

**COMMISSION OF THE EUROPEAN COMMUNITIES**

**A STUDY OF THE EVOLUTION  
OF CONCENTRATION  
IN THE IRISH FOOD INDUSTRY  
1968-1973**

**COMMISSION OF THE EUROPEAN COMMUNITIES**  
DIRECTORATE-GENERAL COMPETITION  
IV/A-3

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1968-1973**

**June 1975**

This report has been prepared under a research programme of the European Commission's Directorate-General of Competition by Professor Louis P.F. Smith and Dr G. Quinn of University College, Dublin.

## P R E F A C E

The present volume is part of a series of sectoral studies on the evolution of concentration in the member states of the European Community.

These reports were compiled by the different national Institutes and experts, engaged by the Commission to effect the study programme in question.

Regarding the specific and general interest of these reports and the responsibility taken by the Commission with regard to the European Parliament, they are published wholly in the original version.

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REPORT ON CONCENTRATION IN  
THE IRISH FOOD PROCESSING INDUSTRY  
1968 - 1973

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1974

## TABLE OF CONTENTS

<u>Section</u>	<u>Section</u>	<u>Page</u>
Development of Industry in Ireland .....	A	9
Industrial Structure .....	B	14
Foreign Firms .....	C	20
Market Interpenetration .....	D	22
Data and Criteria .....	E	26
Advertising .....	F	29
 <u>Product Markets</u>		
Dairy Industry .....	G	34
Milk for Liquid Consumption .....	G1	40
Baby Foods .....	H	41
Milling .....	I	42
Baking .....	J	47
Potato Crisps .....	K	50
Sugar .....	L	51
Chocolate & Sugar Confectionery .....	M	52
Fruit & Vegetables .....	N	55
Canned Beef.....	O	58
Canned Pigeat .....	P	61
Fish .....	Q	62
Margarine & Butter Blending .....	R	64
 Conclusions from analyses .....		 65
 Appendix I .....	 Association of Companies in the Food Industry .....	  69
II .....	Summary of Statistics	79
III .....	Methodology and Statistical Analysis .....	 81
IV .....	Table of Symbols	89

LIST OF TABLES

<u>Page</u>	
9	Table A I ..... Population of the Republic
10	Table A II ..... Apparent Net Emigration
13	Table A III ..... Statistical Summary of Food Sector
15	Table B I ..... Market Share of Co-operatives
18	Table B II ..... Food Industry Structure 1973
19	Table B III ..... Largest Firms 1973
21	Table C I ..... Foreign Firms 1973
24	Table D I ..... Food Sector Imports as Percentage of Home Consumption
25	Table D II ..... Food Sector Exports as Percentage of Gross Output
29	Table I ..... Advertising Expenditure 1960/'73
30	Table F II ..... Distribution of Expenditure Sector 1973
32	Table F III ..... Summary of Figures of Main Advertisers in Television
32	Table F IV ..... Summary of Figures of Main Advertisers in Radio
33	Table F V ..... Summary of Figures of Main Advertisers in Press
36	Table G I ..... Numbers of Manufacturing Firms buying Milk from Producers
39	Table G II ..... Edible Milk Products
43	Table I I ..... Capacity & Employment in Flour Milling 1973
43	Table I II ..... Quota & Capacity in Flour Milling 1973
44	Table I III ..... Number of Mills by Groups
45	Table I IV ..... Grain Milling & Animal Feeding 1963 & 1968
48	Table J I ..... Bread, Biscuits & Flour Confectionery
54	Table M I ..... Cocoa, Chocolate & Sugar Confectionery
55	Table N I ..... Consumption of Vegetables & Fruit per Person
56	Table N II ..... Canned Fruit, Jams, Jellies
59	Table O I ..... Slaughter House Factory Size 1963 & 1968
61	Table P I ..... Bacon Factories by Size & Group 1963 & 1968
17	Figure B I ..... Trends in Co-operation Trade Turnover
18	Figure B II ..... Co-operative Share of Agribusiness 1973



A. DEVELOPMENT OF INDUSTRY IN THE  
REPUBLIC OF IRELAND

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A.1.1. The impact of membership of the European Community on Irish industry has been softened by foreknowledge of the need to widen markets. Government and industry changed their policy orientation some years prior to the Treaty of Accession. In studying the adaptation of the Food Processing Industry during the period under survey - 1968 to 1974 - it is a necessary prerequisite to be acquainted with the general industrial situation, which developed in a manner untypical of the member-states.

A.1.2. Industrialisation was on classical lines. On the formation of the Irish Free State in 1922 the proportion of population engaged in industry was roughly similar to that in India today. Existing industries were based on imported raw material and relied on export rather than home market. Examples were biscuit making, brewing and distilling. Britain received 98% of exports.

A.1.3. Following preliminary experiments in the 1920's a strongly protectionist policy was developed for consumer industries in the 1930's and during the war period. Reconstruction and post war expansion in Europe carried the policy on to the mid 1950's, when it ran out of steam. The economy then stagnated and there was a serious recession in 1956.

A.1.4. The population of Ireland had declined in each census since 1841. Numbers in the Republic began to recover in the 1960's

Table A I                      Population in the Republic

1851	1926	1956	1971	
6,529	2,972	2,818	2,978	Total population 000's

Emigration has dominated the trends outweighing the natural increase which was found each year. In 1881, five million people lived in Ireland; three million Irish born lived abroad. Net emigration exceeded 50,000 per annum in the last century and in the 1950's averaged 40,000 per annum - 3% of the working population. If growth was to be achieved it had to come from export, but the market for traditional agricultural products was bad in price and subject to limitation of quantity. Accordingly industrial policy was reversed and emphasis placed on encouragement of export industries, with notice given that protection would not be continued indefinitely. In the last two years the flow has reversed due to better job opportunities at home and

and less abroad. The trend of population is an increase of about 1% per annum.

Table A II                      Apparent Net Emigration in Recent Years

	1967	1968	1969	1970	1971	1972	1973
Annual Movement 000's	-49	-5	-11	-5	-1	+7	+5

A.1.5.            Accordingly, industrial policy was reversed and emphasis placed on the encouragement of export industries, with notice given that protection would not be continued indefinitely. Direct aid in capital or training, with temporary tax concessions, were the instruments. The first reductions in tariffs took place between Britain and Ireland in 1966 under the Anglo-Irish Free Trade Agreement of 1965 set out stages of tariff reduction, reaching free-trade by 1974 for most products. This agreement was entered into with the expectation of EEC membership prior to 1970.

A.1.6.            To promote export orientated industrial development the policy with regard to foreign firms was changed. The control of Manufacturer's Acts, 1932-4, required that one half of the issued capital of new companies, and at least two thirds of the capital with voting rights, should be in the beneficial ownership of persons born in Ireland, or qualified by residence there, and that a majority of the directors, other than the whole-time managing directors, should be Irish nationals. This was felt to be necessary for the development of a native entrepreneurial class. The Industrial Development (Encouragement of External Investment) Act, 1958, signalled the reversal of this policy with regard to exporting industries and the control of manufacturers legislation has been repealed with effect from 1st January, 1968. Of the employment given in new industries or major expansions aided by the Industrial Development Authority between 1st January, 1960 and 31st March, 1973, only 24% was in factories of Irish origin.

A.1.7.            The expansion of industrial production under the new policy has led to a growth of industrial exports at an average rate of over 20% per annum in volume. In the first years the increase was from a small initial figure but the increase in 1973 for industrial exports fell from 61% in 1972 to 55% in 1973. The greatest growth rate is in exports to the Six.

A.1.8.            The diversification of export outlets is developing as anticipated. Plans for Free Trade were prepared, among other methods, by a series of reports from ad-hoc Committees on Industrial Organisation during the early 1960's for 22 industrial sectors. Similar committees of the Department of Agriculture prepared reports on certain food processing industries within its jurisdiction.

Though reorganisation for free-trade was already taking place, these reports provide a bench-mark against which progress in output and industrial organisation can be measured. In each sector examined there was found a considerable number of small firms catering for the protected market but ill-equipped for export. Consolidation was recommended and became part of the Government policy. In most cases reorganisation was already proceeding during the 1960's and at the same time some large foreign based firms were being founded.

### Food Industry

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A.2.1. Industrialisation has increased the demand for processed foods in the towns and brought the farm population into the market. Food processing is a rather recent development.

A.2.2. At the end of World War II, 45% of the economically active population were engaged in agriculture, and 40% of agricultural output was consumed on the farm. In the 1950's approximately one third of output was consumed on farms (20% without sale), approximately one third other home-consumption and one third exported. In 1963, 13% of gross production was still consumed on the farm without process of sale. In 1972 direct consumption was down to 4.5% of output.

A.2.3. The home market for processed foods has been so small as to be inadequate to support a sophisticated industry.

a) The domestic market is under 3 million in total - the size of one large city.

b) The urban population is 1.6 million (1971). Sixty nine per cent of the population lived outside the main cities.

c) Income per head is roughly half that in the high income areas of EEC and income elasticity of demand for these products is rather high.

d) With an equable climate fresh food is available round the year.

e) Married women do not usually work outside the home. The participation rate is 5.3% compared to 37.8% in France; 38% in England and Wales: 34.3% in W. Germany. This both reduces money income and makes available more time for domestic food preparation.

A.2.4. The export market, which took approximately 50% of production, was orientated to live animals, carcase meats and simply processed foods.

A.2.5. The form of food exports was dictated by the protective policies of recipient countries. Live animals received preferences over dead meat under British and continental agricultural policies. When the meat export trade developed for frozen meat to the United States (no other European country has adequate veterinary clearance for beef), most export was in sides of fresh, or boned frozen, meat having little processing content. The main processed exports were bacon, butter, with growing exports of cheese and dried milk.

A.2.6. The development of the Food Industry Group is shown in Table A III giving figures from 1962 to an estimate of 1974, of gross output in current value and as a volume index, together with exports, competing imports and home consumption. During the period under review there has been consistent increase in volume, production almost doubling in 15 years. The volume of home consumption increased about 70%.

A.2.7. Both imports and exports increased rapidly. The share of competing imports increased from 2% to 6% of home consumption; exports increased from 28% of gross output to 41% estimated in 1974. The increase in export values has been very rapid with the introduction of EEC in place of world market prices. When final adjustments in tariffs and MCAs have been made this stimulant to growth will, it is expected, cease.

A.2.8. The volume of output in the food processing industry has increased at a lightly slower rate than the 133% of industry in general over the last fourteen years.

A.2.9. The importance of the sector is also measured by employment. In 1963 direct employment in the food industry was 23% of the total for manufacturing industry. In 1973 the proportion was 22%.

Table A. III    STATISTICAL SUMMARY OF THE FOOD SECTOR

Year	Gross Output	Exports	Competing Imports	Home Consumption	Volume of output Index (1960=100)	Employment (average)
	£m	£m	£m	£m		No.
1960	161.5	44.9	2.5	119.1	100	34,900
1961	179.4	55.4	3.0	127.0	109	36,400
1962	187.6	56.8	3.8	134.6	113	38,200
1963	199.3	62.5	4.6	141.4	116	39,000
1964	213.9	63.8	5.3	155.4	119	38,800
1965	229.7	71.2	6.5	165.0	126	39,100
1966	246.6	76.6	6.8	173.8	134	39,400
1967	285.2	107.0	6.5	184.7	146	40,200
1968	313.5	114.2	8.4	207.7	152	41,300
1969	346.6	129.1	11.3	228.8	161	42,500
1970	379.5	141.9	13.1	250.7	168	43,500
1971	429.0	155.7	14.8	288.1	173	42,900
1972+	496.7	185.6	18.6	329.7	178	42,200
1973+	596.5	227.5	22.9	391.8	185	42,900
1974+	734	298	27	466	198	43,600

+ Estimated

Source: PRL 3774, 1974

INDUSTRIAL STRUCTURE

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B.1.1. We have investigated some 550 private companies 170 co-operatives, 11 public companies and 5 state companies in a preliminary manner. Many of these are not now trading independantly or do not manufacture in Ireland.

B.2.1. Public Companies

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Information of the business affairs, even for public companies quoted on the Stock Exchange, is more scanty in Ireland than in any other European country (Financial Times; 18th September, 1973). Figures such as those of turn-over and numbers of employees are not necessarily available. The distinction between public and private companies is chiefly the right of quotation on the Stock Exchange.

B.2.2. There were over 370 public companies of which 21 were food processors or handlers in 1970.

B.3.1. Private Companies

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Private Limited Liability Companies have more than 2, but less than 50 shareholders. Private companies are easily formed under Irish law and give limited liability without notable constraints or publicity. The names of shareholders and directors are public, but ~~not~~ the accounts. No accounts need to be filed with the Government, though audit by an independant accountant is obligatory. Consolidated accounts of subsidiaries need not be prepared. Such companies may be subsidiaries of public companies native or foreign and shareholding may be by nominees. They may be larger than public companies.

B.4.1. State Companies

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State owned companies are few but important in the food processing industry handling about 11% of produce in 1972. As part of the reorganisation on entry to EEC certain of these have become co-operatives.

B.4.2. The Irish Sugar Company took over the privately owned factories in 1927. In 1969 the vegetable processing subsidiary, Erin Foods Limited, entered into a fifty fifty marketing partnership with Heinz. No change of status has been made.

TABLE B I  
PERCENTAGE SHARE OF MARKETS CONTROLLED BY FARMER CO-OPERATIVES - 1972\*

<u>COUNTRIES</u>	<u>FARM MARKETINGS</u>						<u>FARM SUPPLIES AND SERVICES</u>					
	Milk Supply	Livestock Marketing	Livestock Slaughtering		Cereals	Fruit & Vegetables	Fish	Fertilisers	Feed	Seed	Oil	Credit
			Beef	Pigs								
	%	%	%	%	%	%	%	%	%	%	%	%
BELGIUM	70	NA	NA	10	10	NA	NA	15	20	10	NA	44
DENMARK	86	40	40	92	NA	50	NA	43	45	40	NA	NA
GERMANY	78	NA	23	29	50	36	NA	64	60	NA	NA	62
FRANCE	45	NA	15	35	70	40	NA	50	40	73	NA	NA
ITALY	29	NA	NA	NA	NA	NA	NA	60	NA	65	NA	35
LUXEMBOURG	91	25	30	NA	70	70	NA	70	NA	NA	NA	80
NETHERLANDS	88	51	18	29	60	83	NA	61	46	NA	NA	40
UNITED KINGDOM	1**	12	NA	NA	14	11	NA	18	18	9	NA	NA
U.S.A	73	NA	NA	11	32	27	NA	32	18	20	26	25 (long term)
IRELAND	95	60	65	35	40	30	30	40	45	40	NA	6.

\* SOURCES:-

- (1) Extracts from tables in " Agricultural Co-Operation in the European Economic Community " published by COGECA - General Committee of Agricultural Co-Operation in the European Economic Community-for all E. E. C countries except Ireland.
- (2) Extracts from tables in " E. E. C Agricultural Policy and Position of Agricultural Co-Operatives. Special report by I.A.O.S Economics Section in January, 1972.
- (3) U.S Figures for 1969/70 - Co-Operative Growth - published by U.S.D.A Farmer Co-Operative Services F.C.S. Information 87 p. 9.
- (4) Ireland 1972 - " Farmers in Business " information bulletin published by the I.A.O.S. Milk figure includes the Dairy Disposal Company, now co-operative.

\*\* The Milk Marketing Board is a quasi co-operative

- B.4.3. Ceimici Teo manufactures glucose from potatoes. It continues in state ownership.
- B.4.4. Dairy Disposal Company was set up in 1927 to facilitate the reorganisation of creameries as co-operatives. It has handled over 20% of manufacturing milk. In 1973 and 1974 the original objectives will have been carried on in transfer of ownership to various co-operative groups.
- B.4.5. Bord Bainne (Milk Marketing Board), Irish Potato Marketing Company and Pigs and Bacon Commission are marketing bodies which have become co-operatives. Coras Beostac agus Feol (Irish Livestock and Meat Board) is in process of reorganisation. None of these bodies process food.
- B.4.6. Board Iascaigh Mhara is involved in the promotion of fishing processing and marketing. It does not engage in any productive activity.

B.5. Co-Operatives

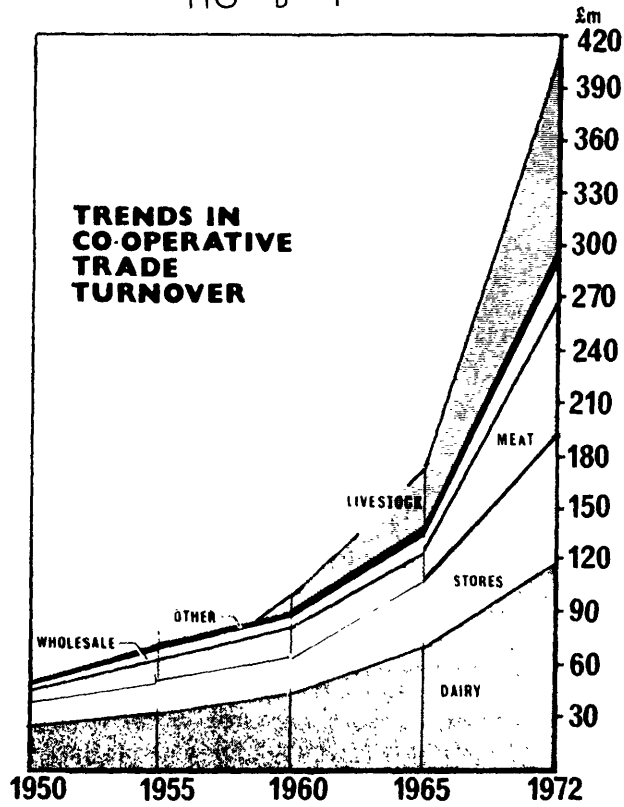
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Co-operatives operate under the Industrial and Provident Societies Acts 1893 - 1936 and must publish detailed accounts.

