing (f)	56.2	83	88	90	93	95	97	102	104	105	106	107	2.1
3	Manufacturing	91.2	86	90	92	94	96	98	101	103	104	105	106	1.8
2-4	All industry (g)	100.0	87	91	92	94	96	98	101	103	104	105	106	1.7

Source: Yearbook of Industrial Statistics, United Nations 1980, Volume I, pp. 588-592.

(a) Excluding: Albania, China, Democratic People's Republic of Korea and Viet-Nam.

(b) Including: Caribbean, Central and South America, Africa (other than South Africa), Asian Middle East and East and South-East Asia (other than Israel and Japan).

(c) Including: North America, Europe (excluding centrally-planned economies), Australia, Israel, Japan, New Zealand and South Africa.

(d) Including: Bulgaria, Czechoslovakia, German Democratic Republic, Hungary, Poland, Romania and the USSR.

(e) Light manufacturing includes: food, beverages, tobacco, textiles, wearing apparel, leather products, wood products, furniture (31-33), printing and publishing (342), rubber and plastic products (355-56), other manufactured products (39).

(f) Heavy manufacturing includes: paper and products (341), industrial and other chemicals, petroleum refineries and coal products (351-54), non-metallic mineral products, basic metal industries, metal products, machinery and equipment (36-38).

(g) All industry includes: mining and quarrying (2), manufacturing (3) and electricity, gas and water (4).

The high growth rate of industrial employment in the food, beverages and tobacco sectors in developing countries can be evaluated positively from the point of view of absorbing large surpluses of unemployed labour force prevailing in these countries. However, in comparing the growth rate of industrial production with industrial employment, one can easily come to the conclusion that the growth in food, beverages and tobacco production in developing countries has been achieved through increases of employment. Practically, the entire growth of production was achieved in an extensive way and not due to increase in productivity.

The efficiency of production factors, measured by the ratio of growth rate of food, beverages and tobacco production, per growth rate of employment, has remained at a low level, and has not increased during the period 1968-1980.

The opposite situation has been observed in developed market economy countries, where the annual growth rate of employment in food, beverages and tobacco industries was zero in the years 1968-80 (in centrally-planned economies 1.1%), and the growth rate of employment for total manufacturing exceeded the growth rate for food, beverages and tobacco. From the point of view of unemployment problems facing the developing market economies, the zero growth rate of employment for food, beverages and tobacco, as well as for practically all of the manufacturing sector, has not contributed to improving the situation on the labour market. However, taking into account the productivity factors, measured by the ratio of growth rate of food, beverages and tobacco production per growth rate of employment for the same industries, the conclusion is easy to be formulated, namely, that the entire growth of production was achieved in an intensive way due to increases in productive factors' efficiency.

Similarly, the increases in productive factors' efficiency have decisively contributed to the growth of food, beverages and tobacco production in centrally-planned economy countries, particularly in the first half of the 1970's.

The percentage weight of employment in food, beverages and tobacco industries of developing countries in total manufacturing (in 1975) was higher (24%) than that of food, beverages and tobacco production in total manufacturing (19.9%) which can be explained by labour-oriented techniques and technologies adopted more often in these industrial branches than in other manufacturing industries. For the developed market economies and centrally-planned economies, the percentage weight of food, beverages and tobacco production in total manufacturing exceeded the percentage weight of employment in the same sectors.

For developed market economies, the percentage weight of food, beverages and tobacco employment in total manufacturing accounted for 10.8% and the weight of production for the same industries amounted to 12.3%. The same indicators for centrally-planned economy countries were 10.2% and 13.7% respectively. These figures reflect the trend of capital-intensive technology being more generally adopted when developing these industrial branches by the above group of countries.

ii. Production of main foodstuffs and beverages

The evaluation of the production trend is based on the analysis of the production data of selected basic food products and beverages for the period 1971-1980. In this connection, Table 3 shows the statistical data, compiled in physical units, collected on world economy and estimated for the group of developing countries.

This part also contains some indicators on the involvement of transnational corporations in the food-processing and beverages industries in developing countries.

(a) Meat products

The world production of meat recorded a steady growth in the years 1971-1980, but bearing in mind the increase in the population over this period, the real growth of meat production did not satisfy the extended needs of all countries, particularly the developing ones.

The largest increase was recorded in the production of poultry (63%) followed by pork meat (35%), beef and veal (17%) and mutton and lamb meat (only 5%). However, in absolute figures, the beef and veal meat output remained at first place.

The position of developing countries, as a whole, in the production of meat only somewhat changed. While the share of this group of countries in total production of mutton and lamb meat, dressed poultry and pork meat augmented, its share in the production of beef and veal, and other meat declined. This can be partly explained by a drop in the beef and veal production of two main producers, belonging to this group, namely Argentina and Brazil, who reached their top production level in 1978 and then recorded a slight decrease. The developing countries,as a whole, achieved the highest increase in the production of dressed poultry (212%), followed by pork meat (39%), mutton and lamb (19%) and beef and veal (11%).

Table 5 Sheet 1 of 2

WORLD AND DEVELOPING COUNTRIES */ PRODUCTION OF PROCESSED FOODSTUFFS AND BEVERAGES (ISIC 311-313) AND SHARE OF DEVELOPING COUNTRIES PRODUCTION IN WORLD PRODUCTION, 1971, 1980

Thousand Metric Tons

Product	ISIC	World production*		Developing countries' production **		Share of developing countries' production in world production	
		1971	1980	1971	1980	1971	1980
Beef and veal (fresh, chilled, frozen)	311101	37,815	44,301	10,199	11,346	27.0	25.6
Mutton and lamb (fresh, chilled, frozen)	311104	6,774	7,151	2,957	3,528	43.6	49.3
Pork (fresh, chilled, frozen)	311107	37,835	51,330	3,521	4,900	9.3	9.5
Poultry, dressed (fresh, chilled, frozen)	311110	17,455	28,555	2,798	5,933	16.0	20.8
Other meat (fresh, chilled, frozen)	311113	3,529	3,975	1,306	1,406	36.5	35.4
Bacon, ham, other dried, smoked, salted pig meat	311116	3,582	4,099	63	95	1.8	2.3
Meat, tinned	311128	2,407	3,053	100.5	121.3	4.2	4.0
Lard	311131	3,992	4,448	224	320	5.6	7.2
Milk and cream, condensed	311201	4,815.6	5,078.5	893.9	1,352.0	18.6	26.6
Milk and cream, dried	311204	4,136.3	5,954.3	268	474.8	6.5	8.0
Butter	311207	5,675.3	6,743.6	1,188.4	1,436.7	20.9	21.3
Cheese	311210	6,619.2	9,611.2	1,090.3	1,348.4	16.5	14.0
Fruits, dried	311301	748.8	928.7	227.8	267.1	30.4	28.8
Fruits, frozen	311313	443.0	535.1	15.8	14.4	3.6	2.7
Fruits, tinned or bottled	311316	5,332.8	5,384.0	744.2	622.7	13.9	11.6
Vegetables, tinned or bottled	311322	11,232.0	13,130.5	224.9	382.2	2.0	2.9
Fish, frozen	311401	7,200.0	8,058.5	452.8	431.4	6.3	5.3
Fish, salted, dried or smoked	311404	4,092.2	4,275.4	1,103.0	1,291.0	26.9	30.2
Fish, tinned	311407	2,406.8	3,263.6	524.1	715.4	21.8	21.9

* Data for developing countries calculated on basis data available in Yearbook of Statistics (1980). Group of developing countries includes all developing countries (Africa, South America, Caribbean, Asia) excluding European developing countries.
** Provisional or estimated figure. Source: Yearbook of Industrial Statistics, 1980 Edition, Volume II.

Table 3 Sheet 2 of 2

WORLD AND DEVELOPING COUNTRIES */ PRODUCTION OF PROCESSED FOODSTUFFS AND BEVERAGES (ISIC 311-313) AND SHARE OF DEVELOPING COUNTRIES' PRODUCTION IN WORLD PRODUCTION, 1971, 1980

Thousand Metric Tons

Product	ISIC	World production*		Developing countries' production **		Share of developing countries' production in world production	
		1971	1980	1971	1980	1971	1980
Flour, wheat	311601	121,964	139,330	24,116	36,695	19.8	26.3
Meal and groats of all cereals	311604	9,739	12,596	1,757	2,985	18.0	23.7
Flour, cereal, other than wheat	311607	3,814	3,970	1,036	1,616	27.2	40.7
Cereal, breakfast food	311610	1,391.8	3,033.5	2.4	1.4	0.2	0.05
Macaroni and noodle products, uncooked	311701	7,268	8,581	810	1,424	11.1	16.6
Bread, ship's biscuits and other ordinary bakers' wares	311704	49,961	53,885	1,079	1,508	2.2	2.8
Biscuits	311707	3,960.7	5,373.0	724.6	1,472.3	18.3	27.4
Raw sugar	311801	70,248	81,594	34,868	41,832	49.6	51.3
Refined sugar	311804	48,849	55,777	12,744	16,380	26.1	29.4
Sugar, confectionery	311904	5,450.0	6,110.3	325.6	431.2	6.0	7.1
Cocoa powder	311907	384.6	426.6	30.1	52.8	7.8	12.4
Cocoa butter	311910	196.7	219.2	79.8	83.2	40.6	37.9
Chocolate and chocolate products	311913	3,396.4	3,902.8	204.2	194.1	6.0	5.0
Coffee extracts, including instant coffee	312101	270.0	343.3	88.9	153.8	32.9	44.8
Prepared animal feeds	312201	122,178.0	192,688.0	8,352	16,449	6.8	8.5
		THOUSAND HECTOLITRES					
Distilled alcoholic beverages excluding ethyl alcohol	313101	43,082.0	61,418.0	7,086	12,671	16.4	20.6
Ethyl alcohol for all purposes	313104	87,343.0	97,338.0	12,099	20,492	13.1	21.0
Wine	313204	288,376.0	341,313.0	42,903	40,117	14.9	11.7
Beer	313304	664,399.0	892,449.0	76,547	142,887	11.5	16.0
Mineral waters	313401	96,851.0	141,703.0	6,848	10,930	7.1	7.7
Soft drinks	313404	265,433.0	428,432.0	56,924	138,517	21.4	32.3

* Data for developing countries calculated on basis data available in Yearbook of Statistics (1980). Group of developing countries includes all developing countries (Africa, South America, Caribbean, Asia) excluding European developing countries.
** Provisional or estimated figure. Source: Yearbook of Industrial Statistics, 1980 Edition, Volume II.

The annual supply of beef and veal exceeded the level of 2 million tons in 1980 in the following countries: USA (10 million tons), EEC countries (6.9 million tons), USSR (4.4 million tons), Argentina (2.9 million tons), China (2.3 million tons) and Brazil (2.2 million tons).

Among the largest producers of mutton and lamb meat were: China (747 thousand tons), EEC countries (602 thousand tons), New Zealand (560 thousand tons), Australia (549 thousand tons), Turkey (405 thousand tons) and India (402 thousand tons).

The highest production of pork meat was reached by China (16.6 million tons), followed by the EEC countries (9.5 million tons), USA (7.5 million tons) and the USSR (2.4 million tons). The largest producers of pork meat, among the developing countries, were Argentina (1.1 million tons), Mexico (490 thousand tons), Viet Nam (447 thousand tons) and the Philippines (408 thousand tons).

The highest poultry production was recorded in the USA (8.7 million tons) followed by the EEC countries (3.9 million tons), China (3.6 million tons), Brazil (1.3 million tons), the USSR (1.2 million tons), Japan (1.1 million tons).

Pork meat represents an essential raw material for meat processing. The main products of pork meat processing are: bacon, ham, sausages and lard. A comparison of the figures for 1971 and 1980 indicates that the share of developing countries in meat processing remains very low and it only increased insignificantly. It even declined slightly in canned meat output due to a rapid increase in canned meat production in developed countries.

A sizeable industrial production of bacon, ham, sausages and lard takes place only in a very limited number of developing countries, although the climatic and economic conditions create prerequisites for a much greater development of the meat processing industry, and a better utilization of the edible parts of the animal carcass, offals and other by-products. The same applies to the production of canned meat which takes place in a somewhat greater number of developing countries due to the possibility of using different types of meat for canning, particularly beef meat.

The involvement of transnational corporations in the meat industry of developing countries is relatively minor. [4] Their interests are centered on

---

[4] Transnational Corporations in Food and Beverage Processing, United Nations Centre on Transnational Corporations, New York 1981.

poultry and meat processing for local markets. Of the 25 million tons of meat processed annually in developing countries, only 4% to 5% is handled by transnational corporations' affiliates. Thirteen of the leading meat-processing transnational corporations have made investments in 23 developing countries covering meat packing and canning (largely beef) or processing (largely pork products). Ten poultry industry leaders with 24 identified investments are engaged in poultry production and processing activities in developing countries. However, there are numerous indications that the expansion of integrated beef and poultry production for exports by foreign companies has strengthened.

(b) Dairy products

The world production of main dairy products (milk and cream condensed and dried; butter and cheese; no figures are available for pasteurized milk) developed steadily during the period 1971-1980. The increases of production were somewhat greater than for meat production except for condensed milk and cream. The world production of dried milk and cream increased by 43.9%, cheese by 45.2%, butter by 18.8% and condensed milk and cream only by 5.4%. This growth rate of dairy products, however, did not satisfy the rising needs of the population, particularly in the developing countries. According to FAO's estimates, the deficit of dairy products in developing countries deepened (reaching about 10 million tons in 1980) and they project this deficit to grow to 19 million tons per year by 1990.

Regardless of the negative trend in satisfying nutritional needs of the developing countries' population, the increase in production of dairy products in developing countries was larger than for the world economy. In the period 1971-1980, the production of condensed milk and cream in developing countries augmented by 51.2%, dried milk and cream by 72.2%, cheese by 23.7% and butter by 20.9%, thus contributing to increasing the share of developing countries in world production of main dairy products except cheese. Despite the relatively high increase in the production of dried milk and cream, the absolute figures for developing countries remained low and the share of developing countries did not exceed 10% in 1980.

Although the production of cheese rose relatively rapidly in developing countries, it developed in a much slower pace compared to developed countries thereby diminishing the share of the former in the world output of cheese.

Among the developing countries the most propicious situation in 1980 for condensed milk and cream production were perceived in India (309 thousand tons), Mexico (175 thousand tons), Malaysia (119 thousand tons), Peru (104.5 thousand tons). However, a slight drop in condensed milk and cream output was observed in India compared to 1978. The relatively good situation in these countries can be explained by reasonably successful programmes of integrated development of the dairy industry.

The largest producers of dried milk and cream in 1980 among the developing countries were Brazil (158 thousand tons), Venezuela (72 thousand tons), and Argentina (50.6 thousand tons).

The highest production of butter in 1980 was recorded in the following developing countries: India (588 thousand tons), Pakistan (216.8 thousand tons), Turkey (124.2 thousand tons), Brazil (90 thousand tons), Iran (68.3 thousand tons) and Egypt (68.1 thousand tons).

The main developing countries' producers of cheese in 1980 were: Argentina (253.8 thousand tons), Egypt (242.7 thousand tons), Turkey (126.5 thousand tons, Iran (100.5 thousand tons), and Mexico (96.7 thousand tons).

The involvement of transnational corporations in the production of dairy products in developing regions is relatively significant. By 1976, 23 of the largest developed market economy-based food processers had established networks of milk-processing affiliates in developing countries. The leading firms among them have some 106 identified affiliate activities in 45 developing countries. The most active company, by far, is Nestlé with dairy-processing affiliates in 26 developing countries in all regions. In Peru, for example, Carnation and Nestlé are the only processed-milk producers.

Out of sixteen firms active in the milk-based infant-formula industry, two originate from India and Mexico. This branch of food-processing industry practically does not exist in an overwhelming majority in developing countries.

(c) Fruit and vegetable industries

The analysis of the fruit and vegetable industries situation relates to these fruits and vegetable products which are, more or less, subject to industrial processing. The Yearbook of Industrial Statistics provides the world statistical data for dried fruits, frozen fruits, tinned or bottled fruits, frozen vegetables and tinned or bottled vegetables. The data relating to the production of jams, marmalades and fruit jellies, as well as concentrated or frozen fruit and vegetable juices, are provided only for individual countries.

Generally, the fruit and vegetable processing is concentrated in the developed countries, with production strengthened during the period 1971-1980. Thereby the share of developing countries in world fruit and vegetable processing dropped with the exception of a slight increase in the share of tinned or bottled vegetables, however on a very low level (from 2 to 2.9%).

The world output of dried fruits increased by 24%, frozen fruits by 20.8%, tinned or bottled vegetables by 16.9% and tinned or bottled fruits by only 1%.

The significance of canning and related activities is still relatively small both in terms of nutrition and of local markets in most developing countries. The estimate of FAO is that only half the fresh produce of developing countries is marketed off farms. Of this, about 10% is exported and 2 or 3% industrially processed.

The output of processed fruits and vegetables is highly differentiated in developing countries. While the supply of tinned or bottled vegetables rose by 70% and dried fruits by 17.2%, the supply of frozen fruits declined by -8.9% and of tinned or bottled fruits by -16.3%.

The highest contribution of developing countries was registered in the supply of dried fruits (28.8%) with a relatively slight processing input. Despite the favourable conditions existing in a majority of developing countries for expanding the fruit and vegetable industries, the situation had rather deteriorated compared to the early 1970s.

As regards the specific categories of products, the main supplier of dried fruits for 1980 in the group of developing countries was Turkey (240 thousand tons), representing approximately 85% of the total supply of dried fruits delivered by the developing region.

Among the main developing country producers of jams, marmalades and fruit jellies were Brazil (211 thousand tons in 1974 - the latest available year), Cuba (15.3 thousand tons), Egypt (12 thousand tons), Turkey (6.5 thousand tons in 1979).

Brazil was probably also the largest supplier of concentrated fruit and vegetable juices, among the developing countries (137.6 thousand tons in 1974) as well as unconcentrated fruit and vegetable juices (340 thousand tons in 1980) mainly processed orange juice. The production of concentrated and unconcentrated fruit and vegetable juices in Mexico reached 63.9 thousand tons in 1980; Turkey supplied 32.2 thousand tons of unconcentrated juices in 1979. In Africa, the Ivory Coast produced only 22.8 thousand tons of pineapple juice in 1980 and Kenya 18.6 thousand tons of unconcentrated juices in 1979.

The supply of frozen fruits by developing countries was insignificant and it even dropped in absolute terms. The only significant supplier of frozen fruits was Turkey.

A declining trend was also observed in the production of tinned or bottled fruits by developing countries. The largest producer of these goods in 1980 was Thailand (128 thousand tons) followed by the Philippines (91.6 thousand tons in 1975), Ivory Coast (56.3 thousand tons), Kenya (49.8 thousand tons) and Egypt (26 thousand tons in 1979). The most important growth in this industry, mainly in the production of canned pineapple, was registered in the Philippines, Thailand for Asia and Kenya and Ivory Coast for Africa.

The supply of tinned or bottled vegetables and frozen vegetables by developing countries was also low. As regards tinned or bottled vegetables, the main suppliers of this product in 1980 were: Mexico (178.7 thousand tons), Republic of Korea (55.5 thousand tons); but production dropped from top level in 1978 76.2 thousand tons to 39 thousand tons in 1979 (Tunisia).

The main obstacles hampering the development of this food-processing branch are the non-availability and high cost of appropriate packaging, high fruit input costs owing to the low yields per hectare, and high cost of transport in general, lack of sufficient storage and preservation facilities.

The presence of the transnational corporations in fruit and vegetable industries in developing countries has reinforced in recent years. According to the United Nations Centre on Transnational Corporations (UNCTC) some 33 leading food-processing

firms have more than 140 developing country investments in this sector. In export-oriented activities, the most important operations are in bananas, canned tropical fruits (mostly pineapples) and fresh produce.

In local market-oriented activities, canning and dried-products are most important. The dominating position of transnational corporations is explained by the effectiveness of their marketing and promotional activities.

(d) Fisheries industries

The world-wide catches of fish can hardly be correctly estimated due to the differences in data provided by various sources. However, one can attempt to estimate the annual catch of fish at 76-78 million tons in 1980 including crustaceans. Approximately two-thirds of these catches were used for direct human consumption with the remainder being reduced to fish meal, oils, etc, largely used in animal feed.

The Yearbook of Industrial Statistics provides three categories of processed fish, namely: frozen fish, salted, dried or smoked fish and tinned fish. In 1980, about 15.7 million tons of fish were processed according to the above categories representing about 20% of the world's fish catch.

The increase in world processed fish during the period 1971-1980 amounted to 13.9%. The most significant increase was recorded in tinned fish 35.6%, while the increase of frozen fish reached 11.9% and salted, dried or smoked fish 4.5%. The frozen fish remained the basic product of processed fish, its percentage weight in total processed fish amounted to more than 50%.

The basic category of processed fish for developing countries remained the salted, dried or smoked fish, which usually does not require sophisticated technology to be produced.

The developing countries increased their production of this type of processed fish by 17% over the period 1971-1980. Their output of tinned fish augmented by 36 5% and the growth rate for this category was higher than for the world as a whole. However, their share in global output increased insignificantly. Developing countries recorded a decline in supply of frozen fish by -4.7% decreasing their small contribution to 5.3% of the global supply of frozen fish.

The fisheries industry of a number of developing countries has been developed relatively well in recent years. A number of them, for example, Peru, Brazil, Thailand, Burma, Morocco, Kenya, Indonesia, Philippines, Argentina, Uruguay, developed their fleets, ports, processing and marketing facilities required to facilitate large-scale fisheries development.

Among the main suppliers of frozen fish from developing countries, Peru produced 115.6 thousand tons in 1979, Kenya 97.1 thousand tons in 1980, Thailand 77.4 thousand tons in 1979, Argentina 69.3 thousand tons in 1979, Uruguay 68.9 thousand tons in 1980, Republic of Korea 56.9 thousand tons in 1980 (its production dropped from 80.9 thousand tons in previous years).