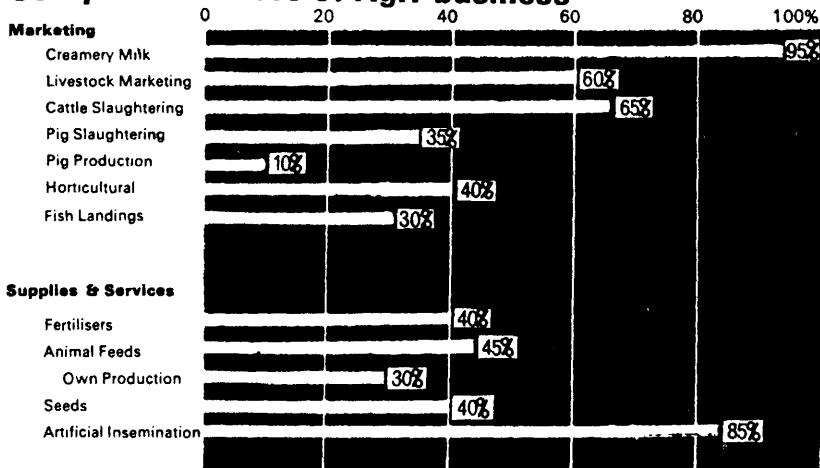
- B.5.1. Agricultural co-operatives started in Ireland during the last quarter of the 19th century and had rapid growth until the 1920's. There followed twenty years of consolidation, together with take-over of certain private commercial firms; the large Government-owned Dairy Disposal Company, and the marketing boards for milk, pig meat and potatoes. A number of firms registered as private companies are subsidiaries or associates of co-operatives.
- B.5.2. The co-operative share in handling agricultural produce is set out for 1972 in Figures B.I & II. The co-operative sale of agricultural products totaled £330m in 1972 when Gross Agricultural Output was £441m. It does not follow that co-operatives handled 75% of produce. Co-operatives output figures include the processing margins and also certain inter-farm sales, e.g. of livestock through marts. A more probable proportion of total trade was 60% - a proportion which has increased since 1972 by the Dairy Disposal Company take over to 65% to 70%.
- B.5.3. Table B I gives the share of agricultural co-operative



FIG B 1



Co-operative share of Agri-business FIG B 2.



trade in some countries. Irish co-operatives are particularly strong in Dairying, Livestock and Fish; also in the Feed and Seed trades.

Traditionally Irish co-operatives are multi-purpose organisations buying produce, selling farm and home requirements, giving services. This has complicated the development of concentration. None the less 70% of these co-operatives have merged in the last 12 years. The large co-operatives have usually absorbed the smaller with an issue of shares, though 2 new large federations have been set up.

Table B. II      FOOD INDUSTRY STRUCTURE 1973

Size Employees	Co-op	State	Public	Private	Foreign	Total
500 and over	22%	11%	11%	16%	39%	100
100 - 499	30%	0%	10%	20%	40%	100
25 - 99	35%	0%	1%	50%	16%	100

B.5.4.      Since 1973 one large state company has been transferred to co-operative ownership and a number of co-operatives have combined. At the time of writing co-operatives would be over 50% of largest firms, with a reduction in their representation in the smaller group. The figures show an order of magnitude and are not capable of precision. Firms included in the food group have major non-food departments; the degree of integration required to enable classification as a subsidiary is debatable.

B.6.      The Size of Firms

B.6.1.      Figures are not published from which an analysis of the size of firms can be established. A list of the largest public companies is available each year since 1970. To it we have added certain private and state companies and co-operatives. The list is not definitive nor is the criterion of size fully satisfactory.

B.6.2.      Taking total turn over as criterion food firms numbered thirteen of the largest thirty manufacturing firms in 1970, twelve in 1971 and thirteen in 1972 - with three more close to inclusion. With the consolidation of creameries the proportion is likely to be higher in 1974. The seven largest food firms were co-operative or state owned in 1972. Cork Marts/IMP is clearly the largest, though half of the turn over is in auctioneering. The largest firms are in the milk, meat and sugar sectors which are dominated by co-operatives and state companies; followed by milling, biscuit making and chocolate confectionery in which public or private companies predominate.

TABLE B III

Largest Firms in the food processing industry measured  
by approximate employment and turnover 1973

<u>State Companies</u>	<u>Employment</u>	<u>Turnover</u> <u>£m.</u>
Sugar Company	3,700	37
Dairy Disposal Company	1,000	22 (1972)
 <u>Co-operatives</u>		
Cork Marts Group	2,000	83
Clover Meats	1,600	37 1972
Mitchelstown	1,600	36 1972
Waterford	1,000	23
Ballyclough	600	19 1972
 <u>Other</u>		
Cadbury	2,500	17
Rank	1,500	16
Irish Biscuits	1,800	13
Odlum & Associates	1,000 to 1,400	10 - 15
Premier Dairies		
Rowntree/Mackintosh		

C. FOREIGN OWNERSHIP

C.I.1. A major part of Irish industry is foreign or closely associated with foreign firms. This may be attributed in part to the lack of old industrial development to form a base for growth; in part to the strong orientation of recent growth in production. Three quarters of employment in new industry is in firms of foreign origin.

C.I.2. Companies developed for the supply of a protected home market of under 3m were correspondingly small in size. The governmental Committees for Industrial Organisation pointed out that consolidation was necessary to achieve competitive efficiency of production. In several cases the nucleus for consolidation has been a subsidiary to an international firm with known export markets. Local firms had often neither the financial backing nor the market knowledge to fulfil this role. In other cases the foreign firms entered partnership with local firms to provide market expertise. Examples are in dairying and vegetable processing.

C.I.3. The response of subsidiaries of international companies to free trade has not been adequately researched, but is different to that of locally owned firms. Mergers at production level are difficult to achieve while each group has a range of competitive products at retail level. Either both firms sell identical products or the processor has duplication of product. The first alternative is unlikely to be accepted by competing parent firms; the latter makes rationalisation impossible in a small factory.

C.I.4. Foreign ownership predominates in the supply of the domestic market in certain consumer goods. Ice-cream, Margarine, confectionery, potato crisps, are examples; a share approaching 50% is found in fruit and vegetable processing, milling, baking, certain forms of milk processing, milling, baking, certain forms of milk processing. Slight influence (under 20%) is found in biscuit making and meat processing.

C.I.5. A survey of management in Irish Firms found the balance of ownership for industry in general as set out in Table C I. The estimate for the food industry is ours.

Table C I. FOREIGN FIRMS 1973

No. Employees	Food Industry	All Firms	Exports as proportion of output.			
			0%	25%	50%	over 50%
500+	39%	25%	12	19	12	54
100 - 499	48%	27%	14	21	21	43
25 - 99	12%	14%	17	17	17	33

Source: Gorman, Hardy, Moynihan, Murphy 'Managers in Ireland' p.22 & p.28  
I.M.I. Dublin 1974  
Food Industry - our estimate

C.1.6. The proportion of foreign firms increased with size and with the importance of their export trade. The share in total output, or employment was not calculated by Gorman, but is obviously greater than proportion of firms by number. The food sector has a higher proportion of foreign firms than the rest of industry. This might be expected from the high proportion of exports. Difficulty of definition of subsidiary companies make the precise level of penetration impossible to determine.

C.1.7. In a European context the increased share of any market taken by a firm operating in another EEC country necessarily increases the level of concentration. The importance of international firms must be determined by a study of the combined market of the Nine. Monopoly in one country is of little significance to consumers when imports are free and, as in the Irish case, take a significant (even dominant) position in the market. Such market dominance is important when exercised also in other countries. Closure of a foreign owned subsidiary company is not significant when the same brands and quantities are now imported.

C.1.8. For primary producers a local processors' monopoly may be significant and lead to abuse of market power.

## MARKET INTER-PENETRATION

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D.I.I. Ireland has an open economy with imports 41% of GNP compared to an EEC average of 19% (1971). Market prices for imports and exports are determined by external factors. The artificial nature of world trade in agricultural products was reflected in a high degree of protection for food products in the past. Veterinary regulations reinforced economic restraints. Under the Anglo-Irish Free Trade Agreement protection for processed foods has been declining, and there may have been negative protection for certain products.

D.1.2. As shown in Table D I the imports of competing processed foods has increased from £4.6m (3% of consumption) in 1963 to £23m (6% of consumption) in 1973. Certain factors, in addition to the freeing of trade, tend to favour imports.

- 1) The overspill of advertising in Ireland from Britain.
- 2) The inter-penetration of firms operating on both sides of the Channel; in the North of Ireland and the Republic.
- 3) The constant movement of emigrants and tourists who compare prices and expect similar products.
- 4) The desire for variety beyond possible production for a small market.

D.1.3. The overall exports of the Food Processing Industry are eleven times those of competing imports and take 41% of gross output. Exports are increasing more rapidly than competing imports. We have, however, examined each sector as far as possible to establish the trend. Imports are not broken down by brand name and it is impossible to determine the market share at individual foreign firms. It is unlikely that any private firm can exploit a strong monopoly position on the home market of the Republic without a similar strength in the U.K.

D.1.4. In certain sectors the Anglo-Irish Free Trade Agreement favoured the importation of processed foods. While Britain followed a cheap food policy, ingredients such as flour, butter, sugar, were available to British manufacturers at world prices. As industrial tariffs were reduced, but food prices were neither harmonised nor compensated by levies on the model of the EEC compensating duties, competitive advantage of cheap raw material developed in a few cases. Within EEC this factor will cease to be significant.

D.1.5. The operation of price control stimulates trade. Exports are exempt and imports cannot be subject to controls. In so far as control prevents an increase which the consumer was prepared to pay, an advantage accrues to the foreign supplier and to the native exporter.

D.1.6. Inter-penetration of markets has developed through subsidiaries. It is more convenient to manufacture a few lines of products, identically wrapped for both home and export market, and to import the range of goods needed to complete the service of the market. Tax advantage would accrue to the Irish manufacturer on the increased volume of exports.

D.1.7. On the other hand the position of certain companies is inhibited by foreign participation, preventing the invasion of the British market in certain lines of products. This has applied to the Irish biscuit manufacturers. An 11% holding by Associated Biscuits is here stated to prevent export of certain competing lines to the British market.

D.1.8. Table D I shows the penetration of the Irish market by imports. The most significant change is in Margarine imports of which were hardly significant in 1971 and reached 10% in 1973. Sugar product imports increased from 10.3% of consumption in 1960 to 25.3% in 1973.

D.1.9. Table DII shows exports as proportion of production. The dominant importance of meat and dairy produce is understated. Live cattle exports are equal to dead. Total meat exports were 4.7 times home consumption in 1972; dairy exports equal home consumption. The importance of export markets has increased greatly in dairy produce, fruit and vegetables, cereals. The trend in sugar products is not significant. Margarine and sweets appear to be losing sectors under free trade.

#### D.2.1. Conclusion

The food processing industry in Ireland is not isolated. In each sector (with minor exceptions of margarine and sugar) imports or exports reach half of domestic production (Tables D I and DII). The Anglo-Irish Free Trade Area existed since 1966, strengthening the connection with the most competitive food market in the world. The level of concentration in Irish domestic manufacture is rarely evidence of a monopoly position. It does not confer the "pouvoir de domination". A dominant market position can be achieved by importers as well as by manufacturers. Most large manufacturers outside the dairy and meat sectors are importers of food from associates abroad.

Table D.1.

## FOOD SECTOR IMPORTS AS PERCENTAGE OF HOME CONSUMPTION

	Meat & meat prep.	Dairy prods. & eggs	Fruit veg. & Nuts	Sugar sugar prep. & honey %	Cereals & cereal prep.	Grain Milling & animal feeding stuffs	Margarine	Misc. food prep.	TOTAL
	%	%	%	%	%	%	%	%	%
1960	1.5	0.3	64.5	10.3	29.3	8.4	0.8	81.9	2.1
1961	1.6	0.3	63.8	14.7	36.5	10.7	1.1	98.7	2.4
1962	0.8	0.3	68.6	14.4	30.0	13.3	0.7	58.4	2.8
1963	0.9	0.3	64.6	24.4	34.4	12.5	0.4	73.4	3.3
1964	0.9	0.3	63.2	25.2	32.1	11.8	0.3	76.1	3.4
1965	0.9	0.3	63.6	14.9	45.2	14.5	2.4	77.8	3.9
1966	0.5	0.3	65.8	20.6	41.1	13.5	0.3	69.5	3.9
1967	0.5	0.5	62.8	15.0	33.8	13.2	2.2	60.8	3.5
1968	0.5	0.5	59.3	14.8	35.8	14.8	0.5	57.2	4.0
1969	0.4	0.5	60.7	16.9	27.9	14.1	2.4	56.8	4.9
1970	0.6	0.5	56.0	19.2	30.7	16.2	0.7	50.6	5.2
1971	0.6	0.4	58.3	21.1	36.6	12.6	0.9	54.5	5.2
1972	0.6	0.6	59.6	27.0	36.6	14.0	5.0	50.6	5.4
1973	1.5	2.4	66.7	25.3	38.9	15.1	10.3	54.9	5.2



Table D. II

## FOOD SECTOR EXPORTS AS PERCENTAGE OF GROSS OUTPUT

	Meat & meat prep.	Dairy prods. & eggs	Fruit & veg. & Nuts	Sugar sugar prep. & Honey	Cereals & cereal prep.	Grain Milling animal feeding stuffs	Margarine	Misc. food prep.	TOTAL
	%	%	%	%	%	%	%	%	%
1960	58.7	10.9	22.5	10.1	7.2	2.8	0.2	75.1	26.9
1961	59.9	18.0	18.3	11.5	17.7	2.6	0.3	79.8	30.8
1962	58.6	19.1	44.0	14.8	8.0	3.3	0.2	14.0	28.7
1963	58.0	24.5	37.8	24.4	17.2	4.0	0.2	69.3	32.5
1964	53.4	24.9	32.1	17.2	5.6	3.7	0.2	75.3	29.5
1965	53.0	20.2	31.3	11.4	4.9	3.7	0.2	73.8	28.4
1966	55.6	25.5	34.7	13.4	6.0	4.4	1.7	60.3	30.9
1967	62.4	27.0	32.1	11.7	6.3	6.9	0.3	46.2	35.3
1968	58.9	27.3	32.5	14.4	6.8	6.7	0.3	34.9	34.0
1969	58.1	24.9	36.2	15.0	6.7	7.7	0.2	30.6	33.6
1970	56.4	29.8	34.2	17.3	7.9	9.8	0.3	34.0	35.7
1971	60.7	33.8	35.0	13.5	10.2	11.5	0.2	47.7	43.2
1972	57.9	30.9	37.2	18.8	9.0	15.7	0.2	37.4	37.5
1973	65.4	46.4	43.4	15.0	14.6	12.6	0.2	51.3	44.6

E. DATA

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E.1.1. Published material on size, structure and activity of firms in Irish industry is minimal. As stated elsewhere, Public Companies are few, eleven in the food sector, and even they do not need to publish the necessary data of turnover, employment of investment. Information is collected by the Central Statistics Office, but in its published form, gives only a break down by places of business, not by firms. The Reorganisation Committees reports on the Food Industry, prepared in the 1960's are of value as a starting point, and enquiries of the National Prices Commission give more recent data on the milling industry and liquid milk for human consumption. The Industrial Development Authority published details of grants paid for industrial development and reorganisation. These monies were available to most firms and, being adjusted for financing from other sources, indicated the comparative size of investments in fixed assets.

E.1.2. Co-operative Societies are important especially in the Dairy Industry. These operate under different legislation from other companies and publish detailed information annually.

E.1.3. With the co-operation of the Food, Drink and Tobacco Organisation of the Confederation of Irish Industries, a circular was sent to all major firms at the end of May. The material gathered formed the basis of much of this report.

The Criteria of Concentration

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E.2.1. It has not proved possible to find a satisfactory criterion of size. Each measure has faults which become apparent on application to particular sectors:

i Employment seems to give a concrete unit of measure. Technology is not, however constant. The largest modern mills require two men per shift on the actual milling operation; the small unmodernised mills require a labour force several times larger in absolute terms. (Vide Table ). In the most extreme case it is almost true to say that numbers employed are in inverse proportion to the size of mill, since larger mills are modernised and small mills use traditional methods.

Firms are not specialised. Milk supply for manufacturing varies 15 fold between December and June. The dairy co-operatives diversify into the supply of feeds and manures to give winter employment to staff. The size of staff is related to diversification rather than to the dairy enterprise. Similarly the flour millers are normally directly associated with animal provender mills in which

transport and managerial staff are involved for a considerable part of the year.

Work in the food industry is highly seasonal.

Peak employment is little indication of annual average and peak employment is at different dates each year.

ii. Gross Turn Over is a measurable concept. The firms investigated, however, have in many cases a great part of their revenue from non-food enterprise. In the case of creameries one third of turn-over is in agricultural goods and services.

The operations carried out by different firms in the same sector are not necessarily the same. Integrated firms act as agents for finished products of the parent; smaller creameries become mere receiving depots for larger groups prior to amalgamation. Double counting occurs.

iii Net Value Added is a satisfactory concept in certain respects but was not elaborated for tax purposes until Tax on Value Added was introduced. Figures do not show which line of product gives high markets. Market control can rest with firms controlling only the final stages of processing

iv Invested Capital is impossible to calculate satisfactorily in a period of very rapid inflation. Records for tax and other purposes are on an historical cost basis. Long established firms appear to have minimal investment. Some comparisons of annual fixed investment figures is available through the Industrial Development Authority grants paid and this is used. Investment is about four times the amount of grants paid.

v Profit is an accountancy concept used for taxation. No allowance is made for changed replacement values of equipment, so the depreciation figure is inadequate. The treatment of interest rates is unsatisfactory for inter-firm comparisons. The division of profit between enterprises within the one firm can only be arbitrary.

Co-operatives are a major section of the industry.

By definition they do not make a profit, and for this reason do not pay tax on profit. The surplus arising in their working is paid out in a higher price for materials received from members. The sum placed to reserve is sometimes called 'profit', but is not similar to profit in private industry. Any benefits in money or kind received by the members above the market norm should be considered as a form of dividend. In practice this is impossible to calculate.

Similarly, state companies are not directed to maximise the return on capital investment (In the case of the Dairy Disposal Company, "Own Capital" is £7). The object is rather to pay a maximum on farm produce bought while keeping the capital stock secure.

vi Physical Data is available in a number of basic industries

such as dairying, milling, etc. In these cases there can be a degree of certainty in market share. More sophisticated products are not so measurable in weight or gallons.

vii Advertising expenditure gives insight into the competitive nature of the market. However, it is not possible to make this a uniform criterion. The perfect monopolist does not have great need of advertising; the competing firm fighting for an enlarged share of the market advertises vigorously but may never achieve a proportionate volume of sales. Advertising is not confined to one product; the same brand name may be carried in a number of campaigns for different products. Some campaigns are launched by the dairy industry as a whole in response to the challenge of Margarine; other campaigns are launched jointly by firms producing complementary products.

viii Import and Export Statistics are not broken down by firms, not are the categories similar in the Census of Industrial Production and Trade Statistics. It is possible, however, to give an approximate market share to competing foreign suppliers and to show the sectorial participation in exports. In this way some indication of competition and competitive efficiency is obtained.

Statistical methods are best adapted to large numbers. The smaller the country, the less the sample and the universe. In the Irish case few sectors can show 20 firms operating. For a number of sectors construction of indices of concentration would be absurd.