The principal suppliers of salted, dried or smoked fish were Indonesia (318.6 thousand tons in 1979)followed by Thailand (83.9 thousand tons in 1979), Republic of Korea (71.3 thousand tons), Ghana (64.7 thousand tons in 1979) and Tanzania (61.5 thousand tons in 1979). Burma produced the greatest amount of tinned fish in 1979 (e.g. 94.5 thousand tons). Morocco held the second position (89.1 thousand tons in 1980), followed by Peru (85.1 thousand tons in 1979) American Samoa (54 thousand tons in 1980).

By the mid-1970s, there were more than 100 fish-industry affiliates of 37 transnational corporations in 46 developing countries. Japanese-based firms have been expanding most actively. With minor exceptions, these transnational corporations' investments and operations are all export-oriented.

The new incentives for development of the fishery industry and increasing the production of processed fish by developing countries, constitute the legal jurisdiction over fishing rights up to the 200 miles off seacoast. As a consequence, close to 35% of the oceans and 90% of commercial fishing grounds are now under national control.

(e) Cereals industry

The cereals industry can be roughly divided into three groups: production of flour from wheat and other cereals, bread-making and other flour confectionery processes, and rice milling. The Yearbook of Industrial Statistics provides the data for the first two groups.

In comparison with 1971, the world production of wheat flour grew 14.2% by 1980, reaching 139 million tons in 1980. Developing countries' wheat flour output increased by 52.2% thus enlarging their share in world wheat flour supply from 20% to 26%.

The significance of other types of flour, measured in physical units, was several times less than that of wheat. Even its world relative importance decreased because it grew only by 4.1% compared to 1971, although for developing countries it increased by 56%, thus more than the production of wheat flour.

During the period 1971-1980, the world economy recorded a very rapid development of the breakfast food industry based on cereals. It is noticeable that the entire increase, amounting to 117.9%, occurred in the developed countries. The contribution of developing countries was practically zero.

A modest expansion was observed in world production of biscuits (35.6%), macaroni and noodle products (18.1%) and the growth remained almost stagnant for bread and other ordinary bakers' wares (7.8%). The corresponding figures for developing countries were marked by an impressive growth of biscuits supply (103.2%), macaroni and noodle products (75.8%), and bread (39.7%). The share of developing countries in the production of bread increased only slightly from 2.2% to 2.8% of world output lagging far behind the requirements of this group of countries. Some achievements in the production of composite flour containing up to 10% of non-wheat flours (especially sorghum and millet) have not contributed decisively for improving the bread-making situation in the developing countries. But further development along this line should bring more promising results.

The developing countries' cereals industry is still experiencing many obstacles and barriers hindering its development (irregular supply of raw materials, inadequate milling capacity, inappropriate storage facilities). It is also strongly recommended to adopt the integrated approach when developing this industry, thereby reducing the level of wasted by-products or secondary products obtained from th production of flour or other cereal foodstuffs (starch, corn oil, corn syrups, glucose, etc.).

Among the developing countries, the largest producers of wheat flour in 1980 were Brazil (5.15 million tons), Argentina (2.4 million tons), India (2.4 million tons), Mexico (2.1 million tons), Algeria (1.6 million tons), Republic of Korea (1.5 million tons), and Nigeria (1.1 million tons).

According to UNCTC, direct transnational corporations' involvement in developing countries is still limited. Nevertheless, more than 40 such corporations are active in this industrial branch. The activities of transnational corporations in the cereal industries in developing countries are directed towards local markets. Among the primary processing industries, transnational corporations are most active in wheat and corn milling. In rice milling, their influence is virtually not perceptible.

With respect to the branded consumer products, based on cereals - biscuits, bakery products, breakfast foods and pet foods, transnational corporations have undertaken general expansion programmes in developing countries in response to shrinking markets and relatively stagnant growth in the home countries. Their expansion programmes have had a key impact on the significant growth of developing countries' consumer products based on cereals over the 1970 decade.

(f) Sugar industries

The world production of raw sugar increased by 16.1% during the period 1971 - 1980. However, whereas it grew by 26% from 1971 to 1977 reaching in 1977 88.5 million tons, it fell to 81.6 million tons in 1980. The main reasons for the raw sugar production breakdown were unfavourable market prospects since August 1976 caused by saturation of sugar markets and resulting in low prices as well as rising competition from other sweetners, especially high fructose corn syrup as well as the real perspectives of obtaining new sources of sweetening agents from unexploited tropical tree species.

Two characteristical periods were also observed for refined sugar. In the first period, 1971-1977, the world production of world sugar rose by 22.1% reaching 59.6 million tons in 1977, and in the second period, 1977-1980, it fell to 55.8 million tons. During the whole period of 1971-1980, the production of refined sugar increased by 14.2%.

Among all food-processing branches, the share of developing countries in the production of sugar, particularly raw centrifugal sugar, was most significant. In 1971-1980 the growth of sugar production rose faster in the group of developing countries than in the world economy. The production of raw sugar increased by 20% and of refined sugar by 28.5%, enlarging their share in world production of raw and refined sugar to 51.3% and 29.4% respectively. The breakdown of sugar production in 1977/78, also affected the developing countries and in the case of raw sugar, they were affected to a greater extent than the world economy. In 1978 their production reached a level of 46.2 million tons, and their share in world raw sugar output amounted to 52.2%. In the period 1971-1977 there was a rapid increase of raw sugar production in developing countries 32.5%; in the following period, 1978-80 the developing countries' production of raw sugar dropped to 41.8 million tons.

The situation improved in the production of refined sugar by developing countries. The highest production was achieved in 1978, e.g. 17.9 million tons; subsequently it dropped to 16.4 million tons in 1980. In the period 1971-1978, the production of refined sugar rose by 41%.

The main reason for the raw and refined sugar breakdown in the group of developing countries was the reduction in the production of raw and refined sugar in India which in 1978 reached 7.1 million tons of raw sugar and 6.6 million tons of refined sugar, and in 1980, its production of raw sugar declined to 4.5 million tons and refined sugar to 4.2 million tons.

The major developing countries' producers of raw sugar in 1980 were: Brazil (7.84 million tons) and the Philippines (2.33 million tons). The production of refined sugar was dominated by India (4.19 million tons), Argentina (1.57 million tons), Brazil (1.34 million tons), Turkey (1.05 million tons).

Most of the sugar-producing countries have state-operated sugar monopolies and national entrepreneurs (with and/or without state firms) control the industry in others. Bangladesh, Burma, Chile, Cuba, Egypt, Fiji, Guyana, Peru and Turkey had national monopolies (in the mid-1970s). In Argentina, Barbados, Brazil, India, Mexico, the Philippines, Thailand and Venezuela, national entrepreneurs dominate the industry, with relatively high influence on the State.

Direct involvement of transnational corporations in developing countries' sugar industries exists mainly in marketing and trade relationships. Of approximately 1,500 commercial cane-sugar mills in developing countries, transnational corporations seem to control no more than 20-30 operations.

(g) Chocolate and confectionery industries

The sugar confectionery industry is concentrated in the developed countries. During the period 1971-80, this sector showed a modest growth (12.1%). The growth in the group of developing countries (data for some of them are not available, for example, Argentina, Brazil, Thailand, Pakistan) has developed faster, by 32.4%, but its share in the world's sugar confectionery output increased only from 6 to 7.1%.

The largest producers in 1980 were Nigeria (65.9 thousand tons), Egypt (60 thousand tons in 1979), Republic of Korea (53.9 thousand tons).

The transnational corporations have greatly extended their activities in developing countries in the past two decades. Thirty-six of the leading firms were active in this industry of which 21 have established one or more operations in developing countries, producing branded candies and chewing gum.

A relatively slow growth took place in the world production of cocoa-based products over the period 1971-80. The world output of cocoa powder increased by 10.9%, cocoa butter by 11.4%, and chocolate and chocolate products by 14.9%. The group of developing countries augmented its production of cocoa powder by 75.4% but cocoa butter only by 4.3% and its output of chocolate and chocolate products even decreased by -4.9%.

The share of developing countries in the processing of cocoa beans slightly increased in the period 1971-80 as regards the production of cocoa powder and chocolate and chocolate products, but declined from 40.6% to 37.9% in the case of the production of cocoa butter which is still the main cocoa product produced in developing countries.

Among the developing countries the main producers of cocoa powder and cocoa butter were African countries (73.5% and 47.9% respectively in 1980). However, the share of African countries in the production of chocolate and chocolate products amounted only to 21.4% of the total production of developing countries. The main producers of cocoa powder in developing countries were: Ivory Coast (21.3 thousand tons in 1979), Cameroon (12.7 thousand tons in 1979) and Ecuador (7.8 thousand tons in 1978).

As regards the production of cocoa butter, the first place in 1980 was occupied by Brazil with 26.7 thousand tons followed by Ghana with 14.7 thousand tons, Ivory Coast (12.6 thousand tons in 1979) and Nigeria (6.5 thousand tons in 1978), Ecuador (5.9 thousand tons in 1979) and Cameroon (4.9 thousand tons).

The major production of chocolate and chocolate products was recorded in Brazil (66.8 thousand tons in 1974), Colombia (44.5 thousand tons in 1979).

One of the major problems facing cocoa products is the economic use for various by-products of cocoa, hitherto completely wasted. These by-products are the cocoa-pod husk (56% of the pod), the sweetens (mucilage) (2%) and unfermentable black pod disease infected cocoa pods.

The slow growth in developed countries' markets for chocolate and confectionery products has induced the transnational corporations to penetrate developing countries' markets and the leaders (four firms generally control from 60% to 80% of sales in cocoa-based consumer products) have followed Nestlé into the developing countries in search for expanded sales.

The production of coffee extracts including instant coffee reached in 1980 343.3 thousand tons. During the period 1971-1981 it increased by 27.1% owing to the expanded production in developing countries. The growth in developing countries reached 44.8%, thus their share in world production extended from 32.9% to 44.8%.

Kenya, the main supplier of coffee extracts, achieved its highest production in 1978, 86.0 thousand tons, and in 1980 its production fell to 80 thousand tons. Brazil reached its highest production of coffee-extracts in 1979, 52.8 thousand tons, but in 1980 its production dropped to 40.2 thousand tons. These two countries supplied in 1980 78.1% of the entire production of coffee extracts originating from developing countries.

The industrial utilization of the by-products of coffee is practically none. So far the husk (coffee berry husk constitutes about 50% by weight of the net berry) is a wasted product in Africa. The husk is a potentially valuable livestock feed if properly decaffeinated.

In the coffee industry, 20 of the major food processers and various specialist firms are significant producers. The eight largest processers control 55% to 60% of world sales with the largest firms (Nestlé and General Foods) together holding an estimated 20% of the world market.

The market leaders have located most of their coffee-processing operations in developed countries' markets, but several corporations are expanding activities in developing countries. Nestlé, for example, owns coffee processing affiliates in 21 developing countries.

(h) Animal feeds

The animal feed industry grew rapidly in both developed and developing countries in the period 1971-80. This growth was caused, to a large extent, by the expansion of the poultry sector (which recorded the highest growth rate within the meat-processing industry).

The world's animal feed industry increased by 57.7%. The expansion of this industry in developing countries was more sizeable, since it rose by 96.9% but because of its negligible share in world animal feed production in 1971 (6.8%), the contribution of developing countries to the world output of animal feed is still insignificant (8.5%).