Where the number of firms is small rivalry is acute and information closely guarded. The privacy of the firm must be respected in publication of statistics when any firm, knowing its own figures can deduce the figures of its rival. In certain sectors this has inhibited publication of material in our possession.

## ADVERTISING

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F.1.1. Advertising is indicative of competition. A company seeking improved market share normally steps up its expenditure. At other times reflects the dominance of a single firm.

### The Media

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F.2.1. Advertising expenditure in press, radio and television has trebled in ten years from £4.2m. in 1963 to £13.7m in 1973. The most rapid increase was in television and radio. The Press is still the most important single medium, taking 57% of the total.

Table F.1. Ireland Advertising Expenditure 1960/73

Space Buying	£m	1963	1969	1970	1973
Press		3.01	4.83	5.52	7.77
T.V.		1.03	2.91	3.02	4.69
Radio		0.16	0.42	0.52	1.28
Outdoor		0.15	0.26	0.24	n.a.
Film		0.02	0.08	0.09	n.a.
Other		0.05	0.23	0.15	n.a.
Other (production etc)		0.89	2.20	2.62	n.a.
<u>TOTAL</u>		<u>5.31</u>	<u>10.93</u>	<u>12.15</u>	

Source: 1963 - 1970 Murray J.A. Irish Advertising Agencies as seen by the Client. MBA Thesis 1970. University College Dublin.

### Product Expenditure

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F.3.1. The choice of media was not uniform over the range of industry. Television and radio give the best coverage of consumers and have a predominant position in consumer product advertising.

Table F.II      Distribution of Advertising Expenditure by Sector 1973

	T.V. %	Radio%	Press%	Share of Total%
Food	73	13	14	14
Drink	55	8	35	8
Tobacco	7	5	88	9
Financial	20	5	72	9
Motor	12	4	84	8
Retail Stores	10	17	73	8
Cosmetics	55	9	37	7
Household Services	62	13	26	6
Other	-	-	-	21
TOTAL	34	9	57	100

F.3.2.      The Food Industry, which accounts for 25% of consumer expenditure, paid 14% of all advertising. This expenditure was heavily concentrated on T.V. and radio. 67% of housewives watch television daily and 74% listen to radio. (Source: Television, Radio and R.T.E. coverage. R.T.E.)

#### Overspill Advertising

F.4.1.      The Republic is unusual in the openness of its economy in trade, language and culture. Speaking English and in close proximity to Northern<sup>n</sup> Ireland and Britain, newspapers, television and radio are received throughout the country.

F.4.2.      In television 61% of viewers receive foreign broadcasts. Those viewers represent a much larger proportion of income since they are in the Eastern areas. Advertising is carried by Ulster and Harlech (Welsh) television stations, but not by B.B.C. In Northern areas reception of Ulster stations is superior to that of R.T.E., the Dublin station. In all areas piped T.V. has increased access to British advertising. We do not know the division of viewing time between stations. An additional 10% of advertising time may arise.

F.4.I.      Products on sale in the U.K. market are available in the Republic. Two thirds of the major British companies have subsidiaries for manufacture or distribution in the Republic. (Sweeney J. Foreign Companies in Ireland. Doctoral Thesis UCD 1973). The same brand names are used by manufacturing companies. The progress of AIFTA and the penetration of the retail trade by international companies facilitate entry of the goods advertised.

F.4.2. Overspill advertising accrues almost by definition to the international companies and not to local firms.

F.4.3. A further advantage lies in the availability of film prepared for other markets to the international firms. Dubbing with Irish voices is a minor expense and a much more sophisticated presentation is given, production of which could not be justified for the Irish market alone.

#### Market Share of Firms

F.5.1. The share of the top eight advertisers of the food industry in television advertising was in 1973 44% of total; in radio 30%; in press 26%. In 1968 the distribution was 42% television; 20% radio; 18% press. There is a tendency to increase concentration.

F.5.2. In all media advertising Unilever bought 8% of total food in 1968 and 6% in 1973. The top eight advertisers bought 37% in 1968 and 41% in 1973.

F.5.3. The main advertisers in television are Cadbury 13% Unilever 9%, Rowntree/Mackintosh 5%. Erin (3%) is the only native major advertisers in the medium. There is little evidence of change since 1968.

F.5.4. The main advertisers in radio were in 1973 Kellogg's 7%, Farley's (baby food) 6%, followed by Batchelor's, Erin, Kraft, over 41% and Lyons, Oxo, Unilever over 3%; Knorr, Mitchelstown over 2%. Variation is considerable from year to year as campaigns are followed. In this strategy in 1972 Mitchelstown, Erin and Unilever were leaders with over 8%. In 1968 the largest share in radio advertising was 4%.

F.5.5. Main advertisers in the press are, (1973) Kellogg's (7%) Mitchelstown Co-operative (4%), Premier Dairies (3.5%), Unilever, Batchelors, H.B. (sweets), Roscrea Meat Packers, Golden Vale Co-operative. Eden Vale had shares over 2%. The degree of concentration was much lower than in radio or television but is increasing over the years. Four native firms are major advertisers.

F.5.6. There is no indication that the "below the line advertising", i.e. that carried at shop level, is a higher proportion of expenditure for large firms than for small. (O'Neill, F.G., Examination of "Below the line Promotion through Food Outlets" UCD MBA Thesis 1971.)

Table F. III

Summary Figures of Main Advertisers in TELEVISION

	1968	1969	1970	1971	1972	1973
	%	%	%	%	%	%
Fry/Cadbury	13	9	9	9	12	13
Unilever	9	9	(11)	11	11	9
Rowntree/Mackintosh	7	6	3	6	6	5
Kelloggs	2	2	3	4	4	4
Heinz/Erin	3	3	3	5	1	3
Mitchelstown	2	-	3	2	1	3
Golden Vale	-	-	-	1	5	3
Batchelors	1	1	1	2	2	2
Urney/H.B.	4	3	3	3	1	1
Premier	-	-	3	1	1	1
Ranks	-	-	-	2	1	1
Odlums	-	-	-	2	1	1
Downes	-	-	-	-	-	1
Smiths	2	-	-	2	-	-
<b>TOTAL</b>	<b>£ 863,990</b>	<b>914,565</b>	<b>994,344</b>	<b>1,022,091</b>	<b>1,156,725</b>	<b>1,242,267</b>

Table F. IV

Summary Figures of Main Advertisers in RADIO

	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74
	%	%	%	%	%	%
Farleys Ltd.	-	0.4	2	3	4	17
Heinz/Erin	3	3	4	6	7	11
Unilever	4	9	8	8	9	10
Mitchelstown	4	3	3	3	2	7
Urney/H.B.	1	-	2	2.5	0.3	6
Kelloggs (CPC)	2.5	3	3	6	2	4
Premier/H.B.	1	0.5	-	0.2	0.1	4
Beatrice Foods	-	-	1	0.3	3	3
Batchelors	1.2	1.9	1.3	-	1.2	2.7
Fry/Cadbury	1	-	1	1	1	1
Irish Biscuits	3	3	4	5	3	0.1
<b>TOTAL</b>	<b>£ 86,675</b>	<b>124,280</b>	<b>165,150</b>	<b>167,316</b>	<b>216,386</b>	<b>84,184</b>



Summary Figures of Main Advertisers in 1973

<u>Table F.V</u>	1968	1969	1970	1971	1972	1973
	%	%	%	%	%	%
Kellogs	1	2	1	2	2	7
Mitchelstown	-	1	-	-	2	4
Premier/H.B.	-	-	1.7	1.6	2	4
Unilever	2	1	-	-	2	3
British Oxygen	6	7	5	1	2	2
Urney/H.B.	-	1	-	2	3	2
Roscrea Meat Packers	-	-	-	-	-	-
Golden Vale	1	-	-	-	1	2
Eden Vale						
Express Dairies	--	-	-	1	1	2
Fruitfield	1	1	1	1	1	2
Lemons	2	2	2	2	-	2
Heinz/Erin	4	4	5	6	5	1
Willwood	-	1	1	1	2	1
Kuorr	2	0.2	0.6	1	1	1
Weetabix	-	-	-	2	1	1
Dublin Meat Packers	-	1	1	1	1	1
Rowntree/Mackintosh	2	-	1	1	1	1
Odlum	3	-	3	-	-	-
Liga	-	-	-	2	1	1
Denny	1	1	-	-	-	1
Ranks	-	-	-	-	1	-
<b>TOTAL</b> £	<b>212,187</b>	<b>198,805</b>	<b>245,800</b>	<b>192,719</b>	<b>235,719</b>	<b>261,000</b>

## DAIRY INDUSTRY

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### Historical Background

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- G.1.1. The dairy industry has a long history. In the 1920's the Government bought, reorganised and consolidated all creameries and resold viable units to co-operatives. In areas producing about 25% of manufacturing milk, mainly in the poorer areas of the south and west of Ireland, it was not possible to form co-operatives and the government-owned Dairy Disposal Company continued ownership with the long term objective of transfer of ownership to farmers. Little progress was made in this direction, in spite of numerous efforts. In 1972 the Dairy Disposal Company still purchased 18% of manufacturing milk and was the largest firm. Between 1972 and 1974 all these dairy interests will have been transferred to farmer co-operatives.
- G.1.2. The dairy sector remained almost static in structure from the reconstruction of 1927 until 1963. The number of independant creameries was 220 in 1939 and 186 in 1963. The number of premises licensed increased from 600 in 1963 to 603 in 1970, but a few may have ceased operation by 1970.
- G.1.3. Three reports were produced under government aegis, the Knapp Report on Co-operatives, 1964; the Cook and Sprague Report in 1968; the Survey Team Report on the Dairy Industry 1963. These all made recommendations on the economies of scale and the need for orderly marketing by larger creameries.
- G.1.4. In 1961 the Milk Marketing Board was set up as a Government agency with monopoly powers on the export of butter and later of other milk products.
- G.1.5. Co-operatives and State Companies are the sole handlers of milk for manufacturing. In Wexford area a producer group system operates. Unigate on acquiring the cheese factory preferred to purchase indirectly through an agency co-operative. The supply of liquid milk for human consumption does not come under the regulations of the Department of Agriculture. Surplus milk, especially from the Dublin area, is available to milk processors.
- G.1.6. Traditionally butter was the main product and skimmed milk was returned to the farm for feed. In 1968, 40% was still returned to suppliers. In 1973 only 2.7% was returned and in 1974 (9 months), 0.8%. The market has been developed in association with foreign firms who, it was felt, could provide marketing outlets. The home market for products other than butter was negligible, cheese consumption per head being under  $\frac{1}{2}$ kg. per annum before the World War II rising to 1 kg. in 1958 and 2.1kg., 29% of European average, by 1968. It is still one sixth of that in France.

## Current Development

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G.2.1. The structure of the milk processing industry is changing with such rapidity that statistics do not as yet indicate the size of the amalgamation effort. The take over of the Dairy Disposal Company has reduced the level of concentration by dismembering the largest firm. The formation of groupings of co-operatives has not yet led to the centralisation of manufacture in the manner planned.

G.2.2. The co-operative multi-purpose creamery organisations in some cases, continue a separate existence as management units, though the milk supply may be handled for the larger grouping. The returns of 1972 show 124 independent co-operatives and the Dairy Disposal Company. The current position in the summer of 1974 is that there are 6 main co-operatives in the southern part of the country, but about 45 actual management units functioning. There are nine other milk intake companies operating. A probable trend would indicate that there will be nine creamery firms in a few years time, each operating a few intake points.

G.2.3. The Milk Marketing Board has been taken over as a co-operative since 1973. This causes little change in the method of operation.

G.2.4. At the secondary processing level private industry of foreign origin becomes important. Certain associations, especially those with the chocolate manufacturers, date from the 1940's.

G.2.5. Of 30 milk and ice-cream firms with international participation listed in Appendix 1, 14 have been formed since 1970. Eleven were wholly owned subsidiaries; 10 had a majority interest. Two have been bought out by local interests.

G.2.6. It is more difficult to ascertain the influence obtained by participation. The international company may have marketing rights with a minority interest; or marketing may be carried out through the state board (now co-operative) Bord Baine. The ties between Bord Baine and its member co-operatives have not yet been tested, but appear to fall short of exclusive marketing rights. It is a co-operative of all interests - state owned international, farmer co-operatives, farmers - not a co-operative of co-operatives.

G.2.7. The position is not yet solidified.

G.2.8. Between 1963 and 1972 the price of milk nearly doubled and volume supplied for manufacture increased 2.09%. Skim milk sales were 20% of supply in 1963 at 1 or 2 new

pence per gallon; in 1974 sales are 99% of the larger supply and the August price 11.4 n. pence per gallon. The number of farmers supplying milk fell 12% while the supply per farm doubled.

G.2.9. These measurable changes, added to the rising level of education and the expected challenge of the Common Market, gave the farmers in the co-operative movement the stimuli to innovation and investment.

Table G.I.                      Numbers of Manufacturing Firms Purchasing Milk From Producers.

Size of Group (in Gallons) <u>No.</u>	1963	1968	1969	1970	1971	1972	1973
Under 1m	86	52	49	51	46	30	12
1m to 1.9m	42	49	46	41	42	34	19
2m to 5.9m	32	32	36	38	39	35	19
6m to 10.9m	4	16	15	14	15	11	7
11m to 19.9m	-	4	4	3	2	6	6
20m and over	1	1	3	3	4	4	6
<b>TOTALS</b>	<b>165</b>	<b>154</b>	<b>153</b>	<b>150</b>	<b>147</b>	<b>119</b>	<b>69</b>

Source:                      IAOS    Annual Reports + DBC

Capital Investment

G.3.1.                      The investment programme of the dairy industry has been exceptionally heavy for four reasons.

1. Reorganisation of existing creameries requiring new centralised premises.
2. New product development, where only butter was previously manufactured.
3. Increased total supply - up to 45% in ten years.
4. The seasonality of supply is such that the peak month is 15 times the nadir. For a given production the capital cost is about twice as great as in Denmark or the Netherlands. As the European prices do not reflect the higher cost of winter production under Irish conditions seasonality of supply may increase.

G.3.2.                      Grants of £6.2m. were given by the Industrial Development Authority to this sector in the years 1970 - 1972 representing investment of about £20m. A further £3.1m. was given in 1973. Some of these investments are for ice-cream plants (£83,000) and others include grain storage or other co-operative enterprises associated with development of centralised co-operatives. About 85% of payments are to the largest creameries in aid of their consolidation and for the diversification of milk which is part of this programme.

## INDIVIDUAL PRODUCTS

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### G.4.1. Butter

Butter is produced by almost every firm in the industry. The level of concentration is increasing as creamery concentration progresses.

### G.4.2. Cheese

Cheese increased from 5% of supply in 1963 to 15% in 1973. The degree of concentration has lessened. The number of producers increased from 9 in 1968 to 13 in 1973. Express Dairies is involved in 30% and Unigate 30% of production.

### G.4.3. Chocolate Crumb

In chocolate crumb the degree of concentration has remained fairly constant with five or six producers. One small producer, subsidiary to an international firm, ceased production in 1968. Exports take 84% of sales.

### G.4.4. Condensed Milk

In condensed milk there has been only one producer throughout the period, the market for this product is not developed.

### G.4.5. Yoghurt

Yoghurt was not consumed in Ireland to any considerable extent 20 years ago, but the market has grown rapidly. Eden Vale was first in the market, a subsidiary of Express Dairies. Cork Milk Products Co-operatives commenced production about 1970, and is now part of the Mitchelstown Group. Golden Vale commenced production in 1969. Waterford Co-operative commenced production on license from Yoplait in 1974. There has clearly been a reduction in the degree of concentration. Eden Vale remain the market leaders with an estimated 60% share, 1973. Golden Vale claims 20% of the market.

### G.4.6. Ice-Cream

Ice-cream is only marginally connected with the dairy industry. Analysis of content is not published and Irish regulations on food products and descriptions are not strict.

G.4.6.i In 1964 Grace Organisation acquired Hughes Brothers a consumer milk firm with the leading share of the ice-cream trade. This was in line with the parent company's

policy taking over ice-cream plants in Denmark and Italy and other food interests in Belgium, Britain and the Netherlands. There were four other processing plants in the Dublin area. In 1966 Grace announced a £1m. investment in ice-cream plant which caused the merger of three Dublin rival manufacturers, Dublin Dairies, Merville and Tel el Kebir to form Premier Dairies, ice-cream manufacturers. In 1969 the dairy business of Hughes Brothers was exchanged for the ice-cream interest of Premier Dairies. In 1972 Grace sold Hughes Brothers ice-cream to Unilever.

G.4.6.ii There are at present four significant ice-cream producers, Hughes Brothers, Leadmore, Palmer Products and Thurles Co-operative, which in 1973 has transferred this section of manufacture to private ownership.

G.4.6.iii This market has been growing between 10% and 15% per annum. Sales of imported products are commencing. Walls, the major U.K. ice-cream manufacturers, is, like Hughes Brothers, a Unilever subsidiary. It is strong in the North of Ireland market and has outlets in the Republic. The Northern Dairies group, of Yorkshire, U.k., opened a Dublin depot in 1973. The State-owned Northern Ireland Board sells Bangor Maid in the Republic of Ireland. Lyons import from their Liverpool factory. The group have large hotels and confectionery interests and are main wholesalers of tea.

G.4.6.iv Investment in ice-cream plant has been considerable. Hughes Brothers, Palmer Products and Leadmore have each installed major new plants during the survey period.

G.4.6.v Advertising expenditure for ice-cream shows a change from competition in 1968 with the dominant firm spending 50%, but 98% in 1973.

#### G.4.7. Casein

Casein, a rather minor product, had four producers in 1973, one producer in 1971.

#### Census of Production - Size of Factory

##### Manufacturing

G.5.1. Little consolidation occurred prior to 1971. The number of licensed premises marginally increased, but some may have ceased operation. The number of firms declined by 15%. The reorganisation did not begin to be effective until 1972 when firms decreased by a further 17%.

G.5.2. The increased volume of production made possible an increase in concentration without a reduction in

enterprises between the full census years 1963 and 1968. The largest group (employing over 100) increased its market share from 28% to 35% and employment from 27% to 37% while those in the smallest groups (under 30 employees) reduced their market share and employment by one third.

Table G II EDIBLE MILK PRODUCTS - Butter, Cheese, Etc.

Group Size No. Employed	Units of Economic Activity		Market Share		Employment %	
	'63	'68	'63	'68	'63	'68
	Under 20	145	112	26	16	25
20 - 29	23	22	12	8	12	8
30 - 49	26	28	21	19	15	17
50 - 99	12	22	12	22	12	23
100 - 499	8	12	28	35	27	37

Source: Census of Industrial Production

Advertising

G.6.1. Advertising in the dairy sector is small. Much of production is of bulk products for export. Industry advertising by the National Dairy Council are the largest item.

G.6.2. Consumer products sold under brand are advertised. Ice-cream shows a strong tendency to concentration. The major firm Premier had 50% of advertising in 1968. In 1969, following a merger, 96%; in 1972 73% and in 1973 again 99.8%. Expenditure on advertising has decreased in total.

G.6.3. Cheese advertising is large in volume but shows no firm trend in market share.

## MILK FOR LIQUID CONSUMPTION

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- G1.I.1. The structure of the industry is dictated by the dispersed population living in rural areas. On farms consumption without sale is normal, in small towns supply is from product retailers or small scale processors. Though consumption per head is the highest in Europe of the Nine, only 17% of total milk production is used for direct consumption, 63% of consumption is bottled pasteurised sales.
- G1.I.2. Consolidation is completed in the main consumption area of Dublin (over 50% of the national market), where now only one firm operates. Very small quantities are supplied from outside the area. The number of premises is three, compared with five in 1968. Outside Dublin, in surplus production areas, direct supply from farmers is to be expected. High costs of transport gave a local near monopoly position in many small towns, but the penetration of larger firms (farmer co-operatives for the most part) is increasing.
- G1.I.3. State control of licences may have limited entry to the industry, though development would not have been rapid in a free market. The number of licensed pasteurisers for milk for human consumption increased from 53 in 1923 to 55 in 1974. The majority of these are extremely small. The top 25% account for 93% of total sales, the top 4 for 62% of total sales.
- G1.I.4. Consolidation is expected to follow introduction in 1977 of EEC regulations on standardisation of butter fat and other regulations improving quality. 78% of the firms process less than 25,000 litres per day, considered to be the minimum economic size under present Irish conditions. When re-equipment becomes necessary under the new regulations closure, or merger, is to be expected in a majority of cases.
- G1.I.5. The great seasonal fluctuation in volume of milk supply from grassland farmers (daily supply in June is 15 times that in December, compared with 150% in the Six) brings advantages of close association with diversified processing firms. The daily sales contact with shops and through door to door milk delivery, are attractive for the sale of other perishable goods, cream, butter, ice-cream, yoghurt, etc.
- G1.I.6. These considerations explain the take over of Wexford and Waterford pasteurising plants from a private firm by the Waterford Co-operatives and the merger of the Cork Milk Producers Co-operative with the large diversified Mitchelstown Group; Killarney by Kerry Co-operative Farmers.
- G1.I.7. No significant advertising expenditure occurs.



BABY FOODS

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H.I.1. The baby food market is not separately returned in Irish statistics and is not homogenous. It covers dairy products, cereals, tinned soups and vegetables, which are not competing groups.

H.I.2. Dairy products for baby foods are processed by Glaxo, at Lough Egish for Unigate by the Ballyclough Group and the Waterford Group. The product is not identified as Irish, nor specifically as baby food at this stage. The product in Ireland, is imported, or reimported, from Glaxo-Farley, U.K.; Cow and Gate, of Guilford, U.K. Unigate manufactures and packages for the Irish and export market at Mallow and is completing a factory for a new product at Wexford. Wyeth (Ireland) was established in 1972 for the manufacture of SMA baby foods. Irish Whey Products had, at foundation in 1972, the manufacture of baby foods as an objective.

H.I.3. In summary, this section of food industry is in process of development.

H.I.4. Heinz is associated with the Irish Sugar Company in the joint subsidiary Heinz-Erin, but baby foods are imported from the U.K.

H.I.5. Other firms selling in the Republic are Reckitts-Colman, U.K., Delrosa, U.K., Lyons Tetley, U.K., Bristol-Myers, Canada, Liga Fabricken, Netherlands.

## MILLING & BAKERY INDUSTRIES

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### Historical

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- I.I.1. Industrial structure and geographical location of the industry are the result of historical development. The small mills distributed through the country disappeared during the Free Trade period from the latter half of the 19th century until the enactment of the Agricultural Produce, Cereals, Act, 1933. The number of mills was reduced from 217 in 1900 to 32 in 1930. At this time the flour supply was imported from the United Kingdom and was a blend of World wheats selected for particular baking qualities. The grist contained about 25% of hard North American wheats.
- I.I.2. The Agricultural Produce, Cereals, Act, 1933, introduced a licensing system under the authority of the Department of Industry and Commerce for all wheat imports and restricted the import of flour. Over the years a system of encouragement for Irish grown wheat developed, enforcing the inclusion of a proportion of home grown wheat in the grist. Except during the war this proportion rarely exceeded 50% until 1957; it varied between 67% and 69% from 1969 to 1972.
- I.I.3. It was never an objective of policy to achieve self-sufficiency in wheat or animal feed cereals. The grist varied with availability of native wheat being 75% in 1972 and 35% in 1974.
- I.I.4. In 1963 ten out of twenty-two licensed mills were inland, but they accounted for only 23% of the milling quotas allocated by the Department of Industry and Commerce; 67% of milling capacity was in the major ports and 10% was in minor ports. The increased reliance on home produced grain did not change the basic structure or location of the industry which developed from mills at the chief ports and from flour importers.
- I.I.5. In Ireland consumption of flour is falling - from 95.7 kilos per head in 1960/61 to 70.4 kilos per head in 1972/73. The decline continues at an annual rate of 2% per annum. Excess capacity is the norm in all western countries. The capacity of Irish mills is 40% idle even after the reorganisation which has taken place. Running at the optimum rate of utilisation existing mills could produce the annual output in seven months.

Table I.I                      CAPACITY & EMPLOYMENT in FLOUR MILLING 1973

	Direct Employment			Total Capacity kg. per hour
	1971	1972	1973	1973
Odlums	99	101	103	22,743
Ranks	49	49	49	18,346
Independants	83	81	81	15,687
<b>TOTAL</b>	<b>231</b>	<b>231</b>	<b>233</b>	<b>56,700</b>

Source: National Prices Commission  
paper 16

Table I.II                      QUOTA & CAPACITY in FLOUR MILLING 1973

	Capacity %	Quota %
Odlum	39.41	39.88
Ranks	31.65	32.67
Bolands	8.70	9.86
Dock	7.60	4.60
Moss	5.24	5.25
Milford	3.28	3.29
Barrow	2.29	1.97
Shackleton	1.75	2.48
<b>TOTAL</b>	<b>100.00</b>	<b>100.00</b>

Note Shackleton ceased operation in 1974

Source National Prices Commission Paper 16

## Reorganisation

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I.2.1. In 1957 there were still 35 flour mills operating in Ireland. By 1962 five of these were closed leaving thirty which were divided in two main groups with a number of independants:

Table I.III Group Structure of Mills.	Number of Mills by Groups								
	1962	1963	1968	1969	1970	1971	1972	1973	1974
Odlum Group	8	8	7	7	7	7	7	7	7
Ranks (Ireland)	5	4	4	4	4	3	3	3	3
Independants	17	11	7	7	7	7	7	7	5
<b>TOTAL</b>	<b>30</b>	<b>23</b>	<b>18</b>	<b>18</b>	<b>18</b>	<b>17</b>	<b>17</b>	<b>17</b>	<b>15</b>

I.2.2. With Government agreement, but no financial aid, the Flour Millers Association worked out a new system of voluntary limitation in output. Quota limitations were calculated on the same per centage basis as the statutory limitations introduced by the 1933 Act. The position was set out as in Table I.II.

I.2.3. The two major groups carried through their own rationalisation programme, retaining their share of quota within the group, and contributed to the central fund, from which they did not collect their share. Six independant mills agreed to close in December 1962 and their quota share was divided among the remaining 11 independants. By 1965 a further four independant mills had closed; Ranks closed one mill in 1963, another in 1971; Odlums closed one mill in 1966. In 1974 one independant mill ceased operation and two merged to form a single firm. Thus the situation is currently:

Odlum Group	7 mills
Rank (Ireland)	3 mills
Independant	5 mills

Table I.II shows the capacity and quota limit of the firms in December 1973. Since then Shackleton has ceased operation.

I.2.4. Grain importing, native purchase drying and storage, flour milling, fodder milling and baking are closely integrated sectors of the economy. At least 25% of imported hard wheat is used in the grist; 30% of the wheat is offal for animal feed; grain handling facilities are common to both. When grain growing was revived in the 1930's, drying and storing facilities

are common to both. When grain growing was revived in the 1930's, drying and storing facilities did not exist on most farms. The mills, directly or through agents, purchase the green grain at harvest from farmers. Purchase of dried wheat from farm stores is not favoured by millers.

I.2.5. In an industry with declining demand the tying of market outlets becomes increasingly important. Direct sales to tied outlets rose from 21.2% to 24.6% total output between 1970 and 1973. As retail flour sales (for home baking) have fallen more steeply than total consumption, integration of mills with bakeries becomes more important. Mills without tied bakeries are in a vulnerable position. In particular two most modern mills have up to 60% of spare capacity under the quota system, and are dependant on contract work given by other mills.

### I.3.I. Concentration Level

The number of establishments and of firms has declined over the period. The smaller establishments and firms have been disappearing with a consequent increase in the indices of concentration of quotas in each year serves to illustrate the position, but is not an accurate measure of activity. Firms worked on contract for each other and inter-firms trading took place so that market shares are obscured. One small mill, for example, works full time on non-quota flour. The two major groups hold a constant 39.88% and 32.67% of quota. The next largest had 9.88%. Shares in capacity were roughly the same - 39.41%, 31.65%, 8.70%.

I.3.2. Over the period 1960 to 1972 the share of the two largest groups increased from 61% to 72% as a result of quota redistribution.

I.3.3. Following the recommendations of the National Prices Commission Occasional Paper No.16, The Irish Flour Industry (May 1974). "Because of the sheer size of the surplus capacity the closure of a large mill is inevitable, the necessary reduction cannot be achieved by merely closing all mills of say less than 30 sacks per hour" (6.6). A merger of the two largest groups is being discussed.

Table I IV                      Grain Milling & Animal Feeding 1963 & 1968

Size of Group No. Employed	Units of Economic Activity		Market Share		Employment	
	'63	'68	'63	'68	'63	'68
Under 20	115	99	18	15	20	18
20 - 29	19	20	6	9	20	18
30 - 49	19	17	16	16	15	14
50 - 99	13	11	15	15	17	16
100 - 499	14	12	46	46	39	42

Source: Census of Industrial Production.

### Advertising

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The level of advertising reflects the market shares of firms with complete predominance of the two major firms. Expenditure in advertising has fallen in each of the last three years - by 25% in total.

### Milling Establishments

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I.4.I. The Census of Production each year gives global figures for the flour milling sector, but the detailed analyses of 1963 and 1968 includes the animal feed sector. The detailed analyses shows a reduction in the number of both large and small mills, but a remarkably constant market share. Larger firms have a higher output per person employed. The trends of two sectors are not similar. Volume of output increased strongly in animal feed and there is little evidence of consolidation.

### I.5.I. Profitability

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The profit figures of Rank are published each year. These rose from a level of £500,000 to £700,000 in the years 1968 - 1971; reached £1,374,000 in 1972, £1,761 in 1973, but fell to £724,000 in the year ending September 1974. In the latter year after tax profit was £373,000 and cash flow £700,000 on a turnover of £19,420,000 and shareholders' funds £7,600,000. Odlum's results are not published but the structure and trading conditions of the firm are similar.

I.5.2. While a strong leader-firm position exists there is not evidence of excessive overall profit.

## Baking

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- J.I.1. Before World War II over 50% of flour was used in home baking, this fell to 29% in 1973. Increased reliance on bakers' bread has developed with urbanisation, but is offset by a decline in total consumption of bread.
- J.I.2. Firm figures for the number of bakeries do not exist. In 1948 a government survey was carried out revealing 600 licensed bakeries - one to every 5,600 of population. Not all licensees were in regular production. The estimated number of bakeries is now 400 to 450 and there is little evidence of concentration. About twelve firms, of which one large, are believed to have gone out of business in the last few years.
- J.I.3. The Census of Industrial Production gives returns of numbers of bakeries for each year. This gives no information on the few largest groups associated with millers, whose present position is best stated by the National Prices Commission\*in regard to tied outlets for flour. Sales to tied outlets rose from 21.2% of total output in 1970 to 24.6% in 1973. Of bakers' flour 33% was sold through tied outlets in 1972/'73 (Appendix 4 of Report). The main outlets are associated with the two main milling groups Odlums and Ranks of roughly equal size. Bolands is also large. The degree of concentration is increased by the closure of one large independant bakery in Dublin in 1971.
- J.I.4. The Census of Industrial Production confirms the general picture of slow change in the industry from 323 establishments in 1963 to 301 in 1971. Apart from the two main groups, the majority are small independant firms. The last full census (1968) for the Bread, Biscuit and Flour Confectionery Sector showed 323 bakeries with the proportions of turnover in Table J I.
- J.I.5. The breakdown of census returns gives little evidence of economy of scale of production. Market share is closely proportionate to numbers employed except in the smallest and largest categories. In the smallest bakeries workers are often part-time shop keepers whose productivity in both occupations must be considered. The largest group includes two biscuit firms and one specialised cake producer whose value of output per employee may not be the same as in baking bread.

\*Prices Advisory Body, July 1971.

Table J.I.

BREAD, BISCUITS & FLOUR CONFECTIONERY

Size of Group No. Employed	Units of Economic Activity		Market Share %		Employment %	
	'63	'68	'63	'68	'63	'68
	Under 20	290	250	22	17	25
20 - 29	24	30	6	7	5	7
30 - 49	14	21	6	8	6	8
50 - 99	10	10	6	7	6	6
100 - 499	12	12	61	60	58	53

J.I.6. A study of the baking industry has commenced under the National Prices Commission, but publication cannot be before next year.

J.I.7. Importation of bread amounts to under £200 p.a. The matter is, none the less, sensitive. The Republic was almost alone in ratifying the Night Baking convention of 1922 which prohibited night work in bakeries. Were import permitted while this legislation is in force a strong advantage would be given to fresher imports from Northern Ireland and Liverpool, where excess capacity is available.

J.I.8. Biscuit manufacture in Ireland was shared by Jacobs (77%) and Bolands (14%) in 1964. In 1966 the two companies merged to form Irish Biscuits in which Associated Biscuits (U.K.) has 11% share. The market has grown from 19,500 tons in 1964 to 32,700 tons in 1973. Irish Biscuits share is 77% in 1974. Other market shares are Cadbury (chocolate biscuits made in Ireland) 3%; United Biscuits (U.K.) 5%; Associated Biscuits (U.K.) 4%; Rowntree 1%; Own Brand 1.5%; others 8%.

J.I.9. With increased imports return on capital has fallen from 15% in 1964 to 0.9% in 1973.

J.I.10 The advertising share of Irish Biscuits has fallen from 89% to 82% of total, the balance being made by growth in share of imports.

J.I.11. In cake manufacture the specialised Gateaux (Lyons) has a dominant position on the home and export markets. Comparison of output is not easy because breakdown of production is not available from other firms or from the Census of Production. Total exports, including biscuits, were £2,274,000 which Gateaux sold £1.1m. Gateaux's share of advertising was



68% in 1968, fell to 45% in 1969 and rose to 99% in 1973.

J.2.1. Investment

Grants of £678,785 were paid in the 3 years 1970 to 1973 and a further £222,809 in 1973. In the 3 years Irish Biscuits received 52% and Gateaux, the prominent cake producer, 12%.

J.3.1. Profitability

Profits in this sector have not been satisfactory. Published figures show that Jacobs (Irish Biscuits) declined from £284 post tax in 1969 steadily to £61,000 in 1973. Gateaux, though a near monopolist on the home market has attracted newspaper comment on difficulties in profitability. Many small bakeries continue to exist and several that are large, such as Kennedy's, have closed for lack of profit. It does not appear that monopoly profits have been made in this sector.

## POTATO CRISPS

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K.I.1. The market for potato crisps is rapidly expanding. Unimportant in the statistics of 1963, they had by 1971 reached £2.3 m., almost equalling production of jams and marmalade.

K.I.2. Tayto, the market leader, has been, since 1969, a subsidiary of Beatrice Foods (Chicago). King Crisps are a subsidiary of Tayto, acquired from private ownership in 1972. Smiths' Crisps (1964) are associated with Smiths' Potato Crisps, leading British manufacturers, and are a part of the General Mills Group (U.S.A.). Jacobs, (Irish Biscuit Manufacturers) acquired an interest of 51%. This interest has since been sold. Perri Potato Crisps are a subsidiary of Palmer Products, makers of ice-cream with controlling British shareholders. Ross Products are also producers.

K.I.3. Advertising expenditure show a change in leadership and a reduced concentration as new manufacturers enter a growing market. Smiths' bought 80% to 90% of advertising in the sector in 1968 and 1969, falling to 8% in 1973. Tayto increased its share from 19% to 65%.

SUGAR

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L.I.1. The State Company, Comhlucht Suicre Eireann, has been the only producer of sugar in Ireland during the period under consideration. Its four factories have continued in operation throughout the period. There has been a continuing situation of monopoly.

L.I.2. The openness of the home market to competition is not at once apparent because of the sugar content of imported and exported processed foods. No compensatory levies were imposed in Ireland. Producers receiving sugar at world free market prices enjoyed an element of price advantage over local manufacture. Imports of refined sugar were only 12.000 tons in 1973 and 6.000 tons in 1972 - about 6% of home sugar production.