The further development of this industrial branch depends on the stable supply of two basic components namely cereal-based products and oilcake output. The latter represents the major source of industrial protein for the animal feed industry. The increased supply of soya bean cake, which dominates the global supply of oilcakes, and other vegetable oilcakes (rape, groundnut, cottonseed, sunflowerseed and copra) will have a decisive impact on its further growth. The short- and medium-term forecasts for the expansion of this industry are propitious, particularly in those regions and countries where the integrated development of the meat industry, vegetable oils and fats industry and other food-processing industries is carried out.

The major producers of prepared animal feed products in the group of developing countries in 1980 were: Republic of Korea (3.6 million tons), Brazil (3.3 million tons in 1974), Mexico (2.9 million tons), data for Argentina not available.

In the late 1950s, the leading feed industry companies began expanding animal feed processing into developing countries. According to UNCTC, by 1976, 20 major food processers had at least 69 operating affiliates in 35 developing countries. Production affiliates were established both in countries where domestic raw materials were available and in a number of smaller countries, which rely heavily on imported cereals or oilcake for this industry.

(i) Beverage industries

Beverages include two main categories of products: alcoholic beverages (distilled alcoholic beverages, wine and beer) and non-alcoholic beverages (mineral waters and soft drinks).

Both categories of beverage industries were developing successfully during the period 1970-1981, particularly the non-alcoholic beverage industry. The world output of mineral water rose by 46.3% and of soft drinks by 61.4%. The rapid expansion of non-alcoholic beverages in the developing countries, whose growth accounted for 59.6% in mineral waters and almost 144% in soft drinks is worthy of note. Their share in world production of mineral water increased from 7.1% in 1971 to 7.7% in 1980 and in soft drinks from 21.4% to 32.3%.

A slightly lower growth rate occurred in the alcoholic beverages in the above period of time. However the world production of beer increased substantially by 34.3%, being influenced mostly by the impressive expansion of beer output in developing countries where the increase amounted 86.7%. In 1980 the share of developing countries in world production of beer increased from 11.5% to 16.0%. Almost the same large growth achieved the developing countries in the production of distilled alcoholic beverages (for ethyl alcohol 69.4% and other than ethyl alcohol by 78.8%), exceeding considerably the world increases (which amounted to 11.4% and 42.6% respectively).

Only the production of wine declined in developing countries, even in absolute terms by -6.5%, while the world output of wine grew by 18.3%.

As far as the individual developing countries' output is concerned, the major pro producers of soft drinks were in 1980: Mexico (48.3 million hectolitres), followed by Colombia (15.1 million hectolitres in 1979), Brazil (13.2 million hectolitres in 1976).

Brazil (2.4 million hectolitres in 1974) and Mexico (2.3 million hectolitres in 1980)also dominated the developing countries' production of mineral water. The third place was occupied by Kenya (1.4 million hectolitres in 1980).

The major suppliers of beer in the group of developing countries in 1980 were: Mexico (26.9 million hectolitres), followed by Brazil (15.1 million hectolitres in 1979), Colombia (11.5 million hectolitres), Nigeria (9.9 million hectolitres), the Philippines (7.5 million hectolitres in 1979) and Republic of Korea (5.8 million hectolitres).

The Republic of Korea achieved supremacy in the production of beverages other than ethyl alcohol distilled alcoholic beverages in 1980 (5.05 million hectolitres), followed by Mexico (1.4 million hectolitres). These two countries delivered more

than 50% of the entire non-ethyl distilled alcoholic beverages production.

The dominant position in the production of ethyl alcohol for all purposes was held by India in 1980 (4.2 million hectolitres), followed by the Republic of Korea (1.3 million hectolitres, and Mexico (0.9 million hectolitres).

The dominating producers of wine in the group of developing countries in 1980 were Argentina (23.3 million hectolitres) followed by Chile (5.7 million hectolitres) and Algeria 2.6 million hectolitres).

The major problem facing the further development of this industrial branch is the manufacturing of packaging materials and containers, and using raw material substitutes. The beverage industries' huge demand for packaging materials (bottles, board, paper, plastic crates, etc) requires a packaging industry to be developed simultaneously. Its requirements for agricultural raw materials (fruits, vegetables, maize, cereals, sugar, etc.) call for the establishment of viable links between agricultural production and the beverage industries. Hence, when developing the beverage industries the optimal effects can be obtained through the integrated approach.

Roughly one quarter of the affiliate and world-wide sales of the transnational corporations' manufacturing soft drink concentrates are generated in the developing countries. Sales of concentrates by the three leaders (Cadbury, Schweppes, Pepsico and Coca-Cola) probably constituted two-thirds of the world industry.

Developing countries have represented a relatively important growth option of leading beer-industry firms, but for wines and distilled alcoholic beverage producers, developing country investments still appear to be marginal.

The four largest European beer producers together have more than half the identified foreign affiliates in the sector, including 36 of the 61 developing country affiliates. More than half of the affiliates are in tropical countries in Africa and the Caribbean.

(iii) Summary

Bearing in mind that one of the principal industrial development objectives is to raise the developing countries' share in global industrial output to at least 25% by the year 2000, the developing countries' share in the food processing and beverage sectors should considerably exceed this target.

According to UNIDO's estimations, the share of developing countries in global industrial inputs in 1982 accounted for 11.02% (for Latin America 5.68%, South East Asia 3.43%, West Asia 0.8% and for Africa 1.11%).

The share of developing countries in world output of food-processing products measured in physical units, strongly differentiated. But out of 52 food processing and beverage products for which data were available in 1980, in 37 cases the developing countries' share exceeded in 1980 the present average share of developing countries for all industrial products. For 25 food processing and beverage products, the share of developing countries exceeded 25% of the world food processing and beverage output (in 1971 for 17 products) and for the next 7 products the share was between 20% and 25% (in 1971 for 5 products).

During the period 1970-1981 the developing countries' share in world food processing and beverage output increased for 36 food processing and beverage products. However for the remaining 16 products this share declined.

(2) Foreign trade in processed food products

The First Global Study on the Food-Processing Industry, published in 1981, included the international trade situation in processed food products within world market economies for the period 1970-1977. In order to evaluate the development of trade, 29 major groups of products were identified in the First Global Study and taken into consideration when calculating the figures for processed food products.

This chapter on foreign trade forms a continuation of consideration on trade in processed food products, and it embarks on the evaluation of the trade situation in this industrial branch in the years 1977-1980. However, these two periods 1970-1977 and 1977-1980 cannot be fully comparable, because the nomenclature for specific food-processing groups of products slightly changed in the United Nations Yearbook of International Trade Statistics, published in 1981, in comparison to its edition in 1978. Besides, the list of products being included in the food-processing sector has been extended by the inclusion of coffee and substitutes sub-sector, as cocoa and tea, requiring a similar degree of processing which had been originally included in food-processing items and which were subjects of evaluation.

The above quoted Yearbook covers data expressed only in values, which are excellent indicators of changes for stable economic situations. However, the present economic situation is characterized by instability of currencies, differentiated fluctuations of their rates of exchange, and inflationary pressure. Thus the analysis of trade data expressed in fluctuating values enables only to outline the general image of changes in international trade of food-processing products. The more detailed analysis could be applied to variables expressed in physical units.

The data related to trade in food-processing products apply to world market economies, which are the major actors on the world trade markets. The international trade between market economy countries constitutes more than 90% of the total world trade. However, the involvement of centrally-planned economies in international trade is considerably diversified - for some products negligible, for others it has an impact on world trade (e.g. imports of cereals or animal feedstuffs); hence the omission of this group of countries' influence; also the accuracy of evaluation of the present position and role of developing countries in the food-processing trade.

As Table 4 indicates, during the period 1977-1980 the world market economies' trade in processed food products increased significantly - imports by 42.3% and exports by 39.7%. Developing markets economies' imports were rising more rapidly than the developed market economies imports, growing by 53.2%, while the latter's imports grew by 39.5%. This rapid development of developing countries' imports contributed to enlarging their share in world market economies' imports from 20.4% in 1977 to 22% in 1980. Contrary to import development the export development was dominated by a rapid expansion of developed market economies whose exports increased by 63.8%, whereas the developing market economies recorded an increase of their food-processing products exports accounting only for 5.8%.

The above-mentioned trend in development of international trade reflected the diminution of the economic position of developing countries. On the one hand their demand for processed foodstuffs increased substantially as a result of a rapid population growth, and extended requirements and needs of the people - on the other hand, the deteriorated terms of trade influenced negatively the expansion of their exports of processing food products. The deteriorated terms of trade emerged as a consequence of strengthening the protectionist policy in the world economy in the second half of the 1970s decade, reinforced by stagflation, deepend unemployment, instability of main world currencies. The international efforts (e.g. Tokyo Round under GATT) undertaken to improve the terms of trade, particularly for developing countries, practically did not bring the visible amelioration of the trade situation for the group of developing countries, although this group benefited from some concessions granted it following the Tokyo Round as regards lifting or reducing the tariff barriers.

However, the almost stagnant growth of developing countries exports of food processing products was influenced not only by external factors, but also by worsening of their domestic economic conditions, particularly the low utilization of installed industrial capacities due to irregular supply of raw materials, spare parts and machinery bottlenecks, inconsequent co-ordination policy at the central level, shortages of skilled manpower, etc. The new industrial investments in the food processing sector were very often delayed and insufficient in quality and quantity to guarantee the required high-quality production for outlets and for local markets to satisfy the extended needs of the population. In other words, apart from the external factors, lack of high quality processed foodstuffs which could be designed for exports by developing countries, was the second substantial constraint having an impact on virtually the zero growth of the food-processing exports.

TABLE 4

DEVELOPED AND DEVELOPING MARKET ECONOMIES TRADE IN PROCESSED FOOD PRODUCTS *

	IMPORTS				EXPORTS			
	1977		1980 **		1977		1980 **	
	Million US$	Share %	Million US$	Share %	Million US$	Share %	Million US$	Share %
World market economies	84,082	100.0	119,677	100.0	84,409	100.0	117,897	100.0
Developed market economies	66,897	79.6	93,345	78.0	49,266	58.4	80,716	68.5
Developing market economies	17,185	20.4	26,332	22.0	35,143	41.6	37,181	31.5

Source: Calculated from figures in the United Nations 1980 Yearbook of International Trade Statistics, New York 1981, Volume II.

* The processed food items in Table 4 have been included in the calculation of world market economies trade in processed food products.

**

** Estimated figures.

The developing countries relatively diminished earnings from exports of processed foodstuffs were confronted with extended financial needs, indispensable for payment for expanded imports. This additionally contributed to further destabilization of developing countries' balances of payments, widening the gap between the real possibility of payments and their imposed financial requirements thus creating unfavourable conditions for enlarging developing countries' debts on capital markets.

The relative worsening of developing countries' trade in processed food products during the period of 1977-1980 is confirmed by Table 5 which contains the imports and exports data related to world market economies and the developing markets' economies share in total market economies imports and exports of aggregated food-processing groups of products. Out of 30 identified food processing groups of products, the developing countries' share increased only for seven aggregated groups of products in exports and for ten in imports, although in absolute figures developing countries' imports and exports considerably increased for practically all groups of products.

As regards developing countries' imports, one can separate three main categories of items, having different percentage weights in the world market economies' imports. The first category of items form the products which exceeded in 1980 50% of developing countries' share in world imports of market economies. The most important among them are wheat flour, exceeding 90% of total world market economy imports, then milk and cream with a downward trend from 58.5% in 1977 to 56% in 1980, and soft fixed vegetable oils with 50% share of developing countries' imports.