## CHOCOLATE AND SUGAR CONFECTIONERY

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### Historical Background

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- M.I.1. Protection was initiated in the Chocolate and Sugar Confectionery sector under the Finance Act 1924. The level of protection was high in 1924 but increased in 1931 and 1932, when import of wrapped sweets was virtually stopped. Duties were reduced on U.K. imports under the trade agreements from 1938 onwards and are eliminated by the Free Trade Agreement. By 1928, the first official review of the industry showed four chocolate manufacturers and twenty (including two of the chocolate manufacturers) of sugar confectionery. Ten firms had been set up since protection was introduced. Twelve of those working in 1928 were still functioning in 1963, and ten in 1973. A core of firms continued in existence while a number of more transient firms have appeared.
- M.I.2. In the 1930's the number of chocolate manufacturers rose to seventeen and of sugar confectionery manufacturers to over forty. In the immediate post-war period of 1946 to 1952 a further fifty new firms opened. As trade became more normal the Census of Industrial Production showed a decline to 58 firms employing 5,181, in 1954. The position of the industry in 1961 is clearly described by the Committee on Industrial Organisation Report on the Cocoa, Chocolate and Sugar Confectionery, and Chocolate Crumb Industry. At that time 34 firms were involved, of whom 9 were engaged in chocolate production. Chocolate crumb was produced in 4 firms. In 1974 there were 4 significant chocolate sweet manufacturers. Eleven of sugar confectionery. During 1974 one of the larger manufacturers, Clarnico-Murray ceased operation.
- M.I.3. There is no chocolate or sugar confectionery firm employing more than 90 workers in Irish ownership. The market shares in 1969 were Fry-Cadbury about 50%, Rowntree-Mackintosh 20%, Clarnico-Murray 10%, Urney 15%.
- M.I.4. The number of factories returned in the Census of Industrial Production shows a decline from 42 in 1963 to 32 in 1970, but a small increase to 34 in 1971. In 1963 ten of them employed less than ten people; ten employed over a hundred each.
- M.I.5. The detailed analysis 1963 and 1968 shows little increase in concentration when adjusted to exclude sugar refining. While the number of establishments and firms decreased by 13% and by 7% the market share of the largest (employing over 500) remained constant at 90%; the share of employment fell from 80% to 59%. This indicates an increased productivity of labour in the largest enterprise compared to the smallest which would cause increased concentration. The

degree of concentration in production may be exaggerated by imports of own products imported, finished or semi-finished included in turnover. The CIO Report drew attention in 1963 to the low rate of profitability in the smaller firms. The average for largest firms was 5.2% of turnover; for the smaller groups 0.9% and 2.2%. There is evidence of some improvement in profitability of Cadbury's to £1,649,000 in 1973 and £1,402,000 in 1972. Post tax profits were charged at £1,112,000.

M.I.6. In 1974 the closure of Clarnico Murray took place. This was a subsidiary of Marks and Trevor Sharp, a British firm. An increase in concentration of manufacturing occurred but not in the market. Importation of the same products enabled the same degree of market penetration to be maintained.

#### Investment

M.2.1. Investment grants to this sector were not numerous. Of the sums paid in the three years surveyed 67% were given to the three largest firms and 15% to one other.

#### Advertising

M.3.1. Advertising expenditure for the group stayed constant between 1968 and 1971 but increased almost 50% by 1973. The two main producers accounted for between 79% and 67% of expenditure; the three largest for between 94% and 89%.

M.3.2. Advertising shows the major firms, Cadburys increasing its share from 43% in 1968 to 53% in 1973. Rowntree/Mackintosh share declined from 32% to 23% Urney/H.B. share declined from 19% to 8%. The increase share attributed to the smaller firms is mainly for importers.

#### Imports

M.4.1. Imports of sugar confectionery and chocolate have grown slightly but are only 12% of exports. The export figure includes a large element of chocolate crumb for further processing. Excluding chocolate crumb imports in 1973 were 54% of exports.

The degree of integration of markets and the extent to which firms import their own products manufactured abroad makes difficult a disaggregation of output. A similar problem arises in employment and profits when wholesaling of imports or their own manufacture is fully integrated with the handling of the product made in Ireland.

Conclusion

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M                      The development of the market has been that projected by the Survey Team. The smaller firms showed inadequate profit and have dropped out. Integration of firms within Ireland has not progressed. The Irish firms, being subsidiaries of international firms, have responded to free trade either by closure and import, or by closer integration with parent firms by complementary import and exports. Such slight increase in concentration as occurred was by closure of small firms with a slight growth of the largest.

TABLE M I                      Cocoa, Chocolate & Sugar Confectionery

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Size of Group	Units of Economic Activity		Market Share %		Employment %	
	'63	'68	'63	'68	'63	'68
Under 20	20	12	2	10	4	2
20 - 29	3	5	1	1	2	2
30 - 49	3	4	2	2	2	3
50 - 99	6	4	8	4	10	5
100 -199	4	5	7	10	12	16
200 -	6	5	80	83	71	71

Note:                      Returns for Sugar Refining have been deducted from Census returns.

FRUIT AND VEGETABLES

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N.I.1. Historical

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Consumption of fruit and vegetables per person is low in Ireland as seen in Table N.I.

Table N.I. Consumption of Vegetables and Fruit per Person 1968

	Vegetables	kg.	Fruit
Ireland	66.0		42.8
Netherlands	82.2		88.2
France	126.5		88.4
U.K.	60.1		45.2

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Source: OECD

N.I.2. A large part of the vegetable consumption is of potatoes. The marketing system for fresh vegetables and fruit is poorly developed.

N.I.3. Demand for processed foods has been low owing to factors mentioned in general analysis - rural population; low income per head; wives not employed outside the home. Demand is now growing rapidly as shown in Table AI. Consumption and production doubled between 1960 and 1970.  
Source: CIO Report.

N.I.4. The industry developed under protection in the 1930's. Jams and marmalades increased from 4,200 tons in 1926 to 73,000 tons in 1939. Canning of vegetables began in 1930's and of fruit in 1940's. The major growth area has, as elsewhere, been in frozen and dehydrated products.

Market Structure

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N.2.1. The Committee on Industrial Progress found that, while excess capacity existed in jam making for which demand is sluggish, most other sectors are fully employed at peak. However, the throughput was inadequate for efficient working. Of eight jam makers "two, or at most three, have a sufficiently large throughput for efficient production". "Of five firms producing canned processed peas and beans, only one firm has a modern continuous process canning plant and annual production by any of the others is not sufficient to justify the installation of another plant".

N.2.2. In 1970 there were fifteen firms engaged. Heinz/Erin which is state controlled, has the largest share of production, approximately 40%. Three externally owned firms and one Irish firm had an output of over £1m. controlling over 40% of the market. Ten firms share the remaining 20%. Knorr holds 43% of the soup market valued at £3.5m. p.a.

N.2.3. Since the CIO Report in 1970 six smaller firms have closed; 2 firms have become subsidiaries of international firms; one medium sized international subsidiary and one small Irish firm have been established.

N.2.4. Subsidiary companies are manufacturers and also distributors of imported goods from the parent firm. A range of competing goods is supplied by each international firm. Unless these firms decide to manufacture for each other it is hard to see how mergers can take place, however much economies of scale might show this to be desirable. Alternatively, under free trade firms may decide to supply all of their market from one, or a few factories (located in the most suitable country), so as to obtain economies of scale within their own organisation.

Size of Factories

N.3.1. The census figures show little evidence of consolidation of enterprises. Between 1963 and 1968 the share of the largest group (over 200 employed) stayed constant in market share but the employment fell from 73% of total 65%, showing increased labour efficiency.

Table NII CANNED FRUIT, VEGETABLES, JAMS, JELLIES, Etc.

Size of Group No. Employed	Units of Economic Activity		Market Share		Employment	
	'63	'68	'63	'68	'63	'68
	Under 20	10	6	3	2	3
20 - 49	7	6	8	5	6	4
50 - 199	6	10	24	27	19	29
200 - 499	7	7	65	64	73	65

Exports

N.4.1. Erin exported 60% of production in 1968, or



£3.6m. Total exports of fruit and vegetables in 1968 was £4.4m. of which £2.2m. processed. In 1973 £9.5m of which £3.4m processed, 75% of which was from Erin Foods.

#### Investment

N.5.1. Investment grants have been for re-equipment of the larger firms. In 1972 and 1973 McDonnell's received 58%, Batchelors 22%. Between 1952 and 1970 total grants were £334,000 of which Fastnet Co-operative (associated with Irish Sugar Company) received 45%, Batchelors 27%, Fane Valley 13%, Chivers 5%. Erin as a state company, was not eligible for grants. Investments by Erin over the period to 1968 were £1.1m. in new plant.

#### Profitability

N.6.1. The losses made by Erin Foods, the largest firm in the sector, varied from £260,000 to £770,000 and made total profits for this sector negative in most years. The profit record of other firms was variable most firms showed less in some years. The allocation of profit between imports, wholesale and own manufacture is difficult.

N.6.2. There is no indication of monopoly profit.

## CANNED BEEF

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### Historical

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- 0.I.1. Meat is the largest export of the Republic, comprising over 25% of total export trade. The home market absorbs 19% of cattle, 60% of sheep, 88% of pigs. The dependance on live trade is unusual, making Ireland the largest live cattle exporter in the world. The protection policy of consuming countries has always favoured live animal imports over dead and less processed foods over more sophisticated. The EEC tariff continues this preference. The operation of Tax on Value Added increased the effective protection for slaughter in the country of consumption.
- 0.I.2. Britain was the dominant, sometimes the only, market. The disease free status of Irish cattle facilitated a trade in store cattle for finishing in Britain, they being considered British after a certain period of residence. In this way live cattle exports shared in British subsidies while dead meat was subject to tariff. Slaughter for the home trade was mainly in minicipal or small private slaughter houses.
- 0.I.3. Dead meat exports became important with the opening of boned cow beef exports to the USA and to US Army contracts for the Continental trade, from 1951. The carcass trade was also developed to Britain, but in the early 1960's the USA accounted for 50% of trade.
- 0.I.4. Canned beef exports began in 1938, were important during the war and continued at a high level(over 5,000 tons) until 1954, after which they declined at a trend rate of 7.6% p.a. to 1969, in contrast to the fresh meat trend of 20.8% p.a. increase.
- 0.I.5. In 1961 the Survey Team on the Beef, Mutton and Lamb Industry found 12.9% of meat factory production was canned, of which 71% was stewed steak and corned beef a further 20%. In 1971 output of canned meat was £3.2m. or 3.8% of output.
- 0.I.6. Essentially the canned beef trade has been a by-product of the frozen beef exports to the USA. The home market has been small. Prior to the beginning of our survey period 38 firms were involved in slaughter and processing of whom 13 had canning plants. In 1961 99.8% of stewed canned beef and 88.9% of canned corned beef was produced by the eight diversified factories.
- 0.I.7. In 1962 a further canning plant was added and three new factories were opened.

Slaughter Houses

0.2.1. A high level of concentration was shown in 1963 when the ten largest factories out of 46 (over 200 employees) handled 90% of turnover. In 1968 there were only 5 in this employment group with hardly 50% of turnover. In part this reflects technology reducing the labour requirement in each factory; in part the rapid growth of output made possible the growth of smaller firms. Smaller firms measured by employment have a higher share of turnover than of employment in 1963, and this became marked in 1968. Small firms process more highly.

0.2.2. Co-operatives handle 65% of the total slaughter. They have no significant penetration of the home fresh meat market as they concentrate on export. There are three co-operatives involved of which the largest two share 94%, roughly equally, in 1972. In 1968 Clover Meats had 75% of the co-operative share, then about 50% of the market.

0.2.3. Canned meat is a by-product of slaughter houses engaged in by a minority of larger firms. Census returns give no indication of firms so engaged. No staff or premises are specifically returned as engaged in canning.

Table 0 I      SLAUGHTER HOUSES - Factory Size 1963 & 1968

Size of Group No. Employed	Units of Economic Activity		Market Share		Employment	
	'63	'68	'63	'68	'63	'68
Under 20	19	17	8	6	6	5
20 - 29	5	7	6	6	4	5
30 - 49	5	8	7	12	7	8
50 - 99	4	4	8	13	11	8
100 - 199	3	3	18	13	16	12
200 -	4	5	53	50	55	61

0.2.4. At Present canning of beef is carried on by:

Castlebar Bacon Factory	(Subsidiary of Unilever)
Clover Meats	Co-operative
Irish Meat Packers	Co-operative. Cork Mkts/ IMP
Roscrea Meat	Private Co.
Shannon Meats	Private Co. until 1972. Now co-operative.

0.2.5. Processed portion foods are prepared by:

International Meats Portion Foods	Cooperative Cork Marts/IMP Subsidiary of Imperial Foods (Ross Group)
Aer Lingus - Irish Clover Meats	State Owned Co-operative
Green Isle Products	Subsidiary of Beechams
Shannon Meats	Private Co. until 1972. Now Co-operative.

Investment

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0.3.1. As in milk supply grassland farming leads to peaks of supply which make heavy demands on capital investment. It is to be expected that the freeing of trade may reduce seasonal price variation and so increase the tendency to sell cattle in Autumn.

Conclusion

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0.4.1. The industry is highly competitive for supplies and in a stage of rapid growth owing to increased cattle production and a changeover to dead meat export. Sales are predominantly on the competitive export market.

FIG MEAT

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P.I.I. The traditional products are bacon or ham which do not fall within the scope of the enquiry. Canned products were about 4% of output in 1963 falling to 2% in 1971.

P.I.2. Diversified factories can easily expand canning operations in pork and larger bacom factories would have no difficulty in expanding their facilities if canning proved more profitable than fresh sausage manufacture. There does not seem to be any meaningful degree of concentration.

Bacon Factories

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P.2.I. During the years to 1971 the number of factories increased from 39 to 46 and fell again to 37.

P.2.2. The general figures of bacom factories by size groups are shown in Table P.I. taken from the Census of Production. There was an increase in the number of factories operating between 1963 and 1968. Productivity per man was not shown to be greater in the larger factories.

P.2.3. Co-operative factories increased from 7 to 10 in number in 4 societies and from 23% to 35% in market share between 1963 and 1973. Two of these factories, one a subsidiary of the numti-purpose Mitchelstown Co-operative, specialise in processed for packed foods and are leaders in the home market.

Table P I Bacon Factories by size group 1963 & 1968

Size of Group	Units of Economic Activity		Market Share %		Employment %	
	'63	'68	'63	'68	'63	'68
Under 50	14	11	13	9	9	6
50 - 99	7	11	15	20	11	16
100 - 199	12	13	41	45	39	42
200 -	6	5	32	26	42	36

P.3.3. Conclusion

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Within the terms of enquiry the processing of pigmeat is insignificant in importance. In the wider sense including bacon ham and pork production there has been a slight and desired increase in concentration. There is no indication of market dominance in supply purchase of in markets. No firm supplies 20% of the market.

PROCESSED FISH

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- Q.I.1. Fish is not traditionally a major part of Irish diet. Consumption is too small to be included under separate heading in the Annual Survey of Cost of Living. The detailed average weekly expenditure per household in urban areas, 1965 - '66, showed an average expenditure, per person, per week, on food of £6.70p of which fish accounted for 14p, compared with 43p for beef, 27p for lamb, 69p for pork. Most consumption was of unprocessed fish, the major processed items were tinned salmon 2p per week, frozen fish including fish fingers 1p per week. As rural households were excluded these figures are overestimates of fish consumption.
- Q.I.2. The Irish government, through its promotion agency, Bord Iascaigh Mhara, has launched a scheme of intensive development of fisheries. Capital investment rose from £2.5 m. in 1967 to £10.5m. in 1972. At the same time £3.5m. were invested in shore facilities. As a result landings of fish rose from £2m. in 1967 to £5.2m. in 1972 for sea fish alone. Exports during the same period increased from £1.4m. to £5.3m. for sea fish. The whole increase in landings was exported.
- Q.I.3. Market strategy is to sell fish fresh. The quantities are small and the highest prices are obtained in this manner. Some fish meal is manufactured from waste products, but Pickled Herrings are the main semi-processed export sent to Germany and the Netherlands for further processing. The total value of exports in the first few months of 1973 under tariff code 0302-453 and 461 was 3347 kg. valued £10,728. Shellfish and shellfish preparations in airtight containers totaled 839 metric tons in 1972 with a value of £730,927. In 1972 fish conserved in vinegar began to be exported to the value of £500,000 and in 1974 two further factories are being opened for this product.
- Q.I.4. A fish preserving industry does not exist in the usual sense. Firms engaged in smoking, salting or other activities are on a small scale mostly for export and the degree of concentration may be considered insignificant.
- Q.I.5. Supplies of processed fish not being available from home production it is natural that the market leaders should be the major brands available internationally. The major frozen fish brands are: Bird's Eye, Findus, Frionor, with market shares approximately 46%, 42% and 10%.
- Q.I.6. Development of the fish processing industry are considered improbable in the near future, though

there are projects for the canning of herring in association with international companies. The maturing of these plans will take one or two years. The home frozen processed fish market is considered inadequate to support an Irish manufacturing venture. The control of the market through refrigerated store space and the volume of advertising for the products of the international companies would seem to give little opportunity for future competition.

MARGARINE & BUTTER BLENDING

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- R.I.1. Detailed analyses of this sector is not given in the Census of Production because, with only four firms engaged, analyses would reveal individual figures. Blending of farm produced butter is included in this sector's statistics. Formerly important it is now negligible. Total output increased 40% between 1963 and 1968 but has shown no consistent trend since then. The importance of the sector is not great with turnover of £5m. in 1972 and employment of 400 in 1973.
- R.I.2. The number of firms producing has remained at four since 1968. Unilever remains the market leader. In 1969 Kraft took over the Irish firm Dowdall-O'Mahony of Cork, which has a market share of about  $2\frac{1}{2}\%$ .
- R.I.3. Imports have grown substantially since 1971 from 0.9% of consumption to 10.3% in 1973.
- R.I.4. Advertising showed no firm trend in concentration from Unilever 88% in 1968 to 85% in 1973.



### Conclusions from analyses

The change in concentration levels for total food has been slight and followed trends differing and even opposite for each variable.

Total sales decreased in concentration for largest firms over the period but concentration ratio increased in 1973 over 1972. This may represent the provisional nature of the total sales figure, changes in the structure of the dairy industry with the transfer of the largest firm from state ownership to a number of small firms are the major influences.

The Linda Index showed decreased concentration, L12 was .2018 in 1968 and .1709 in 1973.

Employment did not increase in concentration for the largest eight firms. For the largest ten and twelve a trend was observable, the concentration ratio moving from 44.37 to 42.97 and 48.11 to 45.51 for the largest 10 and 12. The L12 Index moved from .18082 to .22291.

Wages and salaries did not follow trends identical with numbers employed. There was an increase of concentration in the largest four and a decrease thereafter.

Export figures show an increased concentration by the L Index for each group, but a declining concentration ratio for the largest 4 and 8.

Advertising patterns are variable annually for each firm; concentration ratio was almost the same in 1973 as in 1968. The L Index showed no firm trend.

In no sector other than dairying are there more than four significant firms. In milling, sugar, sugar confectionary, fruit and vegetables, biscuits, consumers' milk, two firms control between 60 and 100% of manufacture. The degree of concentration has changed very little over the period except in fruit and vegetables where it has increased and dairying, where the breakup of the largest company on its transfer from state to co-operative ownership gives an impression of dispersion.

Concentration progressed significantly and according to plan in the milk manufacturing sector with closure of small firms. In milling and fruit and vegetable sectors some smaller firms disappeared. Elsewhere there was no significant change in the number of firms engaged.

Total investment in fixed capital is not published in Irish sources. The Commission Annual Investments in Fixed Capital in the Industrial Enterprises of the Member Countries 1970 - 1972 (Eurostat 2/1974) has appeared since writing of the report.

The following data appear for the food sector:

	1968	1969	1970	1971
£m				
Dairy	5.1	4.1	3.6	4.6
Meat	1.9	1.5	2.4	3.9
Fruit & Vegetable	1.3	1.4	1.7	0.8
Milling	1.6	2.1	2.4	1.9
Baking	1.7	1.8	2.2	3.5
Sugar	0.4	0.4	0.8	0.4
Cocoa, Chocolate & Sugar Confectionary	1.0	0.8	0.8	1.2
Miscellaneous	0.5	0.5	0.6	0.4

The dairy investment took place in the course of a deliberate consolidation programme.

Meat industry investment reflects expansion of total capacity. As a result of new firms being formed there was a reduction of concentration.

Fruit and vegetable investment was small and by the major processors, McDonnells, Batchelors and co-operatives associated with the Sugar Company.

Baking investment was principally by the largest firms in bread, biscuit and cake making.

Cocoa and sugar confectionary investment was by three large firms and specialised exporters of chewing gum.

APPENDIX

TABLE OF SYMBOLS



Foreign Company	Irish Company	Date	Other Interests	Products	Approx. Employment 1973	NOTES
Cadbury/ Schweppes Br.	Fry Cadbury	Dublin 100%		Chocolate Confec)	2,050	Importers of processed vegetables
		Rathmore		Butter, Oil ) Skim milk powder )		
	Chivers	Dublin 100%	1969	Jams, etc.	160	
	Cadbury Ireland (Export)					
	Blackwater Products					
	C.M. Exports					
	Manufacturing Services					
	Chivers & Sons (Export)					
	Wm. P. Harvey					
	Wm. Moorhouse & Sons					
Irish Preserves						
L. Rose & Co.						
Waters Bros. & Co.						
Rowntree Br.	Rowntree/	Dublin		Confectionery	750	
	Mackintosh	Mallow		Chocolate Crumb	460	
	Foxes Glacier mints	Dublin		Confectionery	30	
	Savoy Cocoa	Dublin			30	
Express Dairies	Carbery Creameries	90%	1968	Co-operatives	Cheese, milk powder	50
	Deel Vale Milk Products	50%	1970	Golden Vale Co-op	Cheese	50
	Virginia Milk Products	100%	1974		Evaporated milk	30

Foreign Company	Irish Company	Date	Other Interests	Products	Approx. Employment 1973	NOTES
Express Dairies Cont.2/...	Eden Vale Ireland 50%		Premier Dairies	Yoghurt	12	Irish interest acquired from H.B.
	Eden Vale Production 100%				10	
Unigate Overseas	Wexford Creamery 80%		Waterford Co-operative	Cheese	300	Acquired from German interests
	Irish Whey Products 100%	1973		Electrodiodised whey powder & baby foods		
	Cow & Gate (Mallow) 99%			Baby food	140	
	Woodville Food Products 49%	1973		Ballyclough Co-op 51%	Whey concentrate	
	Kilmeadon Creamery 20%	1965	Waterford Co-op 80%	Cheese		
	Rathduff Cheese 49%	1963	Ballyclough Co-op 51%	Cheese	100	Change of name from Richoll 1957
	Avongate Milk Products 30%	1973	Co-operatives and Avonmore creameries Ltd.	Skim milk powder, casein	100	
	Avonmore Cheese 30%		do.	Cheese		
L.E.Pritchett Br.	McCormack Products (Killeshandra) 100% *(Ballaghderreen)	1962		Dried Milk	60	*Bought by Connaught Farmers 1957.
				do.	60	
Bordens USA	Bordens (Ballyclough) 100%	1961		Milk powder	70	
	Hendersons Portion Foods	1963	Smedley Ross Foods	Meat Products	70	
Wyeth USA	Wyeth (I) 100%	1972		SMA Baby Foods	130	

Foreign Company	Irish Company	Date	Other Interests	Products	Approx. Employment 1973	NOTES
Abbott USA	Abbott 100%	1974		Milk Products		
Flint Br.	Continental Cheese Industry	1970	Co-op, Laiterie Central	Cheese	20	
Glaxo Group Br.	Miloko 51%	1948		Chocolate Crumb Casein	100	Bought by co-operatives 1971
London Bridge Trading Co.	Golden Vale Creameries 50%	1966	Golden Vale Food Products Co-operative	Cheese		
Erie Casein USA	North Kerry Milk Products 20%	1972	Co-operative	Edible Casein	160	
Mitsui Soriamount Japan	Donegal Dairy Products 60%	1971	Co-operatives	Cheese	20	Bought from Nestle / Kraft Franchise
Yoplait French	Dairyland	1971	Waterford Co-op	Yoghurt	50	Franchise Agreement
Unilever	H.B. Ice-cream 100%	1973		Ice-cream	300	Bought from Grace
	H.B. 100%	1973		Confectionery	670	do.
	Liam Devlin 100%	1973		do.	150	do.
	W & C McDonnell 100%			Margarine	240	Also Paul & Vincent (feed)
	Food Industries Ltd 100%					Castle Forbes Works (detergents)
Kraft USA Private Br.	Dowdall O'Mahony 100%	1969		Margarine	70	
	Palmer Products 100%			Ice-cream	120	
	Perri Crisps 100%	1962		Potato Crisps		

Foreign Company	Irish Company	Date	Other Interests	Products	Approx. Employment 1973	NOTES
Beatrice Foods USA	Tayto	100%	1968	Potato Crisps	156	
	King Crisps	100%	1972	do.	30	
Smiths' Food Group - Gen. Mills USA	Smiths' Food Group	100%		Potato Crisps	100	Irish Biscuits held 51% interest
Grace USA	Leaf	100%	1969	Chewing Gum	50	
Nestle Switzerland	Williams & Woods				750	
	Dublin					
	Sunrise Preserving Co.				850	
	James Keiller & Sons				20	
	National Canning Co. of Ireland			Jams	30	
	Chef Products			Fruit & Vegetable Preservations	12	
	Chocolate Toblerone (I)			Confectionery	30	
	Nestle Co.				2	
Crosse & Blackwell			Sauces, etc.	30		
Parker Dobson Br.	Lemon & Co.	100% Dublin	1973	Confectionery	180	
Marks & Trebor Sharp (Br)	Clarnico-Murray	100% Dublin		Confectionery	280	Ceased operation Sept. 1974
Warner Lambert (Br)	Warner Lambert	100%		Confectionery	200	



Foreign Company	Irish Company	Date	Other interests	Products	Employment 1973	Notes
R & W Scott (Br)	R & W Scott 100%			Jams	255	
Brown & Polson	Brown & Polson 100%			Preserves	215	
General Foods USA	Alfred Bird Dublin 100%	1963			105	
Beecham (Br.)	Batchelors 100%	1974		Preserved vegetables	725	Other interests in pharmaceuticals and animal feed.
	Green Isles 100%	1974				
	Quality Frozen Foods 100%	1974		do.	10	
	Irish Cannery 100%	1974		do.		
Heinz USA	Erin Foods 50%	1969	Irish Sugar Co. 50%	Dehydrated Foods Marketing	30	A marketing company selling to UK market.
Brook Bond	Leibigs of Ireland	1971		Dehydration	150	
	Oxo of Ireland 50% Erinox (Dublin)	1973	Golden Vale Marts Co-op	Meat extracts	30	
Denny & Sons (Aust)	Denny & Sons Sligo Mount Mellick Tralee 100%			Bacon & meat products	400	
FMC (Br)	Premier Meats 100%	1965		Meat	60	

Foreign Company	Irish Company	Date	Other Interests	Products	Employment 1973	NOTES
Smithfield (Br) (Unilever)	Castlebar Bacon Factory (also Monaghan) 100%			Bacon & Pork	350	
Lyons Holdings (Br)	Gateaux Dublin 100%	1970		Cakes	660	Also prominent in supply of tea and in hotels (Lyons Irish Holdings 1932) Also in hotel proprietors
Forte Holdings (Br)	Fullers Dublin 100%	1932		Cakes	200	Also hotel proprietors Retailers
Associated Biscuits (Br)	Jacobs 11.5%	1973	Private Irish	Biscuits	1750	
Meade/ Lonsdale (Br)	Amalgamated Meat Packers	1972		Meat Packing		
W. Eggerman (Br)	Irish Fish Foods	1962	Irish Private Interests British private interests	Fish Processing		
Marinpro (Br)	Marinpro	1963		Marinated Herring		
Chr. Salvesen (Br)	Irish Fish meal	1969		Fish meal		
G. Gross German	Shellfish Industries	1972		Cooked frozen shellfish		
W.J. Scheibe (German)	Berehaven Sea Foods	1963		Processed Fish		

## APPENDIX I cont. ...

Foreign Company	Irish Company	Date	Other Interests	Products	Approx. Employment 1973	NOTES
A. Passchier ZNNV	Bopa	1971		Sausage meats		
French Group	Fimarex 100%	1967		Fish processing	10	
Soc. Lanouste (French) <i>et aliae</i>	Celtic Fisheries	1965		Shellfish processing		

Irish Company	Date	Other Interests	Products	Approx. Employment 1973	NOTES
<u>Ranks Hovis McDonald Br.</u>	Jas. Rourke	100%	Milling & Baking	1 301	
	Ranks (Ireland)			420	
	Thos. Swan			235	
	J. Furlong			180	
	Milford Bakery			140	
	Cork Milling Co.			125	
	O'Shea & Sons			85	
	Irish Bakeries			60	
	James Kelly			50	
	Dublin N. City Milling Co.			45	
	Ranks (I) Sales			160	
	Kiely's Bakery			35	
	Ballyshannon Bakery			25	
	Joseph Rank			12	
				Also in Grain Import Transport Storage seeds & animal feeds	
T. Hallinan & Sons					
<u>Odlum Group Ir.</u>	W P & R Odlum		Milling & Baking	155	
	W & G T Pollexfen			70	
	Waterford Flour Mills			45	
	Dublin Port Milling Co.			100	
	National Flour Mills			420	
	Johnston Mooney & O'Brien	Dock Milling Co.		80	
	Procea			90	
	Modern Bakeries				

Irish Group	Irish Company	Date	Other Interests	Products	Approx. Employment 1973	NOTES
Cork Co-operative Meats Ir.	Irish Meat Packers	100%		Slaughter & Auctioneers	625	
	International Meat Co.	100%			110	
	CFV Meats	--100%			60	
	IMP (Middleton)				200	
	Middleton Services				20	
	Global Meat Packers				30	
	Frank Quinn & Co.					
	Quinn's International Meats (U.K.) Burnhall					
	Irish Meat Marketing (U.K.) 60%		Swift 40%			
	Irish Meat Marketing					
	IMP Enterprises				20	
Clover Meats Ir.	Clover Meats			Beef, Lamb, Pork processors.	556	
	Donnelly's				140	
	Clonmel Foods				100	
	Clonmel Bacon				90	
	Lupham Bros.					
	Associated Irish Meats					
	Spot			Pet foods		
	O'Keefe's					
	Geletine & Edible Products					
Bord Baine Ir.	Adams (U.K.)	66%		Dairy Produce distribution Fruit Juice & other manufacture		
	Lloyds Dairy (U.K.)					
	Elkes Biscuits (U.K.)					

Irish Group	Irish Company	Date	Other Interests	Products	Approx. Employment 1973	NOTES
Sugar Company Ir.	Erin Foods 100%			Processors	1 300	Also Interchem (agricultural chemicals)
	Irish Sugar Co. 100%				3 000	
	Kinsale Canners 58%			Fish Processors	45	Western Industries (limestone) Farm machinery animal feeds etc
	East Cork Foods 97%	1968		Processors		
	J.Matterson & Son 100%	1967		Canners		
	Fastnett Co-op 50%		Co-ops .		15	
	Errigal Co-op. 49%				49	
	Kerry Foods 50%				25	
	Heinz Erin 50%	1967	Heinz	Marketing	30	
	Nordic Fishing 22%					
Sea Foods (UK) 100%	1968					
L.Dubec (UK) 100%	1968					

The co-operative general purpose societies are in a state of transition. As ownership does not change with consolidation the detail is not important. Association with international firms is shown in the Table above. Activities in feed, seeds, chemicals, machinery do not concern the survey.

APPENDIX II

SUMMARY OF STATISTICS - from Census of Production & Government Reports.

	1963	1968	1969	1970	1971	1972	1973
<b>O. <u>Slaughter Houses</u></b>							
Establishments	40	44	44	49	45	n.a.	n.a.
Firms							
Turnover £m.	27	55	63	79	84	n.a.	n.a.
Volume of Product (1953 = 100)	239	358	376	394	426	388	485
Employment	2723	3907	3880	4260	4390	3900	4400
<b>F. <u>Edible Milk Products</u></b>							
Establishments	214	223	220	218	219	n.a.	n.a.
Firms	191	171	171	167	162	135	n.a.
Turn Over £m.	48	79	87	88	106	n.a.	n.a.
Volume of Product (1953 = 100)	137	228	226	227	241	298	316
Employment	4,787	6,578	7,170	7,370	7,720	8,000	9,000
<b>N. <u>Fruit &amp; Vegetables</u></b>							
Establishments	30	28	28	30	30	n.a.	n.a.
Firms	23	n.a.	n.a.	n.a.	n.a.	16	15
Turn Over £m.	7.5	14	16	18	18		
Volume of Product (1953 = 100)	110	171	195	177	217	198	197
Employment	3355	4,455	4,320	4,640	4,140	3,900	3,300
<b>M. <u>Cocoa, Chocolate</u></b>							
<u>Sweets</u>							
Establishments	42	35	35	32	34	n.a.	n.a.
Firms	32	32	31	30	28	26	23
Turn Over £m.	11	18	18	20	22	n.a.	n.a.
Volume of Product (1953 = 100)	79	111	103	109	110	115	113
Employment	5129	5273	5010	4950	4960	5100	4900
<b>I. <u>Milling</u></b>							
Flour Establishments	24	22	18	18	18	17	17
Firms	13	9	9	9	9	9	7
Turn Over £m.	n.a.	23	23	24	25	n.a.	n.a.
Volume of Product (1953 = 100)	75	68	69	67	62	65	65
Employment	5100	4500	4900	5300	500	4900	4800
<b>J. <u>Baking</u></b>							
Establishments	323	324	306	303	301	n.a.	n.a.
Firms							
Turn Over £m.	22	30	32	35	38	n.a.	n.a.
Volume of Product (1953 = 100)	93	99	101	100	103	108	111
Employment	9595		10118	10040	10030	9690	9400

.../..

/Contd.

- 80 -

	1963	1968	1969	1970	1971	1972	1973
<b>P. <u>Bacon Factories</u></b>							
<u>Establishments</u>	39	40	46	39	37	n.a.	n.a.
Firms							
Turn Over £m.	31	46	52	55	62	n.a.	n.a.
Volume of Product (1953 = 100)	119	114	154	158	169	164	148
Employment	4445	4714	4650	4720	4780	4700	4600
<b>L. <u>Sugar</u></b>							
<u>Establishments</u>	4	4	4	4	4	4	4
Firms	1	1	1	1	1	1	1
Turn Over £m.	12	14	15	16	21	n.a.	n.a.
Volume of Product (1953 = 100)	112	121	125	160	135	116	235
Employment	2662	2299	1770	1760	1720	1700	1700
<b>R. <u>Margarine &amp; Butter Blending</u></b>							
<u>Establishments</u>	10	10	10	9	8	n.a.	n.a.
Firms (Marg.)				4	4	4	4
Turn Over £m.	3	4	4	5	5	n.a.	n.a.
Volume of Product (1953 = 100)	105	146	150	145	142	145	147
Employment	296	386	460	460	415	400	400



APPENDIX III

METHODOLOGY and STATISTICAL ANALYSES

Methodology The aim of the report is to describe the degree of concentration in certain sectors of the food industry in Ireland and the development of concentration during the years 1968 to 1973.

The sectors analysed are those requested by the Economics Affairs Division of the Competition Directorate of the Commission of the European Communities. These were:

Dairy Industry  
Baby Foods  
Milling  
Baking  
Crisps  
Sugar  
Sugar Confectionary  
Fruit & Vegetable Processing  
Canned Beef  
Canned Pigeat  
Processed Fish  
Margarine and Butter Blending.

Excluded are:

- 1) Drink
- 2) Slaughter Houses of Cattle, pigs, poultry
- 3) Wholesaling, retailing, transportation.

Certain difficulties in the handling of data arose:

1) Confidentiality: In a small country few firms are found in most categories, in some only one. Detailed analyses would reveal information private to the firm.

2) Definition: Certain concepts are inadequately defined. Profit as defined for taxation has little relation to reality in a period of rapid inflation. The effects vary from firm to firm.

In a co-operative the concept of profit and its calculation are different from that in private enterprise. The concept has not, therefore, been analysed.

3) Employment: In multi-product companies it is often impossible to break down. Workers spend part or all of their time in work other than manufacture of food.

Categories of industries shown in the Census of Industrial Production do not coincide with those required. Firms engage in many activities, transferring staff and equipment between them. Processing firms trade in the semi-processed and finished goods of subsidiary or associate companies, Irish or foreign.

4) Size of Sample: Debars elaborate analyses in a sector where under five firms supply the whole market.

Procedure Data was collected for the sectors of the food industry requested by the Competition Directorate of the Commission.

The global figures for each sector are taken from official publications. The Census of Industrial Production of the Central Statistics publishes no breakdown of information by firms, only by places of business, no analyses after 1971 is provided. For reasons of confidentiality of information the CSO refused co-operation. All statistical information needed in the survey is in the files of that office in unprocessed form. The number of firms had to be determined by research.

The categories of industry as those of the Census of Production are the figures of output, employees, wages.

Sources of information were:

- 1) Trade organisations in particular the Confederation of Irish Industries.
- 2) Trade directories, in particular that compiled by the Business Studies Department of Trinity College, Dublin.

For individual firms, with the exception of Co-operatives, minimal published information is available. Official registration of shareholders of companies were available from the Companies Office, Dublin Castle. Public companies do not have to publish even the turnover (they must now do so by the regulations of the Stock Exchange). Private companies must file certain reports to the government but not accounts. No publication is required.

Figures have, therefore, been derived from individual contacts and from certain published surveys by governmental bodies such as the Committee on Industrial Progress, the National Prices Commission, the Department for Agriculture.

Investment has been calculated from the gross figures of the Industrial Development Authority.

Returns were obtained from firms representing 80% of output in the sectors examined. In no sector other than dairying are there more than four significant firms. Analyses was carried out but, besides the technical problems of sample size, publication would reveal confidential figures received from correspondants.