The second category of items present those for which developing countries' share in world market economy imports fluctuates between 25% and 50%. There are 10 such groups of products.

For the following , the share of developing countries in world market economies' imports increased during the years 1977-1980: butter, sugar and honey, margarine, prepared edible products, processed animal vegetable oils. It means that the demand of developing countries for the above products was particularly high, resulting in extended imports of these items. For the remaining items within the second group of products, the developing countries' share declined. They include among others: tea and mate, non-alcoholic beverages,[5/] animal oils and fats and non-soft fixed vegetable oils.

The third category of products is the most numerous. For these products, the share of developing countries' imports leveled below 25%. This group includes all kinds of processed meat, cheese, all types of processed fish, fruits and vegetables, chocolate and non-chocolate products and obviously cocoa and coffee. The low level of processed meat and fish as well as cheese is however not a result of saturation of the developing countries' markets by their domestic production of these items but rather as a result of serious financial limitations which make it difficult for them to finance expensive imports of the above-mentioned products.

5/ This sector in the developing countries recorded a very rapid expansion during the 1970 decade influencing the relatively diminished demand for soft drinks on world market.

Table 5: World market economy trade in processed food products, developing countries' share of total market economy, in 1977 and 1980

SITC Product	World market economy				Developing market economies in total market economy share			
	IMPORTS million US $		EXPORTS million US $		IMPORTS %		EXPORTS %	
	1977	1980	1977	1980	1977	1980	1977	1980
011 meat fresh, chilled, frozen	9 684	15 914	9 120	14 994	13.8	14.0*	12.8	9*
012 meat dried, salted, smoked	670	1 99	599	985	11.9	6.8*	1.6	0.4
014 meat prepared, preservd, nes etc.	1 932	2 605	1 615	2 363	16.2*	13.1*	24.6	24.8*
022 milk and cream	2 828	4 830*	2 598	4 805	58.3	56.0*	2.3	1.2*
023 butter	1 615	3 056*	1 733	3 299	25.3	29.2*	1.2	0.3
024 cheese and curd	2 551	4 057	2 490	3 978	12.7	12.6*	2.1	0.4*
034 fish fresh, chilled, frozen	3 517	5 461	3 341	4 799	8.1	8.3*	32.6	26.1*
035 fish salted, dried, smoked	758	1 243	702	1 183	23.3	22.5*(79)	12.2	9.3*
037 fish, etc. prepd., preservd, nes	1 794	2 749	1 560	2 518	22.6	19.0*	26.0	25.1*
046 wheat, etc. meat or flour	881	1 124(79)	918	1 653	91.3	90.8*(79)	7.5*	4.3
047 other cereal meals, flour	151	229*	110	298	61.1	61.6	13.2	14.1(79)
048 cereal, etc. preparations	2 156	3 290*	1 958	3 035	38.1	32*	9.5	5.0*
056 vegetables, etc. preservd,prepard	2 340	3 010	2 097	2 296	18.2	18.5*	29.9	28.1(79)
058 fruit preserved, prepared	2 751	4 046	2 375	3 788*	16.1	13.8*	32.2	32.8*
061 sugar and honey	6 097	10 657	7 880	10 463	30.6	35.2*	67.1*	-
062 sugar, candy, non-chocolate	603	880	598	837	22.2*	20.6*	11.2*	7.4*
071 coffee and substitutes	14 122	13 741	13 425	13 427(79)	5.4	1.7*	89.7	89.0*
072 cocoa	4 093	4 261	4 259	5 051(79)	3.4	2.6*	79.9	78.7(79)
073 chocolate and products	1 028	1 875	1 215	1 902	10.1	9.7*	16.4	12.6*
074 tea and mate	1 864	1 548	1 817	1 350	33.2	29.4*	87.9	82.5*
075 spices	805	903	763	1 015(79)	42.3	44.1*	86.4	83.2*(79)
081 feeding stuff for animal	6 951	9 727	7 066	10 555	14.8	10.5*	38.6	34.3*
091 margarine and shortening	468	651*	523	632	30.9*	35.6*	11.5	12.8*
098 edible products, preps., nes	1 499	2 773	1 541	2 812	33.9	36.7*	9.4	7.2*
111 non-alcoholic beverages, nes	399	770*	437	785	54.5	48.7*	5.2	7.4*
112 alcoholic beverages	5 359	9 338	5 254	9 050	16.2	12.9*	6.5	4.0*
411 mineral oils and fats	1 207	1 439	1 166	1 526	36.9	35.0*	3.5	1.5*
423 fixed vegetable oils, soft	2 592	3 559	2 748	3 514	50.6	49.6*	34.4	28.1*(79)
424 fixed vegetable oils, non-soft	2 596	2 815	2 419	3 283(79)	34.1	25.9*	80.6	82.2(79)
431 processed animal vegetable oils, etc.	782	1 733	741	1 701*	30.9	48.5*	17.1	19.9(79)

* estimated on provisional figures

Source: 1980 Yearbook of International Trade Statistics, New York, 1981, Vol. 2.

Developing countries' exports of individual processed food groups of products can be segregated similarly as their imports. The first category of items forms the products for which developing countries' share in world market economies exports exceeded 50% in 1980. This group of products consists of: coffee and substitutes for which the share of developing countries amounted to 89%, spices (83% in 1979), tea and mate (82.5%), non-soft fixed vegetable oils (82.2% in 1979), cocoa (78.7% in 1979), sugar and honey (67.1% in 1977). The development trend for developing countries' exports of these products was not very favourable during the years 1977-1980 since for all these groups of items [6/] except non-soft vegetable oils, the share of developing countries in world market economy exports declined. Nevertheless, developing countries decidedly dominate the world exports of coffee, spices, tea and cocoa. Such dominating position on imports occupies only wheat flour.

Among the second category of items, for which developing countries exports' share was below 50% and over 25% in 1980 were: feedstuff for animals (34.3%), preserved or prepared fruit (32.8%), soft fixed vegetable oils (28.1% in 1979), fresh, chilled or frozen fish (26.1%), preserved or prepared fish (25.1%) and preserved or prepared meat (24.8%). Exports of developing countries for almost all of them developed less rapidly than for the developed market economies, thereby diminishing their share.

A faster pace was achieved for developing countries' exports of preserved or prepared meat and preserved or prepared fruit but their share only rose a little.

Finally the third category of food processing products (most largest) leveling below 25% of the developing countries exports' share in world market economy exports. This includes among others meat (fresh, chilled, frozen, dried, salted, smoked), milk and cream, butter, fish (salted, dried, smoked), chocolate and products, margarine, soft drinks and alcoholic beverages. Exports of products included in this category developed generally less dynamically than for developed market economies, thus the very modest share of developing countries in total exports dropped still in a majority of the above products.

Further accelerated expansion of developing countries' exports of food products is indispensable to recompense the extended imports not only of food products but also of other manufacturing goods. The food processing sector creates prerequisites for dynamic development of exports since it is a relatively less capital-intensive

---

6/ The group of sugar and honey is exlcuded from consideration since the latest available year for the developing countries' exports is 1977.

industrial branch, requiring considerably shorter time for entering into operation in comparison with heavy manufacturing thus enabling it to achieve fast successful production. The most challenging food-processing sub-sectors for rapid expansion of developing countries' exports are those belonging to the second and third categories. Numerous natural prerequisites already exist, others may possibly be created. The integrated development of the food-processing industries, as was already proved by examples of developed countries, as well as transnational corporations, is one of the most promising ways to achieve the expected extended production for domestic consumption and for exports.

III. Production and market situation for vegetable oils and fats

(1) Supply of vegetable oil-seeds and oil crops

The production of oils and oil-meals is a derivative of the production of oil-seeds and oil crops, which constitute the basic raw material for the vegetable oils and fats industry, and indirectly for other branches of the food-processing industries, and chemical, pharmaceutical, cosmetics industries, etc.

The total amount of oil-seeds and oil crops' production directly influence the size of global oil output. The vegetable oils' production can be increased under the condition that oil-seeds and oil crops' supply grow accordingly, and are delivered regularly to processing plants. Being aware of this direct inter-relationship of agriculture and industry, there is a need to analyze firstly what is the current output of oil-seeds and oil crops originating from agriculture, how it rose over the period of the 1970s, and what are the perspectives for the near future.

The analysis of the production and market situation for vegetable oils and fats relates mainly to global economic trends and problems. Nevertheless, the emphasis is placed on the evaluation of the situation within the group of developing countries and among the main producing and exporting countries.

As Table 6 shows, soybeans, then far behind coconut and cottonseed, are the main oil-seeds and oil crops delivered by the agriculture sector measured in physical units. The last decade of the 1970s witnessed a particularly rapid expansion of soybeans output, which increased between 1969-71 and 1981 by about 102%. Only in the period 1976-1981 did soybeans' production increase by 39.5%. However just two countries, namely the USA and Brazil, delivered 81.4% of total soybeans'supply in 1981 and the process of concentration of production in both countries strengthened, since their output in 1969-71 amounted to 75.2% of global supply. Production of soybeans only rose in Brazil from 1.5 million tons in 1969-71 to almost 15 million tons in 1981 (ten times as much). Brazil's increased output contributed decisively to the enlarged developing countries' share in world production of soybeans from 25.9% to 34.9% in 1981.

The highest increase in the production of oil crops was recorded for palm oil. The total output of palm oil augmented by 170% between 1969-71 and 1981, and 57% between 1976 and 1981. This extremely high growth is due to the expansion of palm oil output in Malaysia whose supply in 1969-71 accounted for only 23% of the total supply of palm oil and grew to 52% in 1981.

Table 6

World and developing countries' production of main oilseeds and oil crops, and share of developing countries in world production, 1969-71, 1976, 1981*

Thousand Metric Tons

Product	World Production			Developing Countries' Production			Share of Developing Countries in World Production		
	1969-71	1976	1981	1969-71	1976	1981	1969-71	1976	1981
Coconuts	29,355	33,925	36,665	29,355	33,925	36,665	100.0	100.0	100.0
Copra	3,687	5,053	5,054	3,687	5,053	5,054	100.0	100.0	100.0
Cottonseed	22,728	23,134	29,337	14,243	13,507	16,593	62.7	58.4	56.5
Groundnuts in shells	17,850	17,871	18,368	16,010	15,872	17,052	89.7	88.8	92.8
Olive oil	1,557	1,516	1,579	318	444	401	20.4	29.3	25.4
Olives	7,611	8,123	8,403	1,759	2,542	2,543	23.1	31.3	30.3
Palm kernels	1,178	1,491	1,891	1,178	1,491	1,891	100.0	100.0	100.0
Palm oil	1,987	3,426	5,384	1,987	3,426	5,384	100.0	100.0	100.0
Rapeseed	6,607	7,550	12,147	3,132	3,790	6,547	47.4	50.2	53.9
Safflowerseed	706	749	889	472	511	745	66.8	68.2	83.8
Sesame seeds	1,918	1,855	1,959	1,910	1,851	1,956	99.6	99.8	99.8
Soybeans	43,487	63,025	87,941	11,279	26,672	30,683	25.9	42.3	34.9
Sunflower seeds	9,872	10,127	13,765	1,591	1,545	3,172	16.1	15.2	23.0

* Developing countries defined as all market developing and centrally planned countries.

Source: FAO Production Yearbook, 1977 and 1981, Volume 31 and 35.

Cultivation of some of the oil-seeds and oil crops took place almost exclusively in developing countries, due to climatic and soil conditions. This applies to coconuts and copra, palm oil and palm kernels as well as to sesame seeds, groundnuts and safflowerseeds.

However, despite these favourable natural conditions prevailing in developing countries for some of the vegetable oil-seeds and crops, the output of tropical oils and fats increased only in a very limited number of them. For some , the output of certain traditional tropical oil crops even decreased. For example, groundnuts, sesame seeds, safflowerseeds generally declined in African countries over the last decade.

During 1970-1981 the share of developing countries increased in the global output of sunflowerseeds (from 16% to 23%), rapeseed (from 47% to 54%) and olive oi[1] (from 20% to 25%), and dropped in world supply of cottonseed (from 63% to 56%).

It is worthy of note that sunflowerseeds and rapeseeds became more popular growings in developing countries lying in modest climatic zones.

The production of main crops by principal producers in 1980/81 and the forecasts for 1982/83 are shown in Table 7.

(2) Output of vegetable oils and fats

By comparing Tables 6 and 8 one can evaluate to which extent the oil-seeds and oil crops produced in developing countries are processed in these countries. Having assumed that both tables are not fully comparable[7/] they allow however to state that generally the level of domestically processed oil-seeds and oil crops in developing countries is lower than the total amount of vegetable oil-seeds and oil crops produced by them. A substantial part of their oil crops is exported as raw materials and is further processed in industrialized countries. Moreover, the oil-seeds' processing -which requires much greater sophisticated technological inputs to obtain refined oil than simpler technologies required for producing crude oil, is in principal less developed in developing countries. Thus the share of developing countries in the production of crude oil is generally larger than the same share for production of refined oil.

7/ Table 6 derives from the FAO Production Yearbook while Table 8 comes from the UN Yearbook of Industrial Statistics; the group of developing countries in Table 8 exclude European developing countries. Table 8 does not contain all corresponding variables in relation to Table 6.

Table 7

Main oils crops production and forecasts for 1980/81, 1981/82 and 1982/83

	In Million Tons		
	1980/81	1981/82 estimate	1982/83 forecast
SOYBEANS	81.7	87.1	95.2
United States	48.8	55.4	62.0
Brazil	15.5	12.9	14.6
China	7.9	9.3	8.7
Argentina	3.8	4.0	3.2*
Others	5.7	5.5	6.7
COTTONSEED	26.6	29.0	28.1
USSR	6.1	5.9	5.7
United States	4.1	5.8	4.3
China	5.4	5.9	6.8
Others	11.0	11.4	11.3
GROUNDNUTS (in shell)	17.5	20.9	19.2
India	5.0	7.2	5.6*
China	3.7	3.9	3.9
United States	1.0	1.8	1.6
Sudan	0.8	0.8	0.9*
Senegal	0.5	0.9	1.0
Nigeria	0.6	0.6	0.6*
Argentina	0.2	0.2	0.2*
Others	5.7	5.5	5.6
SUNFLOWERSEED	13.2	14.5	16.2
USSR	4.7	4.7	5.3
Argentina	1.3	1.8	2.1*
United States	1.7	2.1	2.7
China	0.9	1.2	1.1
Others	4.6	4.7	5.0
RAPESEED	11.4	12.8	14.3
India	2.2	2.6	2.6
Canada	2.5	1.9	2.1
China	2.4	4.1	4.7
Others	4.3	4.2	4.9*
OLIVE OIL	2.0	1.5	1.9
Spain	0.5	0.3	0.6
Italy	0.5	0.6	0.5
Others	1.0	0.6	0.8
PALM OIL	5.4	6.3	6.6*
Malaysia	2.8	3.5	3.8
Nigeria	0.7	0.7	0.7
Indonesia	0.7	0.8	0.9
Others	1.2	1.3	1.2
PALM KERNELS	1.9	2.3	2.4*
Brazil (babassu)	0.3	0.3	0.3
Nigeria	0.4	0.4	0.4
Malaysia	0.6	0.9	1.0
Others	0.6	0.7	0.7

* Indicates that particular uncertainty still remains in early March 1983.

Source: Committee on Commodity Problems, Intergovernmental Group on Oilseeds, Oils and Fats, FAO, CCP: OF/ST 83/2 (Final), March 1983 p. vi.

Table 8 confirms that during the period 1971 to 1980 the production of oil, originating from soybeans and palm oil [8/] increased particularly significantly. Refined soybean oil rose by 60.7% (in 1976-1980 by 26.5%) and crude soybean oil even by 93.8% (in 1976-80 by 30.1%). The growth of soybean oil in developing countries was particularly impressive, as refined oil increased by 267% in the period 71-80 (in 1976-80 by 45%) and crude oil by 604% (in 76-80 by 40%). This extremely rapid growth took place in the first part of the decade of 1970, in Brazil, where the growing of soybeans became widely promoted. However, the share of developing countries in world processing of soybeans reached a very modest level in 1980 (13.7% for refined oil and 23.2% for crude oil) lagging behind the level of their share in world output of soybeans, since their starting basis was very low and important parts of soybeans are still exported by producers in developing countries (mainly Latin American countries).

A similar pattern of development applies to aggregated variable "crude oil, other of vegetable origin" which grew by 59.6% over the period of 1971-1980 (in 1977-80 by 26.5%). The growth of refined oil originating from these combined crops was much lower 16.8%. Developing countries, dominating the production of these types of crops were processing them only partly domestically, reaching in 1980 58.5% of their share in world production of crude oil, originating from these crops, and only 26.7% of refined oil. The latter share even decreased in comparison to 1971, when it amounted to 33.1%.

A modest growth took place in world processing of cottonseed and olives, averaging 15-33% during 1971-80. The developing countries' growth rate was similar, except for an impressive increase in crude olive oil by 158.1% for the above period of time, due to increased production of crude olive oil in Turkey.

Only the world output of groundnut oil, particularly crude oil, declined during 1971-80 by -21.4% (in 1976-80 by -26%). The drop of refined groundnut oil was somewhat less and accounted for -11.5% (in 1976-80 by -25.4%). The breakdown of crude groundnut oil production was caused by the declined oil output originating from African countries, mainly from Senegal, but also from Asia (India) and Latin American countries (Brazil).

8/ Palm oil and coconut oil are the main components of the variable "oil, other, of vegetable origin".

Table 8

World and developing countries' * production of vegetable oils and fats
(ISIC 311501-311537) and share of developing countries in world production-1971, 1976, 1980

Thousand Metric Tons

Product	ISIC		World Production			Developing Countries' Production **			Share of Developing Countries in World Production		
			1971	1976	1980	1971	1976	1980	1971	1976	1980
Margarine, imitation lard and other prepared fats	311501		7616.2	8883.3	9829.5	832.4	1220.7	1431.5	10.9	13.7	14.6
Oil, soybean, crude	311510		6352	9458	12308	406	2058	2861	6.4	21.7	23.2
Oil, soybean, refined	311513		3480.0	4420	5592.0	208	528	764	6.0	11.9	13.7
Oil, cottonseed, crude	311516		2526.0	2574	2957.0	899	900	1087	35.6	34.9	36.8
Oil, cottonseed, refined	311519		916.0	851	1068.0	392	421	427	42.8	49.5	40.0
Oil, groundnut, crude	311522		3100.0	3293	2439.0	2339	2463	1854	75.5	74.8	76.0
Oil, groundnut, refined	311525		349.0	414	309.0	174	227	218	49.8	55.4	70.5
Oil, olive, crude	311528		1629.0	1600	2133.0	329	530	849	20.2	33.1	39.8
Oil, olive, refined	311531		130.0	162	157.0	30	33	29	23.1	20.4	18.5
Oil, other, of vegetable origin, crude ***	311534		7789.0	9826	12,430.0	4217	5384	7276	54.1	54.8	58.5
Oil, other, of vegetable origin, refined ***	311537		4636.0	5132	5,418.0	1739	1698	1448	37.5	33.1	26.7

* Data for developing countries calculated on basis data available in Yearbook of Statistics (1980). Group of developing countries includes all developing countries (Africa, South America, Caribbean, Asia) excluding European developing countries.

** Provisional or estimated figure. Source: Yearbook of Industrial Statistics, 1980 Edition, Volume II.

***Refers to data on linseed oil, palm oil, coconut (copra) oil, palm kernel oil and those oils covered under SITC 4229.

The world output of oil crops (oil equivalent) in 1976 and 1981 is shown in Table 9. While the total production of oil crops increased by 33.1%, the production in developed market economies increased by 58% and in developing countries only by 21.8%. Thus, the share of developing countries in total production of oil crops (oil equivalent) dropped from 52.4% in 1976 to 47.9% in 1981. Moreover, the increase in absolute terms by 21.8% in developing countries was due to the considerable growth of oil crops in a very limited number of developing countries.

The world output of edible fats and oils is forecast to increase in 1983. About one-half of the increase in 1983 output is likely to originate in North America and most of the remaining balance in Latin America, Asia and Western Europe. There would be a slight increase in the output in Eastern Europe and the USSR and stagnate in Africa. This trend means a further decline of the developing countries' share in world output of oils crops.

The involvement of transnational corporations in vegetable oil processing and downstream production of related consumer products is relatively high. According to UNCTC, 19 of the leading firms have affiliate branches in 38 developing countries. UNILEVER, with affiliates in primary-processing and/or consumer-oil products in 24 of these countries, is by far the leading firm in this industry, as well as in soap and detergent manufacture, which uses the same oil co-products. The only firm whose developing country affiliates' are of comparable scope is American CPC, which has affiliates producing edible oil products in 14 developing countries.

(3) Consumption

During the 1970s', the demand for oils and fats showed only slow growth. However, there appears to be considerable scope for greatly increased demand in a number of developing countries, where per capita consumption is still low and where population grows rapidly as shown in Table 10.

Table 9

Production of oils crops/oil equivalent in 1976 and 1981, by world and regions

World/ Regions	1976		1981		Growth, 1976=100	
	Thousand Metric Tons	Share %	Thousand Metric Tons	Share %	1976	1981
1. World / total	39,812	100.0	52,984	100	100	133.1
2. Developed Market Economy of which:	10,677	26.8	16,869	31.8	100	158.0
a. North America	8,238	20.7	13,447	25.4	100	163.2
b. Western Europe	2,127	5.3	2,845	5.4	100	133.7
3. Developing Countries of which:	20,857	52.4	25,409	47.9	100	121.8
a. Africa	4,068	10.2	4,096	7.7	100	100.7
b. Asia and the Far East	10,282	25.8	13,168	24.8	100	128.1
c. Near East	1,528	3.8	1,475	2.8	100	96.5
d. Latin America	4,652	11.7	6,307	11.9	100	135.6
4. Centrally-Planned Economy Countries of which:	8,278	20.8	10,705	20.2	100	129.3
Asian Centrally-Planned Economy Countries	3,770	9.5	6,254	11.8	100	165.9

Source: Derived from FAO Production Yearbook, 1981, p.85-89 Volume 35, Rome 1982.