Analyses

The statistical analysis of the total sector is based on the methodology developed by the Commission of the European Communities for quantitative studies on concentration trends by industry (see First Report on Competition Policy, Part III, pages 157 - 167 - April 1972; Second Report on Competition Policy, Part III - pages 147 - 161, April 1973).

Given the documentation available, the contents of each table conform by and large to the plan indicated in the explanatory notes below.

Explanatory Notes to the Tables

1. Table I shows the trend between 1968 and 1973 in the total figures for the following five variables:

01 Sales  
02 Employment  
03 Wage and Salary Bill  
08 Exports  
10 Advertising.

The table concerns both the total number of units (firms or units of economic activity) making up the industry (n) and a sample (n\*). Here the sample comprises the largest firms in the industry.

2. Table II shows the trend of concentration for the five variables.

The measures and indices used in this table are obtained from the following formulae:

		Limits	
		Lower	Upper
M	= Arithmetic mean $M = \frac{x}{n}$	0	x
V	= Variation coefficient $\frac{\sqrt{\sum_{i=1}^n (x_i - M)^2}}{n}$	0	(n-1)
G	= Gini coefficient $G = \frac{1}{n \cdot x} \sum_{i=1}^n [(i-1) \cdot Fx_i - i \cdot Fx_{i-1}]$	0	$\frac{n-1}{n}$
H	= Herfindahl - Hirschman index $H = \frac{1000}{n} \frac{V^2 + 1}{x^2} = \frac{1000}{x^2} \sum_{i=1}^n x_i^2$	$\frac{1000}{n}$	1000
E	= Entropy Index $E = 100 \sum_{i=1}^n \frac{x_i}{x} \log \frac{x_i}{x}$	100 (-log n)	0

The definitions of the formulae are given for simple statistical series. It is assumed, therefore, that the value of the variable is known for each unit of the set.

n	=	number of units in a set
x	=	total value of the variable in a set
i	=	unit i
$x_i$	=	value of the variable for unit i
$fx_i$	=	accumulated value of the variable up to unit i.

3. Table III is intended to show the trend since 1968 in the level of concentration of large firms. It comprises five sheets, one for each of the variables used, in the following order:

- Sales
- Employment
- Wage and Salary Bill
- Exports
- Advertising

Each variable is intended to highlight a given aspect of the structure of the sample comprising the large firms and enables significant comparisons to be made between the trends in different variables.

Here the trend in the level of large firm's concentration is measured by Linda indices and concentration ratios.

The Linda index is calculated for each variable, while the concentration ratios relate to the first three variables (sales, employment, wage and salary bill).

In Table III the L index is not calculated in respect of the entire industry ( $\underline{n}$ ) but only for the sample ( $n^*$ ) and for the various hypotheses 4, 8, 10, 12. Within the sample.

The Table also gives the maximum value ( $Ln^*$ ) and the minimum value ( $Ln_m^*$ ) of the various L indices, calculated in the interval between  $n_m^* = 2$  and  $n^* =$  entire sample.

The Linda index is defined as follows:

$$L = \frac{\sum_{i=1}^{n^*} \frac{EO_i}{n^*}}{n^* - 1}$$

where:

$$EO_i = \frac{\frac{A_i}{i}}{A - \frac{A_i}{i}} = \frac{n^* - i}{i} \frac{A_i}{A_{n^*} - A_i} = \frac{n^* - i}{i} \frac{A_i}{1 - A_i}$$

$A_i$  = Cumulative share of the first  $i$  undertakings in the set selected.

$A_{n^*}$  = 100% = 1

That is to say:

- (a) The L or  $L_{n^*}$  index is the arithmetic mean of the  $(n^* - 1)$  ratios of clogopoly equilibrium (EO), each being divided previously by  $n^*$ .
- (b) Each EO ratio is expressed by the average size of the first  $i$  firms and that of the remaining  $(n^* - i)$  firms, where  $i$  in turn has the values 1 (expressing the ratio between the size of the largest firm and the average size of all the other firms in the sample of the industry selected) to  $n^* - 1$ ; this is why the number of EO ratios in question is exactly  $n^* - 1$ .

The upper and lower limits of the L index are  $\infty$  and  $\frac{1}{n^*}$  respectively.

The formula for the concentration ratios is the following:

$$CR_{n^*} = \frac{100}{x} \sum_{i=1}^{n^*} x_i$$

where:

$n^*$  = number of units selected:  
 for each hypothesis: 2,3,4,8,10,12,15,20 etc.  
 or constituting the sample analysed.  
 The upper and lower limits of  $CR_{n^*}$  are 100 and 0 respectively.

Table 3 is intended to provide an analytical description of the structure of the large firms for each year under consideration.

There are in fact 6 sheets, one for each year from 1968 to 1973. This enables significant comparisons to be made between the indices calculated on the basis of the different variables. As they relate to the same period and are based on the same hypotheses of  $n^*$  these indices are homogeneous.

It should be stressed that the analytical description in Table 3a was designed to give a clear picture of the structure of the firms without revealing individual details.

The values of the L indices are given for each of the seven variables, and for comparative purposes the

$$\frac{\text{minimum}}{(L_{n^*_m})} \quad \text{and} \quad \frac{\text{maximum}}{(L_{n^*_h})}$$

are also indicated.

This table, therefore, highlights the complete series of Linda curves from  $n^* = 2$  to  $n^* =$  entire sample.

Table 4 summarises by reference to the  $L_5$  index the trends in the various aspects of the structure of the large firms, constituting the sample. This reveals the trend in the indices between 1968 and 1973 calculated simultaneously on the basis of all the variables used.

As regards the columns in this table, the following should be noted:

The  $\overline{n^*_m}$  indicate the number of firms corresponding to the minimum value of the L index within the sample ( $n^*$ ) selected, while  $\overline{L_{n^*_m}}$

is the value of the relevant L index. The arithmetic mean of the L indices from  $L_2$  to  $L_{n^*_m}$  inclusive, gives the  $L_5$  index, which expresses the degree of equilibrium and of concentration between the first  $n^*_m$  firms in the industry.





TABLE OF SYMBOLS

n	=	total number of units (firms or units of economic activity) making up the industry.
n*	=	number of units selected: for each hypothesis: 2,3,4,8,10, etc. or constituting the sample analysed.
n* h	=	number of units corresponding to the <u>maximum</u> value of the L index within the sample analysed.
n* m	=	number of units corresponding to the <u>minimum</u> value of the L index within the sample analysed.
M	=	average value of the variable.
V	=	variation coefficient.
G	=	GINI Coefficient.
H	=	Herfindahl-Hirschman index.
E	=	entropy index.
CR	=	share of the first n* units (either 4,8,10, etc. or of the sample n* selected) in the total of the variable.
L	=	Linda index: the value of this index is calculated according to the n* hypothesis used (either n* = 2,3,4,8, etc. or: n*, n <sub>h</sub> <sup>*</sup> , n <sub>m</sub> <sup>*</sup> ).
L	=	arithmetic mean of the L indexes on the basis of the hypothesis <u>n* = 2</u> to <u>n<sub>m</sub><sup>*</sup></u> , the formula thus being:

$$L_s = \frac{\frac{\sum_{n^*} L_{n^*}}{n^* = 2}}{n_m^* - 1}$$



CONCENTRATION INDUSTRIELLE

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IV/A-3

EVOLUTION DES DONNEES GLOBALES : TOTAL DU SECTEUR ET ECHANTILLON

TABLEAU NO 1  
1968 - 1973  
\*\*\*\*\*

PAYS : IRELAND  
INSTITUT : "LOUIS SMITH-RESEARCH LTD"  
SECTEUR : ALIMENTATION(AIL FOOD) (NICE 20-B)  
ENTREPRISES

\*\*\*\*\*

VARIABLE : 01 CHIFFRE D'AFFAIRES (£ 1000)

\*\*\*\*\*

* ANNEE	* T O T A L				* E C H A N T I L L O N			
	* N	* VALEUR (T)	* 1968=100	I	* N*	* VALEUR (E)	* 1968=100	I E/T %
* 1968	* 490	* 243.420	* 100	I 19	* 121.710	* 100	I 50.00	
* 1969	* 485	* 285.060	* 117	I 19	* 142.530	* 117	I 50.00	
* 1970	* 460	* 320.700	* 131	I 19	* 160.350	* 131	I 50.00	
* 1971	* 450	* 376.484	* 154	I 19	* 188.242	* 154	I 50.00	
* 1972	* 421	* 488.420	* 200	I 20	* 244.210	* 200	I 50.00	
* 1973	* 400	* 529.040	* 217	I 19	* 264.520	* 217	I 50.00	
* *	* *	* *	* *	I *	* *	* *	I *	
* *	* *	* *	* *	I *	* *	* *	I *	
* *	* *	* *	* *	I *	* *	* *	I *	
* *	* *	* *	* *	I *	* *	* *	I *	
* *	* *	* *	* *	I *	* *	* *	I *	

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VARIABLE : 02 EFFECTIF

\*\*\*\*\*

* 1968	* 489	* 36.602	* 100	I 18	* 18.652	* 100	I 50.96
* 1969	* 485	* 37.212	* 101	I 19	* 18.606	* 99	I 50.00
* 1970	* 461	* 39.120	* 106	I 20	* 19.670	* 105	I 50.28
* 1971	* 451	* 39.650	* 108	I 20	* 19.825	* 106	I 50.00
* 1972	* 421	* 39.834	* 108	I 20	* 20.111	* 107	I 50.49
* 1973	* 400	* 39.516	* 107	I 20	* 20.136	* 107	I 50.96
* *	* *	* *	* *	I *	* *	* *	I *
* *	* *	* *	* *	I *	* *	* *	I *
* *	* *	* *	* *	I *	* *	* *	I *
* *	* *	* *	* *	I *	* *	* *	I *
* *	* *	* *	* *	I *	* *	* *	I *

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CONCENTRATION INDUSTRIELLE  
\*\*\*\*\*

EVOLUTION DES DONNEES GLOBALES : TOTAL DU SECTEUR ET ECHANTILLON

\*\*\*\*\*

PAYS : IRELAND  
INSTITUT : "LOUIS SMITH-RESEARCH LTD"  
SECTEUR : ALIMENTATION(AIL FOOD) (NICE 20-B)  
ENTREPRISES

\*\*\*\*\*  
\* TABLEAU NO 1 \*  
\* \*  
\* 1968 - 1973 \*  
\* \*  
\*\*\*\*\*

\*\*\*\*\*  
\* VARIABLE : 03 MASSE SALARIALE (£ 1000) \*  
\*\*\*\*\*

		T O T A L				E C H A N T I L L O N			
ANNEE	N	VALEUR (T)	1968=100	I	N	VALEUR (E)	1968=100	I	E/T %
1968	489	34.184	100	I 18	17.144	100	I 50.15		
1969	486	42.344	123	I 20	21.388	124	I 50.51		
1970	460	44.000	128	I 20	22.000	128	I 50.00		
1971	451	52.648	154	I 20	26.324	153	I 50.00		
1972	421	57.702	168	I 20	28.851	168	I 50.00		
1973	401	91.980	269	I 20	45.990	268	I 50.00		

\*\*\*\*\*  
\* VARIABLE : 08 EXPORT. (£ 1000) \*  
\*\*\*\*\*

1968	488	56.600	100	I 17	28.460	100	I 50.28		
1969	484	80.000	141	I 18	40.172	141	I 50.22		
1970	456	86.200	152	I 15	43.420	152	I 50.37		
1971	446	108.800	192	I 15	54.520	191	I 50.11		
1972	418	132.200	233	I 17	66.165	232	I 50.05		
1973	397	139.400	246	I 18	70.149	246	I 50.32		

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CONCENTRATION INDUSTRIELLE  
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EVOLUTION DES DONNEES GLOBALES : TOTAL DU SECTEUR ET ECHANTILLON

\*\*\*\*\*

PAYS : IRELAND  
 INSTITUT : "LOUIS SMITH-RESEARCH LTD"  
 SECTEUR : ALIMENTATION(AIL FOOD) (NICE 20-B)  
 ENTREPRISES

\*\*\*\*\*  
 \* TABLEAU NO 1 \*  
 \* \*  
 \* 1968 - 1973 \*  
 \* \*  
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*****											
* VARIABLE : 10 FRAIS PUBLICITAIRES (£) *											
*****											
* TOTAL						* ECHANTILLON					
*****											
* ANNEE	* N	* VALEUR (T)	* 1968=100	I	N*	* VALEUR (E)	* 1968=100	I	E/T %	*	
*****											
* 1968	* 131	* 846.000	* 100	I 9	*	* 423.000	* 100	I 50.00	*		
* 1969	* 131	* 748.000	* 88	I 9	*	* 374.000	* 88	I 50.00	*		
* 1970	* 130	* 870.000	* 102	I 10	*	* 435.000	* 102	I 50.00	*		
* 1971	* 131	* 1100.000	* 130	I 11	*	* 550.000	* 130	I 50.00	*		
* 1972	* 131	* 1388.000	* 164	I 10	*	* 694.000	* 164	I 50.00	*		
* 1973	* 131	* 1126.000	* 133	I 9	*	* 563.000	* 133	I 50.00	*		
* *	* *	* *	* *	I *	*	* *	* *	I *	*		
* *	* *	* *	* *	I *	*	* *	* *	I *	*		
* *	* *	* *	* *	I *	*	* *	* *	I *	*		
* *	* *	* *	* *	I *	*	* *	* *	I *	*		
*****											

EVOLUTION DE LA CONCENTRATION

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TOTAL DU SECTEUR

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\*TABLEAU NO 2 \*

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PAYS : IRELAND  
 INSTITUT : "LOUIS SMITH-RESEARCH LTD"  
 SECTEUR : ALIMENTATION(ALL FOOD) (NICE 20-B)  
 ENTREPRISES

VARIABLES : 01 CHIFFRE D'AFFAIRES 02 EFFECTIF 03 MASSE SALARIALE  
 04 BENEFICE NET 05 CASH FLOW 06 INVESTIS BRUTS  
 07 CAPITAUX PROPRES 08 EXPORT. 09 IMPORT.

10 FRAIS PUBLICITAIRES

\*\*\*\*\*

A N N E E

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\*  
 \*VARIABLE\*

1968

1969

	*****					*****				
	N	M	V	G	H	N	M	V	G	H
0 1	490*	.497*	3.04995*	.46983*	21.02493*-221.92403	485*	.588*	3.07095*	.46897*	21.50669*-221.69025*
0 2	489*	.075*	3.33706*	.48228*	24.81789*-217.61919	485*	.077*	3.19109*	.47050*	23.05789*-219.58987*
0 3	489*	.070*	3.22034*	.47494*	23.25276*-219.29092	486*	.087*	3.17953*	.47390*	22.85891*-219.97312*
0 8	488*	.116*	3.48014*	.47837*	26.86761*-216.22791	484*	.165*	3.75006*	.47803*	31.12176*-214.71690*
010	131*	6.458*	2.13602*	.44718*	42.46241*-177.48150	131*	5.710*	2.17563*	.44837*	43.76614*-176.32222*

1970

1971

	*****					*****				
	N	M	V	G	H	N	M	V	G	H
0 1	460*	.697*	2.92342*	.46694*	20.75303*-221.25181	450*	.837*	2.85181*	.46536*	20.29511*-221.30701*
0 2	461*	.085*	3.18439*	.47096*	24.16553*-218.32694	451*	.088*	3.17985*	.46647*	24.63732*-217.95707*
0 3	460*	.096*	3.15643*	.46694*	23.83274*-218.91935	451*	.117*	3.16344*	.46690*	24.40656*-218.39652*
0 8	456*	.189*	3.31059*	.47702*	26.22810*-215.33369	446*	.244*	3.50614*	.47464*	29.80502*-213.73328*
010	130*	6.692*	2.05064*	.43714*	40.03947*-179.05170	131*	8.397*	1.92258*	.43563*	35.84388*-180.97060*

EVOLUTION DE LA CONCENTRATION

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\*\*\*\*\*

\*TABLEAU NO 2 \*

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TOTAL DU SECTEUR

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PAYS : IRELAND  
 INSTITUT : "LOUIS SMITH-RESEARCH LTD"  
 SECTEUR : ALIMENTATION(ALL FOOD) (NICE 20-3)  
 ENTREPRISES  
 VARIABLES : 01 CHIFFRE D'AFFAIRES 02 EFFECTIF 03 MASSE SALARIALE  
 04 BENEFICE NET 05 CASH FLOW 06 INVESTIS BRUTS  
 07 CAPITAUX PROPRES 08 EXPORT. 09 IMPORT.

10 FRAIS PUBLICITAIRES

		A N N E E															
* VARIABLE *		1972								1973							
		N	M	V	G	H	E	I	N	M	V	G	H	E	I		
0 1	*	421*	1.160*	2.53758*	.46096*	17.67062*	-221.56675I	400*	1.323*	2.61350*	.46177*	19.57601*	-218.78084*				
0 2	*	421*	.095*	2.97977*	.47020*	23.46563*	-216.77092I	400*	.099*	2.92273*	.47127*	23.85582*	-215.07234*				
0 3	*	421*	.137*	2.99002*	.46394*	23.01094*	-217.53219I	401*	.229*	3.04549*	.46390*	25.62341*	-214.82564*				
0 8	*	418*	.316*	2.90845*	.46881*	22.62938*	-215.77017I	397*	.351*	2.92162*	.46904*	24.01980*	-213.29269*				
0 10	*	131*	10.595*	1.93001*	.43958*	36.06830*	-180.43013I	131*	8.595*	2.17567*	.44738*	43.76736*	-177.21466*				

IV/A-3

EVOLUTION DE LA CONCENTRATION

INDICES LINDA (L) ET RATIOS DE CONCENTRATION (CR)

TARLEAU NO 3
1968 - 1973

PAYS : IRELAND
INSTITUT : "LOUIS SMITH-RESEARCH LTD"
SECTEUR : ALIMENTATION(AIL FOOD) (NICE 20-B)
ENTREPRISES

Table with columns: ANNEE L, INDICES L ET CR RELATIFS A N\*, COURBES L, ECHANTILLON, 1ER MAXIMUM, 2EM MAXIMUM, MINIMUM. Rows include years 1968, 1969, 1970, 1971, 1972, 1973 and various CR values.



EVOLUTION DE LA CONCENTRATION
\*\*\*\*\*
INDICES LINDA (L) ET RATIOS DE CONCENTRATION (CR)
\*\*\*\*\*

\*\*\*\*\*
\* TABLEAU NO 3 \*
\* 1968 - 1973 \*
\*\*\*\*\*

PAYS : IRELAND
INSTITUT : "LOUIS SMITH-RESEARCH LTD"
SECTEUR : ALIMENTATION(AIL FOOD) (NICE 20-B)
ENTREPRISES

Table with columns: ANNEE, L, CR, INDICES L ET CR RELATIFS A N\*, and COURBES L. Rows include years 1968, 1969, 1970, 1971, 1972, 1973 with various numerical values and statistical indicators.

INDICES LINDA (L) ET RATIOS DE CONCENTRATION (CR)

\*\*\*\*\*

PAYS : IRELAND  
 INSTITUT : "LOUIS SMITH-RESEARCH LTD"  
 SECTEUR : ALIMENTATION(AIL FOOD) (NICE 20-B)  
 ENTREPRISES

\*\*\*\*\*

VARIABLE : 03 MASSE SALARIALE

\*\*\*\*\*

ANNEE	L	INDICES L ET CR RELATIFS A N =								C O U R B E S L								
		4	8	10	12	20	30	40	N	I	N	L	N	L	N	L		
* FT	* CR	*****								*****								
* %		*****								*****								
		*****								*****								
1968*	L	.39625	.19349	.17505	.19035	.00000	.00000	.00000	.489	I	18	.30168	2	.90909	2	.90909	10	.17505
	* CR	22.80	38.49	44.15	47.12	.00	1.00	1.00	I			50.15						
1969*	L	.37493	.21206	.18949	.20543	.28245	.00000	.00000	.486	I	20	.28245	2	.83659	2	.83659	10	.18949
	* CR	23.67	38.16	43.24	46.03	50.51	1.00	1.00	I			50.51						
1970*	L	.41682	.23892	.21895	.22278	.32077	.00000	.00000	.460	I	20	.32077	2	.85000	2	.85000	9	.21233
	* CR	24.89	37.91	42.58	45.26	50.00	1.00	1.00	I			50.00						
1971*	L	.42399	.24639	.23119	.22842	.29788	.00000	.00000	.451	I	20	.29788	2	.96161	2	.96161	14	.22270
	* CR	25.23	38.07	42.33	45.08	50.00	1.00	1.00	I			50.00						
1972*	L	.42207	.23620	.22081	.23366	.25769	.00000	.00000	.421	I	20	.25769	2	.93600	2	.93600	9	.21525
	* CR	24.29	37.93	42.32	44.75	50.00	1.00	1.00	I			50.00						
1973*	L	.36650	.27133	.28365	.28147	.30482	.00000	.00000	.401	I	20	.30482	2	.59212	2	.59212	16	.25954
	* CR	27.76	39.65	42.78	44.96	50.00	1.00	1.00	I			50.00						

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EVOLUTION DE LA CONCENTRATION

INDICES LINDA (L) ET RATIOS DE CONCENTRATION (CR)

TARLEAU NO 3
1968 - 1973

PAYS : IRELAND
INSTITUT : "LOUIS SMITH-RESEARCH LTD"
SECTEUR : ALIMENTATION(AIL FOOD) (NICE 20-B)
ENTREPRISES

Table with columns: ANNEE, INDICES L ET CR RELATIFS A N, COURSES L, ECHANTILLON, 1ER MAXIMUM, 2EM MAXIMUM, MINIMUM. Rows include years 1968, 1969, 1970, 1971, 1972, 1973 with various numerical values and percentages.

EVOLUTION DE LA CONCENTRATION

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INDICES LINDA (L) ET RATIOS DE CONCENTRATION (CR)

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\*\*\*\*\*
\* TABLEAU NO 3 \*
\* 1968 - 1973 \*
\*\*\*\*\*

PAYS : IRELAND
INSTITUT : "LOUIS SMITH-RESEARCH LTD"
SECTEUR : ALIMENTATION(AIL FOOD) (NICE 20-B)
ENTREPRISES

Table with columns: ANNEE, L, CR, INDICES L ET CR RELATIFS A N, N, I, L, N\*, N\*, \*H< N\*H<, H, N\*H, M, N\*M. Rows for years 1968, 1969, 1970, 1971, 1972, 1973.

CONCENTRATION INDUSTRIELLE

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IV/A-3

TABLEAU STRUCTUREL DES COURBES LINDA

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\* TABLEAU NO 3PIS \*  
\*\*\*\*\*

PAYS : IRELAND  
INSTITUT : "LOUIS SMITH-RESEARCH LTD"  
SECTEUR : ALIMENTATION(ALL FOOD) (NICE 20-B)  
ENTREPRISES

1  
101  
1

ANNEE : 1968

		VARIABLE									
* N*	* 01	* 02	* 03	* 08	* 10	*	*	*	*	*	*
	* CHIFFRE	* EFFECTIF	* MASSE	* EXPORT,	* FRAIS	*	*	*	*	*	*
	* D'AFFAIRES*	* SALARIALE	* PUBLICITAIRES								
* 2 *	* .71615 *	* .97561 *	* .90909 *	* .62500 *	* .67262 *	*	*	*	*	*	*
* 3 *	* .44770 *	* .58130 *	* .53929 *	* .39583 *	* .49447 *	*	*	*	*	*	*
* 4 *	* .33248 *	* .44659 *	* .39625 *	* .34115 *	* .49880 *	*	*	*	*	*	*
* 5 *	* .28956 *	* .35825 *	* .30531 *	* .33859 *	* .42341 *	*	*	*	*	*	*
* 6 *	* .25369 *	* .29155 *	* .25301 *	* .29867 *	* .42718 *	*	*	*	*	*	*
* 7 *	* .23099 *	* .24825 *	* .21945 *	* .25924 *	* .39492 *	*	*	*	*	*	*
* 8 *	* .21491 *	* .21672 *	* .19349 *	* .25408 *	* .35360 *	*	*	*	*	*	*
* 9 *	* .20047 *	* .19643 *	* .18281 *	* .26161 *	* .33891 *	*	*	*	*	*	*
* 10 *	* .20107 *	* .18373 *	* .17505 *	* .25235 *		*	*	*	*	*	*
* 11 *	* .20576 *	* .18238 *	* .18407 *	* .23775 *		*	*	*	*	*	*
* 12 *	* .20182 *	* .18082 *	* .19035 *	* .22186 *		*	*	*	*	*	*
* 13 *	* .20534 *	* .18928 *	* .22626 *	* .23058 *		*	*	*	*	*	*
* 14 *	* .20199 *	* .24600 *	* .24848 *	* .29305 *		*	*	*	*	*	*
* 15 *	* .19558 *	* .28590 *	* .25727 *	* .40003 *		*	*	*	*	*	*
* 16 *	* .19124 *	* .31400 *	* .26795 *	* .46241 *		*	*	*	*	*	*
* 17 *	* .19256 *	* .33682 *	* .29061 *	* .57926 *		*	*	*	*	*	*
* 18 *	* .19610 *	* .35353 *	* .30168 *			*	*	*	*	*	*
* 19 *	* .22183 *					*	*	*	*	*	*

CONCENTRATION INDUSTRIELLE  
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TABLEAU STRUCTUREL DES COURBES LINDA  
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\* TABLEAU NO 3RIS \*  
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PAYS : IRELAND  
INSTITUT : "LOUIS SMITH-RESEARCH LTD"  
SECTEUR : ALIMENTATION(ALL FOOD) (NICE 20-B)  
ENTREPRISES

ANNEE : 1969

*****									
VARIABLE									
* N *	* 01 *	* 02 *	* 03 *	* 08 *	* 10 *	*	*	*	*
* CHIFFRE * * D'AFFAIRES *	* EFFECTIF *	* MASSE * * SALARIALE *	* EXPORT. *	* FRAIS * * PUBLICITAIRES *	*	*	*	*	*
*****									
* 2 *	.75871	.91247	.83659	.50000	.56548	*	*	*	*
* 3 *	.47383	.54921	.51173	.43417	.50570	*	*	*	*
* 4 *	.34929	.42507	.37493	.47552	.46053	*	*	*	*
* 5 *	.31617	.34266	.30465	.40758	.39660	*	*	*	*
* 6 *	.27294	.27982	.26775	.40416	.35852	*	*	*	*
* 7 *	.25433	.23894	.23407	.36525	.32480	*	*	*	*
* 8 *	.23460	.20910	.21206	.32378	.46653	*	*	*	*
* 9 *	.21474	.18544	.19781	.31775	.51316	*	*	*	*
* 10 *	.21601	.17474	.18949	.32605		*	*	*	*
* 11 *	.22245	.17149	.19533	.31632		*	*	*	*
* 12 *	.21855	.17368	.20543	.30022		*	*	*	*
* 13 *	.21059	.20351	.21690	.28218		*	*	*	*
* 14 *	.20875	.23566	.23692	.30256		*	*	*	*
* 15 *	.20318	.25391	.25003	.32171		*	*	*	*
* 16 *	.19743	.28155	.25336	.44872		*	*	*	*
* 17 *	.19526	.30695	.25213	.55439		*	*	*	*
* 18 *	.19360	.33040	.26803	.61967		*	*	*	*
* 19 *	.19900	.38377	.27387			*	*	*	*
* 20 *		.28245				*	*	*	*
*****									

CONCENTRATION INDUSTRIELLE  
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TABLEAU STRUCTUREL DES COURBES LINDA  
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\* TABLEAU NO 3RIS \*  
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PAYS : IRELAND  
INSTITUT : "LOUIS SMITH-RESEARCH LTD"  
SECTEUR : ALIMENTATION(A.I.L FOOD) (NICE 20-B)  
ENTREPRISES

ANNEE : 1970

*****						
* * * * * V A R I A B L E * * * * *						
* N *	* 01 *	* 02 *	* 03 *	* 08 *	* 10 *	
* CHIFFRE * * D'AFFAIRES *	* EFFECTIF *	* MASSE * * SALARIALE *	* EXPORT. *	* FRAIS * * PUBLICITAIRES *		
*****						
* 2 *	* .88774 *	* .91112 *	* .85000 *	* .59701 *	* .62088 *	
* 3 *	* .53977 *	* .63644 *	* .55710 *	* .47292 *	* .65474 *	
* 4 *	* .39129 *	* .48476 *	* .41682 *	* .47159 *	* .54919 *	
* 5 *	* .32481 *	* .38063 *	* .36649 *	* .39465 *	* .44801 *	
* 6 *	* .27515 *	* .30674 *	* .31473 *	* .32754 *	* .37912 *	
* 7 *	* .24858 *	* .26074 *	* .27007 *	* .27561 *	* .32744 *	
* 8 *	* .23572 *	* .22818 *	* .23892 *	* .26811 *	* .32360 *	
* 9 *	* .21646 *	* .20425 *	* .21233 *	* .24836 *	* .30195 *	
* 10 *	* .21081 *	* .19886 *	* .21895 *	* .22695 *	* .35146 *	
* 11 *	* .20791 *	* .19434 *	* .22533 *	* .20681 *		
* 12 *	* .20156 *	* .20060 *	* .22278 *	* .19098 *		
* 13 *	* .19412 *	* .20690 *	* .21870 *	* .20547 *		
* 14 *	* .18738 *	* .22579 *	* .22439 *	* .23731 *		
* 15 *	* .18314 *	* .25032 *	* .23916 *	* .26270 *		
* 16 *	* .17921 *	* .26367 *	* .24496 *			
* 17 *	* .17349 *	* .28653 *	* .26404 *			
* 18 *	* .16985 *	* .30761 *	* .27544 *			
* 19 *	* .17919 *	* .32828 *	* .28275 *			
* 20 *	* .33774 *	* .32077 *				
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TABLEAU STRUCTUREL DES COURBES LINDA

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PAYS : IRELAND  
INSTITUT : "LOUIS SMITH-RESEARCH LTD"  
SECTEUR : ALIMENTATION(ALL FOOD) (NICE 20-B)  
ENTREPRISES

104

ANNEE : 1971

*****									
V A R I A B L E									
N	01	02	03	08	10				
CHIFFRE D'AFFAIRES	EFFECTIF	MASSE SALARIALE	EXPORT.	FRAIS PUBLICITAIRES					
*****									
2	1.04906	.96296	.96161	1.03030	.68280				
3	.60786	.63710	.59475	.72747	.50124				
4	.43019	.47818	.42399	.51315	.40517				
5	.34669	.38516	.37313	.42796	.33758				
6	.28806	.31320	.32211	.39317	.32413				
7	.25563	.27235	.28128	.34391	.34029				
8	.22806	.23802	.24639	.29944	.33152				
9	.21851	.21417	.22584	.26218	.32206				
10	.20967	.20377	.23119	.24770	.30169				
11	.19931	.20678	.23223	.23687	.32382				
12	.18826	.21672	.22842	.22212					
13	.17696	.22073	.22722	.22270					
14	.16999	.23440	.22270	.28189					
15	.16475	.25913	.24397	.37270					
16	.15927	.28718	.25206						
17	.15652	.30226	.25488						
18	.15603	.30978	.26898						
19	.16480	.32062	.28461						
20		.33545	.29788						
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CONCENTRATION INDUSTRIELLE  
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TABLEAU STRUCTUREL DES COURBES LINDA  
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\* TABLEAU NO 3RIS \*  
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PAYS : IRELAND  
INSTITUT : "LOUIS SMITH-RESEARCH LTD"  
SECTEUR : ALIMENTATION(ALL FOOD) (NICE 20-B)  
ENTREPRISES

ANNEE : 1972

*****									
VARIABLE									
N*	01	02	03	08	10				
	CHIFFRE	EFFECTIF	MASSE	EXPORT.	FRAIS				
	D'AFFAIRES		SALARIALE		PUBLICITAIRES				
*****									
2	.74369	.80484	.93600	.50000	.50345				
3	.52373	.59429	.57919	.33333	.54455				
4	.39790	.45232	.42207	.25000	.42429				
5	.31011	.35826	.34626	.23169	.36672				
6	.25346	.29264	.29529	.21886	.31833				
7	.21374	.25714	.25438	.21412	.28454				
8	.18697	.22551	.23620	.19756	.27143				
9	.17619	.21429	.21525	.19696	.28370				
10	.17051	.19987	.22081	.18705	.28212				
11	.16224	.20013	.22909	.17987					
12	.15521	.20906	.23366	.18289					
13	.14865	.21349	.23098	.17870					
14	.14271	.22532	.22488	.19219					
15	.14245	.22980	.24222	.20852					
16	.13956	.24611	.25477	.31431					
17	.14044	.25366	.25900	.40918					
18	.13999	.25467	.25789						
19	.14024	.26581	.25691						
20	.15383	.27255	.25769						
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CONCENTRATION INDUSTRIELLE  
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TABLEAU STRUCTUREL DES COURBES LINDA  
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\* TABLEAU NO 3BIS \*  
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PAYS : IRELAND  
INSTITUT : "LOUIS SMITH-RESEARCH LTD"  
SECTEUR : ALIMENTATION(ALL FOOD) (NICE 20-B)  
ENTREPRISES

ANNEE : 1973

*****						
* V A R I A B L E *						
* N *	* 01 *	* 02 *	* 03 *	* 08 *	* 10 *	* *
* * CHIFFRE * D'AFFAIRES *	* EFFECTIF *	* MASSE SALARIALE *	* EXPORT. *	* FRAIS PUBLICITAIRES *	* *	* *
*****						
* 2 *	* .50838 *	* .77180 *	* .59212 *	* .55556 *	* .62800 *	* *
* 3 *	* .53591 *	* .57613 *	* .49060 *	* .36111 *	* .66661 *	* *
* 4 *	* .41519 *	* .45747 *	* .36650 *	* .31007 *	* .56225 *	* *
* 5 *	* .32868 *	* .35910 *	* .36525 *	* .27400 *	* .46046 *	* *
* 6 *	* .27996 *	* .29023 *	* .32850 *	* .25276 *	* .38999 *	* *
* 7 *	* .25230 *	* .24294 *	* .28792 *	* .22345 *	* .36787 *	* *
* 8 *	* .23196 *	* .21709 *	* .27133 *	* .21249 *	* .36674 *	* *
* 9 *	* .21643 *	* .21064 *	* .26527 *	* .19522 *	* .34832 *	* *
* 10 *	* .19844 *	* .21145 *	* .28365 *	* .19300 *	* *	* *
* 11 *	* .18209 *	* .22370 *	* .28857 *	* .18364 *	* *	* *
* 12 *	* .17085 *	* .22291 *	* .28147 *	* .19023 *	* *	* *
* 13 *	* .16350 *	* .22633 *	* .27828 *	* .20427 *	* *	* *
* 14 *	* .15883 *	* .22652 *	* .26875 *	* .22405 *	* *	* *
* 15 *	* .15208 *	* .22680 *	* .26603 *	* .35909 *	* *	* *
* 16 *	* .14824 *	* .22211 *	* .25954 *	* .46046 *	* *	* *
* 17 *	* .14593 *	* .23702 *	* .26047 *	* .52356 *	* *	* *
* 18 *	* .16017 *	* .24226 *	* .28562 *	* .56222 *	* *	* *
* 19 *	* .17212 *	* .25536 *	* .29790 *	* *	* *	* *
* 20 *	* .26463 *	* .30482 *	* *	* *	* *	* *
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CONCENTRATION INDUSTRIELLE  
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TABLEAU RECAPITULATIF DES INDICES L

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\* TABLEAU NO 4 \*  
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PAYS : IRELAND  
INSTITUT : "LOUIS SMITH-RESEARCH LTD"  
SECTEUR : ALIMENTATION(ALL FOOD) (NICE 20-B)  
ENTREPRISES

VARIABLES	A N N E E																													
	1968			1969			1970			1971			1972																	
	LN	M	LS	LN	M	LS	LN	M	LS	LN	M	LS	LN	M	LS															
01 CHIFFRE D'AFFAIRES	16		.19124	18		.27258	18		.19360	18		.27885	18		.16985	18		.28394	16		.15603	16		.29440	16		.13956	16		.25781
02 EFFECTIF	12		.18082	11		.35106	11		.17149	11		.34889	11		.19434	10		.38061	10		.20377	10		.41166	10		.19987	10		.37769
03 MASSE SALARIALE	10		.17505	10		.35264	10		.18949	9		.34768	9		.21233	14		.40331	14		.22270	9		.35160	9		.21525	9		.41058
08 EXPORT.	12		.22186	13		.31692	13		.28218	12		.37108	12		.19098	12		.33459	12		.22212	13		.42766	13		.17870	13		.23925
10 FRAIS PUBLICITAIRES	9		.33891	7		.45049	7		.32480	9		.43527	9		.30195	10		.45062	10		.30169	8		.39405	8		.27143	8		.38761

FB 180,- — Dkr 28,20 DM 12,20 FF 22,20 Lit. 3050 Fl. 12,45 £ 2.00

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