Table 10

Annual per capita consumption of oils and fats in 1972-1974 and the forecast for 1985 *

		Average 1972-1974 (kg per capita)	Projected 1985
1.	World	9.3	10.4
2.	All developing countries:	5.0	6.4
	(a) Latin America	9.3	11.8
	(b) Africa	5.8	7.5
	(c) Near East	8.1	10.6
	(d) Far East	4.5	5.8
	(e) Asian Centrally-Planned Economy	3.0	3.7
3.	All developed countries:	19.9	21.7
	(a) North America	24.5	26.1
	(b) Western Europe	23.9	25.3
	(c) Eastern Europe and USSR	16.1	18.7

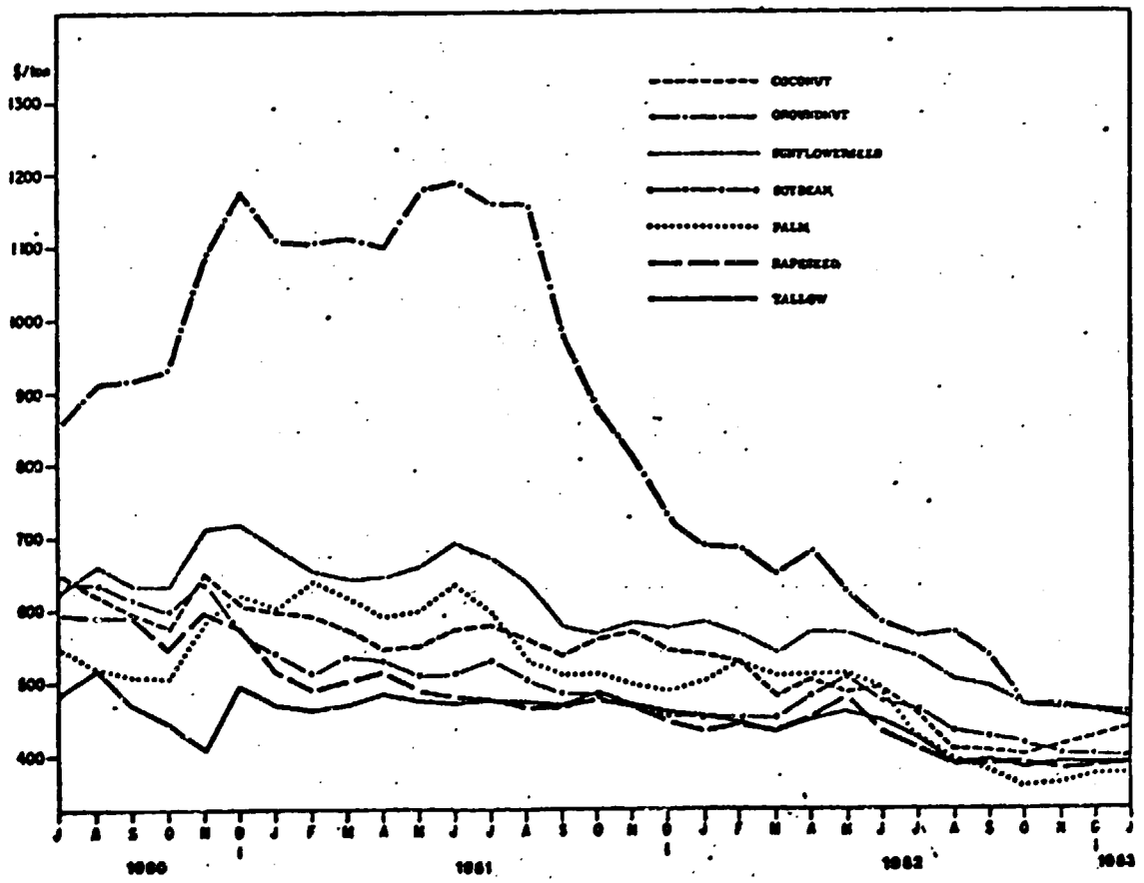
* Source: FAO Commodity Projections 1985, Esc. Proj. 78/4 June 78, p. 19.

(4) Prices

The steady decline in US dollar prices on the world market which began in 1980 continued in 1982. The decline in US dollar prices has been general for all the products. Groundnut oil witnessed the steeper price fall - 46% in twelve months of 1982, palm oil also fell more than most others - 31% (as this oil was particularly in plentiful supply), coconut oil - 27%. The smallest price fall was in soybean oil - 14%. Chart 1 illustrates the decline of prices for selected edible/soap fats and oils, in 1980, 1981, and 1982.

Chart 1

International market prices for selected edible/soap fats and oils



Source: Committee on Commodity Problems, Intergovernmental Group on Oilseeds, Oils and Fats, FAO, CCP: OF/ST 83/3, Feb.1983, p.12.

(5) Imports and exports

Both world imports and exports of basic ten vegetable oils increased in the period 1977-1981, but imports rose by 32.5 per cent and exports by 41.6%.

As Table 11 shows, the world imported 8.4 million tons of oils (originating from ten basic oil crops*) in 1977 and 11.1 million tons in 1981, an increase of 2.7 million tons during the five-year period. Imports of developing countries during the same period showed a much greater increase than world imports. They rose from 3.6 million tons in 1977 to 5.8 million tons in 1981, i.e. an increase of 2.2 million tons or 59.4%.

The share of developing countries in world imports increased from 43.1% in 1977 to 51.9% in 1981. The share of developed market economy countries declined from 50.1% in 1977 to 40.3% in 1981.

While the international market for vegetable oils and fats in 1977 was virtually balanced, with a slight surplus of world imports over world exports, amounting to 40 thousand tons, the situation substantially changed in 1981, when world oils exports exceeded world imports by about 713 thousand tons. It had a considerable impact on lower prices for oils and fats in this period. This tendency strengthened in the beginning of the 1980s.

Table 12 lists exports of oils (the same ten oil crops are included) in 1977-1981. World exports amounted to 8.3 million tons in 1977 and rose to 11.8 million tons in 1981, an increase of 3.5 million tons. Developing countries' exports in the same period rose from 4.5 million tons in 1977 to 6.9 million tons in 1981, i.e. an increase of 2.4 million tons or 54.3%.

As Table 13 shows, the combined exports of the five major exporting developing countries (Argentina, Brazil, Indonesia, Malaysia, and the Philippines) rose from 3.5 million tons in 1977 to 5.8 million tons in 1981, an increase of 2.3 million tons, or 64.3%. Practically, the total increase of developing countries' oils exports was originating from these five major exporting developing countries in this period. The share of these five countries in all developing countries' oils exports increased from 78.3% in 1977, to 83.5% in 1981. These figures lead to the conclusion that oils exports of other developing countries generally rose slower than those of the above five countries, in many cases stagnated and sometimes even declined.

---

* These ten basic oil crops present about 96-97% of all soft and lauric oils. Only safflowerseed oil and sesameseed oil were omitted due to lack of statistical data. This category of oils exclude the edible fats (butter, lard), marine oils, tallow and greases and technical oils (castor oils, linseed oil, tung oil and others).

TABLE 11- Oil imports/originating from 10 basic oil crops/by world, developing countries, developed market economy countries and C.P.E.C. in 1977 and 1981

Imports thousand/metric tons

	1977				1981			
	World	Developing ME Countries	Developed ME Countries	Centrally Planned E. Countries	World	Developing ME Countries	Developed ME Countries	Centrally Planned E. Countries
1. Coconut oil	1083	128	887	68	1399	213	1082	104
2. Cottonseed oil	390	320	.65	5.5	436	371	62	2.5
3. Groundnut oil	576	207	369	0.6	342	46	295	0.3
4. Olive oil	268	65	195	7.9	237	75	142	19
5. Maize oil	151(78)	5%(78)	99(78)	-	255	126	129	-
6. Palm Kernel oil	276	35	241	-	370	48	300	22
7. Palm oil	2317	936	1285	95	2886	1690	1031	165
8. Rape, colza, mustard oil	636	460	160	16	801	464	303	35
9. Soybean oil	2107	1269	568	269	3327	2336	756	234
10. Sunflowerseed oil	590	145	341	104	1066	396	385	285
Total (1+10)	8394(a)	3617(a)	4210(a)	566	11119	5765	4485	866.8
as percentage(11) of world imports	100%	43.1%	50.1%	6.7%	100%	51.9%	40.3%	7.8%

(a) this figure includes maize oil data for 1978

Source: FAO, Trade Yearbook 1979 and 1981, Vol. 33 and 35
FAO, 1980 and 1982

The share of developing countries in world oils imports increased from 43.1% in 1977 to 51.9% in 1981, i.e. an increase of 8.8%. At the same time, the share of developing countries in world oils exports increased from 53.7% to 58.6%, i.e. by 4.9%. The greater increase of developing countries' share in world oils imports vis-à-vis the increase of their share in world exports can be explained by the greater demand for oils in developing countries, over their oils supply for exports. Moreover, taking into account that only a few developing countries substantially weigh in developing countries' oils exports, the increase of developing countries' demand for oils is much more impressive. However, one can keep in mind that the increased demand of developing countries for oils is irregularly widespread, and the demand of developing countries with higher national income per capita is greater than those developing countries with lower national income per capita.

As Table 14 shows, out of the ten exporting types of oils, the developing countries dominate the international supply of palm oil, palm kernel oil and coconut oil. In the period 1977-1981, in all three instances, their contribution increased from the level of 94.9%, 80.9% and 83.5% to the level 96.6%, 92.8% and 94.8% respectively. In 1977 the developing countries dominated also the supply of groundnut oil, exporting 80.7% of the world's supply of this product. However, their share considerably decreased in 1981 to 42.6% since the main exporting developing country - Senegal, drastically cut down its supply for exports.

The contribution of developing countries in olive oil exports slightly increased from 46.8% to 47.7% in the same period.

As regards the other types of oils, the level of developing countries' oils exports was relatively lower; however, their share in world oils exports increased in the five-year period: in soybean oil from 26% in 1977 to 39.8% in 1981 (mainly due to increased supply of Brazil), in cottonseed oil from 10.6% to 25.6% (again, due to extended supply of Brazil), in maize oil from 11% to 25.7%, in sunflowerseed oil from 18.9% to 19.6%. The share of developing countries in rape, colza and mustard oil remained practically unchanged, on a very low level, owing to climatic conditons.

The dominating positions of developing countries in palm oil and palm kernel oil exports are a result of a particularly significant supply of these types of oils by Malaysia, which presented 76.9% and 68% respectively of all developing countries oils exports in 1981.

TABLE 12 - Oil exports/originating from 10 basic oil crops/by world, developing countries, developed market economy countries and C.P.E.C. in 1977 and 1981

Exports thousand/metric tons

	1977				1981			
	World	Developing ME Countries	Developed ME Countries	Centrally Planned E. Countries	World	Developing ME Countries	Developed ME Countries	Centrally Planned E. Countries
1. Coconut oil	1096	915	181	-	1356	1286	70	-
2. Cottonseed oil	380	40	339	1.4	452	120	325	1.2
3. Groundnut oil	578	467	106	5.3	329	140	125	63
4. Olive oil	254	119	135	-	265	126	138	-
5. Maize oil	161(78)	1.8(78)	143(78)	0.6(78)	279	72	207	0.3
6. Palm Kernel oil	244	197	46	-	383	356	27	-
7. Palm oil	2176	2065	111	-	3323	3210	113	-
8. Rape, colza mustard oil	669	3.7	547	118	849	11	796	42
9. Soybean oil	2104	548	1542	14	3483	1386	2083	14
0. Sunflowerseed oil	692	131	114	448	1113	218	558	337
Total (1+10)	8354[a]	4487.5[a]	3264[a]	587.3[a]	11832	6925	4442	457.2
as percentage(11) of world imports	100%	53.7%	39.2%	7.1%	100%	58.6%	37.6%	3.8%

(a) this figure includes maize oil data for 1978

Source: FAO, Trade Yearbook 1979 and 1981, Vol. 33 and 35
FAO 1980 and 1982

TABLE 13 - Oil exports and share of main exporting developing countries in oil exports of all developing countries 1977, 1981

Countries	Exports			
	1977		1981	
	Thousand metric tons	Share in all developing countries oil exports %	Thousand metric tons	Share in all developing countries oil exports %
Argentina	321.0	7.1	335.1	4.9
Brazil	576.6	12.8	1433.9	20.7
Indonesia	421.5	9.4	201.2	2.9
Malaysia	1431.4	31.9	2775.3	40.0
Philippines	769.6	17.1	1039.9	15.0
TOTAL	3520.1	78.3	5785.4	83.5

Source: Derived from FAO Trade Yearbook 1979 and 1981, vol. 33 and 35 (FAO 1980 and 1982)

Table 14

Developing Countries' Share in World Oils Exports
Main Developing Countries Exporting Oils and Fats
Their Share in World's Oils Exports and in all Developing Countries' Oils Exports in 1977 and 1981

Oil/Country	EXPORTS 1977 Thousand Metric Tons	1977 Share in World Exports %	1977 Share in Developing Countries Exports %	1981 Thousand Metric Tons	1981 Share in World Exports %	1981 Share in Developing Countries Exports %
1. Coconut Oil						
Developing Countries of which:	914.9	83.5	100	1,285.8	94.8	100
Ivory Coast	0.4	0.04	0.05	15.5	1.1	1.2
Fiji	17.5	1.6	2.3	13.8	1.0	1.1
French Polynesia	9.7	0.8	1.3	10.3	0.7	0.8
Malaysia	27.1	2.5	3.5	64.0	4.7	5.0
Mozambique	5.3	0.4	0.7	3.5	0.2	0.3
Papua New Guinea	27.2	2.5	3.5	34.7	2.5	2.7
Philippines	769.6	70.2	84.1	1,059.9	76.7	80.9
Sri Lanka	9.1	0.8	1.2	17.5	1.3	1.4
2. Cottonseed Oil						
Developing Countries of which:	48.3	10.6	100	120.3	26.6	100
Argentina	5.6	1.5	13.8	9.8	2.2	8.1
Brazil	21.7	5.7	53.8	94.5	20.9	78.5
Paraguay	1.7	0.4	4.2	12.5	2.8	10.4
3. Groundnut Oil						
Developing Countries of which:	447.3	80.7	100	140.1	42.6	100
Argentina	131.5	22.7	28.1	34.5	10.5	24.6
Brazil	49.7	8.6	10.6	45.8	13.9	32.7
Gambia	17.2	3.0	3.7	8.0	2.4	5.7
Mali	1.8	0.3	0.4	8.9	2.7	6.3
Senegal	227.3	39.3	48.6	20.2	6.1	14.4
Sudan	25.5	4.4	5.4	16.4	5.0	11.7
4. Olive Oil						
Developing Countries of which:	119.1	46.8	100	126.2	47.7	100
Argentina	13.5	5.3	11.3	9.1	3.4	7.2
Morocco	16.2	6.4	13.6	1.4	0.5	1.1
Tunisia	50.8	20.0	42.6	69.9	26.4	55.4
Turkey	35.8	14.1	30.1	43.4	16.4	34.4
5. Maize Oil						
Developing Countries of which:	17.8 (a)	11.0	100	71.7	25.7	100
Brazil	3.1 (a)	1.9	17.4	3.0	1.1	4.2
Singapore	10.1 (a)	6.2	56.7	67.7	24.3	94.4
6. Palm Kernel Oil						
Developing Countries of which:	197.1	80.9	100	356.0	92.8	100
Benin	8.9	3.6	4.5	8.0	2.1	2.2
Brazil	-	-	-	3.9	1.0	1.1
Indonesia	16.9	6.9	8.6	4.9	1.3	1.4
Ivory Coast	13.8(78)	5.7	7.0	8.0	2.1	2.2
Liberia	3.1	1.3	1.6	3.4	0.9	0.9
Malaysia	105.8	43.1	53.3	242.0	63.1	68.0
Nigeria	15.3	6.3	7.8	45.0	11.7	12.6
Paraguay	7.7	3.2	3.9	5.6	1.5	1.6
Singapore	11.6	4.8	5.9	13.9	3.6	3.9
Zaire	20.5	8.4	10.4	18.9	4.9	5.3
7. Palm Oil						
Developing Countries of which:	2,065.2	94.9	100	3,210.1	96.6	100
Benin	3.3	0.1	0.1	8.0	0.2	0.2
Congo	-	-	-	4.4	0.1	0.1
Indonesia	404.6	18.6	19.6	196.3	5.9	6.1
Ivory Coast	78.8	3.6	3.8	65.8	1.9	2.0
Liberia	1.9	0.1	0.1	4.2	0.1	0.1
Malaysia	1,299.3	59.7	62.9	2,446.1	74.1	76.9
Singapore	207.3	9.5	10.0	393.0	11.9	12.3
Zaire	20.5	1.0	1.0	6.1	0.2	0.2
8. Rape, Colza and Mustard Oil						
Developing Countries of which:	3.6	0.5	100	11.2	1.3	100
South Korea	1.9	0.3	52.8	9.3	1.1	83.0
9. Soybean Oil						
Developing Countries of which:	547.8	26.0	100	1,385.7	39.8	100
Argentina	39.8	1.9	7.3	69.9	2.0	5.0
Brazil	502.1	23.9	91.6	1,281.2	36.8	92
Cyprus	-	-	-	4.8	0.1	0.3
Malaysia	0.03	-	-	17.0	0.5	1.2
10. Sunflowerseed Oil						
Developing Countries of which:	130.7	18.9	100	218.5	19.6	100
Argentina	130.6	18.8	99.9	211.8	19.0	96.9
Brazil	-	-	-	5.5	0.7	2.5

(a) This figure includes maize oil data for 1978.

Sources: FAO, Trade Yearbook 1979 and 1981, vol. 33 and 35 (FAO 1980 and 1982).

As far as coconut oil is concerned, the Philippines' supply of this sort of oil - amounting to 80.9% in 1981 of all developing countries' oil supply - considerably influenced the dominating position of developing countries.

The world's exports of five types of oils, namely groundnut oil, olive oil, palm kernel oil and palm oil, which are considered the domain of developing countries, increased from 3.8 million tons in 1977 to 5.1 million tons in 1981, but their share in world oils exports slightly diminished from 45.1% to 43.2%.

Among the various types of oils, the shares of soybean oils and palm oils in world exports were the largest ones and both increased from 25.1% to 26.0% in 1977 to 29.4% and 28.1% respectively in 1981. The increase of world soybean oil exports was somewhat greater than the increase of world palm oils exports.

(6) Conclusions

In light of the information available from FAO sources, the world oil economy recorded an additional increase in production and international trade in 1982 and is likely to expand further in 1983, with output, trade and consumption expected to reach new records. Supplies from current crops would appear more than adequate to satisfy demand so that some addition to carry over stocks can be expected in 1983.

The process of concentration of oil production and exports in a very limited number of developing countries is likely to be strengthened, while the production and exports availabilities for an overwhelming part of developing countries are expected to remain behind the world pace of growth. The most critical situation is estimated for African countries where the production and exports of oils are likely to stagnate and in some cases even decline.

It can also justify the assessment that the industrial capacities in the majority of developing countries for processing oilseeds expanded much slower than in the main producing and exporting countries, but even the installed and existing ones are utilized significantly below their potentials.

World consumption of edible oils and fats will probably expand further in 1983 as a result, above all, of population growth. But the increase will be limited due to factors such as scarcity of foreign exchange, fluctuation of exchange rates, considerable indebtness of developing countries. However, some economy recovery symptoms mainly in the USA can stimulate its higher growth.

Despite a number of factors which limit demand in general, and import demand in particular, import requirements in 1983 are likely to be greater than the 1981 and 1982 imports, initially estimated as record imports, reflecting - among others - decreased output in a number of importing countries and continuing expansion of domestic requirements due to the population growth.

As far as prices are concerned, US dollar prices for most oils have fallen steadily in 1981 and 1982 reaching their lowest level in several years; in 1982 they were 37% lower than in the mid-1970s. The scope for a further long-lasting fall in US dollar prices below the 1982 level is limited as this would probably result in sizeable quantities of soybeans being withdrawn from the market in 1983. An official FAO survey indicates that farmers in the United States intend to substantially reduce oilseed plantings this year. Since the US is the largest producer and exporter of oils, it might considerably influence the world level of oil prices.

Developing countries still have open room to significantly extend the level of processed vegetable oilseeds and oil crops, supplied by themselves. There are some prerequisites indicating that such potentials exist.

Firstly, a substantial part of unprocessed oil crops is exported by this group of countries, thus diminishing possible value added which could be obtained when processing oilseeds and oil crops domestically. The additional local production could enrich the local markets or if it is exported it will bring higher profits.

Secondly, the presumable level of current consumption of oil (as shown in Table 10) for developing countries is at least twice or even four times less than for all developed countries. Hence, one can assume that an important part of demand for vegetable oils in developing countries is not satisfied due to insufficient supply of oil. Besides, the pattern of consumption of vegetable oils and food products is inadequate, admitting the low level of oil consumption. In order to increase the demand for oil, the modified pattern of consumption should be widely promoted, and should further the increased supply of oil under the condition that the effective demand of the population will rise as well parallel. Some indications prove that the global demand for vegetable oils in developing countries, has indeed, started to grow, since in recent years rising imports of vegetable oils and fats have been observed. To eliminate, or at least reduce, the existing paradox that

substantial parts of raw materials indispensable for the production of vegetable oils are exported by developing countries, whereas rising imports for oils worsen their balance of payments, the establishment of new vegetable oilseeds processing plants should be considered as well as the extended level of already installed industrial capacities in this sector.

Thirdly, the observed growth of oilseed and oil crops production in developing countries, as well as the extended supply of vegetable oils during the last decade of the 1970s, were recorded in a limited number of developing countries. Some leading countries belonging to the group of developing countries (e.g. Brazil, Argentina, Malaysia, the Philippines, Indonesia, Ivory Coast, Nigeria) have indeed made impressive progress in augmenting their vegetable oil output, mainly through integrated efforts to achieve this target. However, an overwhelming majority of developing countries lag far behind these leading countries and their level of production and processing of vegetable oilseeds and oil crops is still very low and in a few cases even declined. This group of countries requires and merits particular attention, since in a number of them natural and economic conditions exist which would enable them to gain self-sufficiency in the production of vegetable oils